

WESTERN WASHINGTON UNIVERSITY BULLETIN

*GENERAL
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1981/83*



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CONTENTS

2	CAMPUS MAP
4	UNIVERSITY CALENDARS
7	INTRODUCTION TO WESTERN WASH— INGTON UNIVERSITY
10	ADMISSIONS
16	REGISTRATION
17	FINANCES
20	FINANCIAL AID
22	HOUSING AND DINING
25	STUDENT SERVICES
31	UNIVERSITY ACADEMIC POLICIES
39	UNIVERSITY GRADUATION REQUIRE— MENTS
44	ALL-UNIVERSITY PROGRAMS
51	WESTERN'S SCHOOLS AND COLLEGES
64	GRADUATE SCHOOL
95	DEPARTMENTS
339	APPENDICES

Colleges/Departments

N *Rock Rings*, Nancy Holt
 O *Flank II*, Mia Westerlund
 P *"Serra Sculpture"*—untitled, Richard Serra

- ARTS & SCIENCES, College of** Old Main, OM 310
 Anthropology Arntzen Hall, AH 315E
 Biology Haggard Hall, HH 351
 Chemistry Haggard Hall, HH 207
 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 Garden Street Hall, GS
 Liberal Studies Miller Hall, MH 359
 Mathematics/
 Computer Science Bond Hall, BH 202, 211
 Nursing Old Main, OM 530
 Philosophy Humanities Building, HU 374
 Physical Education, Health
 and 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 315
 Speech College Hall, CH 201
 Speech Pathology/Audiology College Hall, CH 103
 Technology Arl/Technology, AT 105
- BUSINESS & ECONOMICS,**
 College of Arntzen Hall, AH 510
 Accounting Arntzen Hall, AH 510
 Business Administration Arntzen Hall, AH 501
 Economics Arntzen Hall, AH 510
 Office Administration and
 Business Education Arntzen Hall, AH 501
- EDUCATION, School of** Old Main, OM 310
 Education Miller Hall, MH 218
 Library Science Miller Hall, MH 177
- FAIRHAVEN COLLEGE** Fairhaven College, FC
- FINE & PERFORMING ARTS,**
 College of Performing Arts Center, PA 365
 Art Arl/Technology, AT 208
 Music Performing Arts Center, PA 273
 Theatre/Dance Performing Arts Center, PA 395
- HUXLEY COLLEGE OF ENVIRONMENTAL
 STUDIES** Environmental Studies Center, ES 539

Map Key

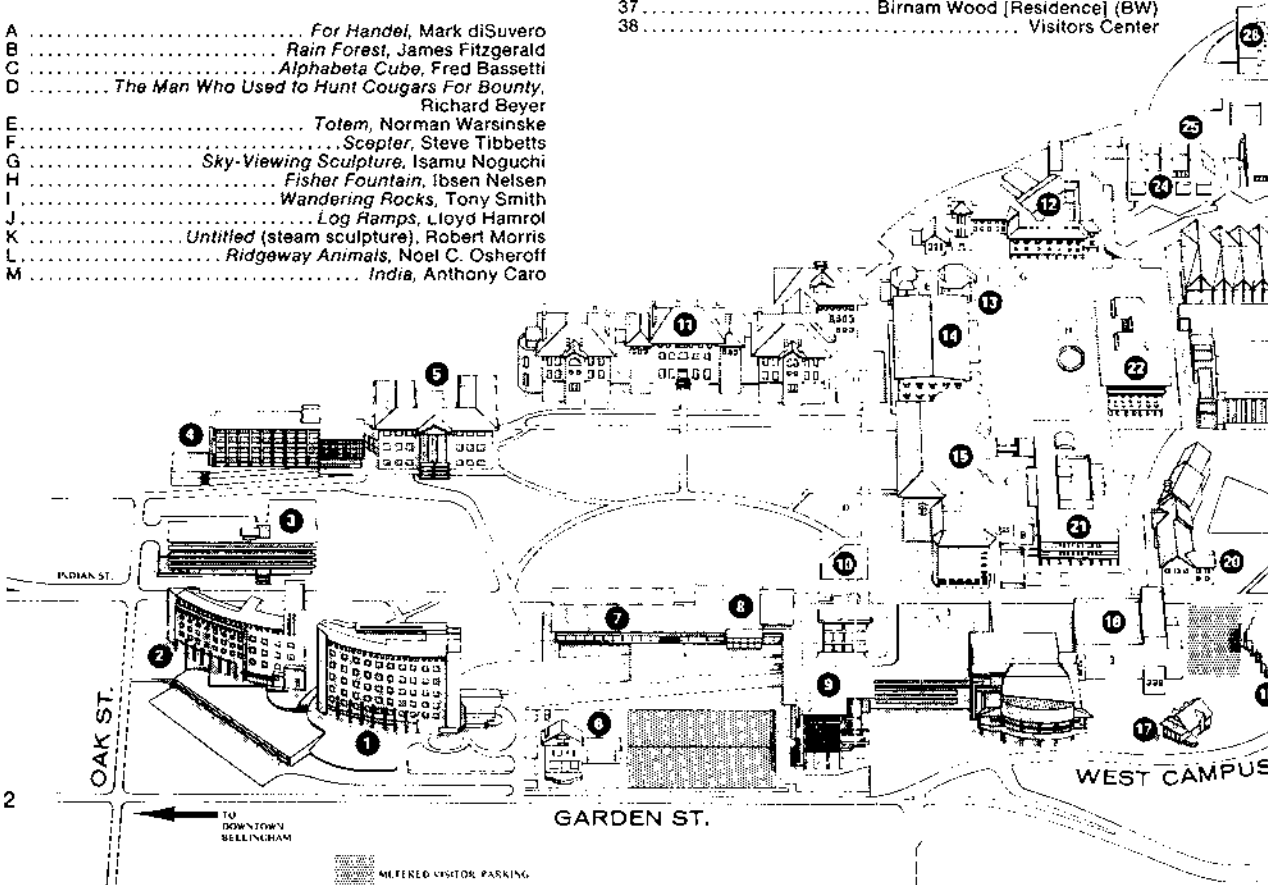
- | | | |
|----|-------|-----------------------------------|
| 1 | ..... | Mathes Hall [Residence] (MA) |
| 2 | ..... | Nash Hall [Residence] (NA) |
| 3 | ..... | Higginson Hall [Residence] (HG) |
| 4 | ..... | Edens Hall North [Residence] (EN) |
| 5 | ..... | Edens Hall (EH) |
| 6 | ..... | Garden Street Hall (GS) |
| 7 | ..... | Viking Commons [Dining] (VC) |
| 8 | ..... | Viking Union (VU) |
| 9 | ..... | Viking Union Addition (VA) |
| 10 | ..... | Bookstore (BK) |
| 11 | ..... | Old Main (OM) |
| 12 | ..... | Miller Hall (MH) |
| 13 | ..... | Lecture Halls (LH) |
| 14 | ..... | Humanities Building (HU) |
| 15 | ..... | Wilson Library (WL) |
| 16 | ..... | Performing Arts Center (PA) |
| 17 | ..... | Canada House (CA) |
| 18 | ..... | High Street Hall (HS) |
| 19 | ..... | Stearns House (SH) |
| 20 | ..... | College Hall (CH) |
| 21 | ..... | Haggard Hall (HH) |
| 22 | ..... | Bond Hall (BH) |
| 23 | ..... | Carver Gymnasium (CV) |
| 24 | ..... | Art Annex (AA) |
| 25 | ..... | Art-Technology (AT) |
| 26 | ..... | Steam Plant (SP) |
| 27 | ..... | Arntzen Hall (AH) |
| 28 | | Environmental Studies Center (ES) |
| 29 | | Highland Hall [Residence] (HI) |
| 30 | | Ridgeway Complex |

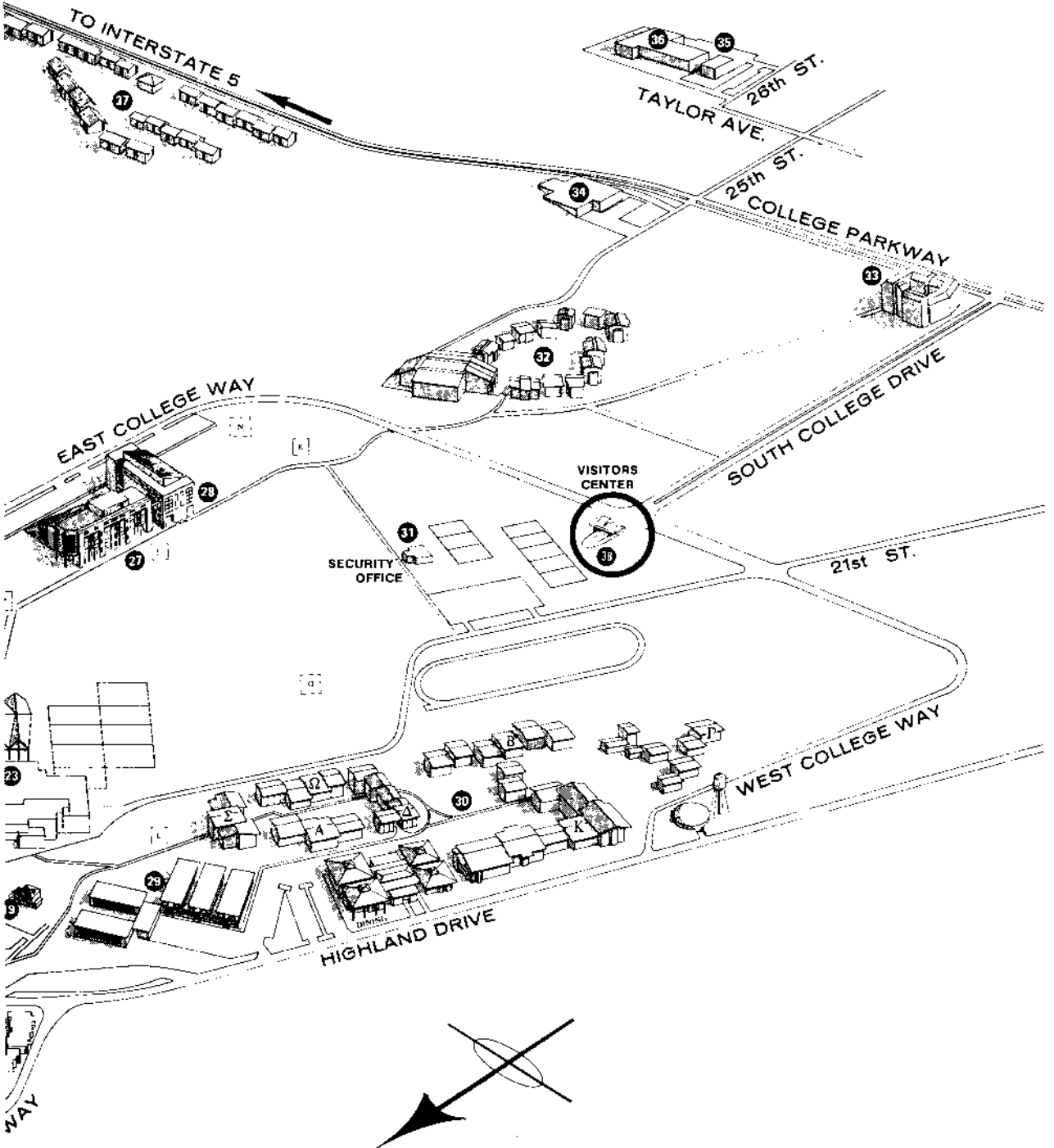
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| A | Alpha [Residence] | K | Kappa [Residence] |
| B | Beta [Residence] | Ω | Omega [Residence] |
| Δ | Delta [Residence] | Σ | Sigma [Residence] |
| Γ | Gamma [Residence] | | |

- | | | |
|----|-------|----------------------------------|
| 31 | ..... | Security Office (SO) |
| 32 | ..... | Fairhaven College (FC) |
| 33 | ..... | Buchanan Towers [Residence] (BT) |
| 34 | ..... | Commissary (CM) |
| 35 | ..... | Maintenance-Motor Pool (MP) |
| 36 | ..... | Physical Plant (PP) |
| 37 | ..... | Birnam Wood [Residence] (BW) |
| 38 | ..... | Visitors Center |

Sculpture

- | | | |
|---|-------|---|
| A | ..... | <i>For Handel</i> , Mark diSuvero |
| B | ..... | <i>Rain Forest</i> , James Fitzgerald |
| C | ..... | <i>Alphabeta Cube</i> , Fred Bassetti |
| D | | <i>The Man Who Used to Hunt Cougars For Bounty</i> ,
Richard Beyer |
| E | ..... | <i>Totem</i> , Norman Warsinske |
| F | ..... | <i>Scepter</i> , Steve Tibbetts |
| G | ..... | <i>Sky-Viewing Sculpture</i> , Isamu Noguchi |
| H | ..... | <i>Fisher Fountain</i> , Ibsen Nelsen |
| I | ..... | <i>Wandering Rocks</i> , Tony Smith |
| J | ..... | <i>Log Ramps</i> , Lloyd Hamrø |
| K | ..... | <i>Untitled</i> (steam sculpture), Robert Morris |
| L | ..... | <i>Ridgeway Animals</i> , Noel C. Osheroff |
| M | ..... | <i>India</i> , Anthony Caro |





UNIVERSITY

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

1981-82 ACADEMIC YEAR

Fall Quarter 1981

September 21-23
Registration

September 24 (Thursday), 8:00 a.m.
Classes begin

November 25, Noon — November 30, 8:00 a.m.
Thanksgiving Recess

December 7-11
Final examination week

Winter Quarter 1982

January 4
Registration

January 5, 8:00 a.m.
Classes begin

February 15
Washington's Birthday Holiday

March 15-19
Final examination week

Spring Quarter 1982

March 29
Registration

March 30, 8:00 a.m.
Classes begin

May 31
Memorial Day Holiday

June 4-10
Final examination week

June 11
Commencement

Summer Quarter 1982

June 21 — July 30
Six-Week Session

June 21 — August 20
Nine-Week Session

June 21
Registration

June 22
Classes begin

July 5
Independence Day Holiday

1981
SEPTEMBER

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AUGUST

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THE UNIVERSITY

Western Washington University is one of three regional universities which, together with two state universities, one state college and a score of community colleges, comprise the state-supported system of higher education in Washington. These institutions have individual governing boards but work together through voluntary associations and the State Council for Postsecondary Education to coordinate their planning and efforts to provide higher education for the college and university population of the state.

Western Washington University is located in Bellingham, a city of 45,000 in the northwestern corner of the state near the Canadian border. Its historical antecedent was the New Whatcom State Normal School, established by the legislature in 1893, which offered its first courses in the fall of 1899. From a normal school the institution evolved into a degree-granting institution in 1933, College of Education in 1937, State College in 1961, and a university in 1977.

Western Washington University is organized into a Graduate School, a School of Education and five semi-autonomous undergraduate colleges: College of Arts and Sciences, College of Business and Economics, College of Fine and Performing Arts, Fairhaven College, and Huxley College of Environmental Studies.

Accreditation

The University is fully accredited by both the Northwest Association of Schools and Colleges and the National Council for the Accreditation of Teacher Education to offer work at the bachelor's and master's degree levels. The University holds membership in the Council of Graduate Schools in the United States.

ROLES AND MISSIONS STATEMENT OF WESTERN WASHINGTON UNIVERSITY

Western's fundamental academic purposes are to maintain, use and develop the arts and sciences tradition. In their long history, the arts and sciences have changed yet endured, providing confidence in their future value. Western seeks to demonstrate the continuing importance of this tradition within contemporary contexts.

Western believes that education in the arts and sciences tradition nurtures both individual development and a free and humane society. It develops the intellect, enlarges the understanding of our own and other cultures, and stimulates the ability to create, share, and act on ideas. In so doing, it provides a sound base for professional and applied pursuits, remaining long after the completion of formal academic study.

Among the values fostered by the arts and sciences tradition are clarity of mind, informed judgment, aesthetic sensibility and appreciation, tolerance for ambiguity, a sensitivity to cultural differences, and a sense of historical continuity. These values have never enjoyed universal consent or unanimity of definition. Nevertheless, generations of people have found these values worth the effort required to understand them.

From Western's dedication to these values comes its commitment to a program of general education in bodies of knowledge that ought to be the common property of all educated people. Western will continue to provide its students the opportunity to examine the humanities, the physical and life sciences, the applied sciences, the social and behavioral sciences, and the fine and performing arts. This general education will enrich the specialized training and the subsequent experiences of each student.

The University has an obligation to include programs of a practical and applied nature, directed to the educational and professional needs of the residents of the region. It must be continuously sensitive to the relationship between the contents of its professional programs and the

expectations of the various fields to which they are preparatory. Questions of accreditation, certification, and external guidelines must be answered in the context of the University's own standards of general education and academic accomplishment. As changes occur in the requirements for a given field or in its opportunities for employment, Western must act to keep its students and faculty informed of such changes. Western will attempt to accommodate its program to career opportunity whenever feasible and desirable.

Most of Western's experience has been with young high school graduates who normally continue on at Western in the reasonably secure expectation of employment or advanced study upon graduation. But now students are less likely to complete their education at any one institution; are much more diverse in age, cultural, and social background; demand more flexibility and innovation in their curricula; and are less confident about the relationship between their university years and the rest of their lives. Western accepts as a mission the continued development of programs suited to the interests and needs of a diverse student population.

Although Western's central obligation to its students is to acquaint them with the life of the mind, to be a complete academic community, Western should attend to all facets of campus life, including the extracurricular intellectual, social, and physical dimensions of the lives of students and teachers. Western is concerned with the physical, psychological, and personal growth and development of its students as provided by the physical education program, the health services, the Counseling Center, and other units of the Student Affairs Division. These activities should take place in an attractive physical environment. Western should work to continue enhancing the beauty of the campus while maintaining its natural charm.

The major responsibility for the educational role of the University lies with the faculty. Western continues to undergo changes in academic organization, in university governance, and in the professional interests of the faculty. As old forms are replaced and new ones arise, tensions and anxieties will occur among faculty. These issues must not be settled merely by contests of will or strength of numbers; they must be assessed honestly and decided rationally. The faculty must rely on their talents and traditions in dealing with these questions. This is a continuous mission.

Certain continuities are sure: Faculty will continue to teach, to advise and counsel students, to be scholars, artists, and performers, and to participate in the government and development of the University as well as in the life of the external community. The most important of these tasks is teaching. Western will continue to insist on the primacy of its instructional operations; teaching ought to be the keynote of Western's communications with the state agencies to whom the University is responsible. Western will continue to emphasize and to

publicize the inseparable relationship between scholarship and teaching. A university faculty which lacks the resources for research, writing, and other creative activity will not teach competently. Western's commitment to this principle will be tested ever more severely, and its response must be ever more firm.

As Western proceeds with planning, questions of norms and standards arise. Since these questions affect teaching, learning, and scholarship, guidelines can be found in habits of mind well-established in our educational tradition: the use of rational and critical thinking; the testing of scientific claims by empirical data; the avoidance of propagandizing for an ideology; the search for accuracy, precision, clarity, and beauty in scholarly and creative work. Rather than attempting to establish specific limitations in this complex area, Western must confidently let the application of these principles rest with the competency and skill of its faculty.

Western also recognizes that the contemporary arts in all their forms should be given full opportunity to be seen and heard and to be subjected to the trial of analysis and criticism and the test of personal tastes. To that end, the University must continue to be a patron of the arts and a contributor to the cultural environment by acquiring works of art for public display, and by making available the very best of the performance of the arts.

This summary of roles and missions gives direction for the future. This statement itself must undergo continued analysis and adjustment, for part of the role and mission is to be self-critical to the end that Western may better serve its fundamental academic purposes in the state of Washington.

ACADEMIC PROGRAMS AND DEGREES

To fulfill its academic objectives, Western's curriculum includes a program of broad general education; intensive studies designed to develop scholarly competence in the arts and sciences; professional programs for both public school personnel and a variety of other professionals; and graduate programs in professional education, the arts and the sciences.

Western's undergraduate and graduate programs lead to the following degrees:

- Bachelor of Arts
- Bachelor of Arts in Education
- Bachelor of Fine Arts
- Bachelor of Music
- Bachelor of Science
- Master of Arts
- Master of Business Administration
- Master of Education
- Master of Music
- Master of Science

RESEARCH

At Western, faculty research and the training of students in scientific and scholarly methods and techniques have received considerable impetus through foundation and government grants. Awards have been made by a wide range of agencies and foundations, including the National Institutes of Health, National Endowment for the Arts, National Science Foundation, Department of Education, ARCO Foundation, Shell Foundation, National Oceanic and Atmospheric Administration, Canadian Embassy, Office of Naval Research, Department of Ecology, Readers' Digest, Gannett Foundation, Northwest Air Pollution Authority, National Park Service, and other agencies of the State of Washington and the federal government.

The Bureau for Faculty Research was established to encourage and coordinate faculty research and creative scholarly endeavor throughout the University. The bureau assists the faculty in obtaining funds for curricular development and research, and provides a manuscript typing service and a staff artist.

ACADEMIC FACILITIES

The main campus and its 62 buildings occupy 224 acres along Sehome Hill overlooking Bellingham Bay and downtown Bellingham. Other University properties, such as the marine laboratory at Shannon Point near Anacortes, support regional educational and conservancy programs.

The University has on-campus residence halls and student apartments for 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 Library

The Mabel Zoe Wilson Library houses more than 900,000 items, including 390,000 volumes of catalogued books and bound periodicals, nearly 500,000 units of microtext, 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 4,700 current periodicals and newspapers.

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



The Computer Center

The Computer Center operates an IBM 4341 system for punched card programs and batch programs submitted from remote terminals. It also operates a Digital Equipment Corporation VAX interactive computer and a Perkin-Elmer 7/32-based interactive system. The combined main memory in the several computers totals more than seven million characters while the on-line disk storage totals over four billion characters. This central facility supports approximately 200 timesharing terminals distributed in clusters of up to 60 terminals. There are more than a dozen smaller computers in a Computer Science laboratory, in Huxley College, and in the departments of psychology, physics and astronomy, geology and sociology.

Leona M. Sundquist Marine Laboratory at Shannon Point

Located near the Washington State Ferry terminal west of Anacortes, Washington, the Sundquist Marine Laboratory provides opportunities for undergraduate and graduate students to study the sea. The facility includes laboratories, a lecture room, research spaces and more than 50 seawater tanks useful in teaching and research. The laboratory site includes 71 wooded acres and a small lake, allowing studies beyond the marine, e.g., ecology and limnology.

The Sundquist Marine Laboratory is administered by Western Washington University on behalf of a consortium of schools including Western, Eastern and Central Washington universities, Skagit Valley College, and Everett and Edmonds community colleges.

ADMISSIONS

Old Main 200, (206) 676-3440

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 be forced to defer an admission decision until a later term or to select from among remaining applicants those students most likely to succeed at Western.

Admission to the University does not imply admission to a particular academic program, nor does it guarantee enrollment in specific courses. Because of limited space, certain programs and courses have admission requirements or waiting lists which are supplemental to general University admission standards.

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).

Application Procedures

The uniform undergraduate application for admission to four-year colleges and universities in the state of Washington is required of all freshman and transfer candidates. It may be obtained from any Washington high school or college, or from the Admissions Office at Western. Returning students may obtain an Application for Registration as a Returning Student from the Office of Admissions.

Application Closing Dates

To ensure consideration, applications must be received 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.

ADMISSION TO WESTERN'S COLLEGES AND SCHOOLS

Western Washington University is organized as a School of Education, a Graduate School, and five colleges:

The College of Arts and Sciences

The College of Business and Economics

Fairhaven College

The College of Fine and Performing Arts

Huxley College of Environmental Studies

Undergraduate admission requirements, policies and procedures described above and below apply to all of Western's colleges and schools.

Unless they designate otherwise on their application forms, qualified undergraduate students are admitted to Western's College of Arts and Sciences. Undergraduate students interested in Western's other four colleges or the School of Education should note that each has additional requirements and that each selects its students on an individual basis. (Details are provided in the section entitled "Western's Schools and Colleges.")

All undergraduate students should apply for admission to Western Washington University through the Admissions Office. Candidates for the Master's Program should apply to the Gradu-

ate School. Degree holders seeking teacher certification should apply to the Office of Fifth Year Advisement.

Freshman Admission

Although Western does not require the completion of specific high school subjects for admission, the University recommends that a "college prep" program, including at least the following subjects, be taken in high school. It is especially important that a prospective university student enroll in a writing course each semester and develop good mathematical skills.

Minimum Subject Recommendations, Grades 9-12

English: Four years, including one composition course and one literature course in the 12th grade

Math: Three years, including two years of algebra and one of geometry

Science: Two years, including one course in 11th or 12th grade

Social Studies: Two years, including one course in 11th or 12th grade

Foreign Language: Two years

Academic Electives: Three years, one course each in 10th, 11th, 12th grades

Graduates of accredited Washington state high schools are generally eligible for admission if their high school records indicate a cumulative grade average of at least 2.50 or a ranking in the upper half of their graduating class. (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 a pre-university program, 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 Entrance Examination Board or the American College Test. Results of these tests should be sent to the Admissions Office by the CEEB 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.

The University may consider applications from individuals 18 years of age and older who are not

enrolled in high school and 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 Admission

Candidates for admission as transfer students should submit an application form before the closing dates of application published above and must request that an official transcript be forwarded to the Admissions Office by each higher institution they have attended. A high school transcript is also required of candidates who have earned fewer than 40 transferable credits.

A transfer student who has 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, is ordinarily admitted if he or she satisfies the above requirements for freshman admission and has 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 credits with at least a 2.00 grade average. 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 are inaccurate predictors of a student's chances for success at Western.

TRANSFER OF CREDIT POLICIES

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. Western's policies and procedures for transfer of credit are detailed under the various headings below.

Accreditation and Credit Transfer

The decision to grant transfer credit is based upon several factors. Chief among them is accreditation. For transfer purposes Western

Admissions

recognizes as fully accredited only those institutions which have received accreditation by one of the following associations: 1) New England Association of Schools, 2) Middle States Association of Colleges and Schools, 3) North Central Association of Colleges and Schools, 4) Northwest Association of Schools and Colleges, 5) Southern Association of Colleges and Schools, and 6) Western Association of Schools and Colleges.

Level of Accreditation

The total amount of transfer credit that may be granted from another institution may not exceed the level of accreditation granted to that institution. For example, the maximum credit transferable from accredited two-year institutions is 90 credits; that is, one half the amount normally required for a baccalaureate degree. Regardless of the amount of transfer credit granted, a student must earn at least 45 resident credit hours through Western and satisfy all other WWU requirements to graduate from Western. (Note: A transfer student may complete more than 90 credits at two-year colleges, and each course will be considered for its appropriateness in satisfying particular requirements at Western. The total transfer credit granted from two-year institutions will be limited, however, to 90 quarter credits.)

Credit with Limited Transferability

(A) *Sectarian Religion Credit.* Regardless of institutional accreditation, Western does not grant credit for religion or theology courses that are sectarian in nature. Certain survey courses in religion, such as literature of the Bible and history of Christianity, are transferable, but others, such as courses designed to prepare missionaries or to teach the doctrine of one particular religious denomination, are not.

(B) *Experiential Credit.* Western grants no academic credit for experience *per se*. Credit granted on this basis by other institutions is not directly transferable and must be validated by departmental examination and placement procedures at Western. A student who believes that previous experience warrants academic credit may "challenge" the appropriate course(s) at Western. If a student's background enables him or her to begin beyond the introductory level in a sequence of courses, successful completion of a higher level course may lead, with prior departmental approval, to credit for lower-level courses or to waiver of course requirements.

(C) *Military Credit.* Western grants no credit for military service *per se*. However, up to 30 credits may be granted for appropriate schooling received while in the military. Western normally grants credit in accordance with recommendations contained in "A Guide to the Evaluation of Educational Experiences in the Armed Services," published by the American Council on Education. DANTES Subject Standardized Test course examinations passed at the 50th percentile or higher will yield credit according to ACE recommendations for each course.

(D) Credit by Examination

(1) Credit granted by other accredited institutions on the basis of internally designed examinations or placement procedures is generally transferable.

(2) Credit granted by other institutions on the basis of external examinations such as CEEB Advanced Placement Examinations or CLEP is not considered as transfer credit. Students are expected to present actual examination results for review by the appropriate departments at Western. Normally, a score of three or higher on the CEEB AP examinations results in credit for the related freshman-level course(s) at Western. CLEP "General" examinations do not result in credit at Western, but CLEP "Subject" examinations are reviewed by departments for credit. Students with questions about establishing such credit are advised to contact the Office of Admissions.

(E) Other Limited Credit

(1) A maximum of 10 transfer credits may be awarded for photography courses completed at two-year colleges.

(2) A maximum of 15 credits may be awarded for Early Childhood Education courses completed at two-year colleges.

(3) Up to 15 credits for courses that are not otherwise transferable will be accepted by Western if they are included as a part of an approved Associate degree program at a Washington community college.

Transfer students who complete the appropriate two-year degree at a Washington community college will ordinarily satisfy all of Western's General University Requirements upon their enrollment. To be accepted in lieu of Western's



General University Requirements, the AA degree must include at least 90 credits, 75 of which are transferable courses listed in the WWU Transfer Advisers Handbook. Since the community colleges offer several degree programs, students should consult their adviser for more complete information.

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.

READMISSION OF FORMER STUDENTS

Western students who have interrupted their studies for one or more quarters (except summer) may advance register with their class by filing an *Application for Registration* form at least two weeks prior to advance registration. Forms are available from the Admissions Office.

Those who file their application forms after advance registration but before the closing dates will register one day prior to the beginning of classes.

Acceptance of transfer credit earned after the student's initial admission to Western Washington University is governed by policies applicable to transfer students.

A student who was eligible to continue at WWU at the time of departure (either in good standing or on academic probation) is eligible for readmission. If he or she has undertaken studies at other colleges or universities since leaving WWU, the cumulative grade average for all such study must be at least 2.00 (C) and the student must have earned at least a 2.00 in the last term at the last institution attended. Exceptions to these standards may be made only by the Admissions Committee, and petitions for this purpose are available in the Admissions Office. A student who was in "dropped" status at the time of departure from WWU must be reinstated by the Academic Standing Committee. Petitions for this purpose are also available in the Admissions Office.

GRADUATE STUDENT ADMISSION

For admission to graduate study at WWU and for full information about programs, assistantships and other matters, see the Graduate section of this catalog.

Candidates for fifth-year study for a standard teaching certificate or for teacher certification through special programs for graduate students apply for admission through the Office of Fifth Year Advisement, Miller Hall, WWU.

INTERNATIONAL STUDENT ADMISSION

Canadian students are considered for admission under the same general procedures as are citizens of the United States.

Western welcomes qualified students from other countries. To be eligible for admission, such students must have completed the university preparatory program in their own countries, give evidence of ability to succeed in university study, and demonstrate competence in use of the English language. They 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 in order to demonstrate sufficient finances, since the University has very limited financial aid available for foreign students. The Test of English as a Foreign Language (TOEFL) is required of candidates from countries in which English is not the language in general use.

International student applications are evaluated on an individual basis. Admission or denial will be based on the total evidence indicating the student's potential for success in an academic program at Western.

SPECIAL STUDENTS AND AUDITORS

The University welcomes mature students whose occupations preclude full-time attendance. Such students may be authorized to enroll with non-matriculated (non-degree) status. Transcripts and tests are not required of such students, although they are ordinarily expected to be able to satisfy the regular admission requirements.

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.



ACCEPTING AN OFFER OF ADMISSION

Each admitted student will be asked to confirm his or her intention to enroll by submitting a non-refundable, non-transferable payment on tuition and fees. This payment should not be made until requested by the University when notification of admission is received.

REQUIRED TESTS

Although test scores are not generally used in determining eligibility for admission, test data are required as an important part of the University's advisement, curricular development and research program.

Freshmen

The Washington Pre-College Test, required of all entering freshmen who are graduates of Washington high schools, should be completed during the junior or senior year of high school. Students unable to take the test in high school will do so during orientation. (The fee is \$11.)

The Scholastic Aptitude Test of the College Entrance Examination Board or the American College Test is required of graduates of high schools from other states. Results of these tests, normally taken in December of the senior year of high school, must be received by the Admissions Office before the candidate's eligibility for admission can be determined. Since the SAT or ACT is required of non-resident freshmen, the Washington Pre-College Test need not be taken during orientation.

Transfer Students

Undergraduate transfer students who have completed fewer than 40 transferable credits at their previous colleges must either present Washington Pre-College Test scores or complete the School College Abilities Test (SCAT) during orientation. (The SCAT fee is \$2.) Transfer students who have graduated from out-of-state high schools may submit SAT or ACT scores prior to registration.

REQUIRED HEALTH HISTORY

New 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 these health requirements are sent to each new student who accepts an offer of admission, and the forms must be completed and returned to Western's Health Services Office before the student registers for courses.

ORIENTATION

Immediately before each fall quarter, new students may participate in orientation programs designed to introduce them to Western Washington University.

Orientation programs provide students with opportunities:

- to learn more about Western's services, facilities and academic programs;
- to complete required tests;
- to meet faculty members, staff members and other new students;
- to begin the registration process.

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.

VETERANS INFORMATION

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

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.

REGISTRATION

Old Main 230, (206) 676-3430

The Registrar's Office works closely with the faculty to develop schedules of courses which serve the needs and interests of Western's students.

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.

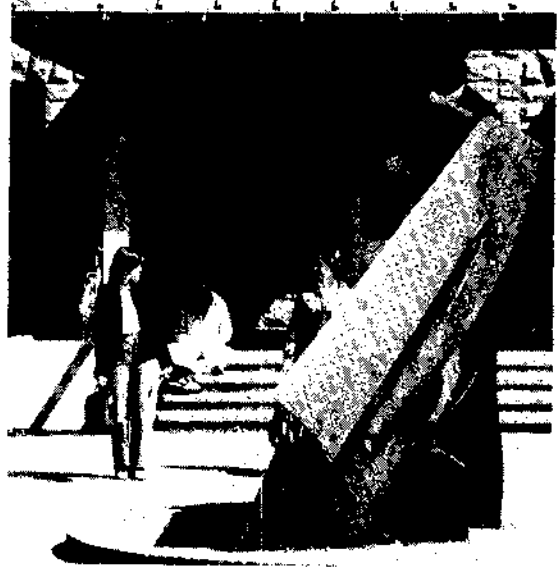
REGISTRATION AT START OF QUARTER

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 about the courses for which they should attempt to schedule additional sections.

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."

FINANCES

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 \$1,300 each quarter.

Approximate Quarterly Expenses, 1981-82

Tuition and Fees	\$289
Room and Board	630
Books and Supplies	80
Personal Expenses	340

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.)

1981-82

Student Classification	Quarterly Total
Southeast Asian Veteran*	\$153
Resident ¹ , General	289
Non-Resident, General	970
Resident ¹ , Graduate Degree	332
Non-Resident, Graduate Degree	1,145

1982-83

Student Classification	Quarterly Total
Southeast Asian Veteran*	\$ 153
Resident ¹ , General	314
Non-Resident, General	1,070

Resident ¹ , Graduate Degree	364
Non-Resident, Graduate Degree	1,272

Quarterly Tuition and Fees — Part-time Students

(Students enrolling for nine or fewer credits)

1981-82

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

Southeast Asian Veteran*	\$15
Resident ¹ , General	29
Non-Resident, General	97
Resident ¹ , Graduate	33
Non-Resident, Graduate	115

1982-83

Southeast Asian Veteran*	\$15
Resident ¹ , General	31
Non-Resident ¹ , General	107
Resident, Graduate	36
Non-Resident, Graduate	127

¹Residency—Washington State law on residence classification requires that a student be domiciled in the State of Washington for one year immediately prior to the beginning of the quarter for which he or she claims the right to pay resident tuition and fees. Washington State law defines domicile as . . . "a person's true, fixed and permanent home and place of habitation". . . In addition, he or she must have established domicile in the state for other than educational purposes. Regardless of age or domicile, the following are entitled to pay resident tuition and fees: any person employed not less than 20 hours per week at a Washington public institution of higher education and the children and spouse of such a person; military personnel and federal employees residing or stationed in the State of Washington and their children and spouses; and any veteran whose final permanent duty station was in the State of Washington, so long as such veteran is receiving federal vocational or educational benefits conferred by virtue of his or her military service.

Questions concerning residency for tuition and fee purposes should be referred to the Admissions Office, Old Main 200.

*For Washington residents only.

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.

MISCELLANEOUS SERVICE CHARGES

Parking

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

	Quarterly Total**
On-campus parking	\$20
Peripheral parking	5-9
Motorcycle parking	6

Late Registration/Late Course Adds

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 \$11. Transfer students without appropriate test results will complete the School and College Abilities Test (SCAT) at a fee of \$2.

Special Examination Charges

Course Challenge \$25 per course

Graduation Fees

Baccalaureate Degree	\$8.00
Master's Degree	5.00
Placement Service fee for students with prior degree who earns teaching certificate only	2.00
Provisional Teaching Certificate	15.00
Standard Teaching Certificate	15.00

(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:

First Official Transcript	\$2.00
Additional Official Transcripts in same envelope	1.00
Unofficial Transcript	1.00

DESCRIPTION OF TUITION AND FEES

1981-82

	Tuition	Service & Activities Fee	Operations Fee
Resident, General	\$25	\$60	\$204
Non-Resident, General	96	60	814
Resident, Graduate	25	60	247
Non-Resident, Graduate	96	60	989
Southeast Asian Veteran*	25	54	74

1982-83

	Tuition	Service & Activities Fee	Operations Fee
Resident, General	\$25	\$60	\$229
Non-Resident, General	96	60	914
Resident, Graduate	25	60	279
Non-Resident, Graduate	96	60	1,116
Southeast Asian Veteran*	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.

*For Washington residents only.

**Estimated at time of printing.

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.

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.

Note: The first \$50 of tuition and fees paid by the newly admitted students, whether paid as a separate deposit to accept an offer of admission or as a part of total fees at the beginning of a quarter, is non-refundable.

*See the Continuing Education Bulletin and the Summer Session Catalog for the refund policy

for Continuing Education and Subject-to-Enrollment courses.

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.



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.

The limited funds available at Western for student aid programs are used to assist students whose attendance seems educationally sound and whose attendance would be impossible without such assistance.

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 are available only to undergraduate students who demonstrate financial need. They are offered as gift aid. Repayment is not required.

Basic Educational Opportunity Grant (BEOG). All undergraduate students are eligible to apply for the federal BEOG. 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 and are generally offered to students with the greatest need.

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 five years.

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

Work-Study Programs (State and Federal). Students may be offered part-time employment under the work-study programs. On-campus jobs are available in nearly every academic area, as well as in the student union, library, computer center, administrative offices, maintenance department and other campus agencies. Off-campus jobs in the Bellingham area are limited to positions related to students' academic career interests.

National Direct Student Loans are long-term, low-interest loans available to undergraduate and graduate 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 four 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 vol-

unteer. Loans are also deferred for graduate study. Loan recipients may receive partial or full cancellation of indebtedness through subsequent service in certain teaching areas.

WWU Scholarships. Two categories of scholarships are available:

- Academic scholarships may be awarded to entering freshmen, transfer students, and returning students in recognition of outstanding scholarship.
- Departmental/Designated scholarships are awarded to students in specific majors or departments.

Entering freshmen are urged to explore scholarship opportunities from their home-town organizations with the aid of their high school counselors. A list of Western's departmental/designated scholarships is available from the Student Financial Aid Office.

HOW TO APPLY FOR FINANCIAL AID

To be considered for the financial aid programs described above, the following application materials must be submitted: College Scholarship Service Financial Aid Form (FAF), Basic Educational Opportunity Grant Student Eligibility Report (SER) and WWU Financial Aid Application.

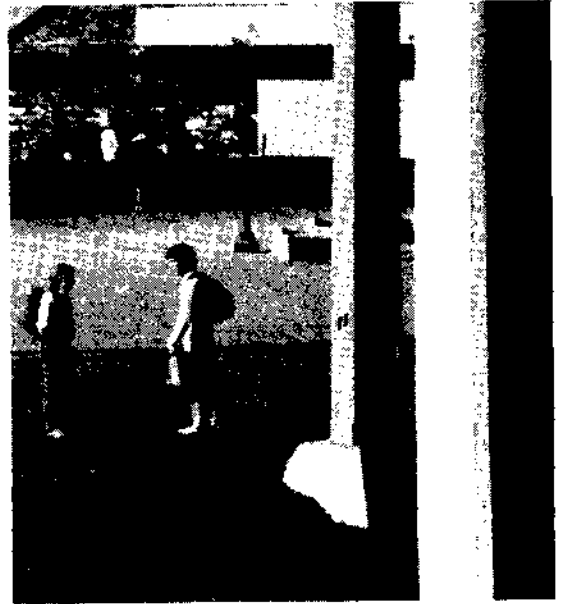
To ensure first consideration for available funds, application materials must be received by the Student Financial Aid Office by April 1. Application material received after April 1 will receive full consideration if financial aid funds are available.

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. Priority is given to students who must attend in order to graduate in August.

OTHER ASSISTANCE AVAILABLE AT WWU

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. Students apply for GSLs through the University or participating banks or credit unions. The application process takes approximately six 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 \$30 or more. Nine 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 deferred payment period.

Part-Time Employment. The Student Employment Center provides information and assistance to students seeking part-time employment, either on or off campus.

On-Campus Employment. Many students are successful in obtaining part-time jobs in Western's academic and administrative units after they arrive on campus. Since advance employment cannot be guaranteed, Western's Student Employment Center does not accept advance applications for on-campus jobs; the office does provide information and assistance to students after they arrive on campus.

Off-Campus Employment. The Student Employment Center provides information about jobs in developing job opportunities for students at WWU. Students should be aware, however, that opportunities for part-time employment are limited and, therefore, should not anticipate meeting a significant portion of their college expenses with earnings from part-time employment.

Graduate Assistantships in limited numbers are available to qualified graduate students. Inquiries should be addressed to the Dean of the Graduate School.

HOUSING & DINING

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

Western Washington University maintains a wide variety of housing accommodations for its students. There are residence halls for men, women and coed living accommodations. 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, telephone, 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 saunas, 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 21 meals per week 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 Housing Office, 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 made just prior to the student's moving into the assigned hall and are based upon roommate preferences, date of application, special health or physical requirements and other information supplied by the student.

Deposits, Cancellations and Refunds

Students making application and later deciding they do not want accommodations must cancel their reservations by notifying the Director of Housing & Dining 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 \$60. Deadlines for the payments are July 1 for fall quarter, or two weeks after the assignment is made. The \$60 security deposit will be retained by the University as a damage and/or reservation deposit as long as the student lives in the Housing system.

Once the agreement is signed and the security deposit is made, cancellation of a reservation cannot be made without forfeiture of the entire deposit. The reservation deposit may be refunded by decision of the Director of Housing 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 telephone service, television-FM cable and parking.

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 Housing Office will assist with the assignment process. A \$60 non-refundable 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. 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, telephone service, television cable and extra storage space are provided at no additional cost.

Phoenix Court apartments are leased by the University and offer student accommodations in three separate complexes adjacent to the south part of the campus. A total of 44 apartments are available. All are unfurnished and tenants pay all utilities but water, sewer and garbage. A \$100 per unit deposit is required to reserve an apartment.

The 22 apartments at 2305 Douglas Avenue are reserved for families only. The six units at 2300 Douglas are available to single students as are the 15 units at 2111 Knox Avenue.



COSTS

The following housing rates are in effect for the 1980-81 academic year:

Double room and 21 meals per week, academic year _____	\$1,680
Double room and 15 meals per week, academic year _____	\$1,655
Double room and 10 meals per week, academic year _____	\$1,605

Quarterly rates and single room rates (when available) are higher. Room and board rates for 1981-82 and 1982-83 should be calculated to increase by an allowance for the current rate of inflation.

Apartment rates for the 1980-81 academic year are as follows:

In Birnam Wood the academic year rent is \$675 *per person* with four people to a unit.

In Buchanan Towers and Fairhaven apartments the *unit rent* is \$2,400 for the academic year.

At Phoenix Court the academic year rent ranges from \$1,380 to \$3,300 *per unit* depending on the unit's size and its location.

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 Housing Office, 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 Washington University is committed to helping each student benefit from the potential inherent in a university education.

The basic responsibility of the Division of Student Affairs is to provide each student every opportunity possible to evolve into the fully functioning, responsible and productive individual central to the goals of the University.

Western's Student Affairs professional staff offers services and assists students in developing an extensive variety of activities and programs so that full advantage can be taken of the University's diverse learning opportunities. Services include financial assistance, a health center, academic advisement, personal counseling, career planning and placement, and support services for minority, international, handicapped, veteran and returning women students. The broad range of co-curricular learning experiences — many of them initiated and administered by students — includes recreational, educational and social activities in the Viking Union, as well as in the residence halls and at off-campus sites.

ACADEMIC ADVISEMENT CENTER

The Academic Advisement Center provides a variety of academic advisement services with emphasis on the pre-major student. Areas of service include new and returning student academic orientation, general advisement for the pre-major and pre-professional student as well as special advisement support for students experiencing academic difficulties. The Academic Advisement Center assists students in planning to fulfill the General University Requirements and in exploring the curricular choices of the University, especially those students undecided about a major or contemplating a change. Services include the following:

For all students:

- Administration of the scholastic standing process
- Mid-term separations and exit interviews

For new students:

- Assistance in developing awareness of Western's curricular offerings
- Appropriate contact with departmental or pre-professional faculty advisers
- Peer adviser assistance during the registration process
- Updating advisement for students returning to Western after an extended absence

For continuing students:

- Drop-in center for individual concerns as they arise
- Referral to appropriate departmental major advisers
- Specialized advisement for pre-professional majors
- Assistance in clarifying academic goals
- Assessment of advisement needs or learning problems and referral to such campus resources as the Writers Clinic and the Reading and Study Skills Center

Since Western's various colleges, schools, and programs offer academic advisement, students should also review the pertinent sections of this General Catalog and contact appropriate individuals in the college, school or program of their choice.

The Academic Advisement Center, located in Old Main 275, is open daily from 9 a.m. to 4 p.m.

CAREER PLANNING AND PLACEMENT CENTER

Western's Career Planning and Placement Center focuses on the full continuum from career

Student Affairs

planning to placement. Major services include student 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 assisted to think and 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 be 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 certificates at Western or who have earned 30 or more credits at Western may also use the Center's placement services.

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, located in Old Main 280, is open from 9 a.m. to 4:30 p.m., Monday through Friday.

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 planning 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 staff of Health Service, located at High Street Hall 25, consists of a physician, registered nurses, office assistants and student employees. The Health Service is open weekdays when classes are in session from 8:30 to 11 a.m. and from 1 to 4 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 medical 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; free venereal 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 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 and Injury policy 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 only during the first week 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 students;
- (b) A negative tuberculin skin test or chest X-ray documented by a physician or 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.

Medical Leaves of Absence

Students are encouraged to discuss absence from courses for medical reasons with their instructors.

All medical leaves of absence are issued through the Health Service, where the student must be seen by a nurse or physician at the time of the illness. If an accident or emergency illness requires the student's absence, the Health Service should be notified by phone.

Verifications of medical leave of absence are mailed to each instructor, the Office of Student Life, the Registrar, the student and any other office designated by the student.

HOUSING AND RESIDENCE LIFE PROGRAMS

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

Student Affairs

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. *Residence hall staff positions* are available each year to students who demonstrate an ability to work effectively with others in activity planning and para-professional advising. Student leadership experience through *membership on the Inter-Hall Council* is another avenue for contributing to a healthy on-campus living environment. Students may also obtain *membership on residence hall governing boards, campus committees, or special activity task forces*. All of these opportunities provide practical leadership experiences, as well as student involvement in the shaping of a total program of residence education.

OFFICE OF STUDENT LIFE

The Office of Student Life is the University's information and referral center for students. Questions or concerns about academic or personal issues are welcome. Assistance is available either directly or through referral for virtually any student concern. Leaves of absence from school for personal emergencies may be arranged here. Professional staff also assist in various support services for different student populations and a wide variety of student programs.

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

Classes are offered to assist students with study habits, interpersonal relations, writing research papers, career development, graduate school and the opportunity to communicate and share with minority students and administrators.

Disabled students may obtain readers, note-takers, tutors and sign language interpreters; career choice and placement counseling; volunteer job experience, off-campus internships, part-time employment; academic and personal advisement; information regarding parking privileges and transportation; and liaison with such state agencies as Vocational Rehabilitation and State Services for the Blind through the Office of Student Life. The study room of Western's

library contains tape recorders, record players, braille dictionaries, and special devices for magnifying print. The Office of Student Life coordinates the taping of classroom materials, a service provided by the State Library Service for the Blind.

International students may obtain academic and personal advisement as well as immigration information from the Office of Student Life. To enable international students to become acquainted with people in the community, the Office of Student Life arranges for host families. Information about the University's International Club also may be obtained in this office.

Older returning students who are attempting to balance class loads, employment demands and family responsibilities may seek information resources in the Student Life Office. Child care listings, current information about community and University services, leave of absence arrangements for family emergency and time-saving referrals when problems arise are available.

Many educational programs which address areas of special student concern are coordinated by the Office of Student Life. Leadership, personal relationships and human sexuality are among the many issues for which programs are developed. Students seeking assistance — personally or for others — regarding alcohol and drug use or abuse may find advice and information in this office.

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; A.S. Community Recycling Center; Men's Resource Center, and a Cooperative Day Care Center.

Club Sports

Competition and/or involvement is offered through the Club Sports program of the Associated Students in rugby, soccer, sailing, chess, lacrosse, fencing, scuba, karate, softball, ice hockey, skiing, swimming, water polo, and indoor recreational games. All 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 Office of Student Life.

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, snow-shoeing, 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, sign-up sheets for trips, informal courses, 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 Equipment Rental Shop.

Program Commission

From rock to Rembrandt, 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 a dance program are regularly provided by the Program Commission. In addition, it presents concerts and speakers such as the Arts Ensemble of Chicago, Gordon Bok, Warren Farrel, Arlo Guthrie, George Benson, James Cotton, Chuck Mangione, Daniel Ellsberg, Bonnie Rait, John Klemmer and Cecil Andrus — 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, operated by the Associated Students, which offers sailing, canoeing, swimming, boating and picnicking. 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 University, 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 50 different organizations exist within the Associated Students including groups such as the Black Unified Society, Political Science Association, International Folk Dancers, International Club, Women's Center, Society of Automotive Engineers, Society of Plastic Engineers, 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/smokecshop, a delicatessen, commercial bank, art gallery, games room, typing room and vending area.

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, 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 Association for Intercollegiate Athletics for Women and the Northwest College Women's Sports Association.

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, women, and co-recreational teams in volleyball, basketball and softball. Tournaments for such sports as racquetball, handball and badminton are held quarterly, while special sport events are offered throughout the year. The pool, weight room, gymnasiums, and playing fields are scheduled for co-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 English and Journalism 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 Journalism, Speech and Technology Departments.

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 B 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 (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 Entrance Examination Board Advanced Placement Examinations in certain subjects. The department concerned determines the minimum acceptable score.

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 (9 credits)
Biology	Biology	Biology 122, 123 (6 credits)
English	English	English 101, 201, 203 (12 credits)
Foreign Languages	German Language Spanish Language French Language	German 102, 103 (10 credits) Spanish 102, 103 (10 credits) French 102, 103 (10 credits)
History	American History European History	History 103, 104 (American History 10 credits) History 113, 114 (European History 10 credits)
Mathematics & Computer Science	Mathematics Calculus AB Mathematics Calculus BC	Math 124 (5 credits)
Music	Music Listening and Literature	Music 140 (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.

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 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 number 417 is reserved for *Senior Seminar or Special Topics* (1-6). Topics vary. Repeatable with different subjects.

The number 445 is 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). Individual study. To enable 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.

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

A student's academic work is recorded quantitatively in credits and qualitatively in grades.

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.

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.).

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 eli-

gibility, 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 five-day 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. Excuses may be granted by the Health Service or authorized University personnel. 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.

WITHDRAWAL FROM A COURSE

To withdraw from (drop) a course, a student must obtain his or her admit-to-class card from the pertinent department and file it, together with a Change-of-Program form, in the Registrar's Office. Discontinued attendance without official withdrawal results in a failing grade (Z).

Course withdrawal during the five-day 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 last week of instruc-

Academic Policies

tion prior to final examinations 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 four and five of the six-week session and during weeks four 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 circum-

stances 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, one by the faculty member, and one is filed with the chairperson of the academic department involved.

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.

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.

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 Advisement 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 30 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 members of the student affairs staff.

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) a new freshman whose first quarter grade average is below 2.00 and (b) any other 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 in academic probation. Such a student is in danger of academic dismissal and must make immediate improvement in his or her grade average (see below).

Continuing Probation. A student who begins a quarter on probation and, during that quarter, earns a grade average of 2.00 or higher without raising his or her cumulative grade average to at least 2.00 is placed on continuing probation. The student must then improve his or her cumulative grade average to at least 2.00 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 and Huxley colleges) rests with the Scholastic Standing Committee. Petitions for reinstatement and appointments with the Scholastic Standing Committee are available in the Academic Advisement 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.

A student who is dropped from one of the colleges and wished admission to another college must follow the normal admission procedures.

Certain restrictions govern students on academic probation. They are not eligible for remunerative employment on campus; they may not hold an elective or appointive office in any student organization or appear in any performance before the student body or at any conference or as a member of any team or organization.

ACADEMIC GRIEVANCE POLICY

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

ENGLISH PROFICIENCY

Reasonable proficiency in the use of the English language is expected of entering freshmen. Students whose entrance test scores are below the standard set by the University are required to complete English 100, *Review of Syntax and Usage*, before registering for English 101.

MATHEMATICS PROFICIENCY

Proficiency in mathematics is expected of entering students. It is prerequisite to all university-level mathematics courses. Students must meet certain minimum requirements as measured by the Washington Pre-College Test. Those who enter with a deficiency are required to remove that deficiency prior to enrollment in a fourth university quarter.

Students failing to meet minimum mathematics standards on the Washington Pre-College Test may remove their deficiency by obtaining a satisfactory score on a re-test offered once each quarter. The Center for Continuing Education

offers a non-credit review course in mathematics for those who need additional preparation for the re-test.

Transfer students with credit in any college-level mathematics course, transfer students with 40 or more credits and students with credit for four years of college preparatory mathematics in high school are considered to have satisfied this requirement.

STUDENT RECORDS POLICY

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



UNIVERSITY GRADUATION REQUIREMENTS

GENERAL REQUIREMENTS FOR BACHELOR'S DEGREES*

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. (Please note that some baccalaureate degree programs require credits in excess of 180 for completion. 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)
- Approved academic major
- General University Requirements (see following section)
- Scholarship meeting minimums prescribed by the university divisions and academic departments

*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.

Correspondence credit earned through a fully accredited college or university may be accepted toward the bachelor's degree up to a maximum of one-fourth of the credits required. Students in residence may not register for these courses except by special permission from the Registrar.

Transferring between undergraduate divisions of Western Washington University requires being admitted according to the procedure of the receiving division. Students may be a member of only one division at a time.

Students considering teacher education are advised to contact the School of Education Admissions and Advisement Office, Miller Hall 202, as early as possible for advisement on the professional studies portion of their programs.

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 students see appropriate college section.

General University Requirements must be completed by all candidates for baccalaureate degrees except where the student has demonstrated proficiency through an acceptable college-level examination or through challenge procedure (see "Advanced Placement and Course Challenge" in the Academic Regulations section of the catalog). 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 certain 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 incoming students are urged to complete Block A of the Communications section of the General University Requirements during their freshman or sophomore years.

A. ENGLISH 101, Language and Exposition (4) (Waived for students demonstrating high English competency on Washington Pre-College Test, ACT or SAT.) English 101 must be completed with a "C" or better.

B. One course from the following:

ENGLISH 201, Introduction to Fiction with Composition (4) 202, Introduction to Drama with Composition (4); 203, 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 (2); 220, Survey of Art History I (3); 230, Survey of Art History II (3); 240, Survey of Art History III (3).

CLASSICAL STUDIES 350, Greek and Roman Mythology (3) (not both Classical Studies 350 and Liberal Studies 232 may be taken for GUR credit).

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) (not both English 336 and Liberal Studies 235 may be taken for GUR credit).

FOREIGN LANGUAGES, any foreign language course numbered 200 and above and involving actual instruction in the foreign language.

HISTORY 103, Introduction to American Civilization (5); 104, Introduction to American Civilization (5); 111, Introduction to Western Civilization (Prehistory to 476) (5); 112, Introduction to Western Civilization (476-1713) (5); 113, Introduction to Western Civilization (1713 to Present) (5); 267, Christianity in History (5); 347, European Intellectual History (5).

INTERDISCIPLINARY ARTS 110 (3)

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) (not both Liberal Studies 232 and Classical Studies 350 may be taken for GUR credit); 235, The Biblical Tradition (4) (not both Liberal Studies 235 and English 336 may be taken for GUR credit); 242, Music and the Ideas of Western Man (4); 332, Universal Religions: Founders and Disciples (4).

MUSIC 140, The Art of Listening to Music (3).

PHILOSOPHY 111, Introduction to Philosophy: Philosophic Problems (3); 112, Introduction to Philosophy: Moral Philosophy (3); 113, Introduction to Philosophy: Philosophy of Religion (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, Introduction to the Dance (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).

BUSINESS ADMINISTRATION 271, Law and Business Environment (4). (no more than one of Business Administration 271, Fairhaven 270 and Political Science 311 may be taken for GUR credit).

ECONOMICS 203, Principles of Economics II: Introduction to Micro-Economics (5); 204, Principles of Economics I: Introduction to Macroeconomics (4).

FAIRHAVEN 270, The American Legal System (5) (no more than one of Fairhaven 270, Business Administration 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).

HISTORY 346, Technology and Society in Early European History (5).

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)

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) (no more than one of Political Science 311, Fairhaven 270 and Business Administration 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); 361, Indians of North America (5); 362, Peoples of Asia (5); 363, Peoples of Africa (5); 364, Peoples of East Asia (5); 365, Peoples of the Middle East (5).

EAST ASIA 301, 302, 303, The Cultures of East Asia: The Early, Middle and Recent Periods (4 each).

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); 280, Introduc-

tion to East Asian Civilization (5); 281, Introduction to East Asian Cultures (5) (no more than one of History 280 or 281 may be taken for GUR credit); 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); 375, The Indian in American History (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, Modernization and the Place of the Individual in the Non-European World (4); 373, Strategies and Visions of Modernization in the Non-European World: Conservatives, Reformers, Revolutionaries (4).

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

PSYCHOLOGY 219, The Psychology of Sex Roles (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.)

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

To satisfy this requirement, successfully complete any one mathematics course numbered 105 or higher or any one computer science course.

or

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

or

Students with two years of high school mathematics may take Mathematics 103, Algebra (5), and then substitute Philosophy 102.

SCIENCE

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

- I. 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 AND ASTRONOMY—
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); Astronomy 103, Astronomy for Liberal Arts (4).

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

ANTHROPOLOGY 215, Introduction to Biological Anthropology (5).

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 201, Environmental Studies: A Scientific Approach (3).

PHYSICS 242, Physics with Calculus II (5); Astronomy 315, Solar System Astronomy (4); 316, Stellar Astronomy (4).

- II. Complete one of the following sequences:

BIOLOGY 121, 122, 123.

CHEMISTRY 121, 122, 123.

GEOLOGY 211, 212 and one of 310, 316, or 360.

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

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 only. All students who have graduated the fall and winter quarters immediately preceding and those who have applied for graduation for spring quarter and the subsequent summer quarter are invited to participate. An informal mailing is forwarded to all eligible students early in the spring.

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:

- Aquatic Studies
- Center for Continuing Education
- Field Experience
- Foreign Study
- Honors Program
- Professional Transfer Programs

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

AQUATIC STUDIES

The Aquatic Studies Program maintains both fresh and salt water related research and instructional facilities to augment regular curricular programs. Operations include research, technical assistance, analytical and monitoring capacities. Offices are located in the Environmental Studies Center and at the Leona M. Sundquist Marine Laboratory at Shannon Point. The Sundquist Laboratory is managed for a consortium of state colleges and community colleges. Located on Fidalgo Island, 44 miles from the WWU campus, it operates year-round and is used primarily for undergraduate instruction and research.

CENTER FOR CONTINUING EDUCATION

The Center for Continuing Education makes Western's courses and degree programs available off campus; develops special workshops, conferences and institutes; and thus extends Western's resources and increases Western's service to the State of Washington.

Learning opportunities available through the Center for Continuing Education enable adults throughout the state to upgrade their occupational skills, to acquire new skills, and to pursue a variety of special interests on a part-time basis. These opportunities are available not only on campus and through field centers in Bellingham and Seattle, but also in more than 50 other localities.

University credit may be earned in a wide variety of evening courses on and off campus; many courses may be audited. Western also cooperates with the state's community colleges, supplementing their curricula so that undergraduate degree courses are available to students and adults in community college areas. In a variety of locations, the Center also makes available Western's graduate courses and programs for public school teachers and administrators. *Independent Study* opportunities offered through the Center make many of Western's courses available by mail. *Non-Credit Programs* include courses, workshops, conferences, and seminars available on request by individuals, by committees, or by public, private and governmental agencies. Each non-credit program is tailored to the needs of its participants, and each usually involves adult learners, faculty members, visiting scholars, and specialists from business, industry and government.

For further information, contact the Center for Continuing Education.

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 fulfillment 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 year-around liberal arts study abroad programs in Great Britain, France, Germany, Spain and Mexico, as well as other countries during specific quarters. 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. 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. 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 ability 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.

Students selected for honors work participate in much of the General University Requirements program required of all degree candidates, but are responsible to the director of the Honors Program for the precise determination of their programs. Substitutions or waivers of some required courses may be approved on the basis of individual needs. The director of the Honors Program and the student's major department have joint responsibility for upper-division course requirements.

The four-year Honors Program involves both general honors courses and more specialized work within the major department. The program also enables students to prepare alternates to the General University Requirements, to undertake more independent study and to develop contracts for graduation.

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 3.7 or above.
3. Faculty recommendation.

Quarterly Courses of Study

Seminars: Usually two or three credits; small groups of students and faculty who meet to study an area in depth. Several seminars are offered each quarter, titles of past seminars including "Socrates and Jesus," "The Common Law Tradition," "Philosophy of Science," "Geologic Hazards" and "The Russian Novel."

Independent Study: Individual work with a concentrated area of study related to the student's major or minor, not necessarily completed on campus. Past examples include working with the ACT Theatre Company in Seattle, studying medieval architecture in Europe, and studying the Russian language.

All University Programs

Special Majors, Course Waivers, Early Graduation: General University Requirements may be waived in lieu of a relevant seminar. Advanced placement exams are available by arrangement with the Testing Center. Students may propose a major or major-minor concentration not listed in the catalog. Such majors are prepared in detail by the student with the help of faculty in concerned departments, and constitute a contract for graduation. In some cases, graduation with fewer than 180 credits is warranted.

The student who has developed his or her own major or who has completed alternate work for General University Requirements should check with the Honors Office prior to the Registrar's senior evaluation. Notice of work in honors will be forwarded to the Registrar.

Policies within the Honors Program, independent studies, recommendations for graduation with honors, and senior theses must be approved by the Honors Board. The Honors Board consists of the director, who chairs the board, and selected faculty and honors students.

Requirements for Graduation with Honors

In addition to (or in some cases, in lieu of) the requirements for graduation from WWU, the honors student must have completed the following:

- A minimum of 12 credits in honors (seminars or independent study); 20 credits of honors work is more typical.
- A minimum of two years in the Honors Program.
- An all-university grade point average of not less than 3.5 for the last 90 credits before graduation.
- A senior thesis approved by the student's thesis adviser and department chairman. The thesis must be signed and delivered in proper form to the Honors Office three weeks prior to expected graduation. (The thesis proposal should be presented to the Honors Board three quarters prior to expected graduation.)

Honors Courses (Non-departmental)

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

150 - 159	SEMINAR (2-4 ea)
250 - 259	SEMINAR (2-4 ea)
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 programs have been developed to assist students who seek preparation in fields which require degrees not available at Western. Early contact with the on-campus program adviser and with the college, university or professional school is strongly recommended. Completion of the recommended prerequisite courses in no way guarantees admission to the degree program, as final acceptance and application of transfer credit are made by the institution to which the student transfers.

Programs listed below are coordinated by the Academic Advisement Center where catalogs from other in-state colleges are available and assistance in clarifying transfer procedures is offered. Catalogs from colleges outside the State of Washington are available in the Office of Admissions. A list of the prerequisite courses for the transfer programs is available from the on-campus program adviser listed following each of the transfer programs. Programs undergo constant revision, however, and as changes occur program recommendations become outdated. The student, therefore, must bear responsibility for continued contact with the on-campus adviser and with the transfer institution.

Coordinator of Professional Transfer Programs:
Mr. Jay-A. Walker, Office of Admissions

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.

Baccalaureate programs are available at Eastern Washington University and at the University of Washington. Because positions at these schools are limited, early communication with the Department of Dental Hygiene at the school of your choice is strongly urged. A list of prerequisite courses which will transfer 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 make personal contacts with a dental school early in the program. The following courses should be included in programs leading to dental school application:

- Biology 121, 122, 123
- Chemistry 121, 122, 123, 351, 352, 353, 354, 355, 471, 472
- Physics 131, 132, 133
- Electives: Equally important is a background in the social sciences and humanities. Psychology, sociology, economics, English literature, anthropology and philosophy are excellent scientific and humanistic studies for pre-dental students. Although there are no firm requirements in these areas, it is suggested that pre-dental students take a minimum of 30 quarter credit hours divided among three or more of the above areas.

A prior degree is recommended although not necessary for admission to the University of Washington School of Dentistry. A minimum of 135 pre-dental quarter credits is required. Currently students accepted have completed an average of more than 180 quarter credits.

There is no apparent advantage in transferring to the University of Washington before applying to the Dental School, as Western students have been admitted directly into their program.

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

Engineering

Schools or colleges of engineering at most universities emphasize course requirements in mathematics, the physical sciences and communications. These are the base upon which all engineering curricula are constructed. After the first year, curricula for the various specializations — electrical, mechanical, chemical, civil, etc. — include general requirements and introductory courses. Usually admission to a college or school of engineering requires above average academic performance and greater depth in introductory courses than is required for a liberal arts program. Since engineering colleges generally require additional courses distributed in social sciences and the humanities, students should select such courses from Western's offerings as their schedules allow.

High school students who wish to major in a field of engineering in college should include high school courses in elementary functions or algebra IV as well as trigonometry, physics and chemistry.

Recommended freshman year curriculum:

- Chemistry 121, 122
- English 101, 301 or 302
- Mathematics 124, 125, 126
- Physics 241, 242
- Technology 210

Students not prepared to take Mathematics 124 or Physics 241 should develop an alternative course of study with the program adviser.

Program Adviser: Mr. Jay A. Walker, Office of Admission

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. Close consultation with the program adviser is essential.

All University Programs

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 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 are desirous that students have proficiency in oral and written communications, an understanding of human, political, economic and social institutions, and well-developed objectives 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 highly 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 years (not later than February).

Program Advisers: Dr. John Moore, Department of Business Administration; Dr. John Wuest, Department of Political Science

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.

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 graduate requirements, selection of an academic major, course sequences, AMCAS applications, scheduling of the MCAT, and other pertinent information. Pre-med students are strongly advised to establish a file in the office of the program adviser so that an on-going record of their academic records and recommendations can be developed.

Recommended freshman year curriculum:

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

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

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

Nursing

See the Department of Nursing section of this catalog.

Occupational Therapy

Students wishing to earn a Bachelor of Science degree in occupational therapy may complete their prerequisite courses at Western. Since graduation requirements vary among institutions, students should obtain specific information concerning them prior to their first term of enrollment. The Western curriculum includes courses which will prepare students for transfer into the occupational therapy programs at the University of Puget Sound and the University of Washington. Students should be aware that admission into these programs as well as into other programs in occupational therapy is highly selective.

Program Adviser: Mr. Jay A. Walker, Office of Admissions

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 121, 122, 123
- Chemistry 121, 122, 123
- English 101, 301 or 302
- Mathematics 105, 124 or 220
- Speech 101
- General University Requirements from the Humanities and/or Social Sciences to total 9 quarter credit hours

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 (see the Department of Physical Education).

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



Puget Sound and the University of Washington. Students should consult with the program adviser prior to their first term of enrollment.

Program Adviser: Office of Admissions

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 272, 371, 373, 473, 475
- 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, 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.

Recommended freshman year curriculum:

- Biology 121, 122, 123
- Chemistry 121, 222, 123
- English 101, 301 or 302
- Mathematics 105
- Physics 131, 132, 133

Other Western courses which are required for admission include Biology 310, 312, 345; and Huxley 352, 452.

Program Adviser: Dr. Herb Brown, Department of Biology

SCHOOLS & COLLEGES OF WESTERN

COLLEGE OF ARTS AND SCIENCES

Dr. James W. Davis, Dean

The College of Arts and Sciences, Western's largest academic division, contains 22 departments offering more than 60 major programs at both bachelor's and master's degree levels. In addition to traditional majors in the humanities, social sciences and natural sciences, students may select from a variety of interdisciplinary programs or design their own majors with the help of faculty advisers.

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 College'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

American Studies	BA
Anthropology	BA, MA
Biology	BA, BS, MS
Biology/Chemistry	BA, BA/Ed
Biology/Math	BS
Biology/Physical Science	BA/Ed
Broadcast Communication	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
English	BA, MA, BA/Ed
Environmental Geology	BS
Foreign Languages	
(French, German, Greek, Latin, Russian, Spanish)	BA
(French, German, Latin, Russian, Spanish)	BA/Ed
(French, German, Spanish)	M/Ed
Freshwater Studies	BS
General Science	BA/Ed
Geography	BA, MS, BA/Ed
Geography/Social Studies	BA/Ed
Geology	BA, BS, MS
Geology/Math	BS
Geophysics	BS
History	BA, MA, BA/Ed
History/Social Studies	BA/Ed
Home Economics	BA, BA/Ed
Industrial Arts Education	BS, M/Ed
Industrial Design	BS
Journalism	BA
Leisure Studies	BA
Liberal Studies	BA
Mathematics	BS, MS, BA/Ed
Mathematics/Computer Science	BS
Mathematics/Economics	BA
Natural Science	M/Ed
Nursing	BS
Philosophy	BA
P.E., Health & Recreation	BA, BA/Ed, M/Ed
Physical Geochemistry	BS
Physical Science	BA/Ed
Physics	BA, BS, BA/Ed

Schools & Colleges

Physics/Astronomy	BA
Physics/Math	BA, BA/Ed
Political Science	BA, MA, BA/Ed
Public Policy & Administration	BA
Psychology	BA, MS, BA/Ed, M/Ed
Science Education	M/Ed
Self-Designed Interdisciplinary Major	BA, BS
Social Studies	BA/Ed
Sociology	BA, BS, MA
Sociology/Anthropology	BA/Ed
Speech	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 Chairmen

Dr. James Bosch	Anthropology
Dr. Gerald F. Kraft	Biology
Dr. Donald M. King	Chemistry
Dr. Douglas B. Park	English
Dr. Jesse Hiraoka (Acting)	Foreign Languages
Dr. James W. Scott	Geography & Regional Planning
Dr. Charles Ross	Geology
Dr. Donald Eklund	History
Appt. Pending	Home Economics
Mr. R. E. Stannard Jr.	Journalism
Dr. William Stoever	Liberal Studies
Dr. Richard Levin	Mathematics/Computer Science
Dr. Ann Harley	Nursing
Dr. High Fleetwood	Philosophy
Dr. M. Chappelle Arnett	P.E., Health & Recreation
Dr. Ajit S. Rupaal	Physics & Astronomy
Dr. Ralph E. Miner	Political Science
Dr. Peter J. Elich	Psychology
Dr. E. R. Mahoney	Sociology
Dr. Larry Richardson	Speech
Dr. Michael Seilo	Speech Pathology/Audiology
Dr. Clyde M. Hackler	Technology

COLLEGE OF BUSINESS AND ECONOMICS

Dr. J. Ronnie Davis, Dean

Objective of the College

The major purpose of the College of Business and Economics is the production and distribution of knowledge 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.

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 four departments: Accounting, Business Administration, Economics, and Office Administration/Business Education. These departments are interdependent and their programs draw upon the whole College.

Department Chairmen

Mr. Ronald Savey Accounting
 Dr. Robert C. Meier Business Administration
 Dr. K. Peter Harder Economics
 Dr. Hubert N. Thoreson Office Administration/
 Business Education

Academic Programs Leading to Undergraduate and Graduate Degrees

Accounting BA
 Business Administration BA, MBA*
 Economics BA
 Business Education BA/Ed, M/Ed*
 Office Administration BS

*Consult the Graduate School for further details.

Joint Majors

Interdepartmental majors are given in Accounting-Computer Science, Accounting-Economics, Business Administration-Computer Science, and Economics-Mathematics. 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 in upper-division courses (300 and above) is given to students who have been officially admitted to the College.

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. For continuation in good standing, the student must maintain this GPA. (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. Transfer students may enroll in courses appropriate to a CBE major during the first quarter of their enrollment at Western. Continued enrollment, however, requires meeting the above criteria.

Applications for admission may be made directly to 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 departments
- General University Requirements must be completed before a baccalaureate degree is granted
- Majors: major area emphasis and require-

Schools & Colleges

ments 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 four departments, a minor makes an excellent addition to a specialized program in other areas of the University. This gives relevant, realistic, and applicable qualities to those valuable skills developed in other more abstract and theoretic departments. The combination of a minor with a major in Speech, English, Journalism, 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

Center for Economic and Business Research (CEBR). In addition to its regular academic programs and functions, the College of Business and Economics is involved in several other endeavors. The Center for Economic and Business Research is an agency designed to stimulate and support the research activity of the faculty and students. Opportunities exist for students to participate in current research.

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.

SCHOOL OF EDUCATION

Dr. Arnold M. Gallegos, Dean

The School of Education encompasses many departments within Western Washington University. These departments of the University cooperate in teacher preparation. The departmental sections of this catalog describe academic major and minor concentrations offered throughout the University. Faculty members from various departments concerned with the preparation of school personnel are members of the School of Education faculty, headed by the Dean of the School of Education. This organization provides a clearing house for exchange of information and an agency for coordination of departmental efforts in programs of teacher education.

The Department of Education, as the major component of the School of Education, is responsible for developing and offering professional studies and for coordinating the elementary programs. As a part of this responsibility it offers programs leading to both the B.A. in Ed and the M. Ed degrees.

In addition to the Education Department, the Human Services Program and the Center for Indian Education Specialists are also within the School of Education. The Human Services Program offers a B.A. degree in Human Services and the Center offers a non-degree certificate of study for counselor aides and teacher aides (see index for listings).

Professional Education Programs are developed and reviewed with the assistance of the Professional Education Advisory Board representing cooperating school districts and various professional associations.

Academic Programs Leading to Undergraduate and Graduate Degrees

See departmental listings for	
academic area programs	BA/Ed, M/Ed
Professional concentration (elementary)	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 may be available beginning fall, 1981.)

Teacher Certification Requirements

Washington State Provisional Certificate

The provisional certificate is valid for three years from the date of issuance, renewable for an additional three years after completion of a portion of the fifth year. (See fifth-year requirements for the standard [continuing] certificate.) For the first year, the provisional certificate is restricted to teaching at the level and/or subject area for which the teacher is recommended by virtue of his or her preparation.

Candidates for the provisional certificate must be citizens of the United States or must have declared their intent to become citizens. Non-citizens may complete the requirements for and receive the Bachelor of Arts in Education degree but will not receive a Washington Teaching Certificate.

Certification Patterns and the B.A. in Education

The B.A. in Education program at this University is designed to meet state requirements for the provisional certificate for all levels of the public schools. Teachers who complete these requirements may qualify also for certification in many other states.

Program requirements for the B.A. in Education degree and teacher certification may be classified in three categories:

- (1) General University Requirements for the B.A. degree.
- (2) Major and minor concentrations. Concentrations vary according to the student's choice of teaching level and/or subject area. (See departmental sections of the catalog for specific requirements in majors and minors.) Although a minor is not required for the B.A. in Education degree, elemen-



Schools & Colleges

tary teachers need both academic and professional concentrations to qualify for a teaching certificate.

- (3) Professional studies. Requirements in this category vary according to the program chosen and according to campus-based or field-centered options. Common to all are courses in educational foundations, educational psychology, instructional strategies and supervised teaching in a public school setting.

In the spring of 1981 WWU's certificate-related programs may be approved under the state's 1978 *Standards for Preparation and Certification*. Please check with the School of Education's Office of Admissions and Advisement, MH 202, about possible changes in requirements for those entering professional studies in fall, 1981.

Students desirous of certification who are pursuing a B.A. or B.S. degree in a specific area (e.g., biology, chemistry) should contact the major department and the Admissions and Advisement Office concerning the additional course work required.

Professional studies programs and course listings in education are found in the Department of Education section of the catalog.

Department Chairman

Dr. Richard O. Starbird Education

FAIRHAVEN COLLEGE

Phillip R. Ager, Dean

The College

Fairhaven College is an undergraduate division of Western Washington University. The purposes of the College include provision for the following:

- A small *learning community* designed to explore creative *alternatives* within higher education;
- Cooperation* with a larger institution and, through it, *affiliation* with the state system of higher education;
- An *innovative* and *trans-disciplinary* core curriculum;
- Opportunities for *non-traditional* and *inter-generational* learning experiences;
- Opportunities for an *Interdisciplinary Concentration* at Fairhaven or for a *major* in any unit of Western Washington University;
- Opportunities for *independent study*, field study and travel study;
- Processes for learning* how to learn and how to become responsible for self-generating, life-long education;

- Opportunities for the development of *creativity*;
- Education toward a *critical perspective* of the world;
- Opportunities for *participation* in college governance and administration.

Through these provisions, the College seeks to assist people in learning how to study, inquire, understand, communicate, experience and act in a responsible and independent manner.

The Student

Fairhaven College invites students who value independence of thought and action, and who want an education which helps them *make connections*:

- Between learners*. Fairhaven provides a creative and supportive atmosphere in which students, faculty and staff interrelate as a learning community.
- Between disciplines*. Students are encouraged to break out of conventional subject areas and to bring a variety of interrelated perspectives to bear on issues and problems of importance to themselves and their world.
- Between learning and the individual*. Many Fairhaven students design their own majors, and all relate their education directly to their own lives to make it personally meaningful.
- Between intuition and intellect*. At Fairhaven, the aesthetic and the analytical are complementary approaches to knowledge. Education is neither for the heart alone nor the head alone.
- Between knowledge and action*. Fairhaven students seek to develop an enlightened social consciousness, and to gain skills in critical thinking and communication, in order to provide worthwhile solutions to personal, social and environmental problems in "the real world."
- Between the past, the present and the future*. At Fairhaven, the past is prologue. We seek to understand the relation between what has been and what is; we strive to create a connection between what could be and what will be.
- Between avocation and vocation*. Fairhaven graduates have realized a connection between what they like to do and what they have to do to earn a living.



The Program

Curricular Stages

Education should consist in a continual repetition of . . . cycles . . . (students) must be continually enjoying some fruition and starting afresh. . . .

Fairhaven's curriculum, adapted from A. N. Whitehead, complements, directs and supports students at each stage of their progress and provides opportunity for wide exploration, intensive concentration and prospective generalization. It focuses on the learners and their development as well as on the content and process of education.

The curriculum comprises three stages of study which, together, sharpen the basic skills of thought and expression; broaden, deepen and integrate knowledge; and provide a context for sharing, summarizing and applying what has been learned.

- **Stage One — Exploration.** The first stage is a time to discover what's there to be learned, to unravel the possibilities, to frame questions. It is an introduction to various areas and methods of learning, a chance to study oneself in relation to intellectual and social experiences.
- **Stage Two — Precision and Specialization.** The second stage focuses on coming to know one field or problem area as deeply as possible. This may be pursued in two ways: (1) through a Fairhaven Interdisciplinary Concentration constructed by the student

in consultation with a faculty advisory committee; or (2) through a major discipline offered in another college of Western.

- **Stage Three — Generalization and Prospectus.** The third stage culminates in at least one quarter's study with faculty and other advanced students to demonstrate an understanding of knowledge gained and to search for ways in which one's specialization may be generalized to other fields or applied to society. Students are also expected to share their studies with the wider community.

Degree Requirements

- 180 credits, including at least 60 credits at the upper-division level
- Completion of all three curricular stages:
 - Stage I: 44 credits minimum.
 - Stage II: 55 credits minimum.
 - Stage III: 5 credits minimum.

The remaining credits required for graduation may be applied to any stage.

All three stages of the curriculum must be completed although students transferring from WWU or other colleges or universities may seek exemption from particular requirements upon entrance. Transfer students should consult the Fairhaven Admissions Adviser for credit evaluation and core program waivers.

Refer to the "Fairhaven College" section of this catalog for a description of the curriculum, graduation requirements, courses and studies.

Opportunities for Specialization

The Interdisciplinary Concentration (Specialization Leading to the B.A. Degree)

The Fairhaven Concentration provides a unique opportunity for developing the equivalent of a major. The advantages of the concentration lie in its recognition that interdisciplinary preparation is increasingly called for in the world today, together with the fact that it allows a student maximum flexibility in designing a program to meet individual goals — personal, academic, vocational.

Concentrations generally take two shapes: integrating fields represented by more than one discipline or centering on a single topic viewed through a variety of approaches. The program of advanced studies may include course work, special seminars, independent study, travel study and field practice; it should include at least 50 non-Fairhaven credits. A concentration adviser and committee of the student's choosing are responsible for assisting in the development, completion and evaluation of the concentration.

A more detailed description of the concentration, including suggested areas of study, is available upon request.

Majors in Other University Divisions (Specialization Leading to the B.A. or B.S. Degree)

Some Fairhaven College students find their area of interest covered by a major offered in another college of Western. Departmental majors are programs of study devised by specialists in disciplines which enable students to gain specific advanced training. (Refer to program descriptions in this catalog.) Appropriate departmental consultation and approval are necessary. Fairhaven faculty can assist students in making contact with various departments.

Professional Education (Specialization Leading to the B.A. in Ed. Degree)

Western's School of Education provides a choice of majors, including certain Fairhaven Concentrations appropriate to public school teaching, and administers a program for students who are interested in obtaining teaching credentials. Fairhaven faculty help to advise students and provide a channel of communication between the School and the College.

The Upside-Down Degree (Liberal Arts, Breadth Studies Leading to the B.A. Degree)

The usual route to a B.A. calls for "general education" to take place during the first two years and for the major area to be completed in the junior and senior years. Students who have an appropriate technical degree and a desire to continue their education may transfer their specialization and complete two years of exploratory and generalized studies at Fairhaven (Stages I and III of the curriculum). (Note: Candidates for admission to this program follow the same procedures as those seeking regular admission. The words "Fairhaven College, Upside-Down Degree" should be clearly written on the standard application form.)

Occasions for Enrichment

The Bridge Project

The Bridge Project with its intergenerational learning focus is one of the ways Fairhaven enriches and diversifies higher education. The major component of the project is the 55-plus age group residing on campus. "Bridgers" participate in classes, activities and workshops; some are studying for a bachelor's degree while others are "Resident Scholars." Questions about the program should be addressed to: *Bridge Project Director, Fairhaven College.*

Visitors

Visiting faculty, co-teachers and guests are brought to Fairhaven as a way of expanding the student's education through exposure to different ideas, viewpoints and personalities. These visitors meet with classes, give public lectures, offer workshops, and join students for informal discussion.

Residential Program, Workshops and Studios

Western's campus residence hall community includes the Fairhaven Complex. Special features of the program offer a broad variety of living accommodations, separate food service and coffee shop, and arts and crafts workshops. Questions about on-campus living should be addressed to: *Housing Office, Western Washington University.*

College-Sponsored Activities and Events

At Fairhaven, various groups of students, faculty and staff engage in a number of projects including educational symposia, professional publications, theatrical productions, media presentations, arts and craft fairs, dance workshops and public concerts.

Options for Graduates

Education is the guidance of the individual towards a comprehension of the art of life

Fairhaven's graduate surveys indicate that both admissions to graduate schools and job placements have been exceptional. Graduates have obtained positions in consulting firms, public school teaching, private business, federal, state and local governments, publishing houses, theatrical agencies, the military, and the professions including medicine, law and the ministry. Graduates have been admitted to Sarah Lawrence, Claremont, University of Chicago, University of California, Stanford, Harvard, Yale, University of Washington and many other prestigious graduate schools across the country.

Application for Admission

Students currently attending Western may transfer to Fairhaven fall, winter or spring quarter. New applicants to Fairhaven and 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 clearly written at the top of the form. The standard application and all transcripts should be sent to: *Office of Admissions, Western Washington University*.

We encourage campus visitations. Given advance notice, we can ensure individual appointments with the Dean, an admissions adviser, faculty, students or staff and various offices at Western.

Other Important Items

Information elsewhere in this catalog related to admission requirements, residency, tuition, financial aid, housing, student life, etc., is applicable to Fairhaven College students.

Requests for Supplementary Information about Fairhaven College should be addressed to: Office of the Dean, Fairhaven College, Western Washington University, Bellingham, Washington 98225.

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

Schools & Colleges

- (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, 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

Dr. Thomas Schlotterbach Art
Dr. Albert Shaw Music
Mr. Dennis Catrell Theatre/Dance

HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES

Dr. J. Richard Mayer, Dean

Huxley College was created in 1968 to develop programs of environmental studies that would bridge the traditional walls of individual disciplines. The College was named after Thomas Henry Huxley, the eminent British biologist. The following quotation from one of his grandsons gives a philosophical cornerstone:

Sooner rather than later we will be forced to get away from a system based on artificially increasing the number of human wants, and set about constructing one aimed at the qualitative satisfaction of real human needs, spiritual and mental, as well as material and physiological.
—Sir Julian Huxley, *The Humanist Frame*

Huxley College is principally an upper-division college offering two-year programs of undergraduate environmental study. The primary mission of the College is to shape programs of undergraduate education which reflect the broadest possible view of man in a physical, biological, social and cultural world. These programs seem to prepare students to recognize and understand environmental problems, to engage in inquiry and research that can provide insight into these problems, and to explore alternative solutions open to society. Huxley's programs are global in their frame of reference, innovative in their design, and problem-oriented in their outlook.

Academic Programs

Undergraduate

Huxley College offers programs of upper-division study leading to a Bachelor of Science or Bachelor of Arts degree in Environmental Studies. Bachelor of Science candidates in environmental studies may choose from four concentrations in two broad program areas:

Environmental Science

- Ecosystems Analysis
- Environmental Health

Environmental Affairs

- Social Assessment and Policy
- Environmental Education

A student/faculty designed concentration may also be developed.

Candidates for the Bachelor of Arts degree undertake a general program in environmental studies.

Huxley degree candidates may complete a second major and/or a minor in any other unit of the University by fulfilling that unit's specified major or minor requirements.

Huxley's concentrations are broadly conceived and allow students to elect course-work, 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; human ecology; environmental journalism; 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 Ecosystems Analysis, 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.

Graduate

While Huxley's primary mission is undergraduate education, the College is also committed to graduate studies and research. A cooperative graduate program has been established by Huxley College and the Department of Biology, College of Arts and Sciences, which leads to the M.S. degree with a specialization in Environmental Biology. The program focuses on application of the principles of biology to the understanding and solution of environmental problems. Program options and requirements are listed in the Biology section of this catalog. Interested students may write to Huxley College or to the Department of Biology, addressing correspondence to the Environmental Biology program. Applications should be made to the Dean of the Graduate School, Western Washington University.

Admissions

Huxley's upper-division degree programs are 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. In addition, interested freshmen and sophomores may be provisionally admitted to Huxley College. Provisional students are assigned faculty advisers to help plan their pre-Huxley programs and are encouraged to participate in all activities of the Huxley community. Western students are urged to apply for provisional admission to Huxley College as soon as they become interested in Huxley's degree programs in order to obtain advisement and to explore ways of participating in the activities of the college community.

Regular Admission — WWU Juniors

Admission of students into Huxley College is based upon satisfactory completion of 90 or more quarter credit hours (junior standing), a cumulative grade point average of at least 2.00, and completion of the following courses:

- Biology 121 — Introduction to Plant and Animal Biology (includes lab) (5)
and
- At least three additional Biology credits in a course numbered above 121
- Chemistry 115 — General Chemistry (5)
or
- Chemistry 121 — General Chemistry I (5) *Prereq: Math 103 or equivalent, or concurrent registration*
- Geology 211 — Physical Geology (5) *Prereq: high school or college chemistry*
- Math 121 — College Algebra (5) *Prereq: basic algebraic skills comparable to those described under Math 103; students should have either trigonometric skills comparable to those described under Math 104 or they should register for Math 103 concurrently*
- English 301 — Reading and Exposition (4) *Prereq: Eng 101*
or
- English 302 — Reading and Argumentation (4) *Prereq: English 101*
or
Demonstration of proficiency in English composition

All of the specifically numbered courses above satisfy General University Requirements.

Regular Admission — Transfer Students

Transfer applicants are encouraged, since Huxley's curriculum is mainly an upper-division pro-

gram. The first step in being admitted to Huxley College is application and admission to Western Washington University. All transfer applicants are evaluated by Western's Office of Admissions for transfer credit and for credit toward completion of the General University Requirements.

The second step is application to Huxley College on the form provided to WWU applicants who intend to major in environmental studies. Huxley applicants who have completed the following requirements will be admitted directly into the College:



- General biology: two college courses offered for science students; topics covered should include plant and animal evolution, cellular biology and genetics.
- General chemistry: a college course offered for science students.
- Physical geology: a college course offered for science students.
- College algebra: a pre-calculus college algebra course.
- English composition: a college course above the level of introductory composition, or demonstration of proficiency in English composition.

These courses may be one quarter, one semester or one trimester of work.

Students planning pre-Huxley programs at other colleges and universities should try, in filling these requirements, to complete equivalents of the WWU courses listed under *Regular Admission*, above.

Regular Admission — Transfers from Washington State Community Colleges

Students who have earned certain associate degrees from community colleges in Washington State are admitted to Huxley College if they transfer with 90 credits and have completed the course requirements listed above. Such students are considered to have completed the General University Requirements; prospective transfers should consult their community college counselor or the WWU Office of Admissions for information on which degree or degrees offered by their community college are accepted under this agreement.

Regular Admission — Students Holding Degrees from Other Institutions

Students holding associate degrees from community colleges outside of Washington State or from colleges within Washington State for which no agreement exists will be considered as transfer students (see above). Students holding the Bachelor of Arts degree from accredited colleges and universities and working toward a second bachelor's degree will be considered as transfers who have completed the General University Requirements.

Provisional Admission — Transfers and Western Students

Transfer students and Western students applying to Huxley College who have not yet reached junior standing or who are deficient in more than two of the courses required for admission will be provisionally admitted. Admission to

Huxley College will be granted when the student reaches junior standing and completes the courses required for admission, provided a cumulative grade average of at least 2.00 (C) is maintained. Provisionally admitted students are encouraged to participate in all activities of the Huxley community.

Requirements for Bachelor's Degrees

- 180 quarter hours of credit; no fewer than 60 credits in upper-division study, including:
 - The General University Requirements
 - The Huxley admission requirements
 - A Huxley College concentration, student/faculty designed concentration, or the general environmental studies major as specified in the Huxley College section of departmental listings;
 - 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 admission requirements, courses that define a student's major and concentration 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.

The Center for Applied Human Ecology / Appropriate Technology

This Center serves faculty and students interested in the technologies appropriate to applied human ecology.

Appropriate technologies meet human needs for basic goods and services with minimal environmental disruption. They include use of sun, wind, water and biomass for energy; use of greenhouses and organic farming for food; use of cooperatives for production and distribution; and development of settlement patterns appropriate for these uses.

Applied Human Ecology is the interdisciplinary effort of refitting human activities into an environment of finite resources and of returning government and economy to human scale.

The Center exists to encourage faculty members to share their research, ideas, information, and points of view; and to help students design interdisciplinary programs of study.

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 Technology — offer graduate study leading to one degree or another.

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. Increasingly, it is possible to combine off-campus study with a residential term at Bellingham and thus earn a master's degree. 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, pro-

fessional 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 avail-

able 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 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 following 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 year's residence study are at minimum \$7,000 (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 seven years before the awarding of the degree does not count toward the degree. All program require-

ments, 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.

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 pro-

grams. 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 credit is given 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.

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.

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 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.

The master's degree is earned at the end of the

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 standard certificate, and an advanced certificate for school administrators. Details are available from the Education Department.

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: Graduate courses taken by undergraduates do not count toward satisfaction of undergraduate degree requirements. 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

Anastasio, Angelo, PhD, cultural anthropology, history of anthropology, intergroup relations, plateau, music and culture.

Bosch, James W., PhD, social organization, North American Indians.

Grabert, G. F., PhD, new and old world archaeology, theory.

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
[1:12-20]

Anth 691 [1:3-6]

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

Specific Test Requirements

Graduate Record Examination, 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 speciality 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 ex-

empted. 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), 423, or 511 or their equivalents.
- (e) The language requirement.
- (f) The Graduate Record Examination, 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

Prerequisites

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

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

Ed 501, 512, 513	[I and II]
Ed 690	[I:6]

Graduate School

Specific Test Requirements

Graduate Record Examination — Aptitude and Advanced in Education; Miller Analogies 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

Broad, A. Carter, PhD, invertebrate zoology.
Brown, Herbert A., PhD, vertebrate zoology.
Dube, Maurice A., PhD, marine algae.
Erickson, John E., PhD, genetics.
Flora, Charles J., EdD, marine invertebrate zoology.
Fonda, Richard W., PhD, plant ecology.
Kohn, Hubertus, PhD, plant physiology.
Kraft, Gerald F., PhD, aquatic entomology.
Mason, David T., PhD, limnology.
Nickelson, Aiden L., PhD, science education.
Parakh, Jal S., PhD, science education.
Rhoades, Fred M., PhD, mycology.
Rifley, 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, microbiology.
Senger, Clyde M., PhD, mammalogy.
Slesnick, Irwin L., PhD, science education.
Taylor, Ronald J., PhD, systematic botany.
Williams, Don C., PhD, cellular and molecular biology.

Biology-Huxley Cooperative Applied Biology Program

Brakke, David F., PhD, limnology.
Kendall, Ronald J., PhD, environmental toxicology.
Smith, Gary C., PhD, vertebrate ecology.
Summers, William C., PhD, marine ecology.
Webber, Herbert H., PhD, applied marine invertebrate ecology.
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 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 Biology 493 (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 B.S. degree with a major in biology for a summary of expected preparation for graduate work.

Specific Test Requirements

Graduate Record Examination, Aptitude and Advanced in Biology; Miller Analogies Test.

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 Graduate Specialization

The Department of Biology and Huxley College of Environmental Studies have established a cooperative graduate program leading to an M.S. degree in biology, with a specialization in applied biology. This program focuses on the application of principles of biology to the understanding and potential solution of environmental problems. The thesis research must be on a problem of an applied nature; the thesis committee will be chaired by a professor from Huxley College.

BUSINESS & ECONOMICS

College of Business and Economics

GRADUATE FACULTY

Benson, Earl, PhD, finance.
Bryan, Cody, MBA/CPA, cost accounting.
Collier, Robert, PhD, finance/investments.
Concordia, Louis, PhD, quantitative methods.
Harder, K. Peter, PhD, economics.
Johnson, H. Thomas, PhD, managerial accounting.
Keleman, Kenneth S., PhD, behavioral science.
Mayer, Erwin S., PhD, labor economics.
Meier, Robert, PhD, operations analysis.
Mischaikow, Michael K., PhD, regional economics, comparative systems.
Mitchell, Howard E., PhD, money, financial markets.
Moore, John, PhD, business policy.
Murphy, Dennis, PhD, managerial economics/international finance.
Nelson, David M., PhD, macro-economic theory, money markets.
Olsen, Robert, PhD, finance.
Owens, Eugene, PhD, behavioral science.
Plumlee, E. Leroy, DBA, business environment.
Rieck, Robin, PhD, business, government and society.
Safavi, Farrokh, DBA, marketing/international business.
Sailors, William, MS/CPA, auditing theory.
Savey, Ronald, MBA/CPA, accounting theory.

M.B.A. — BUSINESS ADMINISTRATION, NON-THESIS

Program Adviser: Dr. Eugene Owens

The Master of Business Administration degree is a non-thesis program. It requires a minimum of 48 credit hours of course work and successful completion of a comprehensive examination.

Prerequisites

Completion of the undergraduate major or its equivalent. For post-baccalaureate students from a field other than business, some pre-MBA program preparation may be necessary or desirable. Such needs will be determined by the program adviser.

Specific Test Requirements

Graduate Management Admission Test.

Basic Requirements

MBA 511, 512, 513, 514, 515, 516, 518, 519 and 520, 521 (40)

Additional electives under advisement (8)
Written Comprehensive Examination

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

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

Specific Test Requirements

Graduate Record Examination — Aptitude and Advanced in Education.

Graduate School

Requirements in Specialization

Bus Ed 503, 504, 571, 572, 574, 600 [I and II:15]
Bus Ed 690 [I:6]

*Electives in Specialization

The following are suggested elective courses. Others may be selected with departmental advisement.

Bus Ed 500, 501, 545, 573; BA 401, 402, 403, 404;
Econ 410, 415, 445 [I:12 II:14]

*Electives in Related Areas

The following related area courses may be elected. Others may be selected subject to departmental advisement.

Ed 450, 451, 511, 516, 543; Psych 431, 524, 555
[II:7]

CHEMISTRY

College of Arts and Sciences

GRADUATE FACULTY

Besserman, Marion, PhD, physical 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., Jr., PhD, organic chemistry.
Lampman, Gary M., PhD, organic chemistry.
Miller, John A., PhD, science education/organic chemistry.
Neuzil, Edward F., PhD, physical chemistry/nuclear chemistry.
Pavia, Donald L., PhD, organic chemistry.
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. George S. Kriz, Jr.

Prerequisites

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

Specific Test Requirements

Graduate Record Examination, Aptitude and Advanced in Chemistry.

Requirements in Specialization

Thesis option: Chem 595 (2 credits), 690 (6 credits).

*A maximum of 10 approved credits at the 400 level may be applied toward the master's degree.

Non-thesis option: Chem 595 (2 credits), 694 (6-12 credits), 500 (6 credits).

In addition, all students must take at least one course from each of the following groups:

- Chem 561, 562, or 563
- Chem 551, 552, 553, or 554
- Chem 531, 541, or 542

Electives in specialization:

Thesis option: Courses under advisement to total at least 45 hours including basic requirements. At least 18 hours of approved electives must be at the 500 level or above.

Non-thesis option: Courses under advisement to total at least 48 hours including basic requirements. At least 15 hours of approved electives must be at the 500 level or above.

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) Ed 443 (3) The Community College (recommended)
- 4) 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.



EDUCATION

School of Education

THESIS AND NON-THESIS, ALL PROGRAMS

All M.Ed. programs include three core courses: Ed 501, 512, 513. Ed 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 Ed 501 for a student to continue in the master's program and be advanced to degree candidacy. 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 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).

M.Ed.—ADULT EDUCATION ADMINISTRATION / M.Ed.—STUDENT PERSONNEL ADMINISTRATION IN HIGHER EDUCATION

Program Head: Dr. Ray S. Romine
Program Advisers: Dr. F. Richard Feringer
Dr. John F. Utendale

M.Ed. — Adult Education Administration

(Contact person — 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:

- a. Salaried employees of Human Services agencies as described above; or
- b. 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*
- c. A bachelor's degree.

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

Graduation Requirements

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

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

Basic Requirements

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

Specific Test Requirements

Graduation Record Examination, Aptitude and Advanced in Education; Miller Analogies Test.

Additional Requirements in Administration/ Planning Specialization

Ed 576, Soc 540

Additional Requirements in Teacher/Education Specialization

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

Electives

Ed 445, 500, 511, 516, 533, 539, 547, 561, 562, 589, Psych 432.

M.Ed. — Student Personnel Administration in Higher Education

(Contact persons: Dr. Ray Romine or 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. Accordingly it is recommended that students plan for full-time enrollment.

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, Aptitude Test (prior to advancement to candidacy); Miller Analogies Test (prior to admission decision)

Basic Requirements (12 credits)
Ed 501, 512, 513

Requirements in Specialization
Core courses — Ed 556a, 556b, 557a, 557b, 557c, 558 (22 credits)

Research project — Ed 559 (6 credits)

Internship — Ed 592f (13 credits)

Electives (variable credit) to be selected under advisement. These credits are supplemental to the student's SPA program and may not be counted toward Graduate School minimums.

Recommended Courses:

- | | |
|--------------|--|
| Psych 320 | Industrial/Organizational Psychology |
| Psych 347 | Humanistic Psychology |
| Psych 420 | Advanced Industrial/Organizational Psychology |
| Soc 315 | Social Statistics |
| Soc 341 | Sociology of Organizations |
| Comp Sci 107 | Programming in BASIC |
| Comp Sci 110 | Introduction to Programming |
| BA 401 | Organization Behavior II |
| BA 404 | Organization Development |
| Ed 518 | Current Issues in Education (Adult Development and Learning) |
| Ed 577 | Learning Problems in Adults |
| Ed 578 | Curriculum Planning for Adult Education |

Additional Requirements in Teacher/Educator Specialization
Ed 577 (plus 5-10 credits in advanced work in content area of teaching).

Electives
Ed 445a, 500, 511, 516, 533, 539, 547, 561, 562, 589; Psych 432.

M.Ed. — ELEMENTARY

Program Head: Dr. Stewart Van Wingerden

Program Options	Adviser
Early Childhood Education	Dr. Roberta Bouverat
Curriculum & Instruction	Dr. Stewart Van Wingerden
Consultant/Supervisor	Dr. George Lamb

Prerequisites

Undergraduate preparation in elementary education and teaching experience.

- Basic Requirements**
Ed 501, 512, 513 [I and II:12]
Ed 533b, 690 [I:6-9]
Ed 521, 632 [I and II:8]
Two courses from
Ed 531, 532 and 533 [I and II:8]



Specific Test Requirements
Graduate Record Examination, Aptitude and Advanced in Education; Miller Analogies Test

Areas of Specialization
The program consists of the systematic, scholarly 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, Aptitude and Advanced in Education; Miller Analogies Test.

- Courses**
Ed 501, 512, 513 [I and II:12]
Ed 690 [I:6]

High School-Middle School Specialization

Program Advisers: Dr. Don W. Brown
Dr. Peter J. Hovenier

Prerequisites
Approval of application by program adviser based on academic record and recommendations. Successful teaching experience in grades

Graduate School

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

Ed 481, 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 Advisers: Dr. Peter J. Hovenier
Dr. Mary Watrous

Prerequisites

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

Requirements

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

Ed 500 (to be used for research background)

Concentration of content electives under advisement: [I and II:10]

Electives

Under advisement [II:6]

M.Ed. — READING

Program Head: Dr. Theodore A. Mork

Basic Requirements

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

Ed 690 [I:6]

Specific Test Requirements

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

Requirements in Specialization

Ed 584, 587, 594e,f,g or e,f,h, 586 [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: Ed 424, 439, 462, 464, 473, 481, 484, 486, 488, 581, 583, 585, 589, Eng 470, Psych 457.

M.Ed. — SCHOOL ADMINISTRATION

Elementary, Secondary, Learning Resources

Program Head (Elementary, Secondary)

Dr. Paul Ford

Program Advisers:

Dr. William Miles

Dr. Len Savitch

Mr. Val Spangler

Program Head (Learning Resources):

Dr. Flora Fennimore

Prerequisites and Specific Test Requirements

Course background appropriate to level of specialization.

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

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

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

Ed 690 [I:6]

Specific Test Requirements

Miller Analogies Test (prior to admission decision); Graduate Record Examination, Aptitude Test and Advanced in Education (prior to advancement to candidacy)

Requirements in Specialization

Ed 541a, 543a, 544a, 549 [I and II:12]

Ed 542a,b,c,d [II:6]

Electives in Specialization

Emphasis on specialized field(s): law, negotiations, finance, personnel, systems management, administration of learning resources [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, including six credits of field project. Option III involves 50 to 56 credits of course work and a comprehensive examination in School Administration.

Principal's Provisional Certificate

Candidates for the Washington State Provisional Principal's Certificate must have three years of successful teaching experience, a valid Washington State teaching certificate and a master's degree in school administration. A 9-credit internship is required in addition to the master's degree.

Individuals who have three years of teaching experience, a valid Washington State teaching certificate, and a master's degree in a field other than school administration may become eligible for the provisional principal's certificate by completing 24 credits of course work under advisement as well as a 9-credit internship.

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

Principal's Standard Certificate

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

Certificate of Advanced Study (CAS)

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

Cooperative Doctorate in School Administration

Washington State University in cooperation with Western Washington University offers a program leading to the Ed.D. or Ph.D. in school administration for highly qualified individuals who already hold the master's degree in school administration. The degree is granted by Washington State University.

The program includes one summer of full-time study and three quarters of part-time study at WWU followed by two summers and one academic year of full-time study at WSU. The second summer, at WSU, involves work related to the preliminary examination and doctoral dissertation. Information is available from the WWU Graduate School or the Dean of the School of Education.

M.Ed. — EXCEPTIONAL CHILDREN

Program Head: Dr. C. Max Higbee

Prerequisites

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

Basic Requirements

Ed 501, 512, 513 [I and II:12]
Ed 690 [I:6]

Specific Test Requirements

Graduate Record Examination, Aptitude and Advanced in Education; Miller Analogies Test

Requirements in Specialization

Ed 561, 562, 563, 564, 566, 598, in area of concentration [I and II:21]

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 Ed 690 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.

ENGLISH

College of Arts and Sciences

GRADUATE FACULTY

Brown, R.D., PhD, literature and creative writing.
Cary, Meredith, PhD, literature and rhetoric.
Donker, Marjorie, PhD, literature.
Francis, Richard Lee, PhD, literature and rhetoric.
Greenstein, Susan M., PhD, literature.
Inniss, 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.
O'Brien, J. H., 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. Richard L. Francis

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)

Option Adviser: Dr. Marjorie Donker

Thirty credits (literature, criticism, rhetoric, including Eng 501, and including Eng 513 for the graduate assistant in English). 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 5 credits in Eng 690.

2. Creative Writing (Thesis)

Option Adviser: Dr. Knute Skinner

Twenty credits in creative writing (fiction, drama, poetry, non-fiction prose) and 5 credits in Eng 690. Electives: 20 credits (literature, criticism, rhetoric, including Eng 501, and including Eng 513 for the graduate assistant in English).

3. Rhetoric/Composition (Non-Thesis)

Option Adviser: Dr. Ken Symes

Nineteen credits, including Eng 442, 471, 510, 595 and 513 or 594. Electives: 20 credits (literature, criticism) and 9 credits in writing courses selected in consultation with the option adviser.

Specific Test Requirements

Graduate Record Examination, 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 option 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 5 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 "A Guide for Graduate Students in English," a copy of which may be obtained from option advisers in English.

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, sample comprehensive examination questions, graduate plan of study, procedural and administrative matters pertaining to the language requirement, the comprehensive examination and graduation may be found in "A Guide for Graduate Students in English."

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

French

Prerequisites

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

Basic Requirements

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

Specific Test Requirements

Graduate Record Examination, Aptitude and Advanced in Education or French; French Comprehensive Exam.

Requirements in Specialization

French 501, 502, 504, 505, 532, 555 [II:20-24]

Electives in French and Related Fields

Electives should be chosen in consultation with the departmental graduate adviser. Eight of the elective credits may be taken in 400- and 500-level courses approved in allied fields (e.g., English, history, education, German, Spanish, linguistics) or in academic work completed at a French university. [II:16-20]

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

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

Specific Test Requirements

Graduate Record Examination, Aptitude and 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*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

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

Specific Test Requirements

Graduate Record Examination, Aptitude and 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).

Langran, Kenneth J., PhD, quantitative methods, water resources, remote sensing.

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

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

Peterson, Gilbert A., PhD, urban and regional 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.

Teshera, Robert W., PhD, Pacific Northwest, rural studies.

Adjunct faculty:

Vernon, Manfred C., J.D., PhD, environmental law.

M.S. — GEOGRAPHY, THESIS & NON-THESIS

Program Adviser: Dr. James W. Scott

Basic Requirements

Geog 501, 510, 521, 531 or 535, 551, 590 [I:23]

Geog 600 (Non-Thesis) or [I:6]

Geog 690 (Thesis) [I:6]

Specific Test Requirements

Graduate Record Examination — 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* [I:11-14]

Supporting Courses

Under advisement, normally from *either* the social sciences *or* the physical sciences. A minimum of 9 credits to be taken. [I: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).

Graduate School

Specialization in Urban and Regional Planning

Core Requirements

Geog 503, 510, 511, 535, 541, 551, 590 [I:27]

Geog 600 (Non-Thesis) or [I:6]

Geog 690 (Thesis) [I:6]

The following additional courses:

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

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.

Pevear, D. R., PhD, clay mineralogy, sedimentation, geochemistry.

Ross, C. A., PhD, paleontology, biostratigraphy.

Schwartz, M. L., PhD, coastal processes, science education.

Suczek, C. A., PhD, stratigraphy, sedimentary petrology,

tectonics.

Wodzicki, A., PhD, economic geology, geochemistry.

M.S. — GEOLOGY, THESIS ONLY

Program Adviser: Dr. Charles A. Ross

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, Aptitude and Advanced in Geology; Department Comprehensive Examination.

Electives in Specialization

Courses are selected under advisement and must 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, biostratigraphy, clay mineralogy, coastal geology, economic geology, environmental geology, geochemistry, geomorphology, geophysics, glacial geology, hydrology, igneous petrology, metamorphic petrology, paleomagnetism, paleontology, sedimentary petrology, sedimentation and stratigraphy. 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

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 315 (3) or 231 (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

- Boylan, Bernard L., PhD, 20th century European history, modern European military history.
 Bultmann, William A., PhD, England and the British Empire.
 DeLorme, Roland L., PhD, 20th century American history, American West, Pacific Northwest
 Dresbeck, Sandra R., PhD, medieval history, Christianity.
 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.
 Kohl, Paul A., B.A., archives and records management.
 Loftus, Ronald P., PhD, modern Japanese 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.
 Ritter, Harry R., PhD, modern Europe, historiography.
 Roley, Paul L., PhD, Soviet history.
 Schuler, Carl U., PhD, ancient history: Rome, Greece, Near East.
 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. Thomas C. R. Horn

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 course requires completion of an undergraduate major in history or the permission of the department; History 511, 512, 533, 536, 537, 540, 550, 558, 563, 571, 573, 582 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).

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

Specific Test Requirements

Graduate Record Examination, Aptitude and 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 ARCHIVAL AND RECORDS MANAGEMENT ADMINISTRATION

The Department of History, in conjunction with a number of cooperating agencies, offers a certificate program in archival and records management administration. 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

Graduate School

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, or Dr. S. R. Dresbeck.

Hist 591a,b	[8]
Hist 592a,b,c	[18]
Hist 501, 502	[8]
Pol Sci 502	[5]
Elelctive courses	[15]

HUXLEY COLLEGE

Huxley College of Environmental Studies

GRADUATE FACULTY

(Environmental Biology Program)

Brakke, David, PhD, limnology, freshwater invertebrate ecology.
Kendall, Ronald J., PhD, environmental toxicology.
Smith, Gary C., PhD, vertebrate ecology, wildlife biology, ecological energetics.
Summers, William C., PhD, marine ecology.
Webber, Herbert H., PhD, marine biology.
Yu, Ming-Ho, PhD, plant and nutritional biochemistry.

COOPERATIVE ENVIRONMENTAL BIOLOGY PROGRAM

The Department of Biology and Huxley College of Environmental Studies administer a cooperative graduate program in environmental biology, leading to an M.S. degree in biology. This program focuses on the application of principles of

biology to the understanding and potential solution of environmental problems.

Applied Biology Program Advisers:

Dr. Gary Smith, Huxley
Dr. Richard Fonda, Biology

MATHEMATICS & COMPUTER SCIENCE

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 W. Woll

Specific Test Requirements

Graduate Record Examination, Aptitude Test; Miller Analogies 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 475 or 435, Math 505, 524, 525, and 531. 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 stu-

dents 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

- Biasini, Americole R., M.S., music education, instrumental music, theory/conducting.
- Frank, Barton, M.Mus., orchestra strings, chamber music, conducting, pedagogy.
- Gadd, Charmain, Diplomate, violin, viola, chamber music, pedagogy.
- Glass, Jerome, M.Mus., conducting, theory, analysis, instrumental music.
- Gorder, Wayne D., Ed.D., conducting, instrumental music, trumpet.
- Mill, Ford D., M.Mus., piano, keyboard pedagogy, performance studies.
- LaBounty, Edwin M., D.Mus., composition, piano, music education, theory/analysis.
- Pullan, C. Bruce, M.A., opera, conducting, voice, vocal pedagogy, musicianship.
- Rutschman, Carla S., PhD, music history and literature, musicology, music education, lower brass.
- Scandrett, Robert L., PhD, choral conducting, music history and literature, pedagogy.
- Schaub, David B., PhD, Graduate Program Adviser, theory/analysis, counterpoint, organ, musicianship.
- Shaw, Albert C., D.Mus.Ed., Chairman, music education, conducting, instrumental music, percussion.
- Stoner, Paul H., D.M.A., theory/analysis, musicianship, strings, chamber music.
- Terey-Smith, Mary, PhD, 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. David Schaub

Basic Requirements for All Concentrations

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

Graduate School

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 444	[1:3]
Music 540 (for three quarters)	[1:6]
Music 545	[1:3]
Music 690 (Thesis)	[1:6]

Performance Concentration

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

Music 424, 425, 426, 427, 429, 434, or 540	[1:6]
Music 511, 512, 513, 514 or 515	[1:9]
Music 690 (Thesis-Recital)	[1:6]

Individualized Concentration

Courses as proposed by the student and approved by the faculty [1:17]

Music 690 (Thesis-as proposed)	[1:6]
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Music Education Concentration (Instrumental Music Supervision, Choral Music Supervision, Choral Conducting, Orchestral Conducting, Band Conducting)

Professional Understandings/Techniques [1:6-9]
Music 501, 502, 521, 552 or any approved 400-level course(s)

Basic Musicianship [1:3-9]

Courses to be selected from the following: (any not elected under Basic Requirements) Music 541, 542, 543, 544, 545, 531, 534, 535, 536 or any approved 400-level course(s)

Applied Music [1:0-9]

Music 511-515, or approved 411-418

Ensemble [1:0-9]

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

Guided Electives in Professional Education in Departments of Education or Psychology [1:3-9]

Music 690 [1:6]

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

ation. 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 *Individualized* concentration must prepare a specific curricular proposal (including a thesis) for a concentration in an area of demonstrated competence for approval by an appropriate faculty committee, subject to final approval by the department.

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 this degree must successfully pass an oral examination in the area of their 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. S. Parakh

Prerequisites and Examinations

1. Prerequisite for admission to the M.M. 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 evalu-

Basic Requirements

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

Specific Test Requirements

Graduate Record Examination — Aptitude and Advanced in Biology, Chemistry, Geology or Education, according to specialization; Miller Analogies Test.

Specializations — Secondary Programs**Biology, Thesis and Non-Thesis**

Requirements in specialization
 Bio 690 or Sci Ed 690 [I:6-9]
 Sci Ed 598 [II:6]
 Electives
 Courses selected under advisement [I:17-20, I:23]
 For prerequisites, see Biology Department listing

Chemistry, Thesis and Non-Thesis

Requirements in specialization
 Sci Ed 580 or 590 [I and II:2-5]
 Sci Ed 690 [I:6]
 Sci Ed 598 [II:6]
 Electives
 Courses selected under advisement [I:15-18, II:18-21]
 For prerequisites, see Chemistry Department listing

Earth Science, Thesis and Non-Thesis

Requirements in specialization
 Geology field course [I and II:5-10]
 Geol 690 or Sci Ed 690 [I:6-12]
 Sci Ed 598 [II:6]
 Electives selected under advisement [I:4-15, II:13-18]
 For prerequisites, see Geology Department listing

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]
 Sci Ed 598 [II: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

Sci Ed 514 [II:1-3]
 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 inservice phase of the program.

**PHYSICAL EDUCATION,
HEALTH & RECREATION**

College of Arts and Sciences

GRADUATE FACULTY

Aitken, Margaret, EdD, administration/socio-cultural aspects of physical education and sport
 Ames, Evelyn, PhD, health education
 Arnett, Chappelle, EdD, human growth and motor development/curriculum/exercise physiology
 Clumpner, Roy, PhD, socio-cultural aspects of physical education and sport/curriculum
 Vernacchia, Ralph, PhD, sport psychology/socio-cultural aspects of physical education and sport

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

Program Advisers: Dr. Margaret Aitken
 Dr. Roy Clumpner
 Dr. Mary Schreiber
 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]

Graduate School

Basic Requirements

Ed 501, 512, 513 [I and II:12]
 P.E. 690 [I:6]

Specific Test Requirements

Graduate Record Examination — Aptitude and Advanced in Education

Requirements in Specialization

Option A: K-12/Community College
 P.E. 50, 504, 506, 508 [I and II:20]
 P.E. 507, 531, 540, 541, 542, 543 [I and II:6]

Option B: Administration in Physical Education
 P.E. 502, 504, 506, 508, 503, 509 [I and II:20]

Option C: Adult Fitness Education
 P.E. 502, 503, 506, 508, 509, 511, 592 [I and II:23-27]

Electives in Specialization

With the aid of the adviser, select electives from 400- and 500-level courses.

Recommended Option A: P.E. 481, 482, 545

Recommended Option B: 9-12 credits under advisement with Education Administration

Recommended Option C: Select courses under advisement from 400- and 500-level courses in Physical Education, Public Administration, Business Administration

option is offered for the student who wishes to do research in a specialized area.

Students may also specialize in public policy and administration (FP&A). This specialization is designed primarily for students planning or having careers in the public service or the not-for-profit sector 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, Aptitude Portion; Miller Analogies 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:

Fields

Public Policy & Administration	Pol Sci 503
Comparative Government	Pol Sci 505
Politics & Government	Pol Sci 540
Political Theory	Pol Sci 560

Basic Courses

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:

Fields

Public Policy & Administration	Pol Sci 503
Comparative Government	Pol Sci 505
Politics & Government	Pol Sci 540
Political Theory	Pol Sci 560

Basic Courses

Requirements in Public Policy and Administration Non-Thesis Specialization

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

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.

Fox, Siegrun, PhD, research techniques.

Heba, John J., PhD, state and local government.

Hogan, Eugene J., PhD, public law.

Kraus, Ellis S., PhD, comparative politics, Japanese politics.

Minei, Ralph E., PhD, public policy and administration, public finance, organization theory.

Rutan, Gerard F., PhD, comparative politics, political theory, national intelligence and security studies.

Schwarz, Henry G., PhD, Chinese politics.

Wuest, John J., PhD, comparative politics, public law.

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

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. [11:11]

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.

Marx, Robert D., PhD, personality, abnormal, evaluation of teaching techniques.
 Mason, Evelyn P., PhD, personality, child psychology, clinical.
 Meade, Robert D., PhD, human motivation, cross-cultural, human population problems.
 Mees, Hayden L., PhD, clinical, behavior modification, human sexuality.
 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.
 Pietstick, N. L., PhD, school psychology, behavior modification, exploratory behavior.
 Prim, Merle M., PhD, sub-human primate behavior, physiological psychology, sensory, comparative.
 Rees, Rod, PhD, experimental child development, learning, research design, decision and judgment.
 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.
 Thorndike, Robert M., PhD, multivariate statistics, measurement, evaluation of teaching.
 Trimble, Joseph E., PhD, social, cross-cultural.
 Tyler, Vernon O., Jr., PhD, clinical psychology, school psychology, developmental psychology.
 Wilkins, James W., PhD, clinical, personality, school psychology.
 Woodring, Paul, PhD, history of psychology, teaching of psychology, theoretical and philosophical issues.

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. Elvet G. Jones

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

PSYCHOLOGY

College of Arts and Sciences

GRADUATE FACULTY

Blood, Don F., PhD, statistics, measurement.
 Budd, William C., PhD, measurement, human learning, philosophical psychology.
 Carmean, Stephen, PhD, perception, thinking, communication.
 Crow, Lowell, PhD, physiological psychology, alcohol and behavior, psychophysiology.
 Cvetkovich, George, PhD, social psychology, population psychology.
 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.
 Hayes, Susanna A., PhD, counseling psychology.
 Jones, Elvet G., PhD, counseling psychology, school counseling.
 Kintz, B. L., PhD, general experimental, measurement and statistics.
 Kleinknecht, Ronald A., PhD, behavior therapy, alcoholism, dental phobia.
 Lippman, Louis G., PhD, learning, verbal learning.
 Lippman, Marcia Z., PhD, cognitive development, psycholinguistics, day care.
 Lonner, Walter J., PhD, cross-cultural psychology, tests, personality/social.
 MacKay, William R., EdD, counseling psychology, personality.

Graduate School

Basic Requirements

Ed 501, 512, 513

[I and II:12]

Ed 690 or Psych 690

[I:6]

Specific Test Requirements

Graduate Record Examination — Advanced in either Psychology or Education, Verbal, Quantitative.

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. Laurence Miller

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.

Specific Test Requirements

Graduate Record Examination — Verbal, Quantitative, and 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 or school psychology). 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. Absolutely 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, mathematics, philosophy, physics and sociology or anthropology approved by advisement only; some 300 courses in biology, chemistry, education, mathematics, philosophy, physics, sociology or anthropology, and zoology approved by advisement only (not more than half the elective credits should be taken at the 300 level).

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 choose at least two seminars, but not all from the same group, from the following three groups: 522, 525 and 528; 520, 521, 523 and 524; and 526, 527, 529 and 530. In addition they must also complete one additional seminar from the sequence 520-531. Psych 505-507, 511 and 512 are also offered as electives.

M.S. IN PSYCHOLOGY — COUNSELING PSYCHOLOGY CURRICULUM

Curriculum Coordinator Dr. Frank A. Nugent

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

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 Certification 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, Educ 588, and at least 8 additional hours of courses in special and general education selected under advisement.

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.

Graduate School

Gossman, Charles S., PhD, demography, statistics, advanced quantitative methods.
Mahoney, E. R. (Department Chairman), PhD, social psychology, research methods, sexual behavior.
Mazur, D. Peter, PhD, demography, statistics, public opinion.
Paulus, Ingeborg L. E., PhD, criminology/deviance, sociology of law, medical sociology.
Richardson, John G., PhD, (Graduate Program Adviser), family, education, contemporary theory.
Rosenberg, E., PhD, aging, sport, demography.
Simpson, Carl, PhD, education, criminology, theory, applied sociology.
Stephan, G. Edward, PhD, theory, human ecology, social demography.

For further information:

Contact: Dr. John G. Richardson, Graduate Program Adviser, Department of Sociology, AH-318, Western Washington University, Bellingham, Washington 98225, (206) 676-3618.

M.A. — SOCIOLOGY, THESIS ONLY

Program Adviser: Dr. John G. Richardson

Prerequisites

General sociology, research methods, statistics; a minimum of 20 quarter hours of upper-division sociology courses. Applications are usually accepted only for those students who will begin graduate study fall quarter.

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 problems; (5) submission of completed thesis; (6) oral defense of 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, Aptitude portion.

Candidacy

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

SPEECH

College of Arts and Sciences

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

Program Adviser: Dr. Sene R. Carlile

The Department of Speech 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 or 502	[I and II:4]
Speech 691	[II:3]
Speech 593	[I:3]
Speech 690	[I:6-9]

Specific Test Requirements

Graduate Record Examination (Aptitude Portion); Diagnostic Examination (done under the supervision of the Department of Speech).

Requirements in Specialization

1. 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.
2. Public Information/Mass Communication: Speech 540, Tech 540 (or approved equivalent), and certain prerequisite courses in Sociology, Journalism, Speech or Psychology, as determined by the program adviser in Speech. A total of 48 hours is required, at minimum, for this master's program.

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:

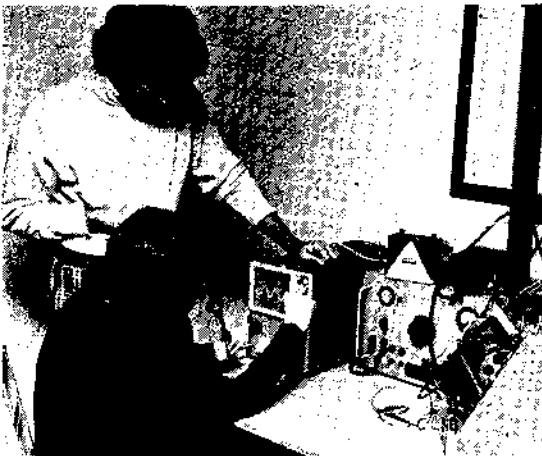
1. Demonstrate a reading knowledge of an appropriate foreign language by passing a test to be given by the Department of Foreign Languages.
2. Where empirical research is being undertaken by the student, demonstrate competence in statistics by passing an approved course or competence examination.
3. 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. Details regarding the written and oral comprehensive examinations are included in the departmental "Guide for Graduate Students."

NOTE: All students should read carefully the departmental "Guide for Graduate Students in Speech" for a more complete statement of the graduate programs in speech.



SPEECH PATHOLOGY & AUDIOLOGY

College of Arts and Sciences

M.A. — SPEECH PATHOLOGY AND AUDIOLOGY

(51 credits)

Options: Thesis and Non-Thesis

Graduate Coordinator: Dr. Erhart A. Schinske

Prerequisites

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 Pathology/Audiology Majors." The department has specific entrance requirements in addition to the general entrance requirements of the Graduate School. Students must consult the departmental graduate coordinator and departmental 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.

Basic Requirements

SPA 502	4
SPA 551	3
SPA 561	3
SPA 690 (Thesis)	6-9
SPA 691 (Non-Thesis)	3

Graduate Entrance Requirements

Graduate Record Examination, Aptitude Portion; Miller Analogies Test. Must be taken prior to admission to graduate program in SPA. The Diagnostic Examination in Speech Pathology and Audiology must be taken during the student's first quarter of graduate enrollment.

Requirements in Specialization

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

Electives in Specialization:

SPA 455, 465, 465a, 555, 557, 560, 563, 569, 570, 571, 573, 574, 575, 575a, 576, 692, 696 and other 400- and 500-level courses selected under departmental advisement.

Total — 51 credits

Graduate School

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 465, 465a, 553, 557, 567, 569, 575, 575a, 692, 696 and other 400- and 500-level courses selected under departmental advisement. Total — 51 credits

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

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 and 559 with grades of "C" or better in each course. Speech and language pathology specialists 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

Both written and oral examinations are 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 or her graduate program to date. A minimum of 36 graduate credits must be completed before comprehensive may be taken. In the same quarter in which he or she expects to graduate, the student is required to take an oral examination based on thesis or non-thesis papers and related items. Details regarding the written and oral comprehensive examinations are included in the "WWU Handbook for Speech Pathology/Audiology Majors."

Certification Requirements

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

The American Speech, Language and Hearing Association requirements for Certification of Clinical Competence in Speech Language or Audiology stipulate completion of 300 clock hours of practicum courses, 150 of which must be obtained at the graduate level. Consult the WWU Handbook for Speech Pathology/Audiology Majors for details.

TECHNOLOGY

College of Arts and Sciences

GRADUATE FACULTY

Black, Joseph E., PhD, materials science.
Fowler, Richard J., EdD, electronics.
Hackler, Clyde M., EdD, industrial education — manufacturing processes.
Hill, Claude E., MEd, plastics technology.
Kenyon, Malcolm, MA, machine metals, manufacturing.
Olsen, Fred A., PhD, technology/social change.
Porter, Sam R., EdD, history, philosophy and administration of industrial and vocational education.
Seal, Michael R., EdD, vehicle design/development
Southcott, Marvin, MFA, industrial design, human factors, delineation techniques.
Vogel, Richard G., EdD, industrial graphics.

M.Ed. — TECHNOLOGY, THESIS AND NON-THESIS

Program Adviser: Dr. Richard J. Fowler

Prerequisites

In addition to the standard requirements for admission to graduate studies, the candidate is expected to have a minimum of 40 quarter hours (27 semesters) of acceptable undergraduate work in industrial education or departmental waiver. Any deficiencies apparent from the evaluation of transcript must be made up along with student's graduate work.

Basic Requirements

Ed 501, 512, 513 [I and II:12]
Ed 690 [I:6]

Specific Test Requirements

Graduate Record Examination — Aptitude and Advanced in Education; Miller Analogies Test.

Residence Requirement

Graduate students in technology must be enrolled on campus at least two quarters (fall, winter, spring or summer) in which a minimum of 10 hours per quarter is completed. These need not be consecutive quarters.

Requirements in Specialization
Technology 590, 591, 592, 594 and 595

Electives in Specialization

Select remaining courses from technology courses and supporting subject matter areas listed under departmental advisement. Selection to meet needs of students and requirements for completion of the degree.

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 typically for the student pursuing a career as a professional performer, or as a teacher at the secondary level.

THEATRE/DANCE

College of Fine and Performing Arts

M.A. — THEATRE

Program Adviser: Dr. Daniel Lerner

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

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, (Aptitude Portion); Diagnostic Examination (administered by the Department of Theatre & Dance).

Core Requirements

All candidates must take the following:

Theatre/Dance 501 [I and II:4]



Graduate School

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, 690 (I) or 690 (II) and 595 (II), and one Key Course outside specialty.

Creative Education

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

Dance

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

Design/Technical Theatre

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

Directing

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

Playwriting

585, 586, 690 (I) or 690 (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.

Programs of this type are restricted by several factors: current offerings which can provide a basis for the individual program; availability of appropriate faculty for special assignment (conference course, projects); the applicant's academic preparation and ability; and the internal logic, or relationship of the elements of the proposed program. Each case is considered on its merits.

For example, a plan of study might be developed around major aspects of environmental science and could include course work and projects undertaken in one or more science departments and Huxley College. Or a plan of study might address social trends and artistic expression. Public policy and science or interdisciplinary study of the atmosphere or quantitative methods and analysis provide other illustrations.

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 to this program.

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."

DEPARTMENTS, PROGRAMS & COURSES

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 bulletin of the Center for Continuing Education.





ACCOUNTING

College of Business and Economics

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, mathematics 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.

To declare a major in accounting, a student must have completed at least 75 credit hours with a minimum cumulative grade point average of 2.6. The student must also have completed with a grade of "C" or better: Accounting 241 and 242; Economics 203 and 204; and Math 155 and 156. The minimum grade standard may be adjusted each term; however, any changes in the standards will be published in the class schedule.

ACCOUNTING FACULTY

- RONALD N. SAVEY (1976) Chairman.
Associate Professor. BA, Western State College (Colo.);
MBA, University of Denver; CPA, States of Colorado and
Washington.
- CODY E. BRYAN (1977) Assistant Professor. BGE, University
of Nebraska (Omaha); MBA, University of Puget Sound;
CPA, State of Washington.
- BYRON E. HAGLUND (1956) Associate Professor. BBA, MA,
University of Minnesota; CPA, Washington, D.C., State of
Washington.
- H. THOMAS JOHNSON (1979) Professor. AB, Harvard
University; MBA, Rutgers University; MA, Ph.D.,
University of Wisconsin; CPA, States of Massachusetts
and Washington.
- H. NEIL PAULSEN (1980) Assistant Professor. BS, California
State University; MBA, California State University; CPA,
State of California.
- DONALD W. RAMEY (1981) Assistant Professor. BS, University
of Illinois; MA, MS, DePaul University; PhD, Washington
State University.
- JOHN A. RUDE (1981) Assistant Professor. BB and MA, West-
ern 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.
- WILLIAM R. SINGLETON (1976) Assistant Professor. BBA,
Memphis State University; MBA, University of Portland;
ABD, University of Hawaii; CPA, States of Oregon and
Washington.

BACHELOR OF ARTS*Major* 105 credits

- Acctg 241, 242, 243, 331, 341, 342, 343, 365, 367, 441, 461
- 6 upper-division accounting credits under advisement
- BA 255, 301, 330, 341, 360, 370, 371, 495
- Econ 203, 204, and either 306 or 311
- Math 155, 156, Comp Sci 117

*Combined Major — Accounting/**Computer Science* 109 credits

- Acctg 241, 242, 243, 341, 342, 441, 461
- 9 upper-division accounting credits under advisement
- Comp Sci 210, 217, 310, 350, 351, 352, 353, 470, 471
- BA 271, 301, 330, 341, 360, 495
- Econ 203, 204
- Math 155, 156, 240*

*May substitute BA 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, 500: 417, 445 are described on page 32 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.
- 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.
- 332 ADMINISTRATIVE CONTROL (3)
Prereq: Acctg 243. Managerial uses of budgeting, cost accounting and other financial techniques to control operations in complex organizations.
- 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 explained.
- 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.
- 431 ADVANCED MANAGERIAL ACCOUNTING (3)
Prereq: Acctg 331 or 332. Considers recent research into how organizations should use accounting information for planning and control.
- 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.

Accounting

443 HISTORY OF ACCOUNTING THOUGHT (3)

Prereq: Acctg 243. This course will trace major historical forces that shaped the development of accounting thought and practice in the Western world from the middle ages to the late twentieth century.

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)

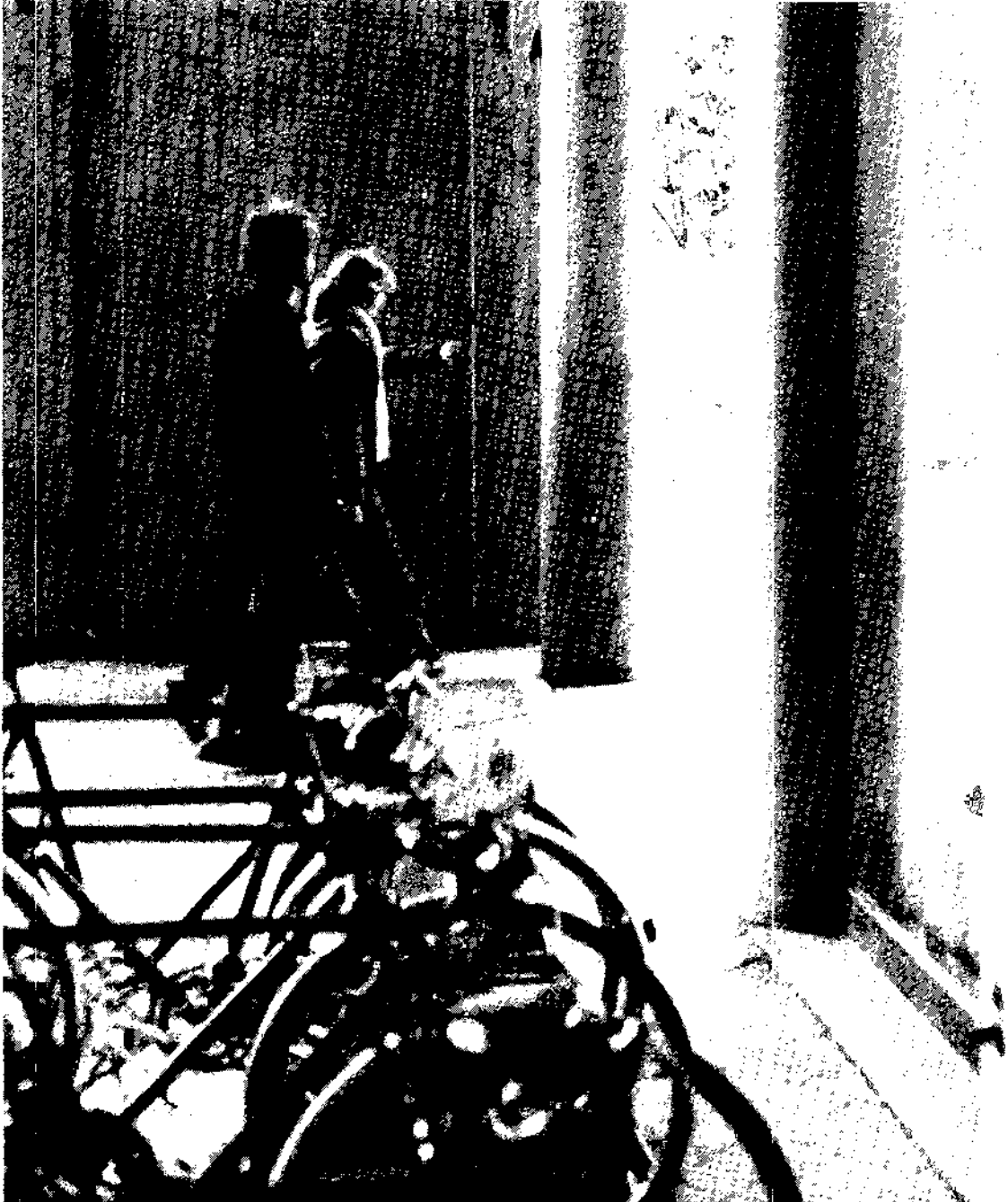
Prereq: Acctg 365. Special problems of partnerships, corporations and trusts; introduction to tax research

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, 461 BA 370. A review of selected areas of law, auditing, accounting theory and accounting practices for students preparing to take the CPA examination. S/U grading.





ANTHROPOLOGY

College of Arts and Sciences

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 aids both in the

reconstruction of the past through a study of human fossil remains and in understanding of the modern human as a biological entity.

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 field work 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.

Degrees offered are the B.A. in Arts and Sciences

Anthropology

and the B.A. in Education (as well as minors in both programs). In addition a combined Anthropology/Biology major is offered.

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 in most summers. During this biennium the department will be engaged in a preparation of a *Handbook of Washington Indians*, 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.

Career opportunities for graduates in anthropology exist in teaching (public school, community college, and college), federal and state agencies, industry, and museums.

ANTHROPOLOGY FACULTY

- JAMES W. BOSCH (1967) Chairman.
Associate Professor. BA, San Francisco State College; MA, PhD, Stanford University.
- ANGELO ANASTASIO (1955) Professor. Certificate, Juilliard School of Music; AA, Boston University; MA, PhD, University of Chicago.
- LESLIE CONTON (1980) Assistant Professor. BA, Oberlin College; MA, PhD, University of Oregon.
- GARLAND F. GRABERT (1967) Professor. BA, MA, PhD, University of Washington.
- HOWARD L. HARRIS (1966) Associate Professor. BA, University of Iowa; MA, University of Missouri; BD, Hartford Theological Seminary.
- LINDA AMY KIMBALL (1976) Associate Professor. BEd, MA, PhD, Ohio State University.
- JOAN C. STEVENSON (1979) Assistant Professor. BA, University of Washington; MA, PhD, University of Wisconsin-Milwaukee.
- HERBERT C. TAYLOR, JR. (1951) Professor. BA, MA, University of Texas; PhD, University of Chicago.

BACHELOR OF ARTS

Major — Anthropology 60 credits

- Anth 201
- Anth 202 or 210 (both may be taken, one as an elective)
- Anth 301
- Anth 247 or 348
- A course in statistics under departmental advisement
- Electives in anthropology under departmental advisement

Minor 25 credits

- Anth 201
- Anth 202 or 210 (both may be taken, one as an elective)
- Electives under departmental advisement

Combined Major — Anthropology/Biology 63 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 231, 307, 308, 325, 465, 466, and 485; Anth 320, 420, 423, 424, any "Peoples" courses relevant to the student interests, and additional courses under advisement

BACHELOR OF ARTS IN EDUCATION

Major — Elementary 45 credits

- Anth 201 and either 202 or 210 (both may be taken, one as an elective)
- Anth 301
- Electives under departmental advisement (it is recommended that fifth-year education students take 5-10 hours under departmental advisement)

(Note: no major is offered in secondary education.)

Minor 25 credits

- Anth 201 and either 202 or 210 (both may be taken, one as an elective)
- 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, 500, 417, 445 are described on page 32 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 cataloguing, 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.
- 320 INTRODUCTION TO PRIMATES (3)
Prereq: Anth 202 or 215. Comparative monkey, ape and prosimian anatomy, behavior and ecology.
- 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.
- 341 INTERGROUP RELATIONS (5)
Prereq: Anth 201. Adjustment of groups to the natural environment and to each other in selected areas. Mechanisms of interaction including social, political and economic factors.
- 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.
- 365 PEOPLES OF THE MIDDLE EAST AND NORTH AFRICA (INCLUDING THE SAHEL) (5)
Prereq: Anth 201. Ethnographic survey of the societies and cultures.
- 371 FIELDWORK METHODS IN CULTURAL ANTHROPOLOGY (5)
Prereq: 15 credits in anthropology. The anthropologist as field worker. Detailed analysis of selected monographs on techniques and methods of ethnographic fieldwork.
- 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.

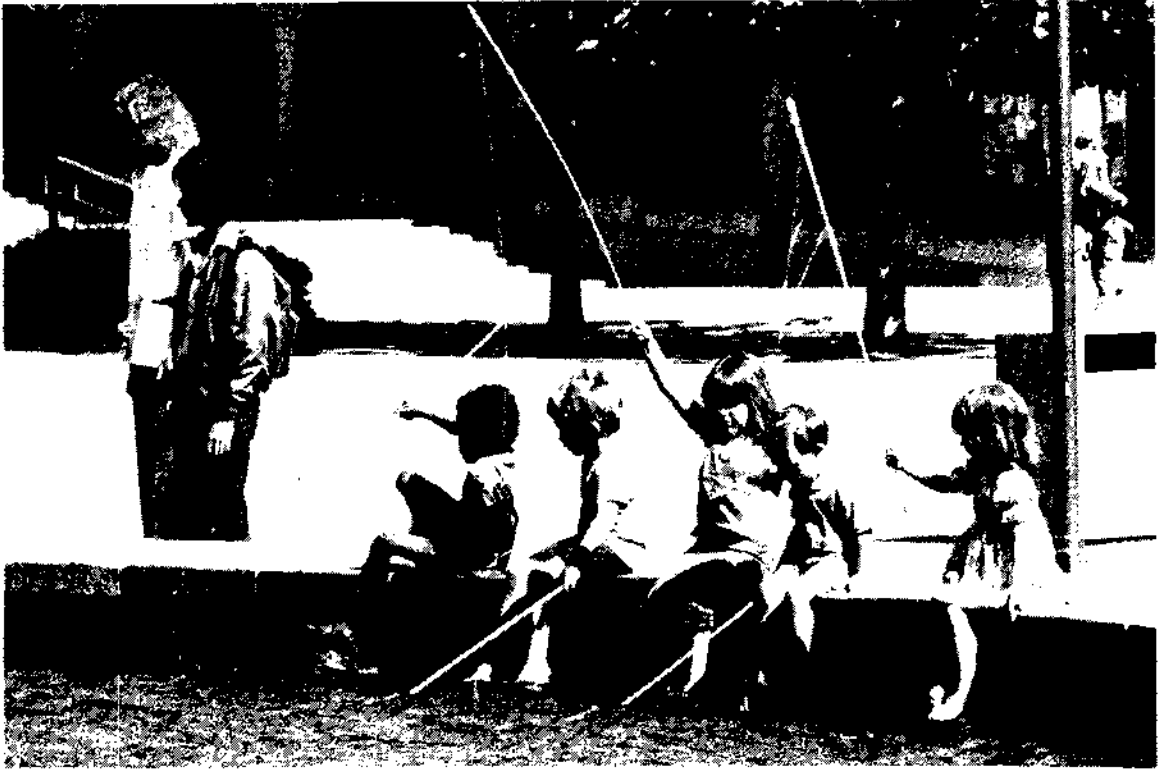
Anthropology

- 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.
- 412 **ARCHAEOLOGY OF THE NEW WORLD (3)**
Prereq: 10 credits in anthropology including 210 or equivalent. Origins of the prehistoric New World cultures, the evidence for early settlement, and the regional development of cultures up to the historic Native Americans, particularly with regard to the Mesoamerican and Peruvian Nuclear areas.
- 420 **FORENSIC ANTHROPOLOGY (3)**
Prereq: 10 credits in anthropology or one year's experience in law enforcement and permission of instructor. The objective of this course is to learn how a physical anthropologist recovers a body, reconstructs the biological history of a skeleton (age, sex, race, disease, etc.) and aids the crime investigator.
- 422 **ECOLOGICAL ANTHROPOLOGY (3)**
Prereq: Anth 201 and 10 additional credits in anthropology. Analysis of the application of ecological concepts to anthropological problems, with an intensive study of one strategy of adaptation.
- 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. Comparative studies of healing practices in non-Western societies, with emphasis upon medical systems within cultural frameworks.
- 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.
- 431 **SOCIAL CHANGE IN AMERICA (3)**
Prereq: 10 credits in anthropology. Social change in the United States since 1900; contemporary theories of social change; problems in predicting 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 **WOMEN OF THE WORLD: ANTHROPOLOGICAL PERSPECTIVES ON WOMEN (3)**
Prereq: Anth 201 and permission of instructor. An ethnographic survey of women's economic, social, religious, political and domestic roles; examination of the issues and theories concerning the positions of women cross-culturally.
- 461 **NORTH AMERICAN INDIAN ACCULTURATION (3)**
Prereq: Anth 361. The study of changes resulting from culture contact in North America. Historical processes and contemporary conditions.
- 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. 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.
- 469 **PEOPLES OF MELANESIA (3)**
Prereq: Anth 201. An in-depth ethnographic study of the Melanesian culture area, with special emphasis on New Guinea 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 INTRODUCTORY ANTHROPOLOGY (3)**
Prereq: 25 credits in anthropology and permission of instructor. Practicum as discussion leaders in Anth 201 or 210. May be repeated once for departmental credit.
- 496a,b,c **HONORS TUTORIAL (3-5 ea)**

Graduate Courses

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.



510 HUMAN OSTEOLOGY (3)

Prereq: graduate status or permission of instructor. Students will learn to identify human skeletal material, particularly in the fragmented condition. Introduction to osteometry and paleopathology.

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.

520 ADVANCED PHYSICAL ANTHROPOLOGY (3)

Prereq: Anth 415 or permission of instructor. Intensive research and study on current concerns of physical anthropology. Emphasis is on critical reading and analyses of relevant literature as well as on orientation toward research topics.

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.

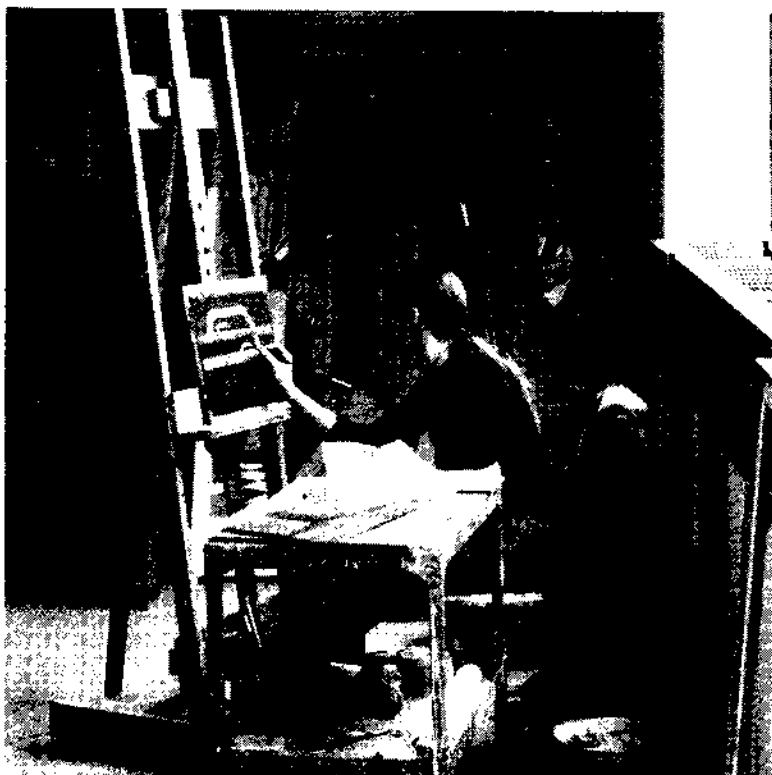
- 584 Cultural Anthropology
- 585 Physical Anthropology
- 588 Linguistics
- 589 Archaeology

690 RESEARCH (3)

Prereq: formal advancement to candidacy for the M.A. in anthropology. Satisfactory/Unsatisfactory grading used in this course.

691 THESIS (3)

Prereq: formal advancement to candidacy for the M.A. in anthropology. Satisfactory/Unsatisfactory grading used in this course.



ART

College of Fine and Performing Arts

One of the earliest human activities was the production of works of art. Through the centuries one measure of human civility has been involvement in the arts. Presently, concern for the arts is very high. The Art Department at Western is meeting that concern with a highly qualified faculty teaching in the major areas of art. The faculty not only teaches but is intimately involved in art production and scholarship.

The Art Department offers a number of degree programs in studio art, art history and art education. Through a contract system students may, in conjunction with faculty of the Art Department, develop majors to meet their particular backgrounds, needs and interests. Most of the traditional areas of art are offered at Western. 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, early in their program at Western, seek advisement from faculty members in the department.

Enrollment Limitation Statement: Depending on the areas of specialization, enrollment may be limited through the presentation of a portfolio for examination, or grade point average where appropriate. For further information, see the department chairman.

Transfer students are required to complete in residence a minimum of 15 credits in art for the teacher education major, 11 credits in art for the Arts major, or 5 credits in art for a minor.

It is possible to take an Interdisciplinary Arts major with a concentration in art. See *Arts, Interdisciplinary*, in the Interdisciplinary Programs section of this catalog for full details of the major.

ART FACULTY

- THOMAS SCHLOTTERBACK (1965) Chairman. Professor. BFA, MFA, University of Kansas; PhD, The State University of Iowa.
- DORIS CHATHAM (1975) Assistant Professor. BA, Rice; MFA, University of Washington; MA, Asian Studies, University of California, Berkeley; PhD, Art History, University of California, Berkeley.
- IONE A. FOSS (1957) Associate Professor. BS, MAA, Montana State College; MFA, University of Oregon.
- LAWRENCE HANSON (1963) Professor. BA, MFA, University of Minnesota.
- ROBERT A. JENSEN (1966) Associate Professor. BFA, University of Washington; MFA, Washington State University.
- THOMAS A. JOHNSTON (1967) Associate 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) Associate Professor. BFA, BA, University of Washington; MFA, Cranbrook Academy of Art.
- MARY A. McINTYRE (1968) Associate Professor. AB, MFA, Indiana University.
- DAVID E. TEMPLETON (1969) Professor. BFA, MA, University of Illinois; PhD, University of Minnesota.
- EDWARD B. THOMAS (1967) Associate Professor. BA, MFA, University of Washington.
- ROBERT A. URSO (1969) Associate Professor. AB, MA, University of Notre Dame, Ind.
- GENE E. VIKE (1962) Associate Professor. BA in Ed, BA, Western Washington State College; MS, Pratt Institute.
- WALTER F. WEGNER (1961) Associate Professor. BS, University of Wisconsin; MFA, University of Iowa.
- HOMER A. WEINER (1964) Professor. BFA, Bradley University; MFA, University of Iowa.

STAFF OF THE WHATCOM MUSEUM OF HISTORY AND ART

- George Thomas, Director, MFA, University of California, Santa Barbara.
- Rod Slemmons, Museum Curator, MA, University of Iowa.
- Janice Olson, Registrar, BA, Art History, Western Washington University.

BACHELOR OF ARTS

Studio Major 73-85 credits

- Art 101 or equivalent
- Art 301, 401
- Art History 220, 230, 240

The student will elect from courses at the 200 level a basis for all subsequent work. The student will be guided by noting the prerequisites for courses at the 300 level, and by faculty advisement.

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, jewelry, textiles, graphic design, or in a combination of these areas as determined by the student's contractual agreement. Courses outside the Art Department where appropriate may be applied. Revisions and amendments will be considered and may be made by the student and the faculty committee upon request.

Transfer students with more than 18 credits of previous work should seek advisement during their first quarter at WWU.

Studio Minor 25 credits

- Art 101 or equivalent
- Art History 240
- Electives under advisement

Art History Major 60 credits plus

Supporting Courses

- 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 24 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 45 credits

- Required of all majors:
 - (a) Art 101 or equivalent, Art 270
 - (b) Art History—two courses from 220, 230, 240
 - (c) Art 280, 381, 382
- One course from each of the following: drawing, painting, sculpture, printmaking, ceramics, jewelry, textiles
- At least 6 credits in one upper division studio area
- Courses outside the department may be required as part of the major

Art

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 25 credits

- Art 101 or equivalent
- Art 280, 381
- Art History 240
- Electives under advisement

Major Concentration

(K-12, Art only) 70 credits

- Required of all majors:
 - (a) Art 101 or equivalent, Art 270, 301, 401
 - (b) Art History 220, 230, 240 and one additional course
 - (c) Art 280, 381, 382
- One course from each of the following: drawing, painting, sculpture, printmaking, ceramics, jewelry, textiles
- At least 15 credits in one upper 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 each student and the faculty committee upon request.

BACHELOR OF FINE ARTS

Studio Major 154 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:

- An 85-hour concentration in one specific studio area. The areas are: drawing, painting, printmaking, sculpture, graphic design, ceramics, fabric design and jewelry
- A 30-hour secondary concentration in a studio area other than that covered in 85-hour concentration
- A 24-hour art history minor
- A minimum of 15 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 major area and minor 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 as a *concours* system. At the completion of all hour requirements each student must submit work *en concours* for BFA degree consideration. This last *concours* will be a public presentation in an appropriate 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 Art 401, Music 342.

MUSEUM TRAINING

The Art Department and the Whatcom Museum of History and Art provide a museum training program for qualified students from Western Washington University. Students wishing such training will enroll in Art History 301 — Museology I, or Art History 401 — Advanced Museology. The students will receive their training with the staff of the Whatcom Museum of History and Art.

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, 500; 417; 445 are described on page 32 of this catalog.

NOTE: The Art Department may request samples of work produced in a studio course for exhibition purposes.

- 101 DRAWING (3)
Not open to students with two years of high school art. Fundamental principles and techniques.
- 201 DRAWING CONCEPTS & SYSTEMS (3)
Prereq: Art 101 or equivalent. A studio course committed to the study of various conventional drawing concepts and systems appropriate to various studio concentrations.
- 202 LIFE DRAWING I (3)
Prereq: Art 101 or equivalent.
- 210 PRINTMAKING I (3)
Prereq: Art 101 & 201. Introduction to intaglio processes. Lab fee.
- 211 PRINTMAKING II (3)
Prereq: Art 101 & 201. Introduction to lithographic processes. Lab fee.
- 220 PAINTING (3)
Prereq: Art 101 or equivalent. Introduction to contemporary painting.
- 230 SCULPTURE I (3)
Prereq: Art 101 or equivalent. Introduction to sculpture. Lab fee.
- 240 CERAMICS (3)
Prereq: Art 101 & 201. Handbuilt clay construction. Introduction to glaze formulation, kiln loading and firing. Lab fee.
- 270 DESIGN AND COLOR (3)
Studies of form and structure in a variety of media; emphasis on two-dimensional design concepts, pattern and color.
- 271 THREE-DIMENSIONAL DESIGN (3)
Exploration of construction in space employing a variety of media.
- 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.
- 301 CONTEMPORARY PRACTICE (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 LIFE DRAWING II (3)
Prereq: Art 202 or equivalent; repeatable to 15 credits. Drawing as a major medium.
- 310 a,b INVENTIVE DRAWING (3,5)
Prereq: Art 201 or 202. A studio course committed to the pursuit of drawing as a major creative mode of expression. Repeatable to 15 credits. Offered alternate years.
- 311 PRINTMAKING — LITHOGRAPHY (3)
Prereq: Art 211, 301, or concurrent enrollment. Planographic processes; emphasis on lithography. Lab fee.
- 312 PRINTMAKING — INTAGLIO (3)
Prereq: Art 210, 301, or concurrent enrollment. Intaglio processes: etching, engraving, drypoint, aquatint. Lab fee.
- 313a,b PRINTMAKING WORKSHOP (3,5)
Prereq: Art 311 or 312; repeatable to 15 credits. Lab fee.
- 320 THE ENHANCEMENT OF COLOR (3)
Prereq: Art 270. Exploration and identification of the issues which make for the enhancement of color in composition.
- 321a,b PAINTING WORKSHOP I (3,5)
Prereq: Art 220, repeatable to 15 credits. Individual search for form and expression within a workshop environment.
- 322a,b CONCEPT DEVELOPMENT IN PAINTING (3,5)
Prereq: Art 321 and 301 or A.H. 240, permission of instructor. A studio course and seminar committed to the development and articulation of delineation concepts and meaning in painting. Repeatable to 15 credits.
- 325a,b WATER COLOR PAINTING (3,5)
Prereq: Art 220, 301, or Art History 240 or concurrent enrollment; repeatable to 15 credits. Various water soluble media.
- 328a,b LIFE PAINTING (3,5)
Prereq: Art 202, 301, or Art History 240 or concurrent enrollment; repeatable to 15 credits. The continued development of a personal direction in painting, making use of the nude or draped model.
- 331a,b SCULPTURE WORKSHOP (3,5)
Prereq: Art 230; repeatable to 15 credits. Problems in three-dimensional form and expression employing a variety of media and materials. Lab fee.
- 341 CERAMICS (3 or 5)
Prereq: Art 101 or equivalent; Art 230, 240 and 271 or concurrent enrollment; repeatable to 15 credits. Introduction to the potter's wheel as a tool. Handbuilding. Glaze formulation and kiln firing. Lab fee.
- 342a,b CERAMIC WORKSHOP I (3,5)
Prereq: Art 341; repeatable to 15 credits. Clay as a medium. Pottery and/or ceramic sculpture. Lab fee.
- 350 JEWELRY I (3)
Prereq: Art 101 or equivalent, Art 271 or Tech 210 or 214. Design and construction of jewelry in various metals, with emphasis on silver; the setting of stones. Repeatable to 15 credits.
- 351a,b JEWELRY II (3,5)
Prereq: Art 350, Art History 240; repeatable to 15 credits. Problems in simple and centrifugal casting.

Art

- 360 FABRIC DESIGN I (3)**
Prereq: Art 101 or equivalent. Art 270, one art history course. Design problems using linoleum block print, tie-dye and stitchery. Lab fee.
- 361a,b FABRIC DESIGN II (3,5)**
Prereq: Art 360; repeatable to 15 credits. Silkscreen processes, batik, natural dyeing. Lab fee.
- 367a,b WOVEN AND CONSTRUCTED FABRICS (3,5)**
Prereq: Art 360. Pattern weaving, construction and use of a primitive loom; non-loom construction. Repeatable to 15 credits. Lab fee.
- 370 LETTERING (3)**
Prereq: Art 101 or equivalent. Anatomy of letter forms, alphabets and calligraphy; problems in pen and brush lettering.
- 371 GRAPHIC DESIGN I (2)**
Prereq: Art 101 or equivalent, 370. Introduction to visual communication as related to graphic processes.
- 372a,b GRAPHIC DESIGN II (3,5)**
Prereq: Art 371; repeatable to 15 credits. Advanced problems in design as communication.
- 375 ILLUSTRATION (3)**
Prereq: Art 101, 202, 270, or equivalent. Basic methods of illustration in black and white, and color. Developing the concept, organizing the image, and execution of the image.
- 376 CARTOONING (3)**
Prereq: Art 101 or equivalent. Basic course in character development, movement and 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.
- 380 ART IN ELEMENTARY EDUCATION (4)**
Prereq: Humanities or Art 190, 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 ART EDUCATION STUDIO (3)**
Prereq: Art 381 or concurrent registration. Problems in art and their adaptation to the elementary and secondary school.
- 401 SEMINAR IN ART (2)**
Prereq: senior status or 9 credits in art history; 18 credits in studio courses; repeatable to a total of 6 credits. Development of criteria for mature artistic judgment. Offered alternate years.
- 402a,b LIFE DRAWING III (3,5)**
Prereq: Art 101 or equivalent, 9 credits of Art 302; repeatable to 15 credits. Continuation of individually established concerns in the area of drawing.
- 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 DRAWING WORKSHOP (5)**
Prereq: Art 101 or equivalent, Art 202 and 302 or an aggregate of nine hours minimum, Art History 240 and consent of instructor. Class is for pursuit of individual creativity in the drawing medium under supervision.
- 411a,b ADVANCED PRINTMAKING WORKSHOP (3,5)**
Prereq: Art 313; repeatable to 15 credits. Continuation of problems related to a refined use of the traditional printmaking processes as well as more recent technological innovation as they might be applied to editioned art. Lab fee.
- 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. Lab fee.
- 421a,b PAINTING WORKSHOP II (3,5)**
Prereq: Art 101 or equivalent; 9 credits of 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 WORKSHOP AND SEMINAR (2-5)**
Prereq: 30 credits in painting or 30 credits in drawing or combination, totaling 40 credits; Art 301 and nine credits in art history including Art History 240. Repeatable to 15 credits.
- 425a,b ADVANCED WATER COLOR PAINTING (3,5)**
Prereq: Art 325; repeatable to total of 15 credits. Painting workshop using aqueous media.
- 429 ADVANCED WATERCOLOR TECHNIQUES (2)**
Prereq: 6 credits in watercolor. Advanced technical problems in watercolor. Repeatable to 12 credits.
- 431a,b SCULPTURE WORKSHOP (3,5)**
Prereq: Art 331; repeatable to 15 credits. Advanced problems in three-dimensional form and expression employing a variety of media and materials. Lab fee.
- 432a,b DIRECT METAL SCULPTURE (3,5)**
Prereq: Art 331; repeatable to total of 15 credits. Direct metal sculpture; emphasis on the welding process. Lab fee.
- 433a,b BRONZE CASTING (3,5)**
Prereq: Art 230; repeatable to total of 15 credits. Bronze casting by the lost wax process; modeling in clay, wax and plaster; mold-making and other techniques for making cast metal sculpture. Lab fee.
- 434 BFA SCULPTURE WORKSHOP (2-5)**
Prereq: admittance to BFA program. Repeatable to 20 credits. For students in the BFA program to pursue their individual directions in sculpture. Lab fee.
- 441a,b CERAMIC WORKSHOP II (3,5)**
Prereq: Art 341; repeatable to 15 credits. Advanced ceramics. Self-directed problems; weekly seminars. Lab fee.
- 444 BFA CERAMICS WORKSHOP (2-5)**
Prereq: admittance to BFA program. Repeatable to 20 credits. For students in the BFA program to pursue their individual directions in ceramics. Lab fee.

450a,b JEWELRY III (3,5)

Prereq: Art 350; repeatable to 15 credits. Advanced problems in fabrication.

451a,b JEWELRY IV (3,5)

Prereq: Art 351; repeatable to 15 credits. Advanced problems in casting.

452a,b ADVANCED JEWELRY WORKSHOP (3,5)

Prereq: Art 451; repeatable to 15 credits. Advanced problems in jewelry as an art form.

454 BFA JEWELRY DESIGN WORKSHOP (2-5)

Prereq: admittance to BFA program. Repeatable to 20 credits. For students in the BFA program to pursue their individual directions in jewelry design.

461a,b FABRIC DESIGN III (3,5)

Prereq: Art 361; repeatable to 15 credits. Advanced study in printed and dyed textile techniques. Lab fee.

464 BFA FABRIC DESIGN WORKSHOP (2-5)

Prereq: admittance to BFA program. Repeatable to 20 credits. For students in the BFA program to pursue their individual directions in fabric design.

467a,b WOVEN AND CONSTRUCTED FABRICS III (3,5)

Prereq: Art 367; repeatable to 15 credits. Advanced workshop in tapestry, rugmaking and other media. Lab fee.

471a,b GRAPHIC DESIGN III (3,5)

Prereq: Art 372; repeatable to 15 credits. Advanced graphic design.

474 BFA GRAPHICS WORKSHOP (2-5)

Prereq: admittance to BFA program. Repeatable to 20 credits. For students in the BFA program to pursue their individual directions in graphics.

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

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

511 GRADUATE DRAWING AND PRINTMAKING (2-4)

Prereq: graduate status or completion of an art major or equivalent. Individual problems.

517 SPECIAL TOPICS (1-6)

521 GRADUATE PAINTING (2-4)

Prereq: graduate status or completion of an art major or equivalent. Individual problems in painting.

531 GRADUATE SCULPTURE (2-4)

Prereq: graduate status or completion of an art major or equivalent. Individual problems in sculpture.

541 GRADUATE CERAMICS (2-4)

Individual problems in ceramics.



Art

- 551 GRADUATE JEWELRY (2-4)
Individual problems in jewelry.
- 561 GRADUATE FABRIC DESIGN (2-4)
Individual problems in fabric design.
- 580 SPECIAL PROBLEMS IN ART EDUCATION (2-4)
Prereq: teaching experience and 27 credits in art. Special problems in art education as announced.
- 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.

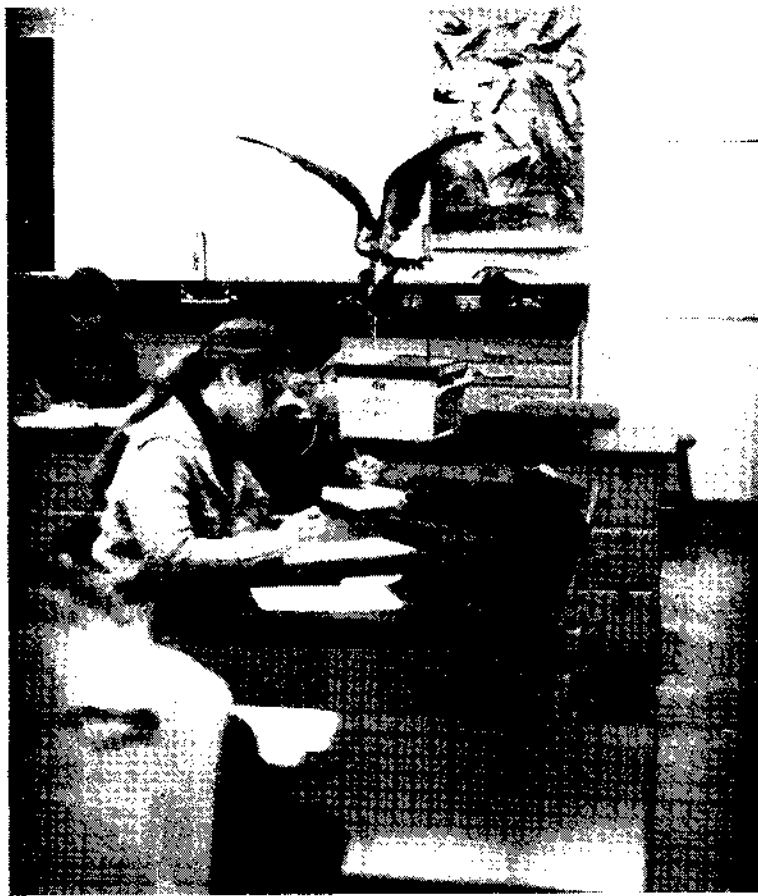
COURSES IN ART HISTORY

- 190 ART APPRECIATION (2)
Introduction to form and expression in the visual arts for the non-major.
- 220 SURVEY OF ART HISTORY I (3)
Ancient and medieval art.
- 230 SURVEY OF ART HISTORY II (3)
Renaissance art, 13th-18th centuries.
- 240 SURVEY OF ART HISTORY III (3)
Modern art in 19th, 20th centuries.
- 301 MUSEOLOGY I (2-5)
Prereq: background in art history, art, history, or anthropology; permission of instructor. May be repeated to 15 hours credit. 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.
- 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 ADVANCED MUSEOLOGY (2-5)
Prereq: Art History 301 and permission of instructor. May be repeated to 15 credit hours. The course concentrates on preparing the student for a career in museum curatorship.
- 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

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

- 517 SPECIAL TOPICS (1-6)
- 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.



BIOLOGY

College of Arts and Sciences

Biology—the study of life—includes a broad spectrum of life sciences: microbiology, ecology, parasitology, systematic biology, genetics, marine biology, biometry, molecular biology, science education, animal and plant physiology and anatomy are some of the specialties to be found in Western's department. Students prepare for professional careers in biology, health sciences or teaching in the public schools and community colleges. Some graduates go on to other universities to complete a doctoral degree program. Many select a liberal arts program in biology because they find it a fascinating area of study even though they do not plan to follow a career in biology. A growing number find biology a valuable second major, thus enhancing employment opportunities. The department offers courses and major and minor programs encompassing all of these possibilities.

MAJOR CONCENTRATIONS IN BIOLOGY

Professional career opportunities in biology are

diverse, and many of them require education beyond the baccalaureate degree, for example, medicine, oceanography, environmental law, fisheries, veterinary medicine, sanitary engineering, and various specialties in medical or dental technology. Students interested in professional careers are advised to enter 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 the larger secondary schools and in community colleges. For students who wish to become certified to teach biology in addition to other subjects in secondary schools, a Bachelor of Arts in Education may suffice. Students who wish to apply for admission to medical or dental schools may take the B.S. degree or may find the Bachelor of Arts (pre-medical emphasis — see below) or the Bachelor of Science combined

major Biology/Chemistry better suited to their needs. These programs differ in depth and breadth; therefore, students should consult the pre-medical or pre-dental adviser concerning the choice. The Biology/Mathematics combined major is offered for those students interested in quantitative biology: statistics, biometry, some kinds of 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.

Many students are deeply interested in biology or one of its component specialties, but not in teaching or other professional careers. These students may wish to combine biology with another area of interest such as history or law; they may wish to enter the medical or dental professions with a liberal education and a baccalaureate degree; they may want an early opportunity to study in depth only one aspect of the field; or the student may 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 and 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. Fred Rhoades) 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 larger 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 Interdisciplinary Programs section). Note that Science Education 383 is Biological Science for the Elementary School.

THE BIOLOGY LABORATORIES AND PROGRAM

The Biology Department is housed partly in Haggard Hall and partly in the Environmental Studies Center. The laboratories are modern and well-equipped. The department shares the facilities of the Sundquist Marine Laboratory at Shannon Point, the Science Education Center, an electron microscope laboratory, and can utilize the services of the Computer Center:

Biology at Western stresses learning by doing, open-ended study, and audiovisual teaching aids. Students explore the Gulf Islands, California's Coast Range and Sierras, Central Oregon's Malheur Game Refuge, and the Grand Canyon on field trips between quarters or during the summer. The biology of the Cascade Mountains, San Juan Archipelago, caves of Washington, a host of lakes and streams, and the arid Palouse country of Eastern Washington are studied on weekend field trips.

BIOLOGY FACULTY

- GERALD F. KRAFT (1961) Chairman.
Associate Professor. BA, San Jose State College; MS, Washington State University; PhD, Oregon 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 (1953) 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.
- JAL S. PARAKH (1966) Professor. BS, Osmania University, India; MS, University of Florida; PhD, Cornell University.
- FREDERICK M. RHOADES (1977) Assistant Professor. BA, Swarthmore College; MS, Oregon State University; PhD, University of Oregon.
- MERIBETH M. RIFFEY (1957) Associate Professor. BS, MS, Northwestern University; PhD, Washington State University.
- JUNE R. P. NOSS (1967) Professor. BSc, PhD, DSc, University of Sydney, Sydney, Australia.
- DAVID E. SCHNEIDER (1966) Associate Professor. BS, Bates College; PhD, Duke University.
- DONALD J. SCHWEMMIN (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.
- RONALD J. TAYLOR (1964) Professor. BS, Idaho State College; MS, University of Wyoming; PhD, Washington State University.
- DON C. WILLIAMS (1968) 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.
- Richard T. Haard
BS, University of Georgia; MS, PhD, Kansas State 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
- Chem 115 and 251, or equivalent

(F. Rhoades, adviser)

Pre-medical and allied sciences emphasis

- Biol 121, 122, 123 or 370, 312, 323, 485, and one course from 471, 480 or 490
- Electives to total 50 credits in biology selected from Biol 223, 310, 311, 325, 340, 345, 348, 349, 408, 450, 464, 466, 467, 490
- Chem 121, 122, 123, and 351, 352, 353, 354, 355
- Physics 131, 132, 133 (or 241, 242, 341, 344)

(G. Kraft, adviser)

Natural history emphasis

- Biol 121, 122, 123, 325, 490

- Four courses selected from Biol 424 (203), 452 (202), 454 (201), 456 (204), 461 (205), 463 (206), 465 (207)
- Electives selected with approval of adviser; suggested electives: Biol 307, 310, 311, 312, 452, 453, 454, 456, 458, 460, 461, 462, 463, 464, 465
- Chem 115 (121, 122, 123) and 251 (351, 352, 353)
- Geol 211 (101) and 310 or 314
- Huxley 439
- Recommended supporting course electives: Geog 251, 310, 331, 421; Hux 436; Recreation and Parks 201, 272; Astronomy 103; Soc 352, 422

(R. Taylor, adviser)

Combined Major — Biology/ Anthropology: Major Concentration

63 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 231, 307, 308, 325, 465, 466, and 485; Anth 320, 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 103, 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, 464, 465

Supporting Courses

- Chem 115 (or 121, 122, 123) and 251 (or 351, 352, 353)
- Math 105 and 220
- Physics 101 (or 131, 132, 133)
- Geol 211 and 212
- Sci Ed 399 and 492

(I. Slesnick, adviser)

Combined Major — Biology/Chemistry: Major Concentration 98-100 credits

- Chem 121, 122, 123, 251, 333, 461, 462

Biology

- 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
- Chem 371 or Biol 323
- Math 220 and Physics 131, 132, 133 (or 241, 242, 341, 344)

(I. Slesnick, adviser)

NOTE: This program is specifically designed for students who wish to be recommended for teaching competence 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 Competence

Recommendations for teaching competence 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, 344
- 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 or 220

(I. Slesnick, adviser)

NOTE: This program is specifically designed for students who wish to be recommended for teaching competence 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)
- Geol 211
- Math 124 or 220
- Physics 131, 132, 133 (or 241, 242, 341, 344)
- Sci Ed 399 and 492 (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.

(F. Rhoades, adviser)

Ecology emphasis

- Biol 121, 122, 123, 325, 340, 490
 - Two courses from Biol 310, 311, 312
 - Complete the courses under one of the three concentrations listed below.
 - Animal ecology (D. Schneider, adviser): Biol 403, 460, 464
 - Plant ecology (R. Fonda, adviser): Biol 379, 404, 452
 - Aquatic ecology (G. Kraft, adviser): Biol 402, 403, 425*
- (Students must register with the appropriate adviser.)
- Chem 121, 122, 123, 333 — the appropriateness of other chemistry courses should be discussed with an adviser
 - Geol 211
 - Math 124 — the appropriateness of the math requirement should be discussed with an adviser
 - Physics: two quarters, under advisement
 - Electives selected with approval of adviser. Some of the courses from which electives should be selected: Biol 310, 311, 312, 323, 345, 402, 405, 406, 424, 425, 450, 463, 465, 480, 481, 485; Chem 351, 352, 353 (or 251), 461, 462, 463; Geog 331, 423, 424; Geol 310, 340; Huxley 431; Comp Sci 110, 211; Math 125, 126

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 220 (or 105 and 124)

*See also Freshwater Studies Program.

- Electives selected with approval of adviser. Some of the courses from which electives should be selected: Biol 311, 323, 460, 461, 462, 463, 464, 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, 323, 345, 408, 471
- Chem 121, 122, 123, 333, 351, 352, 353, 354, 471, 472 and 473 or 474, 411, 412, 413
- One year college physics
- Math 124, 125

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, 344); Comp Sci 210, 439
- Chem 115, 251
- Physics 241, 242, 341, 344 (or Math/Comp Sci 335)

(C. Senger, 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.

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, 500; 417; 445 are described on page 32 of this catalog.

101 PRINCIPLES OF GENERAL BIOLOGY (4)

Energy relationships at all organizational levels of life, heredity, evolution, and man's impact on the biosphere.

103 HUMAN BIOLOGY (4)

Elementary human physiology: the functional anatomy of the human. Lectures and demonstrations. Not open to students with credit in Biol 348. Not applicable to a B.S. major in biology.

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 such currently encountered substances as pesticides, food additives, hallucinogenic drugs, and conventional drugs (alcohol, tobacco and coffee).

231 PLANTS AND CIVILIZATION (4)

The present day and historical interaction between mankind and plants: social, political and economical implications.

301 SURVEY OF MARINE INVERTEBRATES (2)

Prereq: Biol 101 or equivalent and permission of instructor. A laboratory and field study of intertidal and subtidal invertebrates found near the Sundquist Marine Laboratory; emphasis on identification and natural history of local marine invertebrates. Not available for credit toward a WWU biology major.

302 SURVEY OF COASTAL FISHES (2)

Prereq: Biol 101 or equivalent and permission of instructor. Taxonomic, anatomical, behavioral and ecological study of local freshwater and marine fish. Not available for credit toward a WWU biology major.



Biology

- 303 SURVEY OF COASTAL VEGETATION (2)
Prereq: Biol 101 or equivalent and permission of instructor. A laboratory and field study of the plant forms and communities characterizing the coastal areas adjacent to the Sundquist Marine Laboratory. Not available for credit toward a WWU biology major.
- 304 SURVEY OF MARINE ALGAE (2)
Prereq: Biol 101 or equivalent and permission of instructor. A laboratory and field study of the distribution, ecology and field recognition of the intertidal and subtidal algal habitats near the Sundquist Marine Lab. Not available for credit toward a WWU biology major.
- 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 (3)
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.
- 308 HUMAN REPRODUCTION AND SEXUALITY (3)
Prereq: Biol 101 and junior standing. Anatomy, physiology and embryology of human reproduction; behavior, disease, fertility control and other topics related to human reproduction and sexuality.
- 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.
- 334 BIOLOGY OF THE AGING PROCESS (3)
Prereq: Biol 101. Consideration of the physiological and molecular processes which accompany aging. Emphasis on well-documented and measurable changes associated with the aging process.
- 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 121, 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.
- 351 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.
- 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.
- 399 SEMINAR IN BIOLOGY (1)
Prereq: 25 credits in biological sciences and permission of instructor. Outstanding developments, past and present, in the biological sciences. May be repeated for credit.
- 402 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 325 and 312. 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; Biol 325 recommended. 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.
- 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.
- 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.
- 450 **PARASITOLOGY (5)**
Prereq: Biol 121, 122; two quarters of college chemistry. Representative animal parasites with emphasis on structural and physiological adaptations of parasite and host.
- 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 plant species. Several weekend field trips are required.
- 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.
- 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.
- 464 **VERTEBRATE ZOOLOGY (5)**
Prereq: Biol 312. Selected topics in the basic biology of the major groups of vertebrate animals; classification, life cycles, elementary physiology, and structure of representative forms; consideration of their role in ecosystems.
- 465 **MAMMALOGY (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.
- 466 **COMPARATIVE VERTEBRATE ANATOMY (5)**
Prereq: Biol 312. Morphology and evolution of organic systems of major vertebrate groups.
- 467 **GENERAL VERTEBRATE EMBRYOLOGY (5)**
Prereq: Biol 312. Development of the vertebrates; laboratory study of embryos of the frog, chick, and pig with application to human development.
- 468 **INVERTEBRATE EMBRYOLOGY (5)**
Prereq: Biol 368, 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.
- 471 **PHYSIOLOGICAL GENETICS (5)**
Prereq: Biol 123 and 323. Structure and chemical composition of genetic material; genetic systems of bacteria, viruses, yeasts and molds; aspects of biochemical genetics of man applying to the nature of gene functions
- 475 **STRUCTURE AND DEVELOPMENT OF VASCULAR PLANTS (4)**
Prereq: Biol 311. A study of plant organs and their tissues from the standpoint of origin, differentiation, growth and maturation. Normally offered in alternate years.

Biology

- 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.
- 486 **SPECIAL PROJECT IN HISTORICAL AND PHILOSOPHICAL PERSPECTIVES OF BIOLOGY (1)**
Prereq: concurrent enrollment in Biol 485.
- 490 **PRINCIPLES OF ORGANIC EVOLUTION (4)**
Prereq: Biol 121, 122, and 123. Principles, patterns, processes, and mechanisms of evolution in the organic world.
- 524 **ADVANCED TOPICS IN AQUATIC ENTOMOLOGY (4)**
Prereq: Biol 242, 245, 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.

Graduate Courses

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 352 and 404 recommended). Vegetative zonation of North America emphasizing factors controlling distributional patterns and paleogeographical history of major biomes.
- 520 **WILDFIRE AND THE DEVELOPMENT OF PLANT COMMUNITIES (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.
- 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 **ENZYMOLGY 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)

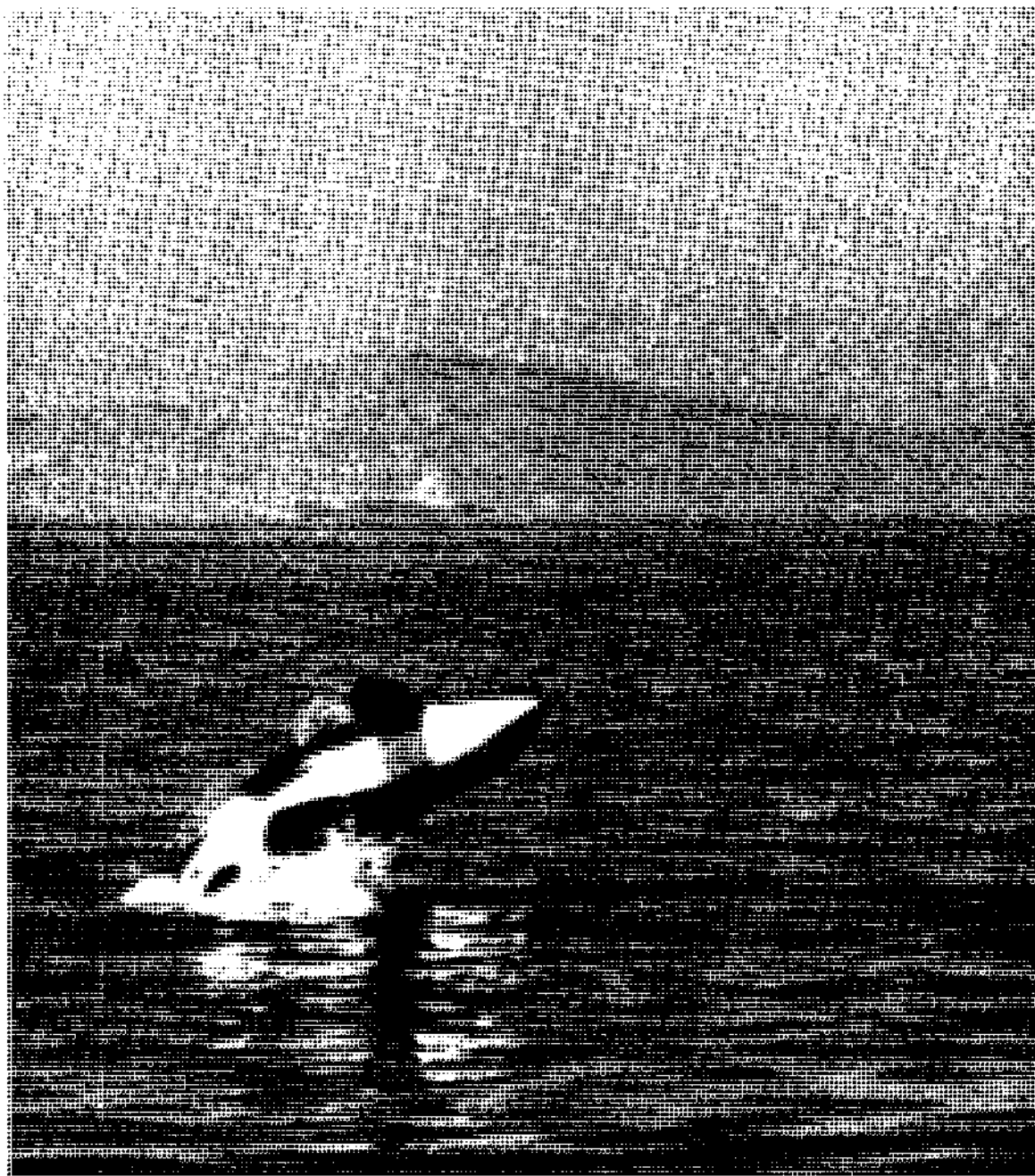
Prereq: permission of instructor. Intended for the student who wants experience in teaching a biology course of his/her choice. May be repeated for a maximum of 6 hours total credit. S/U grading.

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.





BUSINESS ADMINISTRATION

College of Business and Economics

The field of business administration covers a wide variety of responsibilities in both private and public organizations. National data reveal that the business administration major is the most frequent choice of undergraduate students and also is the major preferred by many employers.

MODEL FOR CURRICULUM

Development of the business administration curriculum has been guided by standards of the American Assembly of Collegiate Schools of Business. Required coursework provides opportunities for students to develop:

1. Their knowledge of the economic and social environment within which business functions;
2. Their knowledge of the major functional areas of business;
3. Their perceptual and analytical skills important to management decision-making; and
4. The basis for growth and advancement in their selected career.

Students normally devote most of the freshman and sophomore years to acquiring a broad general education background. Introductory courses in accounting, economics, business law, and mathematics will normally be completed by the end of the sophomore year. Junior and senior years are devoted to upper-division business requirements and pursuing elective coursework selected according to individual interest and/or need. Elective coursework helpful for developing oral and written communication skills is particularly recommended. The faculty is available to advise students on these choices.

ORGANIZATION OF CURRICULUM

Coursework offered within the department may be broadly classified into several fields which cover general management, business law, finance, marketing, operations, and personnel and industrial relations. In addition to required courses in each field which are identified under major requirements, students may specialize in a field, such as finance, by adding appropriate

electives. The Accounting and Economics Departments provide complementary required and elective coursework.

ADVANTAGES OF EARLY DECLARATION OF MAJOR

Faculty of the College of Business and Economics provide individual advising for students who express interest in majoring, minoring or taking elective coursework. Students who declare a major are assigned to a permanent faculty adviser who will assist them to graduation.

Several courses in business law, economics and mathematics which are required or recommended for majors and minors also may satisfy general education requirements in mathematics and social sciences. Careful planning may save time for additional electives.

An early declaration of major also provides faculty with an improved basis for class scheduling.

In order to be eligible to declare a major in business administration, students must have:

1. Completed a minimum of 75 hours including all of the following courses:
 Speech 101 or 205, or equivalent
 Acctg 241, 242
 Econ 203, 204
 Math 155, 156
 Comp Sci 117
 BA 255, 271
2. Maintained a grade point average of not less than 2.5.

BUSINESS ADMINISTRATION FACULTY

- ROBERT C. MEIER (1978) Chairman.
 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.
- ROOSEVELT BUTLER (1979) Assistant Professor. BS, Prairie View University; MA, Washington State University.
- LOUIS CONCORDIA (1979) Associate Professor. BS, Drexel University; MBA, University of San Francisco; PhD, University of Northern Colorado.
- 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.
- JOHN S. MOORE (1970) Associate Professor. BS, University of North Dakota; MSBus, JDLaw, University of Colorado; CPA, State of Colorado; PhD, University of Washington.
- EUGENE OWENS (1975) Professor. BA, University of Arizona; MS, Purdue University; MS, George Washington University; PhD, University of California, Los Angeles.
- E. LEROY PLUMLEE (1976) Associate Professor. BBA, Texas Tech University; MS, Northern Illinois University; DBA, Texas Tech University.

- ROBIN E. RIECK (1981) Assistant Professor. BA, University of Washington; MBA, University of Washington.
- FARROKH SAFAVI (1969) Professor. BA in Journalism, BS in Economics, MBA, University of Teheran; MBA, DBA, University of Southern California.
- ROBERT S. SPICH (1979) Assistant Professor. BA, Lafayette College; MBA, University of Washington.
- BARBARA J. UNGER (1979) Assistant Professor. BS, College of Notre Dame; MA, University of Washington.
- DANIEL M. WARNER (1978) Assistant Professor. BA, University of Washington; JD, University of Washington, MA, Western Washington University.
- BRUCE D. WONDER (1981) Associate Professor. BS, University of California; MS, San Francisco State University; PhD, University of Washington.

Transfer students should contact the department adviser about their major prior to registering so as to assure that they enter the sequence correctly and receive departmental evaluation of course work completed at other institutions.

BACHELOR OF ARTS

Major 93 or 94 credits

(Courses designated with an "*" may satisfy GUR requirements.)

- BA 255, 271*, 301, 303, 322, 330, 341, 360, 482, 495
- Acctg 241, 242, 243
- Econ 203*, 204*, 306
- Math 155*, 156, Comp Sci 117
- Speech 101* or 205* or equivalent

Plus a minimum of 15 hours of upper-division business administration elective courses under advisement.

The following non-BA courses, under advisement, may be used to satisfy the BA elective requirement: Acctg 332 or 365, Econ 311, OA 301, OA 310. Note: BA 451 and 452 may be substituted for BA 495.

Combined Major — Business Administration/Computer Science

94 credits

(Courses designated "*" may satisfy GUR requirements.)

- Acctg 241, 242, 243
- BA 271, 301, 303, 308, 330, 341, 360, 482, 495
- Comp Sci 210, 217, 310, 350, 351, 352, 353, 470, 471
- Econ 203, 306
- Math 155*, 156, 240

Business Administration

Minor 41 credits

(Courses designated "" may satisfy GUR requirements.)

- Acctg 241, 242
- BA 255, 271*, 301, 330, 341
- Econ 203*, 204*
- Math 155*

GRADUATE STUDY

For concentration leading to the Master of Business Administration degree, see the Graduate section of the catalog.

PREREQUISITES

Prerequisites for a particular course indicate its level of analysis and tool requirements. The exceptional student who feels he has already acquired these skills elsewhere, or can readily acquire them, must secure special permission for enrollment from the instructor and chairman.

COURSES IN BUSINESS ADMINISTRATION

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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.
- 215 PERSONAL FINANCE AND INVESTMENTS (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.
- 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.
- 271 LAW AND THE BUSINESS ENVIRONMENT (4)
Historical development of legal institutions, the judicial process, and impact of the law upon individual and business decision making.
- 301 INTRODUCTION TO MANAGEMENT (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.
- 303 ORGANIZATIONAL BEHAVIOR I (3)
Prereq: BA 301. Individual and group behavior in organizations.
- 308 MANAGEMENT INFORMATION SYSTEMS (4)
Prereq: BA 301. Decision process and the information requirements of decision-makers. Application of computers to contemporary business education, and governmental information systems.
- 322 PERSONNEL ADMINISTRATION (4)
Prereq: BA 271, 301. Recruitment, selection, utilization, and development of human resources, with emphasis on employee-management relations and relevant behavioral regulations.
- 330 PRINCIPLES OF MARKETING (4)
Prereq: BA 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, BA 255. Structure and operation of financial management; problems of internal financial analysis, forecasting, planning and control, capital supply and budgeting; dividend policy, mergers, acquisitions.
- 356 QUANTITATIVE METHODS (4)
Prereq: BA 255. Quantitative methods used in research, analysis and decision making in business.
- 360 OPERATIONS MANAGEMENT (4)
Prereq: BA 255, Acctg 243. Fundamentals of operations management, including tools for analyzing, designing and controlling operating systems.
- 370 LAW OF COMMERCIAL TRANSACTIONS I (4)
Prereq: BA 271. Legal principles underlying the law of contracts, personal property and secured transactions.
- 371 LAW OF COMMERCIAL TRANSACTIONS II (4)
Prereq: BA 370. Legal principles underlying the law of agency, negotiable instruments, sales, partnerships, and corporations.
- 372 LAW OF COMMERCIAL TRANSACTIONS III (4)
Prereq: BA 370. This course is intended to cover law not considered in BA 370 and 371 which is important to many accounting, business administration and pre-law students. Application of legal concepts to problem situations.
- 380 BUSINESS HISTORY OF THE UNITED STATES (4)
Prereq: Econ 203 or Lib St 200 and permission of instructor. 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: BA 301, 303. Individual and group behavior in organizations. Case problems and experiential learning exercises are utilized.
- 402 SEMINAR IN ORGANIZATIONAL THEORY (4)
Prereq: BA 301. Current research measuring organizational effectiveness, planning, leadership, patterns, and current problems.
- 404 ORGANIZATIONAL DEVELOPMENT (4)
Prereq: BA 301, 303. Current research and application to planned organizational change and internal training techniques.
- 405 INTRODUCTION TO MANAGERIAL BEHAVIOR (2)
Prereq: BA 303. Applied managerial techniques explored in a supervised environment.

- 406 **ADVANCED MANAGERIAL BEHAVIOR (4)**
 Prereq: BA 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.
- 408 **WOMEN IN MANAGEMENT (3)**
 Prereq: BA 303, or permission of instructor. Expectations and conflicts of managers regarding the changing roles of women in organizations and management.
- 411 **SMALL BUSINESS FINANCE (4)**
 Prereq: BA 341. Financial operations of small businesses with emphasis on capital sources and proposal development. Case studies of successful enterprises will be used to demonstrate potential scope of entrepreneurial activity.
- 422 **COMPENSATION ADMINISTRATION AND THEORY (4)**
 Prereq: BA 301, 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 **PERSONNEL RECRUITING AND SELECTION (3)**
 Prereq: BA 322. Recruiting and selection as related to organizational objectives. Legal requirements, selection models, validation, and topical issues of importance.
- 424 **PERSONNEL TRAINING IN BUSINESS (3)**
 Prereq: BA 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: BA 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 PERSONNEL AND INDUSTRIAL RELATIONS (4)**
 Prereq: BA 322. Current problems in policy and practice used in personnel and industrial relations administration.



- 427 **SYSTEMS OF DISPUTE SETTLEMENT (4)**
 Prereq: BA 322 or Econ 325. Public and private dispute settlement systems, particularly in labor relations, commerce, and public issues. Emphasis on quasi-judicial and nonjudicial systems, nonjudicial methods including arbitration, fact-finding and mediation.
- 430 **MARKETING RESEARCH (4)**
 Prereq: BA 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: BA 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: BA 330. Nature of personal selling with emphasis on industrial sales effort and management of sales personnel.
- 433 **MARKETING MANAGEMENT (4)**
 Prereq: BA 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: BA 330. Analysis of organizational structure, operations, and management of wholesale, retail and other intermediaries in the channels of distribution.
- 435 **CONSUMER BEHAVIOR (4)**
 Prereq: BA 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: BA 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: BA 341. Operation of securities markets and investment risk and return. Analysis of security characteristics and the problems of portfolio selection and management.
- 444 **FINANCIAL INSTITUTIONS AND MARKETS (4)**
 Prereq: BA 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.
- 446 **RISK AND INSURANCE (3)**
 Prereq: senior standing. Personal and organizational risk and the means by which such risk may be minimized, transferred or otherwise managed to avoid serious financial loss.
- 448 **INVESTMENT ANALYSIS AND MANAGEMENT (4)**
 Prereq: BA 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.

Business Administration

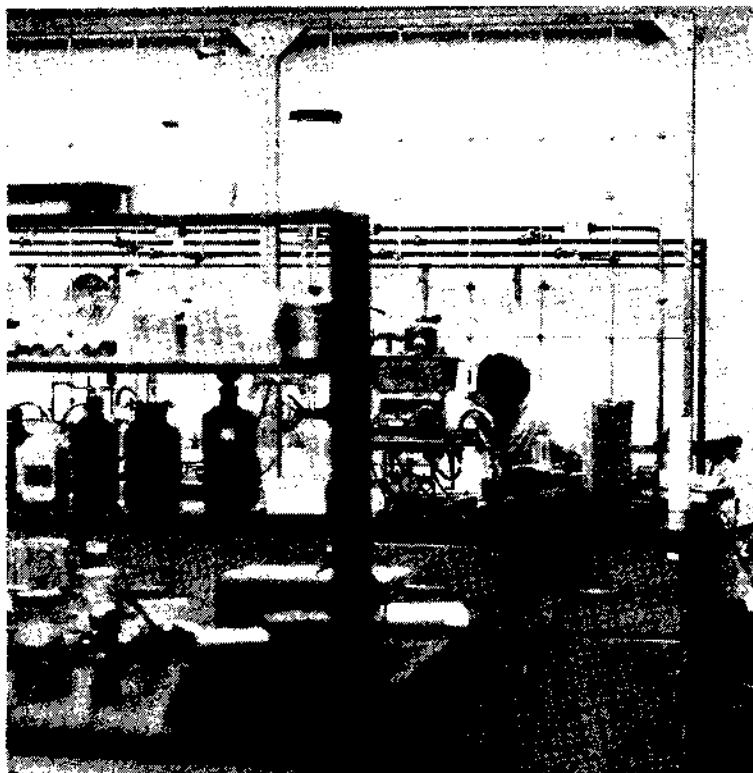
- 449 **CASES IN FINANCIAL MANAGEMENT (4)**
Prereq: BA 441. Case studies are utilized to develop insight and provide experience in the application of financial theory and practice to such decision making areas as working capital management, capital budgeting, capital structure determination and dividend policy.
- 451 **SMALL BUSINESS ENTREPRENEURSHIP (4)**
Prereq: BA 301, 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: BA 330, 341, 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: BA 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: BA 360. Examination of systems for planning levels of output and work force, scheduling machines and equipment, and maintaining inventories.
- 467 **BUSINESS SIMULATION (4)**
Prereq: BA 360 or equivalent. 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: BA 360 and permission of instructor. Field-based study of theory applied to current operating problems.
- 470 **BUSINESS TAX PLANNING (3)**
Prereq: Acctg 243. Impact of federal, state of Washington and local taxation upon business organization, location and operation. Comparable Canadian federal and provincial taxes.
- 471 **GOVERNMENT REGULATION OF BUSINESS OPERATIONS (3)**
Prereq: BA 271 or 370. Impact of federal, state and local government regulation upon business operation.
- 480 **INTERNATIONAL BUSINESS (4)**
Prereq: BA 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: BA 271 or 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 **ADVANCED INTERNATIONAL BUSINESS (3)**
Prereq: BA 480, or permission of instructor. Opportunities and problems in business operations in the special regions of the world (Pacific Rim Basin, Third World Nations, EEC, East-West).
- 485 **REAL ESTATE (4)**
Prereq: BA 271 or equivalent. 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: BA 485. Investment strategy, selection, financing, appraisal of income properties such as rentals, apartments, condos, office buildings, shopping centers and other secure purpose real estate.
- 495 **BUSINESS POLICY (4)**
Prereq: BA 301, 330, 341, 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.

Graduate Courses

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

- 511 **MANAGERIAL ACCOUNTING (4)**
Prereq: permission of program director. Application of accounting data to managerial control and decision making. Derivation and use of accounting instruments. Design and implementation of accounting systems. Auditing applications and principles.
- 512 **MANAGERIAL ECONOMICS (4)**
Prereq: permission of program director. Application of the principles of economics to the analysis and execution of business decisions. Includes economic inputs to problem formulation through analysis of the economic impact of alternative solutions.
- 513 **MARKETING MANAGEMENT (4)**
Prereq: BA 511, 512. 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.
- 514 **FINANCIAL PLANNING (4)**
Prereq: BA 511. Theory and policy for long-term decisions; valuation, asset choice, capital structure, dividend policy, merger/acquisition.
- 515 **PRODUCTION MANAGEMENT (4)**
Prereq: BA 511, 512 or equivalent. Management of production activities from resource procurement through defined and controlled transformation to marketable products.
- 516 **ORGANIZATIONAL BEHAVIOR (4)**
Prereq: permission of program director. Techniques for the management of individual and group behavior in organizations. Includes concepts and techniques for programmed change, conflict resolution and planned organizational modification and evolution.
- 518 **BUSINESS ENVIRONMENT (4)**
Prereq: BA 516, 517. Analysis of the legal and ethical considerations of business.
- 519 **LABOR/MANAGEMENT RELATIONS (4)**
Prereq: BA 516. Analysis of the managerial implications in collective bargaining, government regulation, arbitration/mediation between management and labor in the organization.
- 520 **BUSINESS POLICY (4)**
Prereq: BA 518, 519. Case study of the business enterprise to include all aspects of the organization.
- 521 **INTERNATIONAL BUSINESS (4)**
Prereq: BA 512, 513, 514, 515. Analysis of the special economic, marketing, financial and production considerations in the international marketplace.



CHEMISTRY

College of Arts and Sciences

Chemistry is the study of matter and its transformations. It has a major relationship to most other areas of natural science and technology and has played a significant role in most scientific advances and many important public policy issues during the past century. The study of chemistry can provide entrance to a wide variety of careers in industry, government or teaching as well as a good foundation for further study in chemistry graduate programs or professional schools of dentistry, medicine, law or business.

The Chemistry Department is housed in Haggard Hall, centrally located adjacent to the library on the main campus. The laboratory facilities, equipment and instrumentation in the department are modern and readily available to chemistry students. In addition the department has access to a variety of special campus facilities such as the Computer Center, Electron Microscope Laboratory and the Science Education Center.

CHEMISTRY FACULTY

The Chemistry Department faculty is strongly committed to providing the undergraduate student with an excellent personalized education. All department members hold the Ph.D. degree and most are engaged in experimental research, primarily with junior and senior level chemistry majors who have elected to pursue research study. In addition to providing instruction and academic advisement, faculty members work with individual students on career plans and academic problems.

- DONALD M. KING (1966) Chairman.
Associate Professor. BS, Washington State University; Ph.D. California Institute of Technology.
- MARION BESSERMAN (1952) Associate Professor. BS, University of Washington; MS, Purdue University; Ph.D. University of Washington.
- JOSEPH R. CROOK (1970) Associate Professor. BS, University of Nevada; Ph.D. Illinois Institute of Technology.
- LOWELL P. EDDY (1957) Associate Professor. BS, MS, Oregon State University; Ph.D. Purdue University.
- GEORGE A. GERHOLD (1969) Professor. BS, University of Illinois; Ph.D. University of Washington.

Chemistry

- GEORGE S. KRIZ, JR. (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.
- SALVATORE F. RUSSO (1968) Associate 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.
- MARK L. WICHOLAS (1967) Professor. AB, Boston University; MS, Michigan State University; PhD, University of Illinois.
- H. WILLIAM WILSON (1966) Professor. BSc, University of Alberta; PhD, University of Washington.

Research Associate

James D'Argaville Clark (1964)
BSc, Capetown; BSc, University of London; PhD, Institute of Paper Chemistry, Lawrence College.

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.

- Business Administration
- Computer Science
- Journalism
- Environmental Studies

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

BACHELOR OF ARTS IN EDUCATION

Chemistry Major — Secondary

Teaching 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

Extended Minor 41-43 credits

- Chem 121, 122, 123, 461, 462, 463
- 6-8 credits under departmental advisement from Chem 251, 333, 351, 352, 353, 354, 441
- Sci Ed 399, 492

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.

Combined Major — Chemistry/Mathematics: — Secondary Teaching

84-86 credits plus Supporting Courses

This major leads to recommendation for teaching competence 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
- Sci Ed 399, 492, Math 483
- 40 credits in mathematics (excluding Math 482) under departmental advisement
- Supporting courses: one year college physics

Combined Major — Chemistry/Physics: Major — Secondary Teaching

77-81 credits plus Supporting Courses in Mathematics

This major leads to recommendation for teaching competence 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, 344, 345, 346
- 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 Competence

Recommendation for teaching competence in chemistry normally requires completion of one of the above majors or the extended minor 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, 344, Math 105*, 124, 125, 126, 205
- Electives, selected under departmental advisement 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. In addition to the above degree requirements, the ACS recommends course work in computer science, statistics and a foreign language (particularly German).

A typical four-year program leading to a Bachelor of Science (ACS certified) is outlined below:

First Year

Chem 121, 122, 123; Math 105, 124, 125

*Five credits less of required courses if student begins sequence with Math 124.

Chemistry

Second Year

Chem 351, 352, 353, 354, 355, 333; Math 126, Physics 241, 242, 341, 344

Third Year

Chem 461, 462, 463, 464, 465; Math 205

Fourth Year

Chem 434, 441 plus electives (see above).

Combined Major — Chemistry/Biology: Major Concentration 110 credits

- Chem 121, 122, 123, 333, 351, 352, 353, 354, 471, 472, 473 or 474, 461, 462, 463
- Biol 121, 122, 123, 323, 345, 408, 471
- One year college physics
- Math 124, 125

This program is specifically designed for students who wish to undertake graduate study in either molecular biology or bio-chemistry.

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, 500; 417; 445 are described on page 32 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 103 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 (1-2)
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.
- 340 CHEMICAL PERIODICITY (2)
Prereq: Chem 123. Descriptive inorganic chemistry. Properties of the elements and compounds. Group trends of the representative elements and of the transition elements.
- 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 354 and 353 or concurrent. Techniques of organic chemistry: reactions, separations; syntheses and introduction to practical spectroscopy.

- 371 **ELEMENTARY BIOCHEMISTRY (5)**
Prereq: Chem 251. Outlines of structures and metabolisms of carbohydrates, lipids, proteins, and nucleic acids; biochemical functions of vitamins, hormones, and some co-enzymes; basic properties of enzymes. Laboratory.
- 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 grading.
- 401 **PROJECT IN CHEMISTRY (1-3)**
Prereq or concurrent: Chem 461 and Chem 333; junior status in chemistry and an overall 3.00 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, Math 125.
- 425e **Molecular Spectroscopy**
Prereq: Chem 463, Math 125.
- 425f **Advanced Physical Chemistry**
Prereq: Chem 463, Math 125.
- 425g **Theoretical Inorganic Chemistry**
Prereq: Chem 441.
- 425h **Enzyme Chemistry**
Prereq: Chem 463 or 413, 471.
- 425j **Physical Biochemistry**
Prereq: Chem 463 or 413, 471.
- 425k **Stereochemistry**
Prereq: Chem 353
- 434 **INSTRUMENTAL ANALYSIS (4)**
Prereq: Chem 333; Chem 463 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 electro-chemistry.
- 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 (3 ea)**
Prereq: Chem 123, 353 or concurrent, and Biol 101 or 120; 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.



Chemistry

- 482 **NUCLEAR CHEMISTRY (3)**
Prereq: Chem 123, Physics 133 or equivalent, and Math 125. Theoretical and applied nuclear and radio-chemistry.
- 483 **NUCLEONICS LABORATORY (2)**
Prereq: Chem 123 or Physics 133 or 231. General experimental techniques in nuclear and radiochemistry for chemistry, biology, geology and physics majors.
- 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

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

- 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 461 or Physics 381 or Physics 391. 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 481 (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.
- 555 **ORGANIC PHOTOCHEMISTRY (3)**
Prereq: Chem 353 and 461 or permission of instructor. Topics include: photochemical reactions, rearrangements, mechanisms; the nature of photophysical processes and electronically excited states; energy transfer; photochemical kinetics; and orbital symmetry considerations (Woodward-Hofmann rules).
- 561 **ADVANCED PHYSICAL CHEMISTRY (3)**
Prereq: Chem 463 (equivalent or concurrent) and Math 222. Statistical treatment of thermodynamics and principles of chemical kinetics.
- 562 **THEORETICAL CHEMISTRY (3)**
Prereq: Chem 463 and Math 222. Molecular orbital theory and its application in bonding of complex molecules.
- 563 **MOLECULAR SPECTROSCOPY (3)**
Prereq: Chem 463 and Math 222. Principles of modern spectroscopy.
- 573 **ENZYME CHEMISTRY (3)**
Prereq: Chem 413 or 463 and 471 or 571. 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 413 or 463 and Chem 471 or 571, or permission of instructor. Normally offered in alternate years. Quantitative methods applicable to the study of macromolecules, 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.
- 581 **ADVANCED NUCLEONICS (3)**
Prereq: Chem 482 or Physics 382. Advanced techniques of nuclear chemistry and nuclear physics; nuclear reaction, nuclear fission, and involved multi-particle detection scattering experiments.
- 595 **SEMINAR (1)**
Presentation of contemporary subjects in chemistry. S/U grading.
- 690 **THESIS RESEARCH (1-3)**
Research in chemistry under faculty direction terminating in a master's thesis. S/U grading.
- 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. Repeatable for a maximum of two quarters.
- 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.



ECONOMICS

College of Business and Economics

By any measure, economics is one of the most important and exciting fields in the social sciences and is the only discipline among the social sciences included in the Nobel Prize awards. The most challenging task of economics is the study of how to best use natural and man-made resources in the satisfaction of human wants. Since most of mankind's activities involve economic considerations, it can be said that economics is the study of one of the fundamental aspects and determining forces of human life. Today, more than ever, the problems agitating society are predominantly economic. The concerns of inequality, discrimination, pollution, the energy crisis, and growth are heavily economic. Their solutions, too, will draw heavily on economics. Whether as intelligent citizens or as professional economists, we need the perspective of economics if we are going to understand and deal with the realities of life in the late twentieth century.

The areas to which economists devote most of their analytical skills are the processes of production, distribution and consumption of com-

modities and services. The knowledge of why certain products are produced or consumed, why shortages occur, and what the repercussions of a certain change in production or consumption might be, may all be essential for economic decision-making. In this context, the study of how and why individuals make choices from among alternative courses of action in production and consumption, for example, involves an analysis of man's economic motivation. Similarly, a knowledge of income distribution trends and a theoretical as well as humanistic understanding of the social and economic repercussions of various patterns of distribution can move a society to political action. It is the economist who most typically provides the data, statistical methods and theories to help in the analysis of these basic problem areas. A vast number of economic problems derive directly from these areas of concern. Are depressions inevitable? What about inflation and unemployment? Should we worry about poverty and income inequality? Is stagnation our biggest problem, or is growth an even bigger one? The study of economics produces the educated citizen as well as the trained

professional who can intelligently understand and cope with these problems. Economic analysis is increasingly required in dealing with such diverse social problems as poverty, crime, health care, resource exhaustion, and many more.

The field of economics consists of many areas of interest and specialization where the concerns and methods of economics are selectively applied. For example, the historical area deals with the history of the development of different economies and economic ideas. The area of economic development analyzes the performances of both developed and "backward" economies. Some economists specialize in the examination of taxation and government spending, banking and money supply, sophisticated mathematical methods, government policies, and international economic problems. Still others engage primarily in analyzing the performance of a nation's total economy, or only that of a small unit like a business firm.

Since economics is a discipline involved in such far-reaching concerns of modern society, economists are not only employed as teachers and researchers in the nation's colleges and universities, but also at all levels of government, in the nation's banking and financial institutions, and in labor unions. In view of the technical and complex economic problems confronting the modern business firm, one of the most rapidly growing areas of employment in the profession is the employment of business economists. Business economists are heavily involved in planning, forecasting, production and market analysis, pricing, as well as government policy monitoring.

The major tools of the economist are economic theory, statistical methods and computer-assisted data analysis. While many employment opportunities are available to the university graduate, the person who wishes to pursue a career as a professional economist should plan to do some graduate study.

The economics program provides two options under the Bachelor of Arts degree.

Both options require a foundation in economic theory, quantitative skills and research experience. Option I also provides opportunity for 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 frequently 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 and Economics/Mathematics.

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.

ECONOMICS FACULTY

- K. PETER HARDER (1970) Chairman, Associate Professor. BA, University of Puget Sound; MA, PhD, University of Nebraska.
ROBERT P. COLLIER (1976) Professor. BA, Reed College; PhD, Stanford University.
J. RONNIE DAVIS (1981) Professor and Dean of the College of Business and Economics. BS, MS, University of Southern Mississippi; PhD, University of Virginia.
RICHARD FRYE (1975) Assistant Professor of Economics and Huxley College. BS, United States Naval Academy; PhD, University of Rhode Island.
ERWIN S. MAYER (1953) Professor. AB, Hunter College; PhD, University of Washington.
MICHAEL K. MISCHAIKOW (1964) Professor. BA, School of Commerce and Finance, Bulgaria; MBA, Hochschule fur Welthandel, Austria; MA, PhD, Indiana University.
HOWARD E. MITCHELL (1955) Professor. BA, Whitworth College; MA, PhD, University of Washington.
DENNIS R. MURPHY (1979) Associate Professor. BA, MA, Western Washington University, PhD, Indiana University.
DAVID M. NELSON (1977) Associate Professor. BA, Whitworth College; MA, PhD, University of Oregon.
ALLEN G. SLEEMAN (1977) Assistant Professor. BS, London School of Economics; ABD, Simon Fraser University.

Transfer students should contact the department adviser about their major prior to registering so as to assure that they enter the sequence correctly and receive departmental evaluation of coursework completed at other institutions.

BACHELOR OF ARTS

Major 90 credits

Basic Core

- Econ 203, 204, 271, 301, 302, 303, 311, 406, 407
- Acctg 241
- Math 341
- 14 credits from Econ 325, 381, 410, 461, 482

Option I

- Basic Core

- 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 total credits of the major

Option II

- Basic Core
- A minor to be selected by the student under departmental advisement
- Electives in the College of Business and Economics, under departmental advisement, to complete the required total credits of the major

Combined Major — Economics/Mathematics 100 credits

This concentration is for students who wish considerable depth in both areas and satisfies requirements for both a major and a minor for the B.A. degree.

- Econ 203, 204, 301, 302, 303, 311
- 12 additional credits in upper-division courses in the College of Business and Economics, under departmental advisement
- Acctg 241, 242, 243
- Math 105, 124, 125, 126, 205, 241
- Math 341, 342; or Math 441, 442, 443
- Comp Sci 110 or 210
- 11 additional credits in upper-division mathematics or computer science, under advisement from the departments of Economics and Mathematics.

Combined Major — Economics/Accounting 100 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, 303, 311
- 14 additional credits in upper-division economics courses, under departmental advisement
- Acctg 241, 242, 243, 341, 342, 343
- Math 341
- 16 additional credits in upper-division accounting courses under advisement from the Economics Department
- 12 credits in business administration electives, under advisement from the departments of Economics and Accounting

Minor 25 credits

- Econ 203, 204
- Additional courses selected under departmental advisement; at least 10 credits must be at upper-division level

BACHELOR OF ARTS IN EDUCATION**Minor** 23-25 credits

(Alternate minor for other than business education majors for teaching competency recommendation.)

- Econ 203, 204; Acctg 241 or BA 201
- 10 credits in upper-division courses selected under prior advisement

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, 500; 417; 445 are described on page 32 of this catalog.

- 190 CURRENT ECONOMIC ISSUES (3)
Examination of the major economic problems of our time. Designed to introduce the general student to the most visible economic aspects of modern society, such as inflation, economic growth and recession, pollution, unemployment, etc.
- 203 PRINCIPLES OF ECONOMICS I. INTRODUCTION TO MICRO-ECONOMICS (5)
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.
- 204 PRINCIPLES OF ECONOMICS II. 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.
- 271 QUANTITATIVE METHODS (4)
Prereq: Math 105 or equivalent. 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.

Economics

301 INTERMEDIATE MACRO-ECONOMICS (4)

Prereq: Econ 204 and 311. Determinants of the level of income, employment and output in the economic system.

302 INTERMEDIATE MICRO-ECONOMICS (4)

Prereq: Econ 203 and 271. The theory of pricing under conditions of perfect and imperfect market structure; relation of demand, production, costs and prices; functional income distribution; general equilibrium theory.

303 THE HISTORY OF ECONOMIC THOUGHT (5)

Prereq: Econ 203 and 204. Development of economic thought with emphasis on period following Adam Smith.

306 MANAGERIAL ECONOMICS (4)

Prereq: Econ 203, Acctg 243; Math 155, 156, BA 255; or Econ 271, 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.

311 MONEY AND BANKING (4)

Prereq: Econ 204. Nature and functions of money, monetary institutions, instruments of monetary policy and their influence on economic activity through changes in money and credit.

325 ECONOMICS OF LABOR (5)

Prereq: Econ 203, 204. Economics of the labor market; development and functioning of labor unions and collective bargaining.

338 ECONOMIC ANALYSIS AND INDUSTRIAL MANAGEMENT (5)

Prereq: Math 100 or equivalent. Introduction to structure of markets, production and price theory; application to organization management and operation of business enterprise. Not applicable to a major in economics.

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. 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. Listed jointly as Huxley 383.

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)

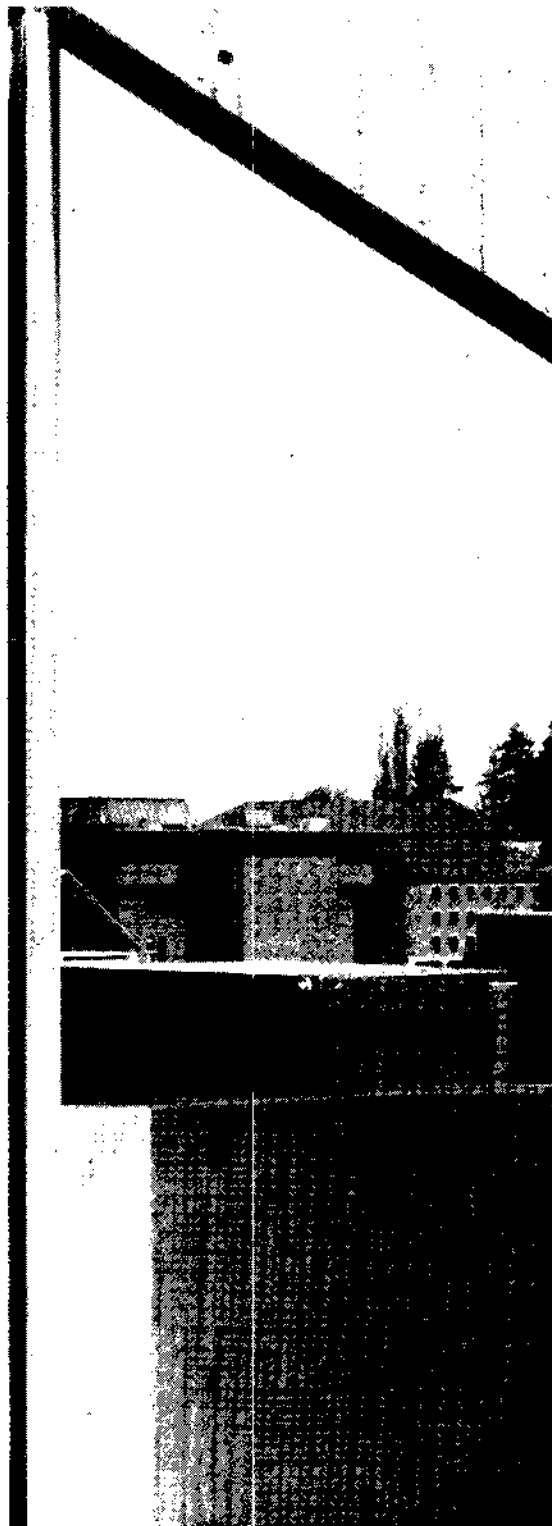
Prereq: Econ 203 or 204. Comparative industrialization in the 19th century. Analysis of the forces, patterns and repercussions of industrialization in several major Western economies.

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.



- 402 ADVANCED MICRO-ECONOMICS (4)**
Prereq: Econ 302 or 306, and Econ 271 or equivalent; Math 341 and/or Econ 475 recommended. Application of quantitative and theoretical tools in key areas of applied micro-economics. Emphasis on benefit-cost analysis, demand forecasting, corporate finance, and natural resource model building. Selective reading in current professional journals.
- 406 ECONOMIC RESEARCH (3)**
Prereq: Econ 301, 302 or 306, 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 (3)**
Prereq: Econ 406. Research and presentation of an extended paper on an individually chosen topic with guidance given by instructor.
- 410 PUBLIC FINANCE (5)**
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. 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. Problems and issues in the finance of state and local government services.
- 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 306. 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. Offered irregularly.
- 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 audio-visual materials, games, simulations and other teaching aids.
- 461 INTERNATIONAL ECONOMICS (5)**
Prereq: Econ 203 and 204. International trade and monetary relations and their impact on the domestic economy. Analysis of trade, tariffs, quotas, balance of payments, foreign exchange, international financial arrangements and world interdependence.
- 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: Math 341. 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. Listed jointly as Huxley 480.
- 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; Geog 207 recommended. 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. Listed jointly as Huxley 483.
- 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 and 204. Causes and conditions characterizing the process of economic development. An evaluation of alternative approaches toward development policies.

Graduate Courses

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.

- 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.



EDUCATION

School of Education

EDUCATION FACULTY

ARNOLD M. GALLEGOS (1973) Professor of Education and Dean, School of Education. BA, University of the Americas (Mexico City campus); MA, Fresno State College; EdD, University of California, Los Angeles.

RICHARD O. STARBIRD (1962) Chairman. Professor. BA, Heidelberg College; MA, Columbia University; EdD, Teachers College, Columbia University.

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.

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.

ROBERTA A. BOUVERAT (1970) Assistant Professor. BA, MEd, Western Washington State College; PhD, The Ohio State University.

DON W. BROWN (1954) Associate Professor. BS, MA, University of Nebraska; EdD, Colorado State College.

RICHARD J. L. COVINGTON (1970) Associate Professor. BA, Doane College; MEd, Whittier College; EdD, University of California, L.A.

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.

MARIE D. EATON (1975) Associate Professor. BA, Pomona College; MEd, PhD, University of Washington.

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.

F. RICHARD FERINGER (1962) Associate Professor of Education. BS, University of Minnesota; EdD, University of California, Los Angeles.

PAUL FORD (1970) Professor. AB, Dartmouth College; MEd, EdD, Harvard University.

SHEILA FOX (1977) Lecturer. BA, Western Washington State College; MEd, PhD, University of Washington.

BURTON L. GROVER (1969) Associate Professor. BS, MA, PhD, University of Minnesota.

C. MAX HIGBEE (1962) Professor. BA, Simpson College; MS, Washington State University; PhD, University of Iowa.

F. HERBERT HITE (1968) Professor. BA, MA, College of Puget Sound; EdD, Washington State University.

- PETER J. HOVENIER (1970) Associate Professor. BA, University of California, Santa Barbara; MA, Brigham Young University; MA, PhD, Stanford University.
- LORRAINE KASPRISIN (1979) Assistant Professor. B.S.Ed., MA, The College of the City of New York; M.Phil., 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.
- MARVIN L. KLEIN (1978) Profesor. BS, MS, Southern Illinois University; PhD, University of Wisconsin, Madison.
- JOHN J. KNIGHT (1975) Assistant Professor. BA in Ed, Wisconsin State University; MS in Special Ed. Portland State University; EdD, Indiana University.
- GEORGE S. LAMB (1965) Professor. AB, Macalester College; MA, University of Washington; PhD, University of Minnesota.
- ROBERT A. McCRACKEN (1963) Professor. BA, MA, PhD, Syracuse University.
- PATRICK J. McINTYRE (1977) Associate Professor. B.Chem.Eng., The Catholic University of America; MS, Polytechnic Institute of Brooklyn; PhD, University of Wisconsin.
- WILLIAM R. MILES (1977) Assistant Professor. BA, MA, Colgate University; PhD, University of Wisconsin, Madison.
- DONALD E. MOON (1966) Associate Professor of Technology and Education. BS in Ed, California State College, California, Pa.; MA, Teachers College, Columbia University; EdD, Oregon State 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 Profesor. BA, University of Washington; EdD, Stanford University.
- RAY S. ROMINE (1966) Associate Professor. BS, Eastern Montana College; MEd, Colorado State University; PhD, University of Oregon.
- LEONARO SAVITCH (1967) Associate Professor. BS, Pennsylvania State; MA, Teachers College, Columbia University; PhD, University of Washington.
- CYNTHIA D. SCHULZ (1978) Lecturer. BA, Western Michigan University; MS, PhD, Southern Illinois 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.
- VAL D. SPANGLER (1977) Lecturer. BA, MA, University of Michigan; JD, University of Michigan School of Law.
- MARIAN J. TONJES (1975) Associate 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.
- JOHN F. UTENDALE (1972) Associate Professor. BS, University of Alberta; MEd, Eastern Washington State College; EdD, Washington State University.
- PHILIP B. VANDER VELDE (1967) Assistant Professor. BA, Calvin College; MA, PhD, Michigan State University.
- STEWART VAN WINGERDEN (1951) Associate Professor. BA in Ed, Western Washington State College; MA, Colorado State College; EdD, Washington State University.
- MARY W. WATROUS (1957) Professor. AB, University of Nebraska; MA, Gonzaga University; EdD, University of Washington.
- PAUL WOODRING (1939) Distinguished Service Professor Emeritus of the University. BSEd, Bowling Green State University; MA, PhD, Ohio State University. Honorary degrees: LHD, Kalamazoo College; PhD, Coe College; LittD, Ripon College; LHD, Bowling Green State University; LLD, University of Portland.

OVERVIEW

The Education Department has the responsibility for providing the professional studies necessary to become a qualified teacher. Also, the department is responsible for screening students for admission and for evaluating their progress during their professional studies.

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.

Application

Students will apply for admission to a specific professional studies program prior to or during the introductory professional course or before taking a second professional course in the Department of Education. Such application is to be made at the Admissions and Advisement Office of the School of Education, Miller Hall 202. Secondary students must apply prior to enrolling in Education 398.

Students with prior records involving a felony should report to the Certification Officer, Miller Hall 204, prior to any course work in Education (as required by WAC 180-80-200 (4): RCW 28A.70.140).

Admission Standards

These standards apply generally to all teacher preparation programs. Education students are expected to meet the professional education requirements in the catalog current at the time they submit an application to the Admissions and Advisement Office (Miller Hall 202).

English Competence: Prior to admission, all applicants to elementary teaching will be required to pass the general education 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.

All applicants to secondary teaching and special education will be required to take and pass a common English competency test prior to admission.

Speech Competence: All candidates for admission to teacher education are expected to demonstrate adequate speaking ability. A grade of "B" or better in a speech performance course such as Speech 101, or a "C" or better in Speech 205 or 302, will be deemed evidence of minimal competence.

Scholarship: A cumulative grade point average of 2.5 overall and in work taken at WWU to be counted toward the degree is required for

Education

admission to all certification programs. This must be achieved prior to consideration for admission.

Students, after being admitted to teacher education, must maintain both a minimum 2.5 cumulative grade average and a 2.5 GPA in work taken at Western. If either of these grade point averages falls below 2.5, students will be dropped from the teacher education program. Students may petition the program area 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's work to determine qualifications for admission or retention.

Credit is given in courses graded "A," "B," "C," "D," "S" and "P." However, the grade of "D" represents poor work which is not acceptable in the major, minor, supporting courses for majors or minors, English composition, professional education and educational psychology courses required for a degree or certification nor for fifth-year courses. Professional studies courses taken more than twice will not be counted toward certification.

Admission Classifications

On the basis of standards listed above, students will be *admitted* or *admitted with provisions* or *not admitted*. Students may not continue to take any professional education courses toward certification if not *admitted* or *admitted with provisions* to a teacher preparation program.

Courses common to all programs:

- Ed 310 The Teacher and the Social Order
- Ed 363 Survey of Exceptional Children
- Ed 411 Foundations of Education (Students may defer Ed 411 to the fifth year by substituting for this undergraduate requirement Ed 390, Professional Practicum and Seminar, or Ed 131, Introduction to Early Childhood Education)
- Psych 351 Psychology of Human Learning and Instruction

To this common core, students will add either Elementary Teaching or Secondary Teaching according to choice of teaching level and will choose either the campus-based or field-centered program to complete their requirements as listed below:

I. CAMPUS-BASED PROGRAM

Secondary Teaching

- Ed 398 Seminar in Secondary Education

- Ed 420 Instruction in Secondary Schools
- Psych 353 Adolescent Psychology
- Psych 371 Evaluation in the Secondary School
- Ed 495 Supervised Teaching, Secondary

Elementary Teaching

- Ed 385 Foundations of Reading Instruction
- Psych 352 Child Development and Education
- Psych 316 for special education or by advisement
- Psych 372 Evaluation in the Elementary School
- Ed 494 Supervised Teaching, Elementary

(Students electing the Professional Concentration for Elementary Teachers will follow variations in this required program. Individual programs are developed from the areas described in the concentration.)

II. FIELD-CENTERED PROGRAM

Elementary: The student completes on campus Ed 310, Ed 363, Psych 351 and Psych 352. The remainder of the professional program is satisfied by Ed 491, Laboratory for Elementary Teaching, and Ed 494, Supervised Teaching in Elementary.

Secondary: The student completes on campus Ed 310, Ed 363, Ed 398, Psych 351 and Psych 353. The remainder of the professional program is satisfied by Ed 492, Laboratory for Secondary Teaching, and Ed 495, Supervised Teaching in Secondary.

Students are urged to make an early choice of options. Careful advance planning is essential to the completion of teacher preparation within the normal four-year university program or study. See Programs I, II, III, and IV following.

Consult the Office of Field Services, Miller Hall 206, for further information regarding the Field-Centered Program.

SUPERVISED TEACHING

All teacher preparation programs require supervised teaching. The requirement in supervised teaching for the provisional certificate is generally 16 credits, with the exception of Special Education which requires 32 credits. The following conditions apply to these courses in both campus-based and field-centered programs.

The student, under advisement, may seek to develop teaching competence in two fields if he has adequate academic background. He may

also obtain recommendations for both secondary and elementary levels if he has an appropriate major field and the elementary teaching minor, and undertakes student teaching at both levels either within the 16 credit requirement or by an additional experience. However, two different experiences in the same quarter cannot be arranged.

Prerequisites for Supervised Teaching

- (a) Admission and continued good standing in the professional studies program. (See "Admission to Teacher Education" under School of Education listing.)
- (b) Completion of at least 128 credits.
- (c) Secondary teachers — at least 30 credits in the proposed teaching major with grade average and program acceptable to the department for teaching recommendation. A methods class in the major area is strongly recommended. Completion of Ed 310, 398, 420, Psych 351, 353, 371.*
- (d) Elementary student teachers in Program II (Elementary Minor) — completion of Ed 310, 385, Psych 351, 352, and courses in four areas of the elementary curriculum including Ed 485 and Math 481; recommendation of readiness for supervised teaching from the elementary adviser.
- (e) In addition to the above requirements, students in Special Education, both elementary and secondary, are required to complete Ed 360, 361, 461, 462 and 462a prior to Ed 498, student teaching in Special Education.
- (f) A chest x-ray or T.B. skin test in compliance with state law.

Application for Supervised Teaching

Application for supervised teaching must be filed in January preceding the academic year in which the student intends to do the work. Students will consult with program advisers before making such application. They 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 opportunities are available. It is necessary that the students keep the Office of Field Services (Miller Hall 206) informed of any changes or cancellations so that openings may be made available to other students.

*Students in the field-centered programs satisfy some of these requirements in other ways. Please see adviser.

Students planning to enroll in supervised teaching fall quarter are advised that eligibility must be established by the close of spring quarter and that they are expected to begin their work with the fall opening of the public school. These students will register for Ed 490 in addition to their other supervised teaching courses.

Completion of application for supervised teaching does not indicate approval or admission to any program. Admission to Elementary, Secondary or Special Education must be granted and continued good standing must be maintained before final assignment can be made in student teaching.

Time Involvement

All work in field programs and supervised 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. Outside work or other demanding commitments, which could affect the quality of work in teaching, must be approved by both the Director of Field Services and the appropriate program adviser.

Placement Locations

Field-centered clinical and student teaching programs are available in school districts in Whatcom/Skagit counties and the greater Seattle area. One-quarter supervised teaching placements are also made in these locations on a space-available basis.

PROFESSIONAL STUDIES PROGRAMS

The following programs either lead to or provide courses for the Bachelor of Arts in Education degree with an endorsement for teaching at the elementary or secondary levels and/or in a specific subject area. Ordinarily, the student will elect just *one* of these programs (the minimum for a degree). However, students wishing to broaden their preparation for greater employability may choose to prepare in more than one area or level. In such cases, study programs will be developed with appropriate advisers to avoid duplication of courses.

Students uncertain of teaching level and/or teaching field should consult advisers in the various programs and/or major fields. Ed 390, Professional Practicum and Seminar, also provides exploratory opportunities through actual contact with more than one school level.

Common to all programs is the core of general university requirements for the B.A. degree outlined under "Requirements for Bachelor's Degrees, General University Requirements."

PROGRAM I SECONDARY TEACHING

[Grades 7-12]

Program Office — Miller Hall 306

The Secondary Teaching Program offers alternative routes toward Washington State certification. The program is competency-based and students are required to demonstrate teaching competence according to established criteria.

Certification

Verification of program completion for State of Washington certification will be granted upon completion of the following:

1. The professional studies program in Secondary Teaching.
2. A baccalaureate degree with a certifiable major.

Students with a bachelor's degree with a certifiable major may be admitted to the program in Secondary Teaching.

Teaching Major

The academic majors listed below are accepted for secondary teaching. Students are directed to contact the appropriate academic department for advisement. Departmental sections of the catalog describe the requirements for each major.

Art
Biology
Biology-Chemistry
Biology-Physical Science
Business Education
Chemistry
Chemistry-Mathematics
Chemistry-Physics
Earth Science
Earth Science-Physical Science
English
English-Speech
Ethnic Studies-Social Studies
Foreign Language
General Science
Geography
Geography-Social Studies
History
History-Social Studies
Home Economics
Industrial Arts
(Technology)
Mathematics
Music Specialist
Physical Education
Physical Science
Physics
Physics-Mathematics
Political Science-Social Studies
Speech
VICOED

All majors are certified for grades 7-12. Student-designed majors may be acceptable if developed according to established policies and procedures.

A teaching minor is often desirable. Check departmental offerings for availability and requirements.

Professional Studies

The professional studies program normally requires three quarters of resident study including supervised teaching.

All students in secondary teaching are required to complete:

- Ed 310, The Teacher and the Social Order (3)
- Ed 363, Survey of Exceptional Children (1)
- Ed 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 program or the field-centered program.

A. Campus-based program — (One quarter on campus and one quarter of supervised teaching).

- Psych 371, Evaluation in the Secondary Schools (3)
- Ed 411, Foundations of Education (4)
- Ed 420, Instruction in Secondary Schools II (4)
- Ed 495, Supervised Teaching — Secondary (8-16)

B. Field-centered program — (A laboratory quarter and one quarter of supervised teaching in the public schools supplemented by seminars).

- Ed 492, Laboratory in Secondary Teaching (16)
- Ed 495, Supervised Teaching — Secondary (8-16)

Students enrolled in fall quarter supervised teaching are expected to start when the school to which they are assigned opens.

Admission to Secondary Teaching

Application should be made at the School of Education Admissions and Advisement Office in Miller Hall 202. Students apply for admission to the Secondary Teaching Program during the first week of or prior to Ed 398. Admission is based upon English competence, speech competence and scholarship as indicated in the "Overview" section.

Students should consult the Admissions and Advisement Office, Miller Hall 202, for more information.

On the basis of the evidence provided, students will be *admitted* or *admitted with provisions* or *not admitted*. Students who have been admitted with provisions must remove any deficiencies prior to taking 400-level education courses.

Students admitted must 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 Teaching before continuing with professional studies courses.

Supervised Teaching Placement

Applications for placement in Education 492 or 495 are normally received each January for the following academic year. These field experiences are offered with the cooperation of teachers in the public schools of western Washington. Students must satisfactorily complete the prerequisites for Education 492/495 prior to beginning their field experience.

Students who hold a baccalaureate degree should apply for placement in Education 492 or 495 as soon as they are admitted to Western Washington University.

PROGRAM II ELEMENTARY TEACHING

[Grades K-8]

[Academic Major — Elementary Minor]
Program Office — Miller Hall 251

A. Teaching Major

In consultation with the Office of Admissions and Advisement (Miller Hall 202), select an appropriate major and consult with academic department adviser for planning and approval of major. See department sections of the catalog for specifications.

B. Elementary Teaching Minor (37-38 credits)

Basic Core (25-26 credits)

- Ed 485 Basic Reading Instruction (4)
- Eng 440 English for the Elementary School (4)
- Math 281 Theory of Arithmetic (4)
- Math 481 Mathematics in Grades 1 through 8 (4)
- Soc St Ed 425 Social Science for the Elementary School (3) or Ed 426a,b Social Studies in the Elementary Curriculum (4)
- Sci Ed 380 Science for the Elementary School (3), plus one course from:
— Sci Ed 381 Science for the Elementary School (3)

— Sci Ed 383 Biological Science for the Elementary School (3)

— Sci Ed 382 Physical Science for the Elementary School (3)

- Electives (12 credits)
- Twelve credits in areas other than the major to be selected under advisement.

C. Professional Studies

Students will elect either the campus-based or field-centered program outlined above in "Overview" section.

PROGRAM III PROFESSIONAL CONCENTRATION FOR THE ELEMENTARY TEACHER

Program Office — Miller Hall 251

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*.

In addition to the standards for admission to teacher education, students enrolling in the Professional Concentration for the Elementary Teacher are required to 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 Ed 399. Application forms and initial advisement are available in Miller Hall 202.

A. Professional Courses

Plan with adviser for 85 credits of work from the following five blocks within the specified minimum and maximum credits. All students complete Ed 310, 363, Psych 351 and 352, and at least three quarters of Ed 399.

Block A

Minimum of 4 credits in each of 4 areas from 1-5; Maximum, 30 credits

Area 1 Teaching as a Profession — Select from Ed 131, 363, 390, 399, 490*

Area 2 Human Relations — Select from Ed 391, 399; Speech 407, 438*

Area 3 Foundations of Education — Select from Ed 310, 399, 411*

Area 4 Elementary Methods and Analysis — Select from Ed 399, 421, 433, 450*

Area 5 Child Development and Learning — Select from Ed 399; Home Econ 320; Psych 316, 351, 352, 372*

Education

Students in the two-quarter clinical program may complete the remaining requirements for Block A by taking Ed 491.

Students in the one-quarter, campus-based program take Psych 372 and additional courses under advisement.

Block B

Minimum of 5 credits in each of areas 6-9; Maximum, 36 credits

Area 6 Language Arts — Select from Ed 385, 439, 485, 488, 493ef; Eng 440 or Ed 424; Lib Sci 405*

Area 7 Social Studies Education — Select from Hist 391 or alternative; Soc St Ed 425 or Ed 426ab*

Area 8 Mathematics Education — Select from Math 281, 481*

Area 9 Science Education — Select from Sci Ed 380, 381, or 383, or Sci Ed/Geol 384 or Sci Ed/Phys Sci 382*

*Consult adviser in Elementary Education for additional courses appropriate for application to the 85 credit total.

Block C

Minimum of 3 credits in each of two areas from 10-13; Maximum, 20 credits

Area 10 Physical Education — PE 306

Area 11 Art Education — Art 380

Area 12 Music Education — Music 350

Area 13 Industrial Arts Education — Tech 350

Block D

Minimum of 16 credits; Maximum, 32

Area 14 Student Teaching and Field Experience (Ed 491, 494)

B. Academic Study in Depth

The Candidate will develop an academic concentration of 40 credits by extending one area from areas 5-13 with prior approval of the elementary adviser and consultation with appropriate departments. Overlap of courses is possible between those taken to satisfy general university requirements or the 85-credit professional concentration and those taken to satisfy this academic requirement.

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 other than 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 for Elementary Teachers.

PROGRAM IV TEACHING IN SPECIAL EDUCATION

Program Office — Miller Hall 318

A. Major for Elementary Special Education

- Ed 360, 361, 461, 462, 462a, 466
- Elementary Basic Core
 - Ed 485 (4)
 - Ed 424 or Eng 440 (4)
 - Ed 426 or Soc St Ed 425
 - Math 281 or 481 (4)
 - Sci Ed 380 (3)
- Electives: 7-11 credits selected under advisement from the following: Ed 261 (1) (may be repeated for a maximum of three (3) credits); *Mental Retardation*: Ed 465; *Emotionally Disturbed*: Ed 463; *Learning Disability*: Ed 460a,b,c; *Elementary Education*: Ed 439, 488, Lib Sci 405, a second course in math education and in science education.
- Minor for Elementary Special Education*
The above major must be accompanied by an academic minor in an area approved by the adviser. Minors are offered in most of these areas; see department section of the catalog and departmental advisers for specifications.

B. Major for Secondary Special Education

- The student will complete a teaching major from the approved list in Program I for Secondary Teaching.

Minor (required for teaching recommendation in special education at the secondary level)

- Special Education courses: Ed 360, 361, 461, 462, 462a, 466
- Elementary Education courses: Ed 485, plus at least one course from Ed 424, 426, 439; Eng 440; Lib Sci 405; Math 281, 481; Soc St Ed 425; Sci Ed 380 381

C. Professional Studies

- Complete the campus-based or the field-centered program outlined in the general catalog for either the elementary or secondary level, depending on level of preparation (A or B above); for endorsement in special education, add Ed 494 or 495 as appropriate and Ed 498, Supervised Student Teaching — Special Education.

PROVISIONAL CERTIFICATION OF DEGREE HOLDERS

*Admissions and Advisement
Miller Hall 202*

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 provisional teaching certificate. This individually prescribed program normally entails three to four 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.

Some of the hours from this program may be applied toward the traditional fifth year leading to the standard (continuing) certificate. To meet full requirements for this certificate, the balance of credits required in planned areas of study must be completed after at least one year of teaching and evidence must be presented of three years of teaching experience which, judged as a whole, are satisfactory.

Note: Special arrangements are possible for individuals who hold the bachelor's degree, have little or no professional preparation, but have one year or more of successful paraprofessional experience in the public schools. Such individuals may be recommended for certification, provided that they successfully complete one quarter of residence study on campus, other study as required in their individual program, and student teaching.

FIFTH YEAR OF STUDY FOR TEACHERS HOLDING PROVISIONAL CERTIFICATES

The provisional (initial) certificate is valid for three years from the date of issuance, and may be renewed once for a second three-year period upon completion of an approved 12 quarter hours of the fifth year. To continue teaching in Washington after the expiration of the provisional certificate, the teacher must have completed an approved fifth year of study leading to the standard (continuing) certificate.

The standard (continuing) certificate is issued after completion of the fifth year of study and at least three years of satisfactory teaching experience. It is valid for teaching at any level in the public schools of Washington on a continuing basis unless there is a service gap of seven consecutive years.

The fifth year of study may be satisfied in combination with one of the programs leading to



a master's degree or by an approved study program without an advanced degree as its goal. Under either program the student files a fifth-year plan with the Office of Admissions and Advisement, Miller Hall 202.

The plan for each student is developed with the assistance of local school officials and university advisers and is to be approved *before courses are taken*.

State regulations for the standard certificate include the following general specifications:

- Credit — 45 quarter hours of approved study in addition to bachelor's degree from a four-year institution with a state approved program in teacher education.
- Correspondence credit limited to 5 quarter hours
- One-half or more of the 45 credits in upper-division and/or graduate study
- Course work to include both academic and professional studies.
- One-half or more of work to be earned through recommending institution, or an approved out-of-state institution; courses taken out-of-state require prior approval of preservice recommending institution
- Limited amount of fifth-year study allowed prior to teaching with prior approval of recommending institution
- Three years teaching experience which judged as a whole is satisfactory; recent teaching experience is of particular concern

The University accepts for fifth-year study only those courses completed with a grade of "C" or better. Grades of "P" may apply if a statement from the instructor is provided indicating that the grade represents at least a "C" level equivalency. Such statement is obtained on the student's initiative and filed with the School of Education Office of Admissions and advisement.

GRADUATE STUDY

For a number of concentrations in education leading to the Master of Education degree and the cooperative doctorate in school administration offered by Washington State University, in cooperation with WWU, see the Graduate section of the catalog.

COURSES IN EDUCATION

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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
- 1 Foundations
- 2 Curriculum and Instruction
- 3 Child and Youth Education
- 4 Administration and Supervision
- 5 Educational Media and Student Personnel Administration
- 6 Special Education and the Disadvantaged
- 7 Statistics and Research and Adult Education Administration
- 8 Reading
- 9 Supervised Teaching or Practicums

[See Psychology section for courses in Educational Psychology.]

- 109 INTRODUCTION TO EDUCATION (3)
History, sociology, philosophy and psychology of education; alternative to Education 310 for Fairhaven College students only.
- 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.
- 310 THE TEACHER AND THE SOCIAL ORDER (3)
Prereq: sophomore status. Dominant aspects of society as they interact with schools and teaching.
- 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.
- 340 PARAPROFESSIONAL ADVISEMENT (3)
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.
- 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: Ed 360 or permission of instructor. Observations and participation in recreational and educational activities of exceptional persons.
- 363 SURVEY OF EXCEPTIONAL CHILDREN (1)
Introduction to the characteristics of and special education programs for exceptional children. S/U grading.
- 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.
- 391 HUMAN RELATIONS (1-4)
A study and practicum in interpersonal relationships as they affect teacher-student interaction.
- 398 INSTRUCTION IN SECONDARY SCHOOLS I (2)
Introduction to general teaching competencies common to middle school and high school. Special academic and professional advisement. S/U grading.
- 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.
- 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.
- 410 TEACHING THE CULTURALLY DIFFERENT CHILD (4)
Prereq: Ed 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 man 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.

- 420 **INSTRUCTION IN SECONDARY SCHOOLS II (4)**
Prereq: Ed 398. To be taken one or two quarters prior to student teaching. Secondary methods including observation, planning, curriculum, strategies and models, simulation or micro 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.
- 423cd **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 **TRENDS AND ISSUES IN EARLY CHILDHOOD EDUCATION (4)**
Prereq: permission of instructor. And 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: Ed 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.
- 438 **SCHOOL-HOME-COMMUNITY RELATIONSHIPS (3)**
Problems of communication and interaction among teachers, parents, and paraprofessionals, administrators, and community; conferencing, planning meetings, community survey, PR publications, use of mass media.
- 439 **IMPROVEMENT OF WRITING SKILLS FOR CHILDREN (2-4)**
Appropriate sequence of skills in composition for children; techniques implementing creative writing and improving fundamental skills.
- 441 **ANALYSIS AND STRATEGIES OF TEACHING (3-5)**
Prereq: one course from the educational psychology or foundations area, or permission of instructor. Systematic study of teaching; observation; analysis and development of teaching skills and strategies; individual projects.
- 442 **WORKING WITH STUDENT TEACHERS (3)**
Prereq: teaching experience. Techniques for the orientation of student teachers, major problems which confront student teachers, and evaluation of their achievement.
- 444 **INSTRUCTIONAL MANAGEMENT SYSTEMS (3)**
Prereq: permission of instructor. Survey of both manual and automated systems 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; laboratory.
- 451 **PRACTICUM IN LEARNING RESOURCES (3)**
Prereq: Ed 450. Preparation of inexpensive instructional materials for classroom utilization; selection, evaluation, utilization of major types of audiovisual materials and equipment; organization and curricular integration of educational media.



Education

- 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 PRACTICUM IN DEVELOPING SEQUENCES OF PROGRAMMED INSTRUCTION (3-5)
Programmed learning as application of learning theory; development of specific behavioral objectives; writing programs in field of interest.
- 457b PRACTICUM IN DEVELOPING INSTRUCTIONAL PACKAGES (3-5)
Identification of instructional problems and entry behavior; writing measurable objectives; designing instructional strategies; construction and critiquing of learning activity packages.
- 457c PRACTICUM IN DEVELOPING INSTRUCTIONAL GAMES AND SIMULATIONS (3-5)
Critiquing commercially developed games and simulation kits; preparation and critiquing of instructional games and/or simulations.
- 457d PRACTICUM IN FIELD TESTING COMMERCIAL AND TEACHER-PREPARED INSTRUCTIONAL MATERIALS (3)
Evaluation procedures used to assess students' cognitive and affective responses to selected instructional materials; field testing of specific materials.
- 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 (4)
Prereq: Ed 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: Ed 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: Ed 360 or permission of instructor. Background and practice in identifying and assessing deficient classroom behavior, selecting appropriate interventions and determining their effect.
- 462 CURRICULUM FOR THE EXCEPTIONAL CHILD (4)
Prereq: Ed 461 or teaching experience or concurrent enrollment in Ed 462a. Curriculum selection and adaptation of methods and materials for exceptional children.
- 462a CURRICULUM FOR THE EXCEPTIONAL CHILD: PRACTICUM (3)
Prereq: Ed 461 and concurrent enrollment in Ed 462. Assessment, instruction, evaluation of pupil progress and writing the IEP for the exceptional child. One hour per day in schools required. S/U grading.
- 463 EDUCATION OF BEHAVIOR DISORDER CHILDREN (4)
Prereq: Ed 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 ARTS AND CRAFTS FOR THE EXCEPTIONAL CHILD (3)
Prereq: Ed 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: Ed 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: Ed 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.
- 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.
- 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: Ed 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.

SUPERVISED LABORATORY TEACHING — Courses 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 (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 Ed 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 (6ea)

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 SUPERVISED TEACHING — ELEMENTARY (8-16)

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 SUPERVISED TEACHING — SECONDARY (8-16)

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.

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 SUPERVISED TEACHING — EXCEPTIONAL CHILDREN (8-16)

Prereq: Ed 360 and 462 and student teaching or teaching experience. Supervised teaching experience providing opportunities to develop and demonstrate teaching competence for exceptional children. S/U grading.

499 ELEMENTARY STUDY IN ENGLAND (3,6)

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 (3)

499f Workshop in Philosophy, Curricula, Methods and Materials of English Elementary Education (6)

Graduate Courses

*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: Ed 501. Differing concepts of the nature of man and his 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: Ed 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: Ed 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; (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.

521 SEMINAR IN ELEMENTARY CURRICULUM (4)

Prereq: teaching experience or permission of instructor. Advanced study of curriculum planning and development, including design, materials and problems in curriculum change. Independent research 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.

Education

- 522b SEMINARS IN SECONDARY CURRICULUM (4)
Prereq: Ed 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
- 523 TEACHING ADOLESCENTS (4)
Prereq: Ed 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.
- 531e ADVANCED SEMINAR IN EARLY CHILDHOOD EDUCATION (3)
Prereq: Ed 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.
- 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.
- 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 POLITICS OF EDUCATION (4)
Prereq: graduate status. Political dimensions of education at local, state and national levels in USA and Canada.
- 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, b,c,d FIELD PROJECT IN EDUCATIONAL ADMINISTRATION (2-3)
Prereq: advancement to candidacy, permission of instructor and submission of outline indicating scope of project. Design, implementation and evaluation of a field project (6 credits minimum).
- 543a SUPERVISION IN THE PUBLIC SCHOOLS (4)
Supervision as educational leadership in continuous evaluation and improvement of school practice.
- 543b SEMINAR IN SCHOOL PERSONNEL ADMINISTRATION (4)
Prereq: permission of instructor. Professional relationships among certified employees and other school personnel; development and implementation of policies.
- 543c DEVELOPING STAFF AND COMMUNITY RELATIONS (4)
Prereq: graduate status. Models for planning, implementing and evaluating professional development and school/community relations programs.
- 544a SYSTEMS APPROACH AND EDUCATIONAL MANAGEMENT (4)
The systems approach as related to educational project planning and management.
- 544b COMPUTER TECHNOLOGY AND EDUCATION (4)
Prereq: Ed 544a and permission of instructor. Data processing in school management, local school district research and computer-assisted instruction.
- 544c PLANNING FOR INSTRUCTIONAL INNOVATION (4)
Prereq: graduate status. Planning and decision-making process as related to successful adoption of educational innovations.
- 545 SEMINAR IN PUBLIC SCHOOL FINANCE (4)
Local-state fiscal arrangements; current school budgets; related educational finance procedures.
- 546a, b,c,d ADMINISTRATIVE RESEARCH TOPICS (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, b,c,d READINGS IN SCHOOL ADMINISTRATION (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 SCHOOL ADMINISTRATION (4)
Current and emergent education problems.
- 550 ORGANIZATION AND ADMINISTRATION OF EDUCATIONAL MEDIA PROGRAMS (3)
Prereq: Ed 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.
- 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.)
- 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, b, c SEMINARS: COLLEGE STUDENT PERSONNEL ADMINISTRATION (4 ea)
Prereq: admission to Student Personnel Administration Program or permission of instructor. Intensive examination of current philosophies, theories and practices in higher education administration. Major emphasis is 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 (1-3)
Prereq: admission to M.Ed. program in Student Personnel Administration and Ed 501. An in-depth research project in the area of higher education administration or related areas of inquiry. (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: 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 MENTALLY RETARDED (3)
Prereq: Ed 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 emotionally disturbed child in the classroom.
- 566 COUNSELING AND GUIDANCE FOR THE HANDICAPPED CHILD (4)
Prereq: enrollment in the graduate program. Application of techniques in guiding and counseling exceptional children and communicating their characteristics to parents and others influential in meeting their needs.
- 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: Ed 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: Ed 501 or permission of instructor. Developing criteria and designing procedures for measuring in-pit 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 (5)
Prereq: B.A. 401 or administrative experience and permission of instructor. 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.

Education

- 578 CURRICULUM PLANNING FOR ADULT EDUCATION PROGRAMS (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.
- 581 SECONDARY AND ADULT READING PROGRAMS (4)
Prereq: baccalaureate degree plus appropriate administrative and/or teaching responsibilities. For administrators, curriculum personnel and experienced teachers in secondary schools and community colleges. Examines present reading education practices, instructional needs of secondary and adult students, innovative programs, materials, staff and curriculum development, evaluation, and guidelines for establishing developmental reading programs.
- 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 preword 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. 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.
- 588 SEMINAR FOR SCHOOL PSYCHOLOGISTS AND READING SPECIALISTS (4)
Prereq: permission of instructor. Orientation to the team approach of studying educational questions and problems. Also provides school psychologists with orientation to the common instructional materials and strategies and the services offered by reading specialists.
- 589 SEMINAR IN LANGUAGE ACQUISITION AND READING DEVELOPMENT (4)
Prereq: graduate status or teaching experience. Exploration of current theories in language acquisition, linguistics, and psycholinguistics and implications for early childhood education and reading instruction.
- 590 SEMINAR IN DEMONSTRATION TEACHING AND SUPERVISION (3)
Prereq: Ed 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, b, c FIELD EXPERIENCE IN ADMINISTRATION FOR THE PRINCIPAL (2-6)
Prereq: permission of instructor. Applicants for the Washington State Administrative Credentials. S/U grading.
- 592d FIELD EXPERIENCE IN EARLY CHILDHOOD EDUCATION (2-6)
Prereq: graduate status and permission of instructor. Supervised field experience in developing, directing and evaluating early childhood education programs.
- 592e FIELD EXPERIENCE IN ELEMENTARY SCHOOL LEADERSHIP (2-6)
Prereq: permission of instructor. Designing, field testing and evaluating innovative school programs, practices and materials for the elementary school.
- 592f FIELD EXPERIENCE IN STUDENT PERSONNEL ADMINISTRATION (2-5)
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.
- 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, j, k FIELD EXPERIENCE IN ADULT EDUCATION (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.
- 594a, f, g, h PRACTICUM IN READING DIAGNOSIS AND REMEDIATION (4 ea)
Prereq or concurrent: Ed 584 or equivalent, and 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 practica 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.
- 594j, k, m PRACTICA IN ACTION RESEARCH (3 ea)
Prereq: teaching experience and permission of instructor. Field-based studies by entire school building staffs to resolve persistent and significant school problems. Course requirements include the development of an approved proposal for action research. S/U grading. May be repeated with different content.
- 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: Ed 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.

**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 Ed 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 Ed 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 Ed 644a. Establishment of management objectives at various levels (system-process, input, output, etc., for the express purpose of evaluating people and/or programs thus effecting 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.

690 FIELD PROJECT OR THESIS (6-9)

Prereq: approval of the 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.

Education

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.

- Administration*: Ed 422, 425, 475, 543a, 545a, 546, 550
- Graphics*: Tech 419, 440, 449, 469, 540, 544

Students interested in the above areas should seek advisement in Miller Hall 177.

LIBRARY SCIENCE

Library Science constitutes an instructional unit attached to the Department of Education.

Employment opportunities in librarianship are good. As long as the information explosion continues, there will be demand for trained personnel to organize and service the variety of materials being produced. To qualify as a professional school librarian the student must meet requirements for the provisional teaching certificate as well as minimum state standards set forth in the minors below.

It should be noted that the term library (or learning resources) includes, in addition to traditional printed material, films, filmstrips, recordings, tapes and any other media for storing, transmitting or retrieving information. Western includes them in its library training program.

Minor — Library Science Elementary

- 24 credits selected under advisement from the following:
 - Lib Sci 309, 401, 402, 403, 404, 405, 407, 410
 - Ed 422, 445e, 450, 451

Minor — Library Science Secondary

- 24 credits selected under advisement from the following:
 - Lib Sci 308, 401, 402, 403, 404, 407, 410
 - Ed 425, 445e, 450, 451

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, The Library in the School
- Ed 450, Audiovisual Communications: Basic
- Ed 451, Audiovisual Communications: Advanced
- Ed 541b, Public School School Organization and Administration
- Tech 240, Visual Communications and Graphic Arts

B. One concentration from the following (some expertise in the area selected is prerequisite)

- Library Science*: Lib Sci 402, 403, 404, 405, 407; Ed 422, 425

COURSES IN LIBRARY SCIENCE

Courses numbered X37; X97: 300, 400, 500; 417; 445 are described on page 32 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.



ENGLISH

College of Arts and Sciences

The Department of English offers majors in English for the liberal arts student and for the teacher education student.

Under its curriculum in English, the department offers students a flexible program in which they can construct a major that meets their own educational goals. The core of the major is the historical and critical study of literature. The department also has offerings in creative writing, linguistic study of English and English education.

A liberal arts English major is one of the dominant liberal arts degrees, acquainting the student as it does with the literature of past and present, providing education in critical analysis and effective expression. As a result, the liberal arts English major provides graduates with a sound basis for pursuing careers in law, publishing, certain positions in business, and a number of non-technical government positions.

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, or work in subjects that are similarly related to English language and literature.

ENGLISH FACULTY

- DOUGLAS B. PARK (1979) Chairman.
Associate Professor. AB, Hamilton College; PhD, Cornell University.
- ROBERT D. BROWN (1965) Professor of English. 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) Associate 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) Assistant Professor. BA, Wellesley College; MA, Indiana University; PhD, Indiana University.
- ROBERT E. HUFF (1964) Professor. AB, MA, Wayne State University.
- KENNETH B. INNISS (1966) Associate Professor. AB, AM, Indiana University; PhD, University of Kansas.

English

- 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.
- W. ROBERT LAWYER (1960) Associate Professor of English and Director of the Library, BA, 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.
- JAMES H. O'BRIEN (1946) Professor, BA, Seattle University; MA, PhD, University of Washington.
- 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) Assistant 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, 401, 471, 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

BACHELOR OF ARTS IN EDUCATION

Major — Secondary 64 credits

- Eng 304, 370, 442, 474; Ed 481
- Four courses on the 300 or 400 level in British literature, two before 1800 and two after 1800
- Two courses from Eng 317, 318, 319
- One course from Eng 443, 444 or Ed 424c,d
- One course from Eng 301, 302, 351, 353, 354; Th/D 285
- One course from 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 201, 202
- Eng 304, 370, 440 or 441
- One course from among Eng 234, 321, 327, 338, 341, 422, 429, or other appropriate courses under departmental advisement
- Electives

Students should consult the undergraduate adviser or the English education faculty adviser for distribution of electives as well as the *teacher certification requirement in the School of Education listing*.

Interdisciplinary Major Concentration

90 credits (Speech 45 credits & English 45 credits)

English: 45 credits

- Eng 304
- Two courses from Eng 306, 307, 308
- Two courses from Eng 309, 310, 311
- Eng 317, 318, 370, 442, 474
- Eng 371
- Electives

Speech: (See listing under Speech) 45 credits

Teaching Competence

Recommendation for teaching competence normally requires completion of the major or interdisciplinary major concentration. An exception is provided through the extended minor listed below. A grade of 2.5 or better in English is required.

Minors 24 credits

A. English 24 credits

- Eng 304
- Electives to total 24 credits

Students may choose freely 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

D. English — Secondary Education 24 credits

- Eng 304, 370, 442, 474
- Electives under advisement

E. English — Elementary Education 24 credits

- Eng 304, 370, 440 or 441
- Electives under advisement

F. Extended Minor 35 credits

(To accompany a history major for those who desire recommendation for a teaching competence combination appropriate for junior high or middle school.)

- Eng 304, 370, 442
- One of the following groups of courses: Eng 281, 282, 283; Eng 317, 318, 319; or three courses from Eng 306, 307, 308, 309, 310, 311
- 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, 270, 301, 302, 354, 371, 401.

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, 500; 417; 445 are described on page 32 of this catalog.

General University Requirement Courses

English courses which satisfy GUR requirements are as follows:

Communications: 101, 201, 202, 203, 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. Practice in expository strategies such as finding information, focusing on a topic, organizing around a thesis, developing an idea, defining an audience; practice of basic expository types such as definition, comparison, classification and analysis; and the reading of models of expository prose. Students wishing to satisfy Block A of the General University Requirements are urged to enroll in this course during their freshman or sophomore years.

English

- 201 INTRODUCTION TO FICTION WITH COMPOSITION (4)
Prereq: Eng 101 or equivalent. An introduction to the nature of fiction with an emphasis upon close reading. Composition is an integral part of this course.
- 202 INTRODUCTION TO DRAMA WITH COMPOSITION (4)
Prereq: Eng 101 or equivalent. An introduction to the nature of drama with an emphasis upon close reading. Composition is an integral part of this course.
- 203 INTRODUCTION TO POETRY WITH COMPOSITION (4)
Prereq: Eng 101 or equivalent. An introduction to conventions of poetry with an emphasis upon close reading. Composition is an integral part of 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 STUDIES IN POPULAR LITERATURE (3)
Different types of popular literature will be treated from year to year. Consult the Class Schedule for current offerings. Students may elect more than one offering under this number.
- 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. A nominal lab fee may be charged to cover the cost of films.
- 270 COMPETENCE AND CONFIDENCE IN STANDARD AMERICAN ENGLISH USAGE (3)
Lectures and recitations dealing with standard American English usage (idioms, stylistics, punctuation, the nature of correctness). Not applicable as part of the English major or minor. S/U grading.
- 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. A 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 TO 1870 (4)
- 318 AMERICAN LITERATURE, 1870 TO 1914 (4)
- 319 AMERICAN LITERATURE, 1914 TO 1945 (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.
- 333 CONTEMPORARY AMERICAN AND BRITISH LITERATURE (4)
Different sections of this course deal with developments in fiction, drama and poetry since 1900. See Class Schedule for offerings. Repeatable with various 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 specified 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.
- 364 **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. A nominal lab fee will be charged to cover the cost of films.
- 370 **INTRODUCTION TO AMERICAN ENGLISH (4)**
Overview of various topics: history of the English language, English grammar, English dictionaries, the writing system, American English dialects, characteristics of language, standard and non-standard English. Designed primarily for teaching candidates.
- 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 **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.
- 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 metaphysical 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 (3-5)**
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 (3-5)**
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 (4)**
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 **MAIN CURRENTS IN LITERATURE (5)**
Varying topics, such as classical backgrounds, will be offered from year to year. See Class Schedule for offerings. Repeatable with various topics.
- 429 **MODERN AND CONTEMPORARY LITERATURE IN TRANSLATION (4)**
Prereq: 15 credits in literature.
- 430 **MYTH AND MODERN MAN (4)**
Prereq: Eng 101. A basic study of myth from several vantages: comparative religion, psychology, anthropology and philosophy. The application of myth analysis to the work of selected writers, like James Joyce, who used mythic motifs.
- 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)**
Teaching reading, writing, speaking and listening: formal and informal methods; textbooks and materials.

English

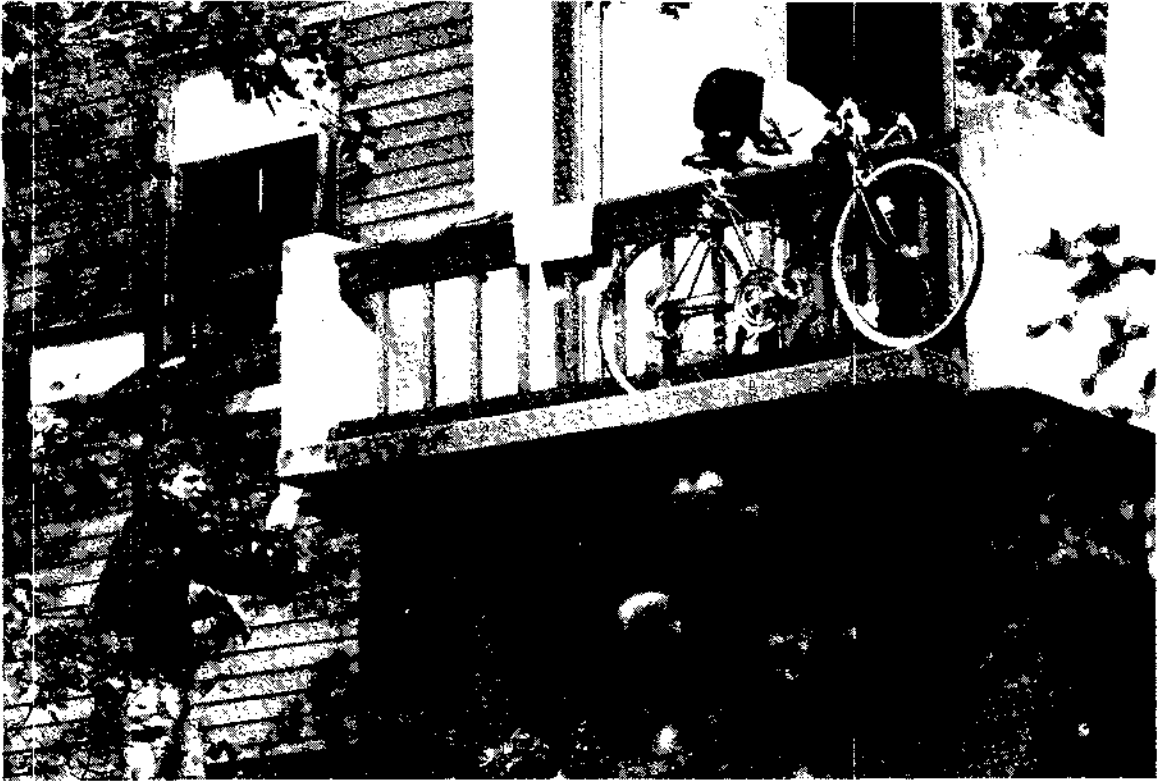
- 441 **WORLD LITERATURE FOR THE ELEMENTARY AND MIDDLE SCHOOL TEACHER (4)**
Myth, legend, folk literature, epic, fairy tales and modern novels for children.
- 442 **COMPOSITION FOR SECONDARY TEACHERS (4)**
Practice and instruction to improve the writing of students; emphasis on the nature of composition and skill in analyzing non-professional expository writing.
- 443 **LANGUAGE IN SCHOOL PROGRAMS (4)**
Prereq: Eng 370. Knowledge of the English language applied to the teaching of English and language arts, grades K-12.
- 444 **LITERATURE IN SECONDARY SCHOOLS (4)**
Survey of resources for teaching literature in secondary schools, methods and practice in teaching literary works in classrooms.
- 448 **CURRENT TRENDS IN ENGLISH EDUCATION (1-5)**
Selected topics in the current developments in literature, composition and linguistics for the elementary and middle school classroom.
- 446 **WORKSHOP IN THE TEACHING OF ENGLISH (3-5)**
Practical work in the teaching of English.
- 447 **CONFERENCE ON CHILDREN'S LITERATURE (1-3)**
Prereq: junior status or experience as teachers, librarians or writers. A conference consisting of lectures, demonstrations and small group meetings.
- 451 **CREATIVE WRITING WORKSHOP: FICTION (4 ea)**
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 ea)**
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 (3)**
The historical development of the English language; phonology, morphology, syntax, semantics.
- 474 **ENGLISH USAGE (4)**
Survey of standard American English usage. Designed primarily for teacher candidates.
- 499a,b,c **HONORS TUTORIAL (2-5 ea)**

Graduate Courses

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



- 501 INTRODUCTION TO GRADUATE STUDY IN ENGLISH (5)
- 502a SEMINAR IN THE WRITING OF FICTION (5)
Individual projects in fiction will be submitted for group discussion. Recently published works of fiction will be studied for examination of originality of style.
- 502b ADVANCED SEMINAR IN THE WRITING OF FICTION (5)
Prereq: Eng 502a or permission of instructor. Individual projects in the development of a finished manuscript.
- 503a,b SEMINAR IN PLAYWRITING (3)
Individual projects in dramatic writing submitted for group discussion.
- 504a SEMINAR IN THE WRITING OF POETRY (5)
Individual projects in poetry will be submitted for group discussion. Recently published volumes of poetry will be studied for examination of originality of styles.
- 504b ADVANCED SEMINAR IN THE WRITING OF POETRY (5)
Prereq: Eng 504a or permission of instructor. Individual projects in the development of an original idiom.
- 505a SEMINAR IN THE WRITING OF NON-FICTION PROSE (5)
Individual projects in non-fiction will be submitted for group discussion. Classic and modern models of non-fiction also will be examined.
- 505b ADVANCED SEMINAR IN THE WRITING OF NON-FICTION PROSE (5)
Prereq: Eng 505a or permission of instructor. Individual projects leading to development of a finished manuscript and individual style. Models of prose read and examined.
- 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 (2)
Prereq: appointment as a teaching assistant or permission of instructor. Elective. Satisfactory/Unsatisfactory grading used in this course. Offered once a year in the fall.
- 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 SEMINAR IN ANGLO-SAXON LITERATURE (5)
- 521 SEMINAR IN MEDIEVAL LITERATURE (5)
- 522 SEMINAR IN SIXTEENTH-SEVENTEENTH CENTURY LITERATURE (5)
522b Elizabethan Poetry
522c Non-Shakespearean Drama
522d Early 17th Century Poetry
- 523 SEMINAR IN EIGHTEENTH CENTURY LITERATURE (5)
523a Swift/Pope
523c Fielding/Sterne
523d Eighteenth Century Satire
- 524 SEMINAR IN ROMANTIC LITERATURE (5)
524a Wordsworth and Coleridge
524b Byron and Shelley
524c Blake and Keats
- 525 SEMINAR IN VICTORIAN LITERATURE (5)
525a Tennyson, Browning, Arnold
525b Hardy
525c Conrad
525d Eliot/Thackeray
525e Dickens
525f The Anti-Victorians
525g The Victorian Novel
- 526 SEMINAR IN MODERN LITERATURE (5)
526b The Ironic Novel
526c Yeats/Joyce
526d The Irish Dramatic Movement
526e Eliot/Pound
526g The Modern British Novel
526h Modern British Poetry
- 527 SEMINAR IN POST-MODERN BRITISH LITERATURE (5)
Prereq: graduate status.
- 531 SEMINAR IN AMERICAN LITERATURE: BEGINNINGS TO 1900 (5)
531a The Transcendental Movement
531b Hawthorne/Melville
531c The Romance and the Novel
531d The Rise of Realism and Naturalism
- 532 SEMINAR IN AMERICAN LITERATURE: 1900 TO THE PRESENT (5)
532a The Whitman Tradition
532b The Literature of Protest
532c Modern American Poetry
532d Modern American Novel
- 541 SEMINAR IN CHAUCER (5)
- 543 SEMINAR IN SHAKESPEARE (5)
- 545 SEMINAR IN MILTON (5)
- 560 SEMINAR IN LITERARY FORM (5)
560a The Picaresque Novel
560c The Comic Novel
560d The Pastoral Tradition
560f The Continental Lyric
- 587 SEMINAR IN LITERARY CRITICISM (5)
587a Principles and Problems of Literary Criticism with Emphasis on Recent Criticism
587c Theories of Comedy
587d Theories of Tragedy
- 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 513 or 510. 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.
- 600 DIRECTED INDEPENDENT RESEARCH (2-4)
Prereq: advancement to candidacy. May be taken twice and for a total of six hours.
- 690 THESIS WRITING (5)



FAIRHAVEN COLLEGE

PROGRAM PLANNING

Fairhaven College schedules its own orientation activities and academic advisement for entering students at the beginning of each quarter. During their first quarter students are assigned a faculty adviser with whom they are expected to consult in preparation for quarterly registration thereafter.

All three stages of the curriculum must be completed for graduation although students transferring from Western Washington University or other colleges or universities may have some requirements waived at the time of admission.

A minimum of 180 credits (60 upper division) must be earned in order to graduate.

EVALUATION

Fairhaven does not use traditional letter grades; rather, courses are taken on a "Satisfactory"/"Unsatisfactory" basis. Academic credits are

granted after satisfactory completion of course requirements and the submission of written student self-evaluation and faculty evaluation.

REGISTRATION

Fairhaven students may enroll for courses and studies offered by Fairhaven or any of the University divisions. Likewise, Fairhaven courses are open to all students of Western Washington University. Quarterly registration takes place at the University Registration Center.

THE CURRICULUM

Fairhaven College offers a complete baccalaureate curriculum composed of study at three stages, each containing required courses, elective studies and transition requirements. Students need not complete one stage before moving into the next. Transfer students may enter at any point, depending on previous studies.

FAIRHAVEN COLLEGE FACULTY

- PHILLIP R. AIGER (1965) Associate Professor and Dean of the College. BA Ed. Western Washington State College; MA, University of Washington.
- KATHRYN L. ANDERSON (1972) Associate Professor. BA, MA, University of Iowa; PhD, University of Washington.
- JOSEPH BETTIS (1975) Professor. BA, Southern Methodist; BD, Drew; MA, PhD, Princeton.
- MICHAEL J. BURNETT (1969) Associate Professor. BA, University of Illinois; MA, PhD, Claremont Graduate School.
- W. GARY CLEVIDENCE (1969) Associate Professor. BA, Antioch College; MA, University of Michigan.
- CONSTANCE P. FAULKNER (1968) 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.
- HARVEY M. GELDER (1948) Professor. BA, Colorado State College; MA, University of Missouri.
- PAUL C. GLENN (1969) Assistant Professor. BA, University of Washington; MA, Stanford University.
- WILLIAM H. HEID (1968) Associate Professor. BA, Denison University; MS, PhD, University of Washington.
- ANNIS J. HOVDE (1948) Professor Emeritus. BA, MA, University of Washington.
- RAND F. JACK (1971) Associate 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) Associate 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.
- DOUGLAS D. RICH (1977) Adjunct Assistant Professor and Director of Bridge Project. BA, Whitworth College; MDiv, San Francisco Theological Seminary; PhD, Washington State University.

FAIRHAVEN COURSES AND STUDIES

The courses and studies listed in this catalog will be offered during the 1981-1983 academic years. Prior to registration, students should consult the *Fairhaven College Quarterly* and the *University Class Schedule* for offerings, class location and meeting time. Students should note that the most complete listing appears in the *Fairhaven College Quarterly*.

There are five categories of courses or studies at Fairhaven: required core courses, elective courses, independent studies, special topic seminars, and experimental courses.

CORE COURSES

Stage I

For Fairhaven College students these courses are applied toward meeting specific requirements appropriate to each of the three curricular stages. For other Western Washington University students these are elective courses which may be applied toward the 180 credit requirement for graduation.

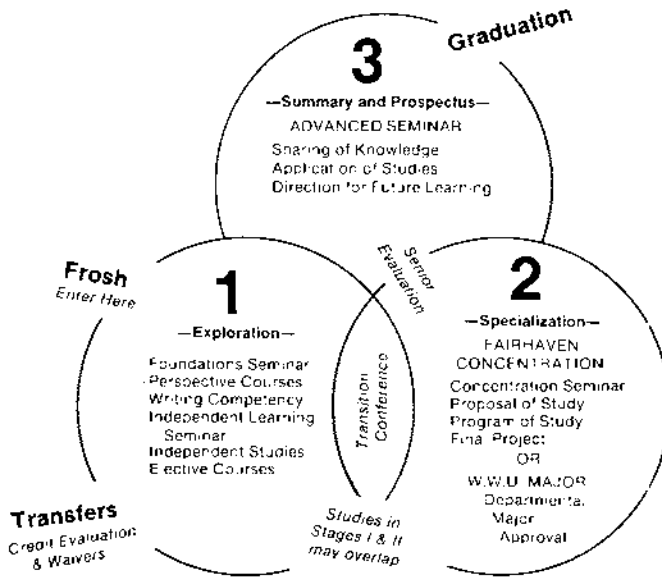
- 101 FOUNDATIONS SEMINAR (5)
Required of all entering students. Provides an introduction to the University and to the Fairhaven College faculty, staff and students, and the curricular structures and various procedures of the individualized learning program. Emphasis on communication skills (writing, seminar discussion, listening), the design of study programs, the discovery and use of resources, research techniques and self-evaluation.
- 102 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.
- 103 HISTORICAL PERSPECTIVES (5)
Various approaches to historical methodology and ways in which information is interpreted to reveal relationships between past and present.
- 104 SCIENTIFIC PERSPECTIVES (5)
The nature of scientific truths, sources and manipulation of data, and the philosophic and cultural limits of science.
- 105 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.
- 106 PERSONAL PERSPECTIVES (5)
What knowledge is possible about the unique individual? Various methodologies and resources for such investigation, exploration of ways toward personal growth.
- 107 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.
- 108 WRITING COMPETENCY (3)
Development and demonstration of writing competency.
- 109 TRANSITION CONFERENCE (1)
Demonstration of breadth of knowledge in five selected areas to be developed in consultation with a member of the faculty.
- 201 INDEPENDENT LEARNING SEMINAR (5)
Application of the processes and procedures by which independent study projects are developed, carried through to completion, and then reported and evaluated.

Stage II

- 301 INTERDISCIPLINARY CONCENTRATION SEMINAR (5)
Review of procedures for the interdisciplinary concentration; survey of previously completed concentrations; discovery of ways one's intentions can be given effective shape and form; introduction to other interdisciplinary modes and relationships; preparation and critique of an acceptable draft of one's concentration proposal.

Stage III

- 401 ADVANCED SEMINAR (5)
Prereq: senior standing. 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. Students are expected to devise an "activity" that brings some aspect of their respective fields of study to a larger Fairhaven College community.



Stage I: Exploratory Studies

A. The Core Program

1. Foundations Seminar (Fair 101, 5 credits)
2. Perspectives Program (Fair 102-107, 30 credits)
3. Writing Competency (Fair 108, 3 credits)
4. Independent Learning Seminar (Fair 201, 5 credits)

B. Students are expected to supplement these requirements with other Fairhaven or Western Washington University courses of their own choosing

C. Transition Conference (Fair 109, 1 credit)

Stage II: Specialized Studies

A. Fairhaven Interdisciplinary Concentration

1. Concentration Seminar (Fair 301, 5 credits)
2. Proposal of study accepted
3. Program of study completed
4. Final project approved and evaluated

OR

B. Completion of a Western Washington University departmental major. (See departmental listings for requirements.)

Stage III: Summary and Prospectus

A. Advanced Seminar (Fair 401, 5 credits). To be taken after or near completion of Interdisciplinary Concentration or Western Washington University departmental major

B. Clearance for graduation

ELECTIVE COURSES

These courses may be taken during any stage of the curriculum. For Stage I they may widen the students exposure to areas of study or deepen their understanding of subject matter presented in the Perspectives program. For Stage II students may provide bases for the Fairhaven Interdisciplinary Concentration when grouped in combinations of a student's choosing. Or, for students opting to specialize in a Western Washington University major, they offer possibilities for understanding different perspectives on traditional disciplines and suggest ways in which those disciplines relate to other fields of study. These courses are available to Western students as electives.

112 UTOPIA (4)

Literary, historical and pragmatic approaches to Utopian thought. Selections from More, Bellamy, Wells, Morris, Huxley, Skiller and Callenbach will be discussed, along with other blueprints for a better world.

- 118 **THE NATURE OF CULTURE (5)**
Culture is the way people order their lives; their social relationships, their values, their knowledge of themselves and their understanding of the world. An examination of different approaches to the study of culture, such as the origins of culture, cultural diversity, cultural adaptation, and the individual and culture.
- 120 **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.
- 121 **INTRODUCTION TO PERSONAL PHILOSOPHY (4)**
Through readings, class experiences and discussions, a course to elicit from students their own philosophical questions. The material tends to come from outside traditional philosophy and the class is largely experimental.
- 123 **THE ART OF MAKING SENSE (4)**
Introduction to the analysis of arguments. Writing and speaking more clearly and logically.
- 124 **WHAT IS MATHEMATICS? (4)**
The development of mathematical structures from common intuitions about number, form and occurrence.
- 125 **THE EARTH AND BEYOND (4)**
Introduction to the theories about the formation of solar systems, evolution of stars, galactic structures and cosmology.
- 126 **SCIENCE FICTION (3)**
A survey of the writing that led to the development of the genre and a study of selected books and short stories by recent authors.
- 128 **STAINED GLASS (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.
- 129 **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 "Too Te Ching." The temple sculpture in India which drew its inspiration from the Tantric religion: the religious scripture of Tantra, Hinduism and Buddhism.
- 135 **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.
- 140 **HOW LIKELY IS IT? (4)**
A development of formal statements about probability from intuitions. Probability distributions and their application. Use of a calculator.
- 151 **CHORAL SINGING (2)**
Open to all women and men who wish to participate in a mixed choral ensemble. A broad range of choral literature will be rehearsed and performed.
- 180 **COOPERATIVE SPECIAL INTEREST STUDIES (1-5)**
Prereq: Fairhaven College independent study permit required for registration. Faculty-directed, student-initiated special interest small study groups formed around particular topics, themes, issues or activities.
- 190 **VISITING ARTIST/LECTURE STUDIES (1-5)**
Prereq: Fairhaven College independent study permit required for registration. Small study groups formed around particular topics, themes, issues or activities of visitors or guests invited to participate in Fairhaven's academic program.
- 205 **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.
- 211 **STYLE IN ART (4)**
Styles in art history — such as art nouveau, baroque, pop, neo-classical, romantic, gothic — as these reflect the personal style in which an artist expresses individuality.
- 215 **NORTHWEST POETS (3)**
A survey of the work of major poets of the Northwest that will include, among others, the work of William Stafford, David Wagoner, Richard Hugo, Carolyn Kizer and Kenneth Hansen.
- 216 **COLLEGE WRITING (3)**
Directed toward the student who wishes to improve expository writing skills. Theory, practice and criticism of student work.
- 217 **DRAMATIC LITERATURE (4)**
A survey of a particular period of dramatic literature such as the Elizabethan or contemporary drama. The influence and development of tragic and comic theory will be studied.
- 218 **IMAGINATIVE WRITING (3)**
Workshop to critique and discuss student manuscripts. Meets one evening per week.
- 223 **SEXUAL MINORITIES (3)**
Historical, sociological, political, psychological and cultural aspects of people who prefer other than the heterosexual mode of sexual expression.
- 224 **MUSICAL/DRAMATIC PRODUCTION (1-5)**
Prereq: Fairhaven College independent study permit required from instructor. Rehearse, stage and produce a musical/dramatic theatre performance.
- 225 **EXPLORING THE DICTIONARY (3)**
Building vocabulary and understanding of usage through extensive verbal analysis, practice and gaming.
- 229 **THE USES OF AUTOBIOGRAPHY I: READING (4)**
An introduction to autobiography as a literary form, with emphasis on the special ways in which it gives order, meaning and symbolic value to human existence. Readings will be studied to determine writers' attitudes toward such concepts as childhood, role-playing, crisis, imagination, self-knowledge and self-discovery.
- 231 **INTRODUCTION TO GERONTOLOGY (5)**
A survey of psychological, sociological and biological perspectives of the process of human aging.
- 233 **INTRODUCTION TO POLITICAL ECONOMY (5)**
The American economic system from orthodox (Keynesian/neo-Keynesian) and critical (Marxian) perspectives; application of both theoretical frameworks to problems in modern American society.

- 235 DEATH AND DYING (5)
The implications of one's death for philosophy, culture, art, literature, aging, economics, psychology, medicine and living. In addition to extensive reading, including the *New Testament*, Plato, Marcus Aurelius and Tolstoy, field trips and a journal are required.
- 236 KARL MARX ON HISTORY AND SOCIETY (4)
Readings and discussions of Marx' works dealing with historical materialism, politics, history and social relations. Each reading will be placed within the general historical and specific polemical milieu from which it arose.
- 240 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.
- 241 SOCIAL THEORY I: THE RISE OF LIBERALISM (4)
The rise of industrialized society in Europe and the ideology which supported its increasingly dominant socio-economic class. Emphasis on social theorists writing between 1600 and 1850, their support for the worth of the individual, the right of privacy, materialism and competitive capitalism.
- 243 THE ORACLE & THE SATYR'S DANCE: AN INTRODUCTION TO MYTH AND MYTH-MAKING (4)
In general, an introduction to the nature and function of myth; in particular, an attempt to learn something more about our separate selves — female, male and mutually human — as well as about our collective cultural history. Both purposes will be carried on by exploring the two powerful, curiously complementary, endlessly live myths of Apollo and Dionysus.
- 265 THE LIFE OF BIRDS (5)
A field course in ornithology. Introduction to the physiology, territory, social behavior, mating patterns, flight, migration, songs and evolution of birds.
- 270 THE AMERICAN LEGAL SYSTEM (5)
NOTE: This course may be taken in partial fulfillment of the GUR Social Sciences requirement. An introduction to 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.
- 302 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.
- 305 MARK TWAIN'S AMERICA (4)
Prereq: Fair 103 or course in American history or course in American literature. The American cultural experience, from the late 1930s to the turn of the century, through the eyes and works of Mark Twain.
- 306 THE EMOTIONS (4)
Prereq: Fair 120 or 121. Theoretical frameworks for understanding the emotional life will be introduced, along with techniques for self-observation.
- 307 MOBY DICK: OR, THE WHALE (4)
Prereq: course in American literature or American history. Intensive study of Melville's masterpiece from the perspectives of literary history and criticism, psychology, cultural history, philosophy, biography, social theory and marine biology.
- 308 HISTORY AND LITERATURE OF MOUNTAINEERING (3)
Social, psychological and spiritual motivations in mountain climbing. Resources include fiction, climbing journals, film and the history of the sport. The philosophy of climbing — why persons take risks, and the climber's relationship to others and to nature — will be discussed.
- 309 WOMEN AND THE TRANS-MISSISSIPPI WEST (5)
Prereq: Fair 103 or other course on American history and culture. A survey of the West from the perspective of women's experience followed by a closer examination of women's lives in the Northwest through their diaries, letters and oral histories.
- 310 DREAMS, IMAGINATION AND CREATIVITY (4)
Focus upon the experiences of the participants; ways to enhance the intuitive side of personality. Expression of creativity will be encouraged.
- 314 CULTURE AND COGNITION (5)
Prereq: Fair 118 or Anth 201. Based on the assumption that culture is a system of knowledge, an exploration of how cultural knowledge is related to perception, language, styles of thinking, social relationships and the classification of nature.
- 317 SYMBOLIC LOGIC (4)
Prereq: Fair 123. A first course in the formal study of concepts and their extensions; elementary propositional forms; logical relations; and the algebra of classes.
- 318 ART HISTORY: THE ARTISTS (4)
An examination of paintings from different periods in the history of art, with an emphasis on works that reveal the creative methods and personal visions of the artist. Study of diaries and journals of artists, biographies and related literature.
- 329 POLITICAL ECONOMY AND THE STATUS OF WOMEN (4)
Prereq: Econ 204 or equivalent. The ways in which modern capitalism affects women in their personal and public lives and how capitalism utilizes the various capacities and functions of women as a distinct group.
- 330 COMMUNIST CHINA TODAY (4)
Prereq: Fair 102 or 103 or equivalent. Life in the People's Republic: the family, the educational system, health care and work. An historical overview of the political and economic systems of China.
- 332 WORK (4)
An interdisciplinary study which examines the meaning, necessity and value of our basic activity. Readings drawn from philosophy, psychology, sociology, political science and literature.
- 333 LIFE OF MEN (5)
Prereq: prior course in human development. Study of the male life cycle. Interaction of historical context and personal growth throughout the male life span; including family life, sex-role, adaptation to stress, work, creativity, aging and community activity.
- 334 THE THIRD WORLD ON THE MOVE (4)
Prereq: Fair 102, 103 or history/political science background. The history and dynamics of contemporary political movements in Africa, Asia and Latin America. Use of case study approaches.
- 336 SOCIAL THEORY II: SEARCH FOR A METHOD (4)
Prereq: Fair 233, 241, or background in some social science (see instructor). 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 answers to social questions.

337 PAINTING TECHNIQUES (5)

The fundamental grammar of painting; studies in water color, tempera, pastel, gouache, oil, acrylic, mixed media, and collage. How to stretch canvas, prepare panels, and size paper. Exploration of the nature of pigments, their relative permanence — how to grind and mix them. Examples of the techniques of such painters as Rubens, Van Dyke, Da Vinci, Degas, Renoir, Rothko.

339 MODERN MIDDLE EAST (4)

Prereq: some background in economics or political science. Contemporary problems in sub-areas of the Middle East; the historical development of the current situation, socio-economic class conflicts, relations with the rest of the world; and political, economic and social patterns.

345 TELEVISION AND OTHER DISASTERS (5)

Prereq: exposure to the mass media or junior standing. A critical examination of television and the television industry. Its impact and influence on American life. Comparison of television with the other mass media.

349 FORMULAS OF EXISTENCE (4)

Prereq: upper-division standing or instructor's permission. The study of certain theoretical propositions and working perspectives, involving significant definitions of being, identity and the self — how they were derived and formulated ("I think, therefore I am" is the classic example), as well as their contemporary relevance and limitations. Readings from: Descartes, DeSade, Nietzsche, Marx, Sartre, Simone De Beauvoir, others.

353 COMPARATIVE SOCIAL STRUCTURE (4)

Prereq: Fair 118 or Anth 201 equivalent. Human society comes in many diverse shapes and sizes. This course will compare functional structural regularities which underly different cultural patterns.

356 HISTORY OF THE AMERICAN FAMILY (5)

Prereq: Fair 103 or other course on American history and culture. Changes and patterns in American family life including division of roles, responsibilities and privileges; structures for satisfying physical and emotional needs; the relationship between the family and other social institutions.

362 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.

365 THERAPY, ARTS AND THE COMMUNITY (5)

Prereq: course in human development and personality. 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.

375 INTERPRETIVE ANTHROPOLOGY (5)

Prereq: previous background in anthropology, comparative religion, myth or cross-cultural studies. A critical survey of the anthropological tradition which studies social behavior, religious doctrines, myth, linguistic usage and ritual practice in order to comprehend the "frames of meaning" in which peoples of different cultures live and act.

379 EDUCATION IN AMERICA (3-5)

Prereq: Fairhaven College independent study permit required from instructor. A critique of the American mass educational system and its impact on the individual, including study of educational alternatives which may involve practice with younger children.

**380 COOPERATIVE SPECIAL INTEREST STUDIES (1-5)**

Prereq: Fairhaven College independent study permit required for registration. Faculty-directed, student-initiated special interest small study groups formed around particular topics, themes, issues or activities.

390 VISITING ARTIST/LECTURE STUDIES (1-5)

Prereq: Fairhaven College independent study permit required for registration. Small study groups formed around particular topics, themes, issues or activities or visitors or guests invited to participate in Fairhaven's academic program.

391 COSMOLOGIES (5)

Prereq: some background in comparative religion, philosophy, history of science or cross-cultural studies. Examination and comparison of different cosmological systems that peoples of various times and places have used to make sense of the world about them.

405 LUCIFER: BRINGER OF LIGHT/PRINCE OF DARKNESS (4)

Prereq: assumes some background in literary analysis. Western literature and art depicting the Devil. Selections from the Bible, Dante, Marlowe, Milton, Goethe, Byron, Benet, Twain and others. Literary, philosophical and sociological interpretations of the Evil One and human nature, temptation, the Fall, Faust legends and hell.

410 NEUROSIS AND CIVILIZATION (5)

Prereq: prior study in one or more social sciences. Personal suffering and alienation as dimensions of modern consumer society. The work of contemporary feminist, Freudian, Marxist and other social theorists will be examined.

- 411 THE CONSTITUTION AND AMERICAN SOCIETY I (6)
Study of constitutional law and the way in which the Supreme Court construes the constitution in addressing major social and political questions.
- 412 THE CONSTITUTION AND AMERICAN SOCIETY II (6)
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. Individual rights in conflict with government regulations.
- 413 RED MAN'S LAND, WHITE MAN'S LAW (5)
Legal history of the status of American Indians with emphasis on questions of Indian sovereignty and control of land and natural resources. Using Supreme Court decisions and other resources, consideration of the historical development of these issues, federal policies and the controversy which surrounds them today.
- 414 ENVIRONMENTAL LAW (5)
Survey study of major areas of environmental law with emphasis on legal and policy conflicts which have gone to court for resolution.
- 415 POPULAR CONSENSUS IN RONALD REAGAN'S AMERICA (3)
Prereq: survey courses in history, philosophy and sociology. The beliefs, concepts and myths of the American people in the late 20th century and the application of these beliefs to political and economic life. Is there "national character" or "cultural personality" in the United States? If so, can we define it? How does it express itself?
- 420 TOLSTOY! (4)
Prereq: upper-division standing or instructor's permission. An introduction to his life and work. Readings will include *Childhood*, *Boyhood*, *Youth*; some parables and short stories, novels *The Cossacks*, *Anna Karenina* and *Resurrection*, selected writings on art, education, civil disobedience and non-violence. Henri Troyat's biography will be a required traveling companion.
- 422 HUMANISTIC PERSPECTIVES ON AGING (4)
The process of human aging through the perspectives of film, literature, philosophy and religion.
- 424 AMERICAN INDIAN RELIGION AND NATURE (5)
Prereq: previous study in anthropology, ethnic studies, environmental studies or American history. Three tribes: their religion, beliefs and attitudes toward the earth and wildlife. Indian practices are studied and compared with white myths about Indians.
- 425 THE AMERICAN SHORT STORY (3)
Prereq: background in literary analysis, junior standing or permission of instructor. Discussion and analysis of the American short story from its beginnings to the present. Selected works by Nathaniel Hawthorne, Edgar Poe, Herman Melville, Mark Twain, Edith Wharton, William Faulkner, Katherine Anne Porter, Ralph Ellison, Hubert Selby and others.
- 427 RHETORIC OF FEMINISM (4)
Prereq: background in rhetorical theory or women's studies. Models of rhetorical criticism, their usefulness for studies of female orators and feminist rhetoric. Historical survey of feminist ideas and modes of persuasion and the specific study of selected individuals, e.g., Mary Wolstonecraft, Elizabeth Cady Stanton, Charlotte Perkins Gilman and contemporary feminists.
- 430 SEMINAR IN ALFRED N. WHITEHEAD (4)
Prereq: prior work in philosophy. A close reading and discussion of selected philosophical writings of Whitehead. Some work with *Process and Reality*.

432 MICROBIOGEOCHEMISTRY (3)

Prereq: upper-division standing in biology, geology, chemistry, geography or related sciences. Focus on small-scale interactions between living organisms and their geochemical environment. Students will be expected to prepare several case studies for presentation to the class. Relations to human affairs, pollution, mineral resources, etc., will also be stressed.

436 AMERICA AND THE VIETNAM WAR: 1954-75 (4)

Prereq: background in U.S. History or junior standing. History of American involvement in the Vietnam war and of the influence of the war on the U.S. History of the "new left" and the anti-war movement.

451 ALBERT EINSTEIN (4)

Prereq: at least one course in mathematics and one in physics. The social, intellectual and political setting of Einstein's life. His philosophy, his writings and a descriptive consideration of his contributions.

455 THE LOST GENERATION (3)

A survey of the novelists and poets of the period between the two world wars. Stein, Hemingway, Faulkner, Fitzgerald, Eliot, Stevens and others.

465 A HISTORY OF AGING IN AMERICAN CULTURE (4)

Prereq: previous course in one of the humanities, or permission of instructor. A comprehensive historical examination of American society's changing attitudes and responses to aging and to older adults.

Independent Study

(By arrangement: fall, winter and spring)

Group or individual independent study may be undertaken at the 200, 300 or 400 level, depending on the student's background or abilities and the nature of the study.

Registration via signed Fairhaven College "Independent Study Permit" card after consultation with faculty sponsor. Student-faculty "Independent Study Proposals" must be filed and approved within the first two weeks of each quarter.

Special Topic Seminars

Fairhaven remains responsive to student needs and to educational innovation by offering special studies each quarter under the following general topics: Current Issues, Scientific Inquiry, Social Critique, Individual Development, Creative Process, Cultural Understanding, Authors/Artists and Their Work, and Learning and Learning Theory. (290-299, 490-499)

Full descriptions of these seminars appear in the *Fairhaven College Quarterly*.

Experimental Courses

These courses, offered as Fairhaven 297 or 497, give further flexibility to the curriculum by allowing faculty on their own or student initiative to offer unusual or timely classes. Full descriptions will be announced prior to registration in the *Fairhaven College Quarterly*.



FOREIGN LANGUAGES & LITERATURES

College of Arts and Sciences

YOUR CAREER

In these days of closer relationships among the countries of the world, foreign language training is invaluable. The ability to speak and understand foreign languages makes possible direct contact with the people, culture and literature of other lands, contributing to international understanding as well as personal development.

Traditionally, Western's foreign language department has emphasized the preparation of foreign language teachers, but we also encourage students to plan for careers in other areas in which the command of a foreign language is not only an asset but sometimes essential: library, work, journalism, communications, business, secretarial work in connection with foreign commerce, music, motion pictures, the theater, and various phases of government work, including the diplomatic service. There is also an increasing demand for translators and interpreters. Language students are encouraged to combine their interest in foreign languages with other

academic areas by electing a program of supporting courses in another field or a second major or minor, depending upon their particular vocational objectives. Because credit may be awarded for proficiency, it is often possible for advanced language students to complete more than one major.

DEGREE PROGRAMS

The Department of Foreign Languages and Literatures offers a well-balanced curriculum of language, literature and civilization courses on both the undergraduate and graduate level. A student may earn a Bachelor of Arts degree in French, German, Russian and Spanish. Elementary and intermediate courses in Chinese and Japanese have recently been added to the department's offerings. All linguistic skills are stressed: understanding, speaking, reading and writing. Special reading courses are also offered for students wishing to increase their reading

skill rapidly. In the civilization and literature courses, active use of the target language remains a primary objective. The electronic language laboratories are available to students for individual use as well as for class use.

ADVANCED PLACEMENT CREDIT

If you have begun your foreign language study in high school, you may be granted extra 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 departmental office, Humanities 231.

FOREIGN STUDY

Foreign language students are encouraged to increase their language proficiency through foreign travel, residency and study in France, Mexico, Germany, and other countries. For information on foreign study programs, contact the director of the Foreign Study Office, Old Main 40C.

GRADUATE STUDY

Students who wish to pursue their language studies on the graduate level may, upon satisfactory completion of 48 credit hours, earn a Masters of Education degree in French, German or Spanish. Graduate courses are given each summer so that the M.Ed. candidate may earn his or her degree after having been enrolled on campus for at least three summers. An informal atmosphere and a small student/faculty ratio make Western Washington University a particularly attractive place for scholarly endeavor and the maximum development of individual potential and interests. For further details, see Graduate section of the catalog.

FOREIGN LANGUAGES AND LITERATURES FACULTY

- JESSE HIRAOKA (1972) Acting Chairman. Professor. BA, Roosevelt University; MA, University of Chicago; PhD, Northwestern University.
- DARREL W. AMUNDSEN (1969) Professor of Classics. BA, Western Washington State College; MA, University of Washington; PhD, University of British Columbia.
- RALL ARELLANO (1972) Associate Professor of Ethnic Studies and Spanish. BA, Boston University; MA, University of Washington.
- HERBERT L. BAIRD, JR. (1967) Associate Professor of Spanish. AA, Santa Ana Junior College; AB, Pomona College; AM, PhD, University of Chicago.
- ROBERT S. BALAS (1969) Associate 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.
- EUNICE D. FABER (1959) Associate Professor of Spanish. AB, Howard University; MA, PhD, Catholic University.
- GUADELUPE GARCIA BARRAGAN (1965) Professor of Spanish. BA, Colegio Aquiles Serdan; BEd, Instituto America; MA, Normal Superior Nueva Galicia; Doctorat d'Universite Paris, Sorbonne III.
- ARTHUR S. KIMMEL (1969) Associate Professor of French. AB, MA, University of Miami; PhD, University of California, Berkeley.
- LOUISE S. KIKUCHI (1979) Assistant Professor. BA, University of Hawaii; MA, PhD, University of California, Santa Barbara.
- 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.
- TORU TAKEMOTO (1976) Assistant Professor. PhD, University of Pennsylvania.
- RUDOLF WEISS (1970) Professor of German. BA, BA in Ed, Western Washington State College; MA, PhD, University of Colorado.

BACHELOR OF ARTS

Major — French, German, Spanish, Russian

65 credits: 50 credits in the language; 15 credits in supporting courses. GPA of 2.5 or above required in the major.

The Foreign Language Component

- 10-15 credits in the language on the 200 level
- 35 credits in the language on the upper-division level with at least three courses numbered above 400 to be taken in residence

Courses in literature in translation not involving instruction in the foreign language, i.e., 367 and 375, are not applicable to the major except as supporting courses.

Supporting Courses

- 15 credits selected under departmental advisement in other foreign languages and literatures or in other subjects complementing the student's interest in the foreign culture. With departmental approval, students completing a second major may be exempted from the supporting course

requirement. Also, students with minors in a second language or in other areas approved by the department may be excused from the supporting course requirement

Major — Classical Studies

A student-faculty designed major in Classical Studies may be arranged.

BACHELOR OF ARTS IN EDUCATION

Teaching Competence

Recommendation for teaching competence normally requires completion of the B.A. in Education foreign language major with a GPA of 2.5 or better. Teaching competence recommendations are not normally issued to persons who have completed only the minimal requirements for a foreign language minor. Teacher certification requirements of the School of Education must also be met by candidates for this degree.

Major — French, German, Spanish

50-55 credits

- 10-15 credits in the language on the 200 level
- 20-25 credits in the language numbered 300 or above, to include two courses in literature, one in civilization and one in composition or grammar. German and Spanish majors include 314; French majors include 311
- 9-15 credits in the language on the 400 level, to include 401 and 402 (French majors substitute another 400 level French course for 402)
- Foreign Language Education 420
- Foreign Language 410 for foreign language majors (French 411 for French majors)

Courses in literature in translation not involving instruction in the foreign language, i.e., 367 and 375, are not applicable to the major.

These minors are appropriate for both Bachelor of Arts and Bachelor of Arts in Education degrees:

Minor — A Modern Foreign Language

- 25 credits in the foreign language numbered above 200

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 — Linguistics

- Linguistics 201, 301, 302, 303
- Speech 373
- 6 credits in a foreign language selected under departmental advisement

GRADUATE STUDY

For a concentration in French, 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, 500; 417; 445 are described on page 32 of this catalog.

- 215 INTENSIVE ENGLISH FOR FOREIGN STUDENTS (10)
Prereq: pre-college English education in East Asia, or equivalent English ability (six years of English). Not applicable to minimum credits required for graduation. Intensive English training for foreign students with a basic knowledge of English, to enable them to function in English-speaking university-level classes. Summers only.
- 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 adoption and micro-teaching presentations. School observations.

For courses taught in translation, see Classical Studies (list below): Foreign Language 367; French 367; German 367, 375; Russian 367; 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, small tutorials led by native speakers of Chinese, and self-instruction using cassette recorders and other materials.

Foreign Languages/Literatures

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.)

101 LATIN AND GREEK IN CURRENT USE (2)

A workbook course applying the principles of word derivation from Latin and Greek to the practical enlargement of the student's English vocabulary.

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, Apollonios 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.

Foreign Literatures in Translation

See French 367; German 367, 375; Russian 367; East Asian 367.

These courses are based on readings in foreign literature in English and no knowledge of foreign language is required for participation.

French

101, 102, 103 ELEMENTARY FRENCH (5 ea)

To be taken in sequence. Fundamentals of speaking, reading, writing and understanding French.

104 FRENCH GRAMMAR: REVIEW OF THE FIRST YEAR (5)

Recommended for students with two years of high school French or more if they do not qualify for 201. A rapid review of basic skills needed for intermediate French. To be offered fall quarter only.

105 INTENSIVE FIRST-YEAR FRENCH (15)

This intensive course is intended for those who have had no experience or very little contact with French. It covers one full academic year of French, accentuating speaking and comprehending, and is based upon a special series of French films.

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. Intensive reading and discussion in French of short passages from modern French texts.

205 INTERMEDIATE CONVERSATION (2)

Prereq: French 103. Conversational practice involving situations of daily life.

280 FRENCH FOR A READING KNOWLEDGE (4)

For students needing a reading knowledge of the language. Fulfills graduate reading requirement when completed successfully; graduate students are advised to take the course P/NP.

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 to review French grammar. Regular written assignments, study of grammar, and vocabulary building.

305 ORAL EXPOSITION (5)

Prereq: French 202 or equivalent; may be taken concurrently with French 311. The advanced student practices expressing himself orally in French. Students give expository talks and discuss articles taken from current French periodicals. Vocabulary building.

311 INTRODUCTION TO LINGUISTIC STUDIES (5)

Prereq: French 202 or equivalent. Linguistics, phonetics, stylistics.

330 FRENCH CIVILIZATION (3)

Prereq: 10 credits of French on the 200 level. Studies in French civilization and culture.

340 INTRODUCTION TO FRENCH LITERATURE STUDIES 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 STUDIES II (5)

Prereq: French 301 (341) 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.

367 FRENCH LITERATURE IN TRANSLATION (3-5)

Selected major works in French literature read and discussed in English. When topics vary, the course may be repeated.

- 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: permission of department and six credits upper-division French. Practicum in course preparation, classroom and language laboratory procedures, materials, evaluation and counseling. May be repeated. S/U grading.
- 450 **SEMINAR IN FRENCH LITERATURE (3-5)**
Prereq: 9 credits 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.

Graduate Courses in French

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

Existing undergraduate courses may be taken as electives with approval of graduate adviser. In these courses, students with graduate status will do work beyond that required of undergraduates. No more than 9 credits (M.Ed.) acceptable towards basic requirements in French (401, 411, 437, 450, 451).

- 501, **FRENCH PHONOLOGY, MORPHOLOGY AND**
502 **SYNTAX (4 ea)**
Prereq: graduate status or permission of department. An advanced course in written and oral expression, with emphasis on the identification and correction of phonological and grammatical problems.
- 504 **HISTORY OF THE FRENCH LANGUAGE (4)**
Prereq: graduate status or permission of department. The development of phonology, morphology and syntax from Latin to modern French.
- 505 **APPLIED FRENCH LINGUISTICS (4)**
Prereq: graduate status or permission of department. An advanced course in linguistics designed for the teacher of French.
- 510 **STUDIES IN THE FRENCH NOVEL (4)**
Prereq: graduate status or permission of department. A detailed investigation of the development of the French novel.

- 511 **STUDIES IN DRAMA (4)**
Prereq: graduate status or permission of department. Historical and critical study of the French theatre, with emphasis on the major genres.
- 512 **STUDIES IN FRENCH POETRY (4)**
Prereq: graduate status or permission of department.
- 530 **CIVILIZATION AND CULTURE OF THE FRENCH-SPEAKING WORLD (4)**
Prereq: graduate status or permission of department.
- 532 **THE TEACHING OF FRENCH (4)**
Prereq: teaching experience or permission of department. Emphasis on audio-visual and methodology, language laboratory operation and management. Materials and methods of teaching French for those with teaching experience.
- 550 **GRADUATE SEMINAR (4 ea)**
Prereq: graduate status or permission of department. Students should have some background in literature studied on the undergraduate level before taking this course.
550a Studies in Modern French Literature
550b The French Short Story
- 555 **WORKSHOP IN THE TEACHING OF FRENCH (4 ea)**
Prereq: graduate status or permission of department. A seminar designed to give teachers of French an introduction to specialized areas of methodology such as the teaching of literature in high school and the community college, psycholinguistics, testing, preparation of audio-visual materials, etc.
555a Literature
555b Methodology

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 **REFRESHER COURSE IN ELEMENTARY GERMAN (5)**
Recommended for students with two years of high school German, or more if they do not qualify for German 201. A rapid review of basic skills needed for intermediate German.
- 180 **GERMAN FOR A READING KNOWLEDGE I (3)**
Not open to students with more than one year of college German. Introductory course for students needing a reading knowledge of the language. See also German 280.
- 201, 202, 203 **INTERMEDIATE GERMAN (5,5,3)**
Prereq: German 103 or two years high school German or equivalent; German 201 prerequisite to 202; German 202 prerequisite to 203. 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 1984.
- 280 **GERMAN FOR A READING KNOWLEDGE II (3)**
Prereq: German 180 or one year of college German or equivalent. For fulfillment of master's degree reading requirement.

Foreign Languages/Literatures

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.
- 305 GERMAN CONVERSATION (3)
Prereq: German 301. Conversation practice involving situations of daily life; topics of contemporary Germany. Vocabulary building.
- 314 PHONETICS (3)
Prereq: German 203. A course designed to improve the student's pronunciation and intonation, to familiarize him with phonetic transcription, and to develop an awareness of problems involved in teaching sounds of German.
- 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 will also be provided for the improvement of language skills. S/U grading. Summers only. Next offered summer 1984.
- 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 (3)
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.
- 367 GERMAN LITERATURE IN TRANSLATION (3)
Selected from eminent German authors read and discussed in English. When topics vary, the course may be repeated.
- 375 MAIN CURRENTS IN MODERN FOREIGN LITERATURE —GERMAN (5)
A survey of German literature and civilization — readings and discussion in English. Intellectual, philosophical and social ideas as reflected in the literature of Germany.
- 380 GERMAN FOR READING KNOWLEDGE AND RESEARCH (3)
Basic German for readings in chosen field of specialization for graduate students and others requiring access to German materials for research.
- 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.
- 425 TEACHING-LEARNING PROCESS IN ELEMENTARY GERMAN (2)
Prereq: 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

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 from pagan times through 1850. General conversational practice and exploration of every-day 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. General conversational practice on topics of every-day life.
- 503 CULTURE AND CONVERSATION (4)
Prereq: German 401 or equivalent. Oral and written composition based on topics reflecting contemporary German civilization. General conversational practice on topics of every-day 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 will practice syntax and style. An awareness of the various levels of language will also be 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, Lallenspiel*
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)

Greek 111 prerequisite to 112, 112 prerequisite to 113. 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. Offered only through Continuing Education.

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, pronunciation, grammar, aural comprehension, reading and speaking. Use is made of a combination of formal instruction, small tutorials led by native speakers of Japanese, and self-instruction using cassette recorders and other materials.

201, 202, 203 INTERMEDIATE JAPANESE (5 ea)

Prereq: Japanese 103 or equivalent. Review of the fundamentals of the language; emphasis on acquisition of oral and written vocabulary; intensive reading and discussion in Japanese of graded materials in modern Japanese.

301, 302, 303 ADVANCED JAPANESE (3 ea)

Prereq: Japanese 203; each course prerequisite to the next. Intensive reading, written vocabulary acquisition and oral comprehension of materials in modern 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, 302 THIRD YEAR COMPOSITION (3)

Prereq: Russian 203 or equivalent; Russian 301 prerequisite to 302. Written and oral composition and 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.

340 INTRODUCTION TO RUSSIAN LITERATURE (3)

Prereq: 15 credits of second-year Russian or equivalent. Selected works of major Russian authors, with emphasis on reading improvement and textual interpretation.

341 NINETEENTH CENTURY LITERATURE (3)

Prereq: Russian 340. Introduction to Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky, Tolstoy or Chekhov. Emphases vary. May be repeated when topics vary.

367 INTRODUCTION TO RUSSIAN LITERATURE IN ENGLISH (3)

Survey of history of Russian literature. Readings and discussions in English.

Spanish

101, 102, 103 ELEMENTARY SPANISH (5 ea)

To be taken in sequence. Fundamentals of speaking, reading, writing and understanding.

104 REFRESHER COURSE IN ELEMENTARY SPANISH (5)

Recommended for students with two years of high school Spanish or more if they do not qualify for Spanish 201. A rapid review of basic skills needed for intermediate Spanish.

201, 202, 203 INTERMEDIATE SPANISH (5 ea)

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

301, 302 COMPOSITION AND GRAMMAR (3)

Prereq: Spanish 203 or equivalent; to be taken in sequence. Written and oral composition, grammar and vocabulary building.

305a,b,c THIRD YEAR CONVERSATION (2 ea)

Prereq: Spanish 203 or equivalent; may be taken concurrently with Spanish 301, 302 or 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 of 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, 203 or equivalent. Panoramic view of Mexican civilization and culture from pre-Columbian times to the present.

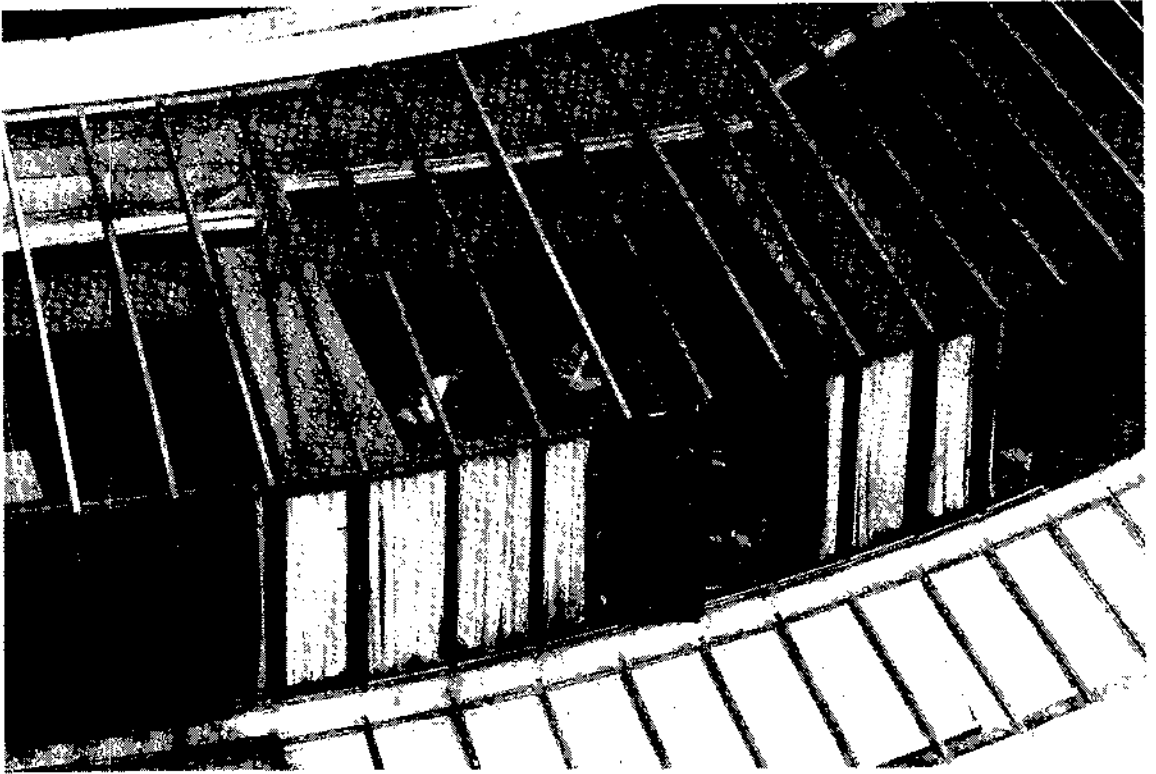
Foreign Languages/Literatures

- 340 INTRODUCTION TO HISPANIC LITERATURE (3)
Prereq: Spanish 301 or equivalent. Work of major Hispanic authors representing each literary genre; emphasis on reading improvement and methods of analysis.
- 341 SPANISH LITERATURE TO 1538 (3)
Prereq: Spanish 340. Literary development from beginnings to death of Garcilaso.
- 342 SIGLO DE ORO (3)
Prereq: Spanish 340 or equivalent. Literary development in various genres during the Golden Age; special study of major works and writers.
- 343 MODERN SPANISH LITERATURE (3)
Prereq: Spanish 340 or equivalent. Selected authors and works from 1680 to present.
- 344 SPANISH-AMERICAN LITERATURE: COLONIAL PERIOD TO END OF NINETEENTH CENTURY (3)
Prereq: Spanish 340 or equivalent. Selected authors and works.
- 345 MODERN SPANISH-AMERICAN LITERATURE (3)
Prereq: Spanish 340 or equivalent. Modernism and other literary trends.
- 346 CONTEMPORARY SPANISH-AMERICAN LITERATURE (3)
Prereq: Spanish 340 or equivalent. Major authors and trends after modernism.
- 348 TWENTIETH CENTURY SPANISH-AMERICAN NOVEL (3)
Prereq: Spanish 340 or equivalent. Interpretation and discussion of selected readings.
- 350 STUDIES IN SPANISH AND SPANISH-AMERICAN LITERATURE (3)
Prereq: completion of Spanish 340 or equivalent. Different genres, schools and/or movements in Spanish and Spanish-American literature at the different periods of development in Penninsular and Spanish-American letters will be studied under this course. Specific topics to be listed in class schedule; may be repeated for credit.
- 353 CONTEMPORARY MEXICAN LITERATURE (3)
Prereq: Spanish 340 or equivalent. Reading and discussion of selected major documents from the twentieth century Mexican literary canon.
- 362 AZTEC SOCIETY AND CULTURE (4)
Prereq: any introductory course in Ethnic Studies or Spanish. A study of Aztec history and culture. An investigation of Aztec social structure, war, religion, philosophy and literatures. The Aztec view of the conquest. Readings and discussions in English.
- 385a,b,c HISPANIC CULTURE AND CONVERSATION (1 ea)
Prereq: Spanish 201. Hispanic culture through film, talks and song. General discussions of the Hispanic World and its culture, especially in contrast to our own. May be repeated for credit.
- 401 402 ADVANCED COMPOSITION AND GRAMMAR (3 ea)
Prereq: Spanish 302; Spanish 401 prerequisite to 402.
- 405a,b,c ADVANCED CONVERSATION (2 ea)
Prereq: Spanish 301, 302 or 305; may be taken concurrently with Spanish 401 or 402. 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.
- 412 CULTURE, RACE AND CLASS IN MEXICO AND THE U.S. (4)
Prereq: any introductory course of ethnic studies or Spanish. A historical and contemporary view of the Indian in the Mexican social structure with respect to the factors of ethnicity, race and class. An emphasis on modern Mexico. A comparison with ethnic-racial groups in American society. Readings and discussions in English.
- 425 TEACHING-LEARNING PROCESSES IN ELEMENTARY SPANISH (2)
Prereq: permission of department and six credits 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: 9 credits in upper-division Spanish and permission of department. Major authors and movements. Since topics vary, the course may be repeated.

Graduate Courses in Spanish

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 XIX 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

College of Arts and Sciences

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. Among these are population and settlement; land use and resources; and the physical environment itself, including the nature of patterns of landforms, climate, soils and vegetation.

THE TWO FIELDS

Geography and regional planning are compatible fields that in many countries have enjoyed a long and fruitful association. The oft-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, which has been called a science of

spatial relationships, 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 and 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

- JAMES W. SCOTT (1966) Chairman. Associate Professor. BA, MA, Cambridge University; PhD, Indiana University.
- HOWARD J. CRITCHFIELD (1951) Professor. BA, MA, Phd, University of Washington.
- KENNETH J. LANGRAN (1979) Assistant Professor. BA, California State University, Long Beach; MA, University of Washington; PhD, University of Wisconsin.
- ROBERT L. MONAHAN (1955) Professor. BA, University of Washington; MA, University of Michigan; PhD, McGill University.
- DEBNATH MOOKHERJEE (1961) Professor. BS, MSc, University of Calcutta; PhD, University of Florida.
- GILBERT A. PETERSON (1972) Associate Professor. BS, Youngstown State University; MUP, PhD, University of Washington.
- FRANKLIN C. RANEY (1966) Associate Professor. BS, University of Chicago; MS, Washington State University; PhD, University of California, Davis.
- 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.
- ROBERT W. TESHARA (1965) Associate Professor. BA, BA in Ed, Western Washington State College; PhD, University of Washington.
- MANFRED C. VERNON (1964) Honorary Lecturer Emeritus in Political Geography. LLB, University of Cologne; JD, University of Berlin; PHD, Stanford 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. Robert W. Teshera, as 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, 301, 311, 351, 454, 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 341, 345, 370, 372, 373, 407, 409, 440, 442, 444, 445
- One course from Geog 352, 353, 451, 452, 453, 455
- Supporting course Math 240
- Electives under departmental advisement

Minor — Geography 25 credits

- Geography 201
- Electives under departmental advisement

Extended Minor — Cartography

35 credits

- Geog 351, 352, 353, 451, 452
- Comp Sci 110 or 210, 211
- One course from Huxley 313, Tech 240
- Electives from Geog 251, Art 371, 372, Math 240, Tech 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 vari-

ous 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 204, 482
- Geog 201, 207, 280, 341, 351, 380, 454, 480
- Huxley 436
- Math 240
- Pol Sci 250, 353
- Soc 202, 340
- Comp Sci 110 or 210

Electives

Either 26 credits to be selected from the following with two courses from each group:

- Geog 301, 352, 353, 432, 452, 453, 457
- Geog 331, 370, 372, 373, 407, 409, 417, 422, 423, 440, 442

or 16 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. Robert W. Teshera. For interdisciplinary combinations and certification requirements for secondary teaching in geography and the social sciences, see Interdisciplinary Programs section.

Major 45 credits

- Geog 201, 203, 207, 251, 311, 460

Geography/Regional Planning

- 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 341, 345, 407, 409, 440, 442, 444
- One course from Geog 301, 351, 352, 417, 453, 454, 455
- Electives
- All selections to be made under departmental advisement

Minor — Geography 25 credits

- Geog 201, 203, 311
- Electives under departmental advisement

Teaching Competence

Recommendation for teaching competence requires completion of the major or extended minor outlined above with a grade average of 2.5 or better.

GRADUATE STUDY

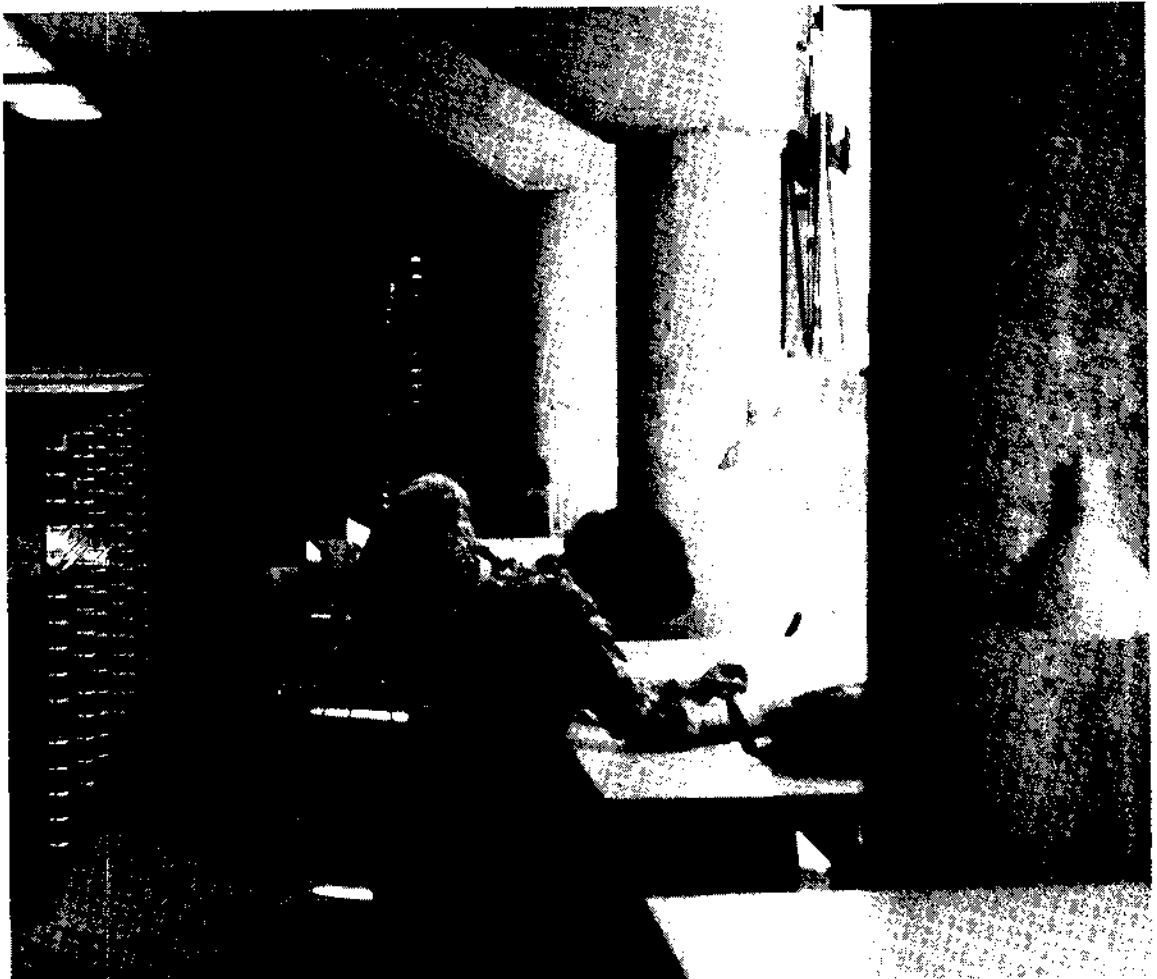
For concentration in geography leading to Master of Science degree, see Graduate section of catalog.

COURSES IN GEOGRAPHY

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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.
- 310 THE PACIFIC NORTHWEST (3)
Prereq: Geog 201 or 203 or 207. Environments, settlement, resources, and economic development of the Pacific Northwest.
- 311 THE UNITED STATES (5)
Prereq: Geog 201. Environments, resources, settlement and economic activities of the United States and its regions.
- 313 CANADA (3)
Prereq: Geog 201. Environments, resources, settlement and economic activities of Canada and its provinces.
- 314 LATIN AMERICA (5)
Prereq: Geog 201. Peoples, resources, regions and economic and political development of South and Central America.
- 315 EAST AND SOUTH ASIA (5)
Prereq: Geog 201. Settlement, population, economic resources and activities of the countries and regions of East and South Asia.
- 318 THE PACIFIC (3)
Prereq: Geog 201. Environments, resources, and settlement of the Pacific Islands, Australia, and New Zealand. Normally offered alternate years.
- 319 AFRICA (5)
Prereq: Geog 201. Resources, peoples, regions; economic, social and political development of Africa.
- 321 INDIA, PAKISTAN AND BANGLADESH (3)
Prereq: Geog 201. Environments of India, Pakistan and Bangladesh; their resources, population and economic activities; emphasis on contemporary problems. Normally offered alternate years.
- 322 THE MIDDLE EAST (3)
Prereq: Geog 201. Environment, resources, culture and problems of Southwest Asia and North Africa.
- 330 GEOGRAPHY OF LANDFORMS (5)
Prereq: Geog 101 or 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 101 or Geog 203 or Physics 101. Elements of climate, climatic regions, and climate as an environmental factor.
- 341 URBAN GEOGRAPHY (5)
Prereq: Geog 201. Geographic relations of the modern city with emphasis upon the development, functions and problems of American cities.
- 345 REGIONAL HISTORICAL GEOGRAPHY (3)
Prereq: Geog 201. Analysis of geographical change through time of selected regions of the United States or Canada.
- 351 CARTOGRAPHY (5)
Prereq: Geog 201 or 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.
- 353 **AERIAL PHOTO AND MAP INTERPRETATION (3)**
Prereq: 4 credits in geography. Geographic interpretation of aerial photographs and maps; remote sensing techniques and analyses.
- 370 **NATURAL RESOURCES MANAGEMENT (5)**
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.
- 372 **RECREATION RESOURCE MANAGEMENT (3)**
Concepts, methods and application of outdoor recreation planning.
- 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.
- 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 101 or 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 101 or 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 101 or 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.



Geography/Regional Planning

- 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.
- 440 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.
- 442 RURAL SETTLEMENT AND LAND USE (3)
Prereq: Geog 201. Geographical analysis of rural settlement and land use; origins, diffusion and patterns in selected regions.
- 444 THE DEVELOPING WORLD: SPATIAL PROBLEMS, STRATEGIES AND SOLUTIONS (3)
Prereq: Geog 201 or 207. 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 ADVANCED CARTOGRAPHY (3)
Prereq: Geog 351. Development and maintenance of data files for use with computer mapping systems; interactive program development; special projects involving computer mapping systems and/or other mapping techniques.
- 453 FIELD METHODS IN GEOGRAPHY (3)
Prereq: Geog 351. Recording, mapping, and analysis of physical and cultural features.
- 454 ANALYSIS OF AREAL DATA (4)
Prereq: Math 240. Statistical and cartographic techniques in solving geographic problems.
- 455 FIELD CAMP (3)
Prereq: permission of instructor. Methods of geographical field investigation.
- 457 BIOPHYSICAL METHODS IN PLANNING (3)
Prereq: Geog 280. Identification, structuring and analysis of environmental data used in land-use planning from published and unpublished sources.
- 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: permission of instructor. Selected topics in cultural, economic or physical geography. May be repeated for credit.

Graduate Courses

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.
- 517 CURRENT TOPICS (3)
Prereq: Geog 501 or 503 and 510. Advanced study of selected subfields of geography/planning. May be repeated for credit.
- 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

College of Arts and Sciences

The natural setting of Western Washington University adjacent to the Cascade Mountains and Puget Sound provide 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 labora-

tory facilities and equipment are available for X-ray diffraction, X-ray fluorescence, atomic absorption, sedimentation, air photo interpretation, flume and wave tank studies, paleomagnetic analysis, geochemistry, petrography, seismology and scanning electron microscopy. The Sundquist Marine Laboratory at Shannon Point near Anacortes provides facilities for studies in marine geology.

PROGRAMS

Objectives of the department are varied, including preparation of undergraduate and graduate students for careers as professional geoscientists and also preparation of earth science teachers at the primary and secondary levels.

A wide variety of geologic phenomena in the adjacent Cascade Range and the marine environment of Puget Sound provide a broad spectrum of geologic features for study.

A number of concentrations are offered within the geology program.

Geology

These include:

Biostratigraphy	Geophysics
Clay Mineralogy	Glacial Geology
Coal Geology	Hydrology
Coastal Geology	Paleomagnetism
Economic Geology	Paleontology
Environmental Geology	Petrology
Geochemistry	Sedimentation
Geomorphology	Volcanism

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, including studies of active volcanism; others include investigations in other parts of the United States, Canada, and even overseas.

GEOLOGY FACULTY

- CHARLES A. ROSS (1964) Chairman.
Professor. BA, University of Colorado; MS, PhD, Yale University
- 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.
- EDWIN H. BROWN (1966) Professor. AB, Dartmouth College; MSC, University of Otago; PhD, University of California, Berkeley.
- 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 R. PEVEAR (1967) Associate Professor. BS, Allegheny College; MS, PhD, University of Montana.
- MAURICE L. SCHWARTZ (1968) Professor of Geology and Education. BA, MS, PhD, Columbia University.
- CHRISTOPHER A. SUCZEK (1977) Assistant Professor. AB, University of California, Berkeley; PhD, Stanford University.
- JAMES L. TALBOT (1976) Vice President For Academic Affairs/Provost and 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 DEGREE

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, 314, 340, 352, 360, 400, 410a, 410b, 412, 414, 416, 423, 424, 425, 430, 431, 432, 433, 440, 444, 446, 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 competency 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, 310, 304, 306 and 407
- Geog 203, 331; Physics 131; Astronomy 103
- Electives under departmental advisement from Geol 214, 314, 316, 318, 340, 352, 390, 399, 400, 410a, 410b, 412, 414, 416, 430, 440; Geog 353; one from Geog 422 or 423; Astronomy 315, 316, 415; Physics 219; Biol 406

Major — Earth Science Secondary

45 credits

- Geol 211, 212, 304 or 305, 306, 310, 407

- Geog 331; Physics 131; Astronomy 315
- Electives from Geol 214, 314, 316, 318, 340, 352, 399, 400, 410a, 410b, 412, 414, 416, 418, 420, 430, 440, 460; Sci Ed 399, 492; Geog 203, 353, one from 421, 422 or 423; Astronomy 316, 415; Physics 219

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, and 341 or 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 DEGREE

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, 314, 340, 360, 400, 414, 423, 424, 425, 430, 432, 433, 440, 444, 446, 453, 454, 455, 460, 461
- Supporting courses: Chem 121, 122, 123; Physics 131, 132, 133 (or 241, 242, 341, 344); Math 124, 125, Comp Sci 110 or higher, and Math 126 or 240.
- 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 131, 132, 133, or 241, 242, 341, 344
- 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

General Geophysical Option 110 credits

Petroleum Option 109 credits

- Geology 211, 212, 318, 352, 410a, 410b, 416, 454
- Math 124, 125, 126, 205, 224, 331, Comp Sci 210
- Physics 241, 242, 341, 343, 344, 346
- Chemistry 121
- General Geophysics Option: Geol 304, 306, 407, 453 and one of the following: Geol 360, 432, 455; Math 332, 430; Physics 381, 382, 485
- Petroleum Option: Geol 360, 399; Math 332, 430; Physics 485

For advisement in this concentration, consult the department of geology or physics.

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 or 305, 306, 318, 352, 407, 453, 454
- A minimum of five credits from the following: Geol 214, 316, 360, 410a, 410b, 416, 431, 432, 434, 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 335, 375, 435; Comp Sci 110, 210

Geology

- Chem 121
- Physics 241, 242, 341, 344
- 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; X97: 300, 400, 500; 417; 445 are described on page 32 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.
- 314 GEOMORPHOLOGY OF WESTERN UNITED STATES (3)**
Prereq: Geol 101 or 211. Geological forces and processes that have shaped the landscape of the West; origin of scenic geological features in the national parks.
- 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 131 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.
- 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. A special fee of approximately \$350 is levied to cover operational costs for these field trips.
- 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 MICROSCOPY LAB (2)**
Prereq: Geol 420. Hand specimen and microscopic study of ore minerals and hydrothermally altered rocks. Concurrent enrollment with 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.
- 446 CLAY MINERALOGY (4)**
Prereq: Geol 444. Classification, identification, structure and genesis of clay minerals.
- 453 GEOTECTONICS (4)**
Prereq: Geol 352. Crust-mantle interactions, isostasy, continental drift, sea floor spreading, theories of mountain building.
- 454 APPLIED GEOPHYSICS (4)**
Prereq: Geol 352. Field and laboratory exercise in seismic refraction and reflection, electrical resistivity, gravity and magnetics.
- 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.
- 460 GEOLOGIC PHASE EQUILIBRIA (3)**
Prereq: Math 124 or 220, Chem 122, 123, Geol 306. Application of classical thermodynamics to interpretation of geologic phase equilibria.
- 461 ANALYTICAL GEOCHEMISTRY (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 colorimetric methods.
- 472 HYDROLOGY (4)**
Prereq: 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

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

- 507 COASTAL GEOLOGY (4)**
Prereq: Geol 310 or 340. Coastal processes and morphology. Waves, tides and currents; sea-level changes, coastal sedimentation; 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 316 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.



Geology

- 51E 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.
- 51F SPECIAL TOPICS IN GEOLOGY (1-6)
Prereq: permission of instructor.
- 51G 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
- 51H GENESIS OF ORE DEPOSITS (4)
Prereq: Geol 420, 432, Chem 123. Investigation of composition, sources and transportation and deposition mechanisms of ore deposits; laboratory study of samples from selected mining districts.
- 52A 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.
- 52B 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.
- 52C 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.
- 52E 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 MICROSCOPY (2)
Prereq: Geol 418. Advanced hand specimen and microscopic study of ore minerals and hydrothermally altered rocks.
- 536 PALEOECOLOGY (4)
Prereq: Geol 316 or permission of instructor. Independent or class study in interpretation of fossil organisms from skeletal morphology and associated features; reconstruction of marine ecosystem relations from the study of assemblages of fossils.
- 540 GLACIAL GEOLOGY (4)
Prereq: permission of instructor. Physics of glacial movement; processes of glacial erosion and deposition; effects of Pleistocene climatic changes.
- 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.
- 547 CLAY MINERALOGY (4)
Prereq: Geol 444 or 544. The classification, structure, chemistry and x-ray diffraction identification of clays and clay minerals.
- 548 GEOLOGY OF CLAYS (3)
Prereq: Geol 444. Occurrence, distribution and genesis of clays, including weathering and soils, diagenesis and hydrothermal alteration.
- 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 APPLIED GEOPHYSICS (4)
Prereq: permission of instructor. Advanced field and laboratory exercise in seismic refraction and reflection, electrical resistivity, gravity and magnetics.
- 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 application 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

College of Arts and Sciences

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

- DON D. EKLUND (1968) Chairman.
Associate Professor. BA, University of New Mexico; MA, Colorado State College; PhD, University of Colorado.
- BERNARD L. BOYLAN (1956) Professor. BA, MA, University of Washington; PhD, University of Missouri.
- WILLIAM A. BULTMANN (1965) Professor. AB, PhD, University of California, Los Angeles.
- ROLAND L. DE LORME (1966) Professor. AB, University of Puget Sound; MA, University of Pennsylvania; PhD, University of Colorado.
- SANDRA RYAN DRESBECK (1979) Assistant Professor. BA, MA, PhD, University of California, Los Angeles.
- 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.
- PAUL A. KOHL (1974) Adjunct Professor. BA, St. Meinrad College.

History

- RONALD P. LOFTUS (1977) Assistant Professor. BA, George Washington University; MA, Johns Hopkins S.A.I.S.; PhD, Claremont Graduate School.
- GEORGE ERIC MARIZ (1970) Associate Professor. BA, MA, PhD, University of Missouri.
- AUGUST RADKE (1953) Professor. BA, MA, PhD, University of Washington.
- 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.
- CARL U. SCHULER (1959) Associate Professor. BS, MA, PhD, University of Wisconsin.
- HENRY G. SCHWARZ (1969) 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 these 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, 440, 441); 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 Interdisciplinary Programs for details.

BACHELOR OF ARTS IN EDUCATION

The following statements refer to the junior and senior high school major and the junior and senior high school concentrations:

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 in the College of Arts and Sciences section.)

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 2.5 is required for graduation and certification for teaching competence.

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

Teaching competency will be certified in history.

History/Social Studies Concentration

See Interdisciplinary Programs for description of the history/social studies concentration as an alternative teacher preparation major.

Major — Elementary 45 credits

- Hist 103, 104
- Two courses from Hist 425 through Hist 449
- One course from Hist 410 through Hist 420
- Electives under advisement

A minimum grade point average in history of 2.5 is required for graduation and certification of teaching competence. Competence will be certified in history.

Minor 25 credits

- History 103, 104
- 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 Interdisciplinary Programs for details.

Extended Minor 35 credits

(Alternate Minor for teaching competence recommendation)

Credits should be distributed under advisement as follows:

- Three courses in United States history
- Two courses in European history
- Hist 391
- Electives under advisement

A minimum grade point average in history of 2.5 is required for graduation and certification of teaching competence.

Extended Minor 33-35 credits

For English majors desiring a combined recommendation appropriate for junior high or middle school.

- Hist 103, 104
- One modern European course from Hist 425 through Hist 449
- One course from Hist 271, 280, 385
- One upper-division U.S. history course
- 10 credits in electives under departmental advisement

A minimum grade point average in history of 2.5 is required for graduation and certification of teaching competence in history.

DEPARTMENTAL HONORS

A history major may petition for entrance into the History Department Honors Program after completion of 25 credits in history with a GPA of 3.5 or above, and must thereafter maintain at least a 3.5 GPA in history courses to remain a member in good standing of the program.

In addition to fulfilling successfully all regular requirements in either the Bachelor of Arts or Bachelor of Arts in Education programs (including History 499), an honors student must (a) complete one of the following courses as part of his or

History

her major: History 493, 494 or 495; and (b) complete a departmental honors essay through registration in History 402 by the winter quarter of his or her senior year. This honors essay may also count as the senior honors thesis for those doing general university honors. It should be treated as an extension and deepening of the essay written in History 499 and should be written under the direction of the history faculty member who supervised the student's History 499 essay. Each essay must be approved by a committee of four faculty members, one of whom must be the departmental honors adviser and another of whom must be the student's 402-499 supervisor. The non-mandated members of the committee are to be nominated by the student, and one of them may be from another department than history.

GRADUATE STUDY

For concentrations in history leading to the Master of Education or 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, 500; 417; 445 are described on page 32 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.
- 110 HISTORY OF TECHNOLOGY AND SCIENCE (5)
A study of the influence of innovations and ideas in technology and science upon Western society. An overview of the successive paradigms established by technological and scientific developments and how changing ideas in these fields affected intellectual, social, religious and economic life.
- 111, 112, 113 INTRODUCTION TO WESTERN CIVILIZATION (5 ea)
Not open to those who have completed or intend to take 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.

- 199 RESEARCHING THE TERM PAPER (1)
How to use repositories of knowledge (courthouses, public and private archives, libraries) to research undergraduate papers in history and other academic disciplines. Twelve taped lectures keyed to an accompanying set of printed illustrative material, each lecture followed by a short practical exercise, culminating in the preparation of an annotated bibliography for an undergraduate paper. May be begun at any time up to the seventh week of any quarter.
- 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, Indianism, 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.
- 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.
- 316 SOCIETY AND ECONOMY IN PRE-INDUSTRIAL EUROPE (5)
Prereq: Hist 113 or Lib St 122. Economic and social changes in Europe between 800 and 1750: feudalism, manorialism, the growth of cities and commerce, the rise of the nuclear family, marriage patterns, the role of women and children, and the growth of literacy.

- 318 SOCIETY AND ECONOMY IN INDUSTRIAL EUROPE, 1750 TO THE PRESENT (5)
Prereq: Hist 114 or Lib St 123. Demographic, social and economic changes in Europe since the mid-eighteenth century: population increases and shifts, changes in family structure, urbanization, the rise and evolution of modern industry, capital formation, the development of modern banking, and social-intellectual changes associated with these phenomena.
- 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.
- 338 BRITISH IMPERIALISM: FROM TUDOR TIMES TO INDIAN INDEPENDENCE (5)
Prereq: sophomore status. The growth of British interests overseas: Britain and the American Revolution; convicts, traders and settlers; abolition of the slave trade; race relations in the 19th century empire; free trade and "anti-imperialism"; the Boer War, the emergence of the modern Commonwealth; the liquidation of the British Empire.
- 346 TECHNOLOGY AND SOCIETY IN EARLY EUROPEAN HISTORY (5)
Prereq: Hist 112, Lib St 122 or equivalent. Man's efforts to control his environment; the impact of technological change from the fall of Rome to the Industrial Revolution.
- 347 EUROPEAN INTELLECTUAL HISTORY (5)
Prereq: Hist 111, Lib St 121 or equivalent. A study of the evolution of Western thought from its Greek and Hebrew origins to modern times. Special emphasis on the development of the European mind since the seventeenth 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.
- 368 AMERICAN SOCIETY AND THOUGHT: THE TWENTIETH CENTURY (5)
Prereq: sophomore status. Intellectual developments in twentieth century America.
- 375 THE INDIAN IN AMERICAN HISTORY (5)
Prereq: junior status. Events and persons critical to history of North American Indians; review of interpretations of Indian cultures and history.
- 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.
- 402 HISTORY DEPARTMENTAL HONORS ESSAY (3)
Prereq: open to history honors students only.
- 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.

History

408 HISTORY OF THE SECOND WORLD WAR (3)

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).
- 418a,b EUROPE IN THE MIDDLE AGES (5 ea)
Prereq: Hist 112, Lib St 121; open to sophomores by 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.
- 418 MEDIEVAL ENGLAND (5)
Prereq: Hist 112, Lib St 122; open to sophomores by permission of instructor. Political, social and constitutional history of England from the Roman conquest to War of the Roses.
- 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.
- 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).
- 425 MODERN EUROPE: 1648-1789 (5)
Prereq: junior status. Development of the modern state system and the conflict between monarchs and the growing middle class.
- 426 MODERN EUROPE, 1789-1850 (5)
Prereq: junior status. Political, economic, social, and diplomatic developments between the French Revolution and mid-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 HABSBURG 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 111, 112; Lib St 121, 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 111, 112, 113; Lib St 121, 122, 123, 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 111, 112, 113; Lib St 121, 122, 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 111, 112, 113; Lib St 121, 122, 123, or equivalent. Political, social and economic development from Louis XIV through Napoleon.
- 442 FRANCE SINCE 1815 (5)
Prereq: Hist 111, 112, 113; Lib St 121, 122, 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.

History

- 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.
- 455 THE UNITED STATES, 1877-1916 (5)
Prereq: junior status. Social, economic and political development of the American nation after Reconstruction.
- 458 THE UNITED STATES: 1917-1941 (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.
- 465 THE TRANS-MISSISSIPPI WEST (4)
Prereq: junior status. History of the American Far West, from the eve of European penetration to the present.
- 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 MODERN CANADA SINCE 1867 (3)
Prereq: junior status. A survey of Canadian political, social and economic history since Confederation. The problems confronting federalism and Quebec; the emergence of Canada in world affairs.
- 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: Hist 280, East Asia 301, 302, 303, Lib St 275, 370, or equivalent. 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: Hist 280, East Asia 301, 302, 303, Lib St 275, 370, or equivalent. 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: Hist 280, East Asia 301, 302, 303, Lib St 275, 371, or equivalent. 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.
- 493 HISTORY OF EUROPEAN 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 work of the major historians of the ancient west and modern Europe, their varying styles of writing and differing patterns of interpretation, reflecting changing climates of opinion.
- 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.
- 498 WORKSHOP IN RECORDS MANAGEMENT (2)
General principles of records management and archival programs as applicable to government and business organizations, with emphasis upon such topics as records inventorying, scheduling and retention.
- 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.

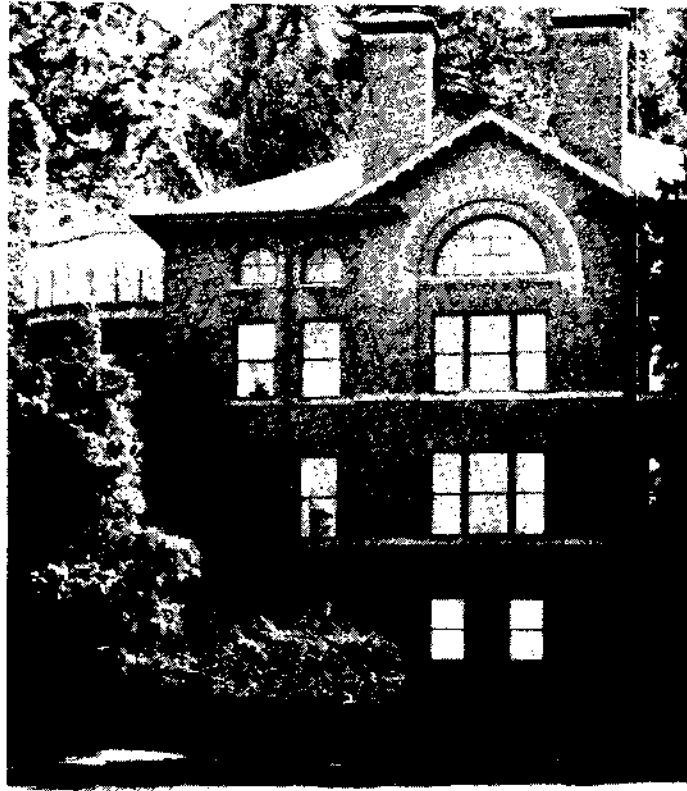
Graduate Courses

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.
- 537a,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)
- 558a,b 20th CENTURY AMERICAN HISTORY (4)
Prereq: Hist 458 or 459.
- 560a AMERICAN ECONOMIC AND BUSINESS HISTORY (4)
- 561a,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 ARCHIVAL AND RECORDS MANAGEMENT ADMINISTRATION (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

College of Arts and Sciences

HOME ECONOMICS — A DEFINITION

"Home economics in its most comprehensive sense is the study of laws, conditions, principles, and ideals which are concerned on the one hand with man's immediate physical environment, and on the other hand with his nature as a social being, and is the study especially of the relations between these two factors. It is a philosophical subject — something to connect and bind together into a whole the pieces of knowledge, at present unrelated."

*Fourth Lake Placid
Conference on Home
Economics — 1902*

Home economics in the 1980s, as it did in the early 1900s, looks at the relationships between people and environments. Home economics studies the decisions the family organization makes to create harmonious adaptations so that the optimum development of people is assured. Home economics pulls together, into an integrated whole, all knowledge and information

known about the family and the environments surrounding the family.

HOME ECONOMICS FACULTY

- JUNE C. GATES (1981) Chairman.
Associate Professor. BS, MS, PhD, University of California, Berkeley.
- EDITH B. LARRABEE (1957) Assistant Professor. BA, East Texas State University. MA, Colorado State College.
- MARTHA HERNDON NELSON (1978) Assistant Professor. BFA, MS, PhD, University of Tennessee.
- 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.

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 Concentrations 110 credits

70 credits in home economics plus supporting courses from other disciplines.

Major Concentration: Family and Community Services

The family and community services concentration integrates concepts from natural and social sciences as they apply to problems of family and community. The student focuses on the family as a primary socializing and stabilizing agent within a rapidly changing society. A knowledge of the structure and function of community agencies is important for the student. The student will work with an advisory faculty committee in planning a program and selecting courses. Choices are available in all the areas of home economics.

This program is flexible and the student has the opportunity to design a program to fit personal and professional goals.

Graduates may find employment in a variety of areas such as community agencies, family counseling programs, day-care programs, youth programs, welfare and rehabilitation programs, volunteer aid supervisor, interagency coordinator.

- *General requirements:* Home Econ 100, 250, 310, 410 (7 credits)
- *Concentration requirements:* Home Econ 101, 120, 166 or 461, 175, 224, 230, 275, 334, 410; plus 42-44 credits in home economics classes to be planned with faculty advisement to meet student's proposed personal or career objectives
- *Supporting courses:* Econ 203 or 204; Psych 201 and 351; Soc 202 and 340; plus 16-17 credits selected with advisement from disciplines other than home economics. A total of 18 GUR credits may be applied toward supporting course requirement

Major Concentration: General Home Economics

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.

- *General requirements:* Home Econ 100, 250, 310, 410 (7 credits)
- *Concentration requirements:* Selected credits from each home economics area listed below with faculty advisement (9 credits minimum from each area):
 - child development and family relationships
 - foods and nutrition
 - home management and family economics
 - housing, furnishings, equipment, design
 - textiles and clothing
- *Electives:* 18 credits in home economics
- *Supporting Courses:* Econ 203 or 204 plus 34-35 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

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 old and new furnishings design; and meeting professionals in the field.

A block of interior design classes at the senior level provides an in-depth experience. Work experience in the interior 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.

Home Economics

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.

Students will be accepted into the major after successful completion of home economics and supporting course requirements at the 100 and 200 levels.

- **General requirements:** Home Econ 100, 230, 250, 310, 334 or 338, plus 2 courses selected from the following human development courses: Home Econ 120, 224, 320, 330, 421, 424, 425, 428 (16-17 credits)
- **Concentration requirements:** Home Econ 101, 164, 175, 201, 364, 367, 370, 371, 372, 375, 376, 470, 475, 478, 480 (48 credits)
- **Electives:** 5 credits in home economics courses (courses relating to interior design preferred)
- **Supporting courses:** Econ 203 or 204; Tech 210, 311 and 313; plus 22-23 credits selected with faculty advisement from disciplines other than home economics, e.g., art history, art, business administration, 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.

BACHELOR OF ARTS IN EDUCATION

Major: Child Development and Family Relationships 45 credits

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; 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 Education Department listing for details of basic core and student teaching requirements and options in general classroom, early childhood, or special education.

- **Concentration requirements:** 27-30 credits from the following courses with approval of departmental adviser: Home Econ 120, 224, 250, 320, 327 or 427, 419, 420, 421, 422, 423, 424, 426, 428
- **Electives:** 15-18 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

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 middle school and 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 in micro-teaching, videotaping, 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 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.

- *General requirements:* Home Econ 100, 250, 310, 410
- *Concentration requirements:* Home Econ 101, 120, 164, 166, 175, 224, 230, 253, 260, 272, 334, 338, 353, 361, 370, 375, 422, 424, 432, 441, 448, 450 or 452
- *Electives:* 1 credit in home economics
- *Supporting course:* 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 Competency

A minimum grade point average of 2.5 in home economics is required for graduation and certification for teaching competence.

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, 500; 417; 445 are described on page 32 of this catalog.

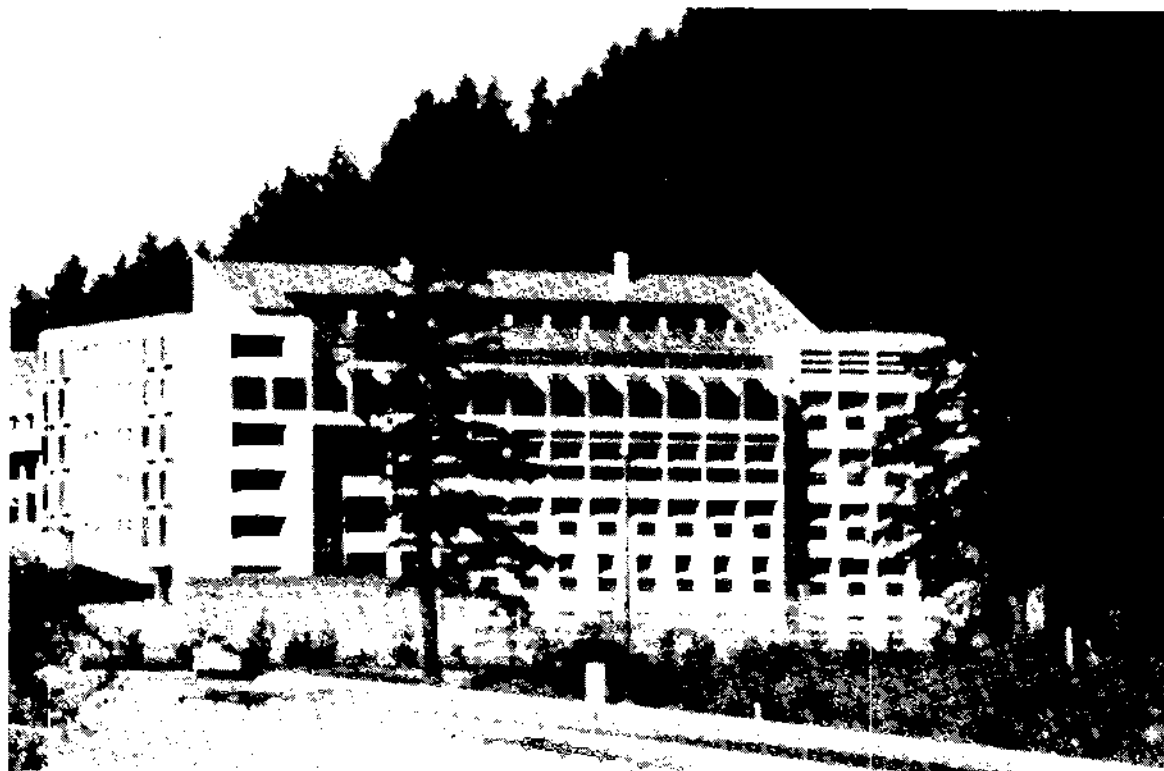
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| <p>100 FOCUS OF HOME ECONOMICS (1)
Home Economics as a discipline and a profession. S/U grading.</p> <p>101 DESIGN ORIENTATION (3)
Prereq: permission of department. Fundamental design principles, design concepts and techniques as studio experiences.</p> <p>120 THE PRE-SCHOOL CHILD IN THE FAMILY (3)
Intellectual, physical, social and emotional development of the child from conception through age five, with emphasis on ages three to five and relationship of the child in the family.</p> | <p>164 TEXTILES FOR THE CONSUMER (3)
Comparative properties of textile fibers and fabrics. Emphasis on use, care and economics of natural and synthetic textiles.</p> <p>166 CLOTHING DESIGN AND SELECTION (2)
Prereq: Home Econ 101 or equivalent, with Home Econ 164 recommended. Selection of clothing from aesthetic and consumer aspects.</p> <p>175 PERSONAL ENVIRONMENTAL DESIGN (2)
Design aspects of the individual's environment; aesthetic, cultural and ecological.</p> <p>201 DESIGN CRITERIA FOR INTERIORS (3)
Prereq: Home Econ 101 or equivalent; Home Econ 175; permission of department; limited to Interior Design and Merchandising majors. Studio experience in design relating to interiors and architectural problems.</p> <p>224 MARRIAGE AND FAMILY LIVING (2)
Prereq: Lib St 105 or equivalent; interpersonal relationships in pre-marital and marital interaction.</p> <p>230 DECISION-MAKING IN THE FAMILY (2)
Basic concepts of management and decision-making viewed within the framework of the family as an ecosystem.</p> <p>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.</p> <p>253 FOODS (3)
Prereq: Home Econ 250; Home Econ 272 recommended; permission of department. Basic principles of food preparation and selection; laboratory experience and demonstration.</p> <p>260 CLOTHING CONSTRUCTION (3)
Prereq: Home Econ 101, 164, 166, and permission of department. Basic sewing skills required. Basic construction techniques; emphasis on management of resources.</p> <p>272 HOUSEHOLD EQUIPMENT (3)
Evaluation of household equipment; application to the family's management.</p> <p>275 HOUSING AND INTERIORS (3)
Prereq: not open to Interior Design majors or students with credit in Home Econ 370 or 375. Alternatives in housing; choices for the family from an historical, cultural and aesthetic viewpoint; home furnishings, designs for interiors.</p> <p>310 CONCEPTS AND RESEARCH IN HOME ECONOMICS (2)
Prereq: Home Econ 100. Concepts, analysis of research purposes and methods in the five areas of home economics. S/U grading.</p> <p>320 THE SCHOOL-AGE CHILD IN THE FAMILY (3)
Prereq: Home Econ 120, Lib St 105 or equivalents. Intellectual, physical, social and emotional development of the child (6-18) with emphasis upon relationship of the child in the family.</p> <p>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.</p> |
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Home Economics

- 330 LEGAL ENVIRONMENT OF THE FAMILY (3)
Prereq: Home Econ 230 or equivalent. The legal environment of the family and its effect on family decision-making.
- 331 LEGAL AND FINANCIAL ISSUES OF THE ELDERLY (3)
Prereq: Econ 203 or 204 or Soc 202 or Soc 251. Legal and financial implications of aging and public policy related to these issues.
- 334 CONSUMER ISSUES (3)
Current consumer issues in the economic world; responsibilities and protections.
- 338 FAMILY FINANCE (3)
Prereq: Lib St 105, Econ 203 or 204 or Lib St 200. 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 FAMILY MEAL MANAGEMENT (3)
Prereq: Home Econ 250, 253 and permission of department. Concepts of management applied to meal service for the family.
- 361 CLOTHING ANALYSIS (2)
Prereq: Home Econ 260 or equivalent. Limited to home economics education majors. New techniques applied to methods of teaching clothing; special fabrics; principles of fitting.
- 364 TEXTILES FOR INTERIORS (3)
Prereq: Home Econ 164 and 175 or 375. Decorative and functional textiles for the home.
- 365 ADVANCED TEXTILES (3)
Prereq: Home Econ 164 or equivalent. Emphasis on special fabrics and finishes, fiber modifications and textile legislation. (Normally offered alternate years or summer.)
- 367 WEAVING DESIGN (3)
Prereq: Home Econ 101, 164, and permission of department. Limited to Interior Design majors. Basic fabric construction; emphasis on color, texture and design.
- 370 HOUSING (3)
Prereq: Home Econ 101 or equivalent, Home Econ 175, and permission of department. Housing alternatives for the family; historical, aesthetic and cultural implications.
- 371 SPACE PLANNING FOR LIVING ENVIRONMENTS (3)
Prereq: Home Econ 201, 370; Tech 313; 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 HOME FURNISHINGS (3)
Prereq: Home Econ 101 or equivalent; Home Econ 164 and 175; permission of department. Home Econ 364 recommended. 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, or equivalent. Development of furniture and decorative arts from ancient to contemporary times.
- 410 PROFESSIONAL TRENDS IN HOME ECONOMICS (1)
Prereq: Home Econ 310. Current issues, trends, career education. S/U grading.
- 419 HOME ECONOMICS FOR ELEMENTARY SCHOOLS (3)
Prereq: student teaching or teaching experience. The development of home economics concepts and skills for the elementary school curriculum. (Normally offered alternate years or summer.)
- 420 PRE-SCHOOL EDUCATION (3)
Prereq: Home Econ 120. 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. (Normally offered alternate years or summer.)
- 422 LABORATORY EXPERIENCE WITH THE PRE-SCHOOL CHILD (3-5)
Prereq: Home Econ 120 and 420 and 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.
- 423 ADVANCED CHILD DEVELOPMENT (3)
Prereq: 5 credits in upper-division child development courses. Critical analysis of aspects of child development; recent development of theories; supervised individual projects.
- 424 FAMILY RELATIONSHIPS (3)
Prereq: Home Econ 224 or equivalent. Concepts of the family; current issues, family life education.
- 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 320 and 424 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.
- 428 CONTEMPORARY ISSUES IN FAMILY RELATIONSHIPS (3)
Prereq: Home Econ 424 or equivalent. Exploration of contemporary issues in family relationships. (Normally offered alternate years or summer.)



- 432 HOME MANAGEMENT (3)
Prereq: Home Econ 230, 353. Application of concepts and principles of home management to group and home living.
- 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.
- 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.
- 442 CURRICULUM IN HOME ECONOMICS EDUCATION (3)
Prereq: student teaching and/or teaching experience. Incorporating futuristic approaches in developing courses or programs for middle school, senior high school and/or the adult classroom. (Normally offered in the summer.)
- 443 ADULT EDUCATION IN HOME ECONOMICS (3)
Prereq: permission of department. Principles of education for adult learners, development of home economics programs for adult education; philosophies, issues and objectives.
- 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.
- 446 RESOURCES FOR TEACHING HOME ECONOMICS (2)
Prereq: home economics teaching experience or student teaching experience. Current resources for teaching home economics programs in middle school, junior and senior high schools. Repeatable for credit.
- 447 CONSUMER EDUCATION FOR HOME ECONOMICS TEACHERS (1-3)
Prereq: student teaching or home economics teaching experience. Comprehensive overview of current consumer issues; exploration of new media and resources; description and evaluation of consumer education courses and/or programs for home economics at the secondary level. (Normally offered alternate years or summer.)
- 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.
- 454 COMMUNITY NUTRITION (3)
Prereq: Home Econ 350 or 450. Nutrition as an applied science in the community. (Normally offered alternate years or summers.)
- 451 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.)
- 470 HOUSING AND SOCIETY (3)
Prereq: Psych 201 and Soc 202; Soc 340 recommended. The personal environment and its relation to the community; current housing issues.
- 475 CONTEMPORARY DESIGN FOR INTERIORS (3)
Prereq: Home Econ 175 or 375 or equivalent; Home Econ 364 recommended. 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, permission of department; concurrent registration in the IDM block: Home Econ 376, 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 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; permission of department. Concurrent registration in the IDM block: Home Econ 376, 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.
- 498 SCANDINAVIAN DESIGN (3-5)
Prereq: Home Econ 175 or equivalent courses in art or design; 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.



HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES

As we approach the beginning of the twenty-first century, it is increasingly clear that one of the important responsibilities of colleges and universities is to help meet the needs of society through education that is aware of environmental problems and issues. What is required is a new synthesis of knowledge that is global in its frame of reference, interdisciplinary in its character, experimental in its work, and holistic in its outlook.

Environmental studies at Huxley College centers on two program areas: environmental science and environmental affairs. 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 com-

munity. 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, present seminars under the sponsorship of faculty members, and work with faculty and staff on decision-making College committees.

Huxley's courses and seminars are open to all students at Western. Descriptive information about Huxley College, admission requirements, and programs of study are to be found in the Huxley College section of this catalog under "Schools and Colleges of Western."

REGION AND RESOURCES

Huxley College is situated 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 are carried out in the Environmental Studies Center, a six-floor laboratory, classroom, and studio facility on the WWU campus. The center also houses the University's Aquatic Studies Program which provides opportunity and specialized equipment for freshwater 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; in addition, around 100 pre-Huxley students are enrolled in Western's College of Arts and Sciences. Huxley students are members of the WWU student body, which totals almost 10,000. They have access to all library and computer facilities, and the academic, athletic and recreational activities of Western.

HUXLEY FACULTY

- J. RICHARD MAYER (1978) Professor and Dean of Huxley College. BS, Union College; MA, Columbia University; PhD (Organic Chemistry), Yale University.
- JAMES R. ALBERS (1971) Professor and Vice Provost for Instruction and Planning, WWU. BS, Washington State University; MS, George Washington University; PhD (Physics), University of Washington.
- DAVID BRAKKE (1980) Assistant Professor. BA, College of St. Thomas; MS, University of North Dakota; PhD (Zoology), Indiana University.
- DAVID E. CLARKE (1966) Associate Professor. BA, MA, Trinity (Cambridge); PhD (Political Science), Stanford University.
- CRYSTAL DRIVER (1980) Lecturer. BS, Western Washington University; MS (Applied Biology), Western Washington University.
- RICHARD FRYE (1975) Assistant Professor. BS, U.S. Naval Academy; PhD (Marine Resources Economics), University of Rhode Island.
- ERNST L. GAYDEN (1971) Associate Professor. PhD, University of Chicago; MS (City and Regional Planning), Illinois Institute of Technology.
- RONALD J. KENDALL (1980) Assistant Professor. BS, University of South Carolina, Columbia; MS, Clemson University; PhD (Fisheries and Wildlife Sciences), Virginia Polytechnic Institute and State 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.
- GARY C. SMITH (1977) Assistant Professor. BS, Clarion State College; MS, Ohio University; PhD (Zoology), University of Georgia.
- 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

Bert C. Brainard

Director of Environmental Health, Bellingham-Whatcom County Health District. MPH (Public Health), University of Minnesota.

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

- Ecosystems Analysis
- Environmental Health

Environmental Affairs

- 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.

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. Each applicant to Huxley College will receive an admissions contract and will be assigned an adviser from among the Huxley College faculty. (See section on admission under "Schools and Colleges of Western.")

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 admission requirements
- Huxley core of five courses (20 credits)
- Huxley seminars (4 credits)
- Electives, under advisement, and consisting of at least 25 Huxley credits (46 credits)

MINOR IN ENVIRONMENTAL STUDIES (24 credits)

Huxley Environmental Studies minor is open to all students at Western.

- Hux 201 and 202, or Hux 305 (4-6 credits)
- Two Huxley core courses selected from Hux 330, 335, 350, 383, 470 (8 credits)
- Electives, under advisement (14-16 credits)

B.S. IN ENVIRONMENTAL STUDIES

In general, Huxley students pursuing B.S. degrees will complete the Huxley admission requirements, certain "common requirements" and, in addition, specific requirements for a concentration.

Huxley Common Requirements

These requirements consist of five core courses, Huxley seminars, and Problem Series (student independent study projects):

Core Courses (20 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 330 Ecosystems Analysis
- Hux 335 Human Ecology
- Hux 350 Introduction to Environmental Pollution
- Hux 383 Environmental Economics
- Hux 470 Environmental Ethics

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:

- Freshwater Wetlands
- Trace Organic Compounds in the Environment
- Energy and House Design
- Outdoor Skills: Teaching and Learning
- Solar Energy

Problem Series (10-12 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 begins with Hux 398, Introduction to Problem Series, normally taken in the junior year, and is followed in the senior year by a special project guided by a faculty tutor or tutors. 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 in 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 398, Introduction to Problem Series (may be waived at the discretion of the tutor), 2 credits
- Hux 498a, Problem Series, 4 credits,
or
Hux 498b, Problem Series; Internship, 4 credits
- Additional credits of 498a or 498b (up to six), for projects that are determined by the tutor to be complex or demanding beyond the four-credit norm, plus Huxley College electives to total 6 credits,
or
Electives in Huxley College; courses to be selected under advisement, 6 credits

Recent examples of Problem Series:

- The effect of water-soluble fractions of three types of crude oil on *Thais lamellosa* and *Hemigrapsus nudas*
- Effects of Thermal Effluents on Development of Black Willow
- A Social Impact Assessment of the Northern Tier Oil Port on the City of Port Angeles
- Population dynamics and night roost requirements of bald eagles in the Nooksack Valley, Washington
- The effects of certain environmental pollutants on the ascorbic acid production in germinating *Phaseolus mungo*
- Artificial Reef Ecology

Recent examples of internships include work with:

- Youth Conservation Corps
- Washington State Department of Ecology
- Whatcom Opportunity Council
- Wastewater treatment plants
- State Legislatures
- Nature Centers and National Parks
- Public schools

Specific Requirements for Huxley Concentrations

Ecosystems Analysis (90 credit hours plus supporting courses)

The concentration in Ecosystems Analysis offers study in the applied ecology of terrestrial, marine and freshwater environments. Program objectives include measurement and assessment of ecosystems structure and function; environmental sampling and monitoring; data analysis and interpretation; analysis of human impact on terrestrial, marine and freshwater ecosystems; and ecosystems management.

Career opportunities in Ecosystems Analysis 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, Gary Smith, William Summers, Herbert Webber.

- Huxley common requirements (36 credits)
- Four required courses (20 credits)
 - Hux 333 Applied Limnology (5)
 - Hux 338 Marine Ecosystems Analysis (5)
 - Hux 339 Terrestrial Ecosystems Analysis (5)
 - Biol 340 Biometrics (5)
 - or
 - Math 341 Statistical Methods (5)
- One of the following (3-4 credits):
 - Hux 360 Ecological Effects of Water Pollution (3)
 - Hux 361 Water Quality Laboratory (3)
 - Hux 455 Pollutants and Health (4)
 - Hux 462 Air Pollution (4)
- One of the following (4 credits)
 - Hux 433 Watershed and Lake Management (4)

- Hux 438 Coastal Ecosystems Management (4)
- Hux 439 Wildlife, Forest, and Park Management (4)

- Concentration electives, selected under advisement (26-27 credits), which may include but are not limited to:
 - Hux 321 Oceanography (3)
 - Hux 352a Nutrition I (4)
 - Hux 358 Evaluating Toxic Substances in the Environment (4)
 - Hux 365 Energy and Energy Resources (4)
 - Hux 431 Applied Population Ecology (3)
 - Hux 432 Stream Ecology (5)
 - Hux 436 Environmental Impact Assessment (4)
 - Hux 452 Nutrition II (4)
 - Hux 456 Aquatic Chemistry (3)
 - Hux 457 Environmental Toxicology Laboratory (2)
 - Hux 459 Environmental Physiology (3)
 - Geol 306 Mineralogy (5)
 - Geol 310 Geomorphology (5)
 - Geol 340 Geological Oceanography (3)
 - Geol 472 Hydrology (4)
 - Biol 404 Plant Ecology (5)
 - Biol 407 Marine Ecology (5)
- Supporting courses (in addition to Huxley admission requirements of Biol 121, Chem 115 or 121, and Math 105); Biol 122 and 123; or Biol 123 and one course from among Biol 310, 311 or 312; Chem 251 or 351; Computer Science 110 or 210.

Environmental Health (90 credit hours plus supporting courses)

The Environmental Health concentration deals with the understanding of those substances, forces and conditions in the surrounding environment that influence the health and well-being of humans as well as plant and animal systems. Such problems as air and water pollution, food contamination, exposure to pesticides and other toxic substances, and radiation exposure are considered. In addition, the concentration deals with the influence of an organism's nutritional status upon its ability to withstand adverse environmental conditions. The concentration stresses the need for a healthful environment that contributes to high-quality living and seeks the tools and methods to be used for assessing environmental health-related problems.

There has been and will continue to be a need for trained people to monitor environmental quality, to conduct both field and laboratory research on environmental health related problems and to plan and manage environmental health programs. Persons completing the Environmental

Health concentration are prepared to work in a variety of programs, such as food quality control, water supply, air pollution, water pollution, institutional health and community nutrition. In addition, students are prepared to work in federal agencies concerned with environmental quality, such as the Environmental Protection Agency and the Food and Drug Administration.

The Environmental Health program also provides flexibility so that qualified students interested in continuing with graduate education can plan coursework to meet graduate school admission requirements.

Areas of emphasis in the Environmental Health Concentration include: (1) environmental chemistry; (2) environmental toxicology; (3) nutritional science.

Students interested in the Environmental Health concentration can choose any one of the three areas, structuring their programs under the advisement of the appropriate faculty member.

Concentration advisers: Ronald Kendall, Ruth Werner, Ming-Ho Yu.

Huxley common requirements (36 credits)

Concentration common requirements (15 credits)

- Hux 352a Nutrition I (4)
- Hux 358 Evaluating Toxic Substances in the Environment (4)
- Hux 361 Water Quality Laboratory (3)
- Hux 455 Pollutants and Health (4)

Concentration electives, selected under advisement (39 credits), which may include but are not limited to:

- Biol 340 Biometrics (5)
or
- Math 240 Statistics (3)
- Biol 345 Microbiology (5)
- Chem 251 Elementary Organic Chemistry (5)
- Chem 333 Introductory Analytical Chemistry (5)
- Chem 351 and Chem 352 Organic Chemistry (4,4)
- Chem 371 Elementary Biochemistry (5)
- Hux 333 Applied Limnology (5)
- Hux 338 Marine Ecosystems Analysis (5)
- Hux 339 Terrestrial Ecosystems Analysis (5)
- Hux 352b Nutrition I Laboratory (2)
- Hux 359a Community Environmental Health Administration (1)
- Hux 359b Field Practice in Environmental Health (1)
- Hux 360 Ecological Effects of Water Pollution (4)

- Hux 365 Energy and Energy Resources (4)
- Hux 452 Nutrition II (4)
- Hux 453 Nutrition II Laboratory (2)
- Hux 454 Contemporary Nutrition (4)
- Hux 456 Aquatic Chemistry (3)
- Hux 457 Environmental Toxicology Laboratory (2)
- Hux 459 Environmental Physiology (3)
or
- Biol 349 Human Anatomy and Physiology (5)
- Hux 462 Air Pollution (4)

- Supporting courses (in addition to Huxley admission requirements of Biol 121, Chem 115 or 121, and Math 105): Biol 122 and 123; Chem 122; Math 124 or Comp Sci 110

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, geography, political science or psychology. The concentration allows many opportunities for self-development in addition to professional and career preparation.

This concentration is structured around a set of specific objectives. Students choose much of their coursework from among courses meeting these objectives.

Concentration advisers: David Clarke, Richard Frye, Lynn Robbins, Ruth Weiner.

- Huxley common requirements (36 credits)
- One course selected under Objective 1 (3-4 credits)
Objective 1: To teach the perspectives and tools of social science as they apply to analysis of environmental problems. Courses most centrally addressing this objective: Hux 342, 366. Other courses: Hux 308, 353, 365, 406, 407, 419, 420, 430, 467, 480, 483, 491
- One course selected to meet Objective 2 (4 credits)
Objective 2: To provide skills to work within and understand the social system: Hux 371, 419, 420, 430, 436, 467, 491
- Two courses — one from each of two of the remaining objectives 3-7 (7-8 credits)
Objective 3: To develop new viewpoints necessary to work out problems, dilemmas and conflicts. Courses most centrally addressing this objective: Hux 377, 467, 471. Other courses: Hux 365, 366, 415, 419, 430, 491
Objective 4: To examine the past, present and future roles of government and governmental structure in environmental affairs. Courses most centrally addressing this objective: Hux 420, 430. Other courses: Hux 308, 365, 419, 436, 491
Objective 5: To provide skills and opportunities for participation in the local community and in environmental affairs. Courses addressing this objective: Hux 371, 412, 413, 473
Objective 6: To study the history and dynamics of human cultural and technical evolution. Courses most centrally addressing this objective: Hux 365, 419. Other courses; Hux 467
Objective 7: To develop logical skill in working through the moral dilemmas involved in social priorities and in the risks involved in seeking to attain them. Courses most centrally addressing this objective: Hux 471. Other courses: Hux 308, 377
- Electives, under advisement, from Huxley or other WWU colleges (23-25 credits)

Recommended preparation for Social Assessment and Policy includes a 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 environmental perspective; i.e., how the environmental education process differs from other processes of education, what ideas and methods are central to the process and what specific techniques are available to facilitate it. Third, students investigate ways of applying environmental education content and techniques in the professional roles which they may pursue. Fourth, students participate in internships, a field practicum, or research.

Graduates of this 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 (32 credit hours 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. A program in cooperation with the School of Education must be worked out individually for each student.

- Huxley core of five required courses (20 credits)
- Huxley seminars (4 credits)
- Two environmental education courses (8 credits):
Hux 371 Introduction to environmental Education (4)
Hux 472 Environmental Education Curriculum (4)
- Certifiable secondary subject concentration
- 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.

Huxley College

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 (36 credits)
- Six courses (23 credits):
 - Hux 371 Introduction to Environmental Education (4)
 - Hux 372 Outdoor Education (4)
 - Hux 373 Experiential Learning in Environmental Education (4)
 - Hux 375 The Writings of American Naturalists and Outdoorsmen (3)
 - Hux 472 Environmental Education Curriculum (4)
 - Hux 473 Environmental Interpretation (4)
- Electives, under advisement (31 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 (36 credits)
- Four courses (16 credits):
 - Hux 366 Systems Thinking
 - Hux 371 Introduction to Environmental Education
 - Hux 377 Alternative Futures
 - Hux 472 Environmental Education Curriculum
- Electives, under advisement (38 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.

GRADUATE STUDY

While Huxley's primary mission is undergraduate education, the College is also committed to

graduate studies and research. A cooperative graduate program has been established by Huxley College and the Department of Biology, College of Arts and Sciences, which leads to the M.S. degree with a specialization in Environmental Biology. The program focuses on the application of the principles of biology to the understanding and solution of environmental problems. Program options and requirements are listed in the Biology section of this catalog. Interested students may make further inquiries to Huxley College or to the Department of Biology, addressing correspondence to the Environmental Biology program. Applications should be made to the Dean of the Graduate School, Western Washington University.

COURSE DESCRIPTIONS

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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.

201 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).

305 GENERAL PRINCIPLES OF ENVIRONMENTAL STUDIES (4)

This course delineates the complexity of man's interaction with his many social and natural environments. General systems philosophy as a means of integrating the significance of a multitude of environmental issues.

308 CURRENT ENVIRONMENTAL ISSUES (3)

Prereq: one of the following Huxley courses: 201, 202, 330 or 350; or permission of instructor. Presentation and analytical discussion of current, on-going 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.

- 321 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.
- 330 ECOSYSTEMS ANALYSIS (4)
Prereq: two quarters of general biology. Application of concepts and methods of ecological theory to environmental problems.
- 333 APPLIED LIMNOLOGY (5)
Prereq: Hux 330 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.
- 335 HUMAN ECOLOGY (4)
A survey of the historical development of writings and concepts in human ecology. An overview of man's views of himself as a creature interacting with the natural environment. Basic human ecology concepts are strongly emphasized.
- 338 MARINE ECOSYSTEMS ANALYSIS (5)
Prereq: Hux 330, 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.
- 339 TERRESTRIAL ECOSYSTEMS ANALYSIS (5)
Prereq: Hux 330 or equivalent. Analysis of components of terrestrial ecosystems, including flora, fauna, soils and climate. Impacts of human activities on flora, fauna, and ecosystem dynamics analyzed in field and laboratory.
- 342 SOCIAL IMPACT ASSESSMENT (4)
Prereq: general social science course. 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.
- 350 INTRODUCTION TO ENVIRONMENTAL POLLUTION (4)
Prereq: general biology, general chemistry. An introduction to the problems of air and water pollution, pesticides, radiation, hazardous substances and noise. This course provides information on the current status of the technology of environmental quality and stresses the interaction of pollutants with human health and the environment.
- 352a,b NUTRITION I: NUTRITION I LABORATORY (4,2)
Prereq: general biology and one year of chemistry; or permission of instructor. Register concurrently for 352a,b. Introduction to the disciplines of food and nutrition with emphasis on relationship between nutrition and health. Laboratory involves experimental techniques used in analysis of food and body fluids.
- 358 EVALUATING TOXIC SUBSTANCES IN THE ENVIRONMENT (4)
Prereq: general biology, general chemistry; Hux 350; 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.
- 359a COMMUNITY ENVIRONMENTAL HEALTH ADMINISTRATION (1)
Prereq: Hux 350 or permission of instructor. An introduction to the methods of administering environmental health programs at the local level.
- 359b FIELD PRACTICES IN ENVIRONMENTAL HEALTH (1)
Prereq: concurrent enrollment in Hux 359a required. This course will acquaint the student with actual field problems encountered in administering local environmental health programs.
- 360 ECOLOGICAL EFFECTS OF WATER POLLUTION (3)
Prereq: Hux 350. Sources, detection, effects, and methods of treatment of pollutants in the freshwater and marine environment. Among the types of pollutants considered are wastewater and thermal discharges, oil and sedimentation. The use of chemical measures and biological indices for assessment of pollution are considered.
- 361 WATER QUALITY LABORATORY (3)
Prereq: general chemistry, Hux 330, 350. (Hux 330 and 350 may be corequisite.) 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.
- 363 QUANTITATIVE METHODS FOR ENVIRONMENTAL PROBLEMS (4)
Prereq: one quarter of integral calculus. A review of basic mathematics and its application to chemical, physical and biological problems. Discussion topics are exponents, trigonometry, functions, dimensional analysis, graphics, calculus, differential equations, statistical inference.
- 365 ENERGY AND ENERGY RESOURCES (4)
Prereq: general physics or general chemistry or Hux 350; 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.
- 366 SYSTEMS THINKING (4)
Prereq: Hux 202 or 305, or permission of instructor. Historical roots in Goethe, Hegel, Smuts, Whitehead. The debate between analytical and synthetic approaches to philosophy. Origins in biology (von Bertalanffy) and management (Operational Research, the Cyberneticists). Implications of systems thinking for individual, social, economic and political behavior, and for the solution of environmental problems.
- 371 INTRODUCTION TO 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. 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.

- 373 EXPERIENTIAL LEARNING IN ENVIRONMENTAL EDUCATION (4)
Prereq: Hux 371 or permission of instructor. 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.
- 375 THE WRITINGS OF AMERICAN NATURALISTS AND OUTDOORSMEN (3)
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 (2)
Introduction to the growing field of future studies; review of future studies literature. Predictions, projections and extrapolations of alternative futures.
- 383 ENVIRONMENTAL ECONOMICS (4)
Prereq: Econ 203. Economic analysis of environmental quality; environmental quality as a public good. Theory of economic efficiency and the concept of an "optimal" amount of pollution. Welfare criteria for resource allocation. Implications of the no-growth economy. Listed jointly as Econ 383.
- 398 INTRODUCTION TO PROBLEM SERIES (2)
Practicum in scientific methodologies, experimental designs and analyses, survey techniques and critical evaluation. Problem definition and applied aspects of data handling and presentation are taught with emphasis on a holistic, environmental approach. S/U grading.
- 407 THE URBAN ECOSYSTEM (3)
Prereq: Hux 335 or permission of instructor. The "urban environment," whether metropolis, town or village, is studied as an evolving system of physical elements and cultural processes, existing for the satisfaction of human needs and wants. The functional relationships among physical elements, and between them and the cultural processes, form the basis for principles of planning/design.
- 412 APPLIED HUMAN ECOLOGY: SETTLEMENT DESIGN I (4)
Prereq: Hux 335 or Hux 407 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 335 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)
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.
- 420 ENVIRONMENTAL ADMINISTRATION (4)
Prereq: Hux 202 or 305 or permission of instructor. History of administrative treatment of environmental problems. Contemporary difficulties (compartmentalization, incrementalism, etc.) in the way of adequate environmental policy formulation and application. Recent innovations arising from new environmental law. Prospects for reform opened up by operations research, cybernetics, communication engineering, etc. Taught in alternate years.
- 430 ENVIRONMENT AND POLITICS (4)
History of environmental problems and their economic and political causes; national and international political reactions: the nature and extent of needed changes. Taught in alternate years.
- 431 APPLIED POPULATION ECOLOGY (3)
Prereq: Hux 330 or Biol 325 or equivalent; or permission of instructor. Taught in alternate years. Application of the theories and techniques of population ecology to the study of man-animal relationships: e.g., pest control, wildlife management.
- 432 STREAM ECOLOGY (5)
Prereq: Hux 330 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.
- 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.
- 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 330, 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 WILDLIFE, FOREST AND PARK MANAGEMENT (4)
Prereq: Hux 339, or Biol 404, or equivalent courses. Conflicts arising in multiple-use management of forests, parks and wildlife. Topics include forest and game management. Management plans for local renewable resource areas.
- 452 NUTRITION II (4)
Prereq: Hux 352a, Chem 251 and Biol 349. Chemistry and biochemical role of essential nutrients and their interrelationship; intermediate metabolism of nutrients.
- 453 NUTRITION II LABORATORY (2)
Prereq: Hux 352a and b and Chem 251. Theory and advanced experimental techniques of food analysis and the analysis of biological fluids.

454 CONTEMPORARY NUTRITION (4)

Prereq: Hux 352a. Various current issues in nutrition: fiber and sugar in nutrition, vitamin C and vitamin E, food additives, dental caries and diet, obesity, and nutrition and diseases.

455 POLLUTANTS AND HEALTH (4)

Prereq: Hux 350 and Chem 251 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 AQUATIC CHEMISTRY (3)

Prereq: Hux 350 or equivalent. 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.

457 ENVIRONMENTAL TOXICOLOGY LABORATORY (2)

Prereq: general biology, general chemistry, Hux 350; or permission of instructor. Methods of experimentation with toxic substances in animal test systems. Studies will be conducted to evaluate effects of mammalian and avian exposure to various environmental pollutants.

459 ENVIRONMENTAL PHYSIOLOGY (3)

Prereq: general biology and general chemistry, Hux 350; or permission of instructor. Physiological mechanisms involved in the response of vertebrate animal systems to various environmental parameters. Topics will include nutrition and energy metabolism, temperature, chemical correlation and control of reproduction.

462 AIR POLLUTION (4)

Prereq: Hux 350; 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.

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.)

470 ENVIRONMENTAL ETHICS (4)

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 is made to identify an environmental ethic which might be operable in modern society.



- 471 ENVIRONMENT AND VALUES (4)
Prereq: Hux 470. How environmental problems are defined and determined by the values we hold. How changing values create or solve environmental problems by changing human behavior. An examination of the possibility of creating and disseminating value systems which are both humanly significant and environmentally benign. Taught in alternate years.
- 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)
A field-oriented course in methods, techniques and design of environmental education programs. Natural, historical, and cultural systems are interpreted.
- 478 TOPICS IN ENVIRONMENTAL STUDIES (variable credit)
Environmental problems of northwest Washington and related topics. A survey course including 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.
- 480 URBAN ECONOMICS (4)
Prereq: Econ 203. Economic forces behind urbanization. Urban public finance, welfare economics and efficient resource allocation. Economic analysis of urban problems, including land use, housing and poverty, education, transportation and environment. Listed jointly as Econ 480.
- 483 RESOURCE ECONOMICS (4)
Prereq: Econ 203; Geog 207 recommended. 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 and social cost. Listed jointly as Econ 483.
- 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 (2-15)
Prereq: Hux 398 or permission of instructor. Problem-solving experience in environmental problems. May be repeated for credit.
- 498b PROBLEM SERIES: INTERNSHIPS (2-15)
Prereq: Hux 398 or permission of instructor. Internships in positions appropriate for the student's program. May be repeated for credit. S/U grading.
- 499a SEMINAR (1)
Student-faculty interaction on topics of general interest. May be repeated for credit. S/U grading.
- 499b SEMINAR (2)
Student-faculty interaction. May be repeated for credit. S/U grading.
- 499c SEMINAR (1)
Student-faculty interaction on topics of general interest. May be repeated for credit.
- 499d SEMINAR (2)
Student-faculty interaction. May be repeated for credit.

Graduate Courses

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/Department of Biology M.S. Program or for other possible graduate programs.

- 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.
- 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.
- 550 ENVIRONMENTAL BIOCHEMISTRY (3)
Prereq: Hux 350, Chem 371, or equivalent. Understanding of biological systems at a molecular level and their relation to their surroundings. Special emphasis on the transformation of carbon, nitrogen, oxygen, phosphorus, sulfur and certain trace elements in soil, water, atmosphere and biological systems; biochemical effects of environmental pollutants.
- 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.
- 556 ENVIRONMENTAL TOXICOLOGY (3)
Prereq: general biology, organic chemistry, Hux 350 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, sub-cellular and molecular levels.



INTERDISCIPLINARY PROGRAMS

AMERICAN STUDIES PROGRAM

College of Arts and Sciences

The American Studies Program 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 American Studies major, then, 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.

Program records are maintained in the Liberal Studies Department. Further information is available there or from members of the Executive Committee: J. Bosch (anthropology), R. Buckland (liberal studies), L. Harris (journalism), J. Hiraoka (ethnic studies and human services), R. DeLorme (history), T. Lee (English), W. Stoeber (liberal studies). One member of the committee is acting director of the program each year.

BACHELOR OF ARTS

Major 70 credits

General Requirements (36-38 credits)

- Hist 366, 367, or equivalent (10)
- Eng 316, 317, 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 Studies 302 — Introduction to American Studies (4)

Individualized Program of Study (32-34 credits)

A program formulated by the student, a member of the American Studies 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 also wish to combine the major with minors in other interdisciplinary programs such as Canadian-American Studies, Women's Studies, Linguistics, Ethnic Studies or Recreation and Parks. In planning their program, students are urged to include courses taught with comparative or interdisciplinary perspective such as those offered in Liberal Studies and other participating departments.

COURSES IN AMERICAN STUDIES

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

- 302 INTRODUCTION TO AMERICAN STUDIES (4)
Prereq: two other courses from the general requirements for the major.
- 499 SPECIAL PROBLEMS (4)
Prereq: American Studies 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.

AQUATIC STUDIES

College of Arts and Sciences
Fairhaven College
Huxley College

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.

A service unit called the Institute for Freshwater Studies (IFS) is located in Environmental Studies Building 508 and exists to promote research about freshwater, to provide service to students and faculty engaged in the study of water, and to coordinate activities having to do with this resource. Analytic service is available to students and faculty, as is a reprint collection consisting of several thousand entries. For information about the IFS, contact the director, Charles J. Flora, extension 3510, and for information about the freshwater concentration contact any of the faculty in the following list.

FRESHWATER STUDIES FACULTY

David Brakke, Huxley College
Maurice Dube, Department of Biology
Charles J. Flora, Director, Institute for Freshwater Studies
Gerald F. Kraft, Chairman, Department of Biology
David T. Mason, Fairhaven College
Richard Mayer, Dean, Huxley College
Franklin C. Raney, Department of Geography
Ruth Weiner, Huxley College

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 220 or 124
- Biol 325 or Hux 330
- Biol 402 or Hux 333
- Geog 331
- Geol 472
- Hux 360 and 361

Plus Electives (under advisement) to complete 110 credits:

- Biol 204, 305, 310, 311, 312, 340, 345, 403, 425, 456, 462
- Chem 251 or 333, 351, 354
- Fair 432
- Geog 422, 423
- Geol 214, 310, 416, 473
- Hux 432, 433, 456
- Physics 131, 132, 133
- Independent study courses (see individual listings)

Minor 25 credits

- Biol 325 or Hux 330
- Biol 402 or Hux 333
- Electives under advisement to total 25 credits

ARTS, INTERDISCIPLINARY

College of Fine and Performing Arts

BACHELOR OF ARTS

Major

Nine-quarter Program

- First year — Interdisciplinary Arts 210, 211, 212 (4 credits each)
 - Second Year — Interdisciplinary Arts 310, 311, 312 (4 credits each)
 - Third Year — Interdisciplinary Arts 410, 411, 412 (4 credits each)
- TOTAL 36 credits
- Concentration within a department of the College under advisement (36 credits)
 - University concentration under advisement (36 credits)
- GRAND TOTAL 108 credits

Concentrations: arts management, theory and criticism, creative interdisciplinary artistic production, others under advisement.

The director of Interdisciplinary Arts, Julian Riepe, or his/her designated appointed appointee, shall have the primary responsibility for program advising and blue book approval.

The Interdisciplinary Arts major shall have, under advisement, the option of taking one quarter in the Fine and Performing Arts Abroad program.

Students who can demonstrate strong competencies within the interdisciplinary areas may confer with the head of Interdisciplinary Arts for placement within the program.

Minor

Core Program: Interdisciplinary Arts 110, 210, 211, 212, 310, 311, 312 (27 credits)

I. *Option (a)* — Core program plus four courses under advisement in any one of the arts (other than the student's major); up to 42 credits

Option (b) — Core program plus four courses under advisement selected from University programs at large (e.g. journalism, English, business, etc.); 39-42 credits.

II. For students with appropriate credits (approved by director of Interdisciplinary Arts) in music/art/theater/dance; Interdisciplinary Arts 300 and 400 level plus three or four courses under advisement selected from college or University courses; 33-40 credits.

COURSES IN INTERDISCIPLINARY ARTS

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

110 INTERDISCIPLINARY ARTS (3)

An introduction to creativity and artistic expression. Students will be required to develop critical judgment.

210, 211, 212 INTERDISCIPLINARY ARTS (4 ea)

Prereq: Interdisciplinary Arts 110 and, under advisement, at least one introductory course from the following: Art 190, Music 140, Theatre/Dance 101 or Theatre/Dance 231. A detailed and systematic inquiry into the nature and historical evolution of style, aesthetic theories and the social uses of the arts.

310, 311, 312 INTERDISCIPLINARY ARTS (4)

Prereq: Interdisciplinary Arts 210, 211, 212. Intensive work in the theory and criticism of all the arts: historical and contemporary.

Interdisciplinary

320 ARTS MANAGEMENT (3)

Prereq: Th/D 101, 231, Art Hist 190, Music 140 or concurrent. Study and practice in advertising, publicity, promotion, grantsmanship and budgeting.

410 411, 412 INTERDISCIPLINARY ARTS (4 ea)

Prereq: Interdisciplinary Arts 310, 311, 312. Internships and practicum: work outside of the classroom in arts management, or exhibition of creative work, and/or completion of a senior thesis in art theory and criticism.

CANADIAN-AMERICAN STUDIES PROGRAM

College of Arts and Sciences

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), office, Canada House or AH 226.

BACHELOR OF ARTS

Canadian-American Studies Major

50 credits

- Core Courses: Canadian-American Studies 200, 400, 401; Eng 360; French 280; Geog 313; Hist 277; Pol Sci 406
- Select 10 credits from French 450 (French-Canadian literature); Hist 477; Pol Sci 417h
- Select credits to complete the major from list above or list following: Anth 361, 411, 461, 462; Ed 414; French 367 (French-Canadian literature); Geog 310, 312; Hist 337, 468; 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 360, French 280, 450 (French-Canadian literature); Hist 477; Pol Sci 417h

COURSES IN CANADIAN-AMERICAN STUDIES

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

200 THE CANADIAN IDENTITY (5)

A basic interdisciplinary course of studies covering the major physical, historical and socio-political aspects of Canada.

401 RESEARCH AND PAPER WITH INSTRUCTOR (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

College of Arts and Sciences

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.

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 301, 302, and 303 (12 cr); or: Hist 280 or 281 and Lib St 272 or 273 or 274 (9 cr) and one year of Chinese, Japanese, or Korean language (15 cr)
- 43-46 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 301, 302, 303; 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, 500; 417; 445 are described on page 32 of this catalog.

301, 302, 303 THE CULTURES OF EAST ASIA: THE EARLY, MIDDLE AND RECENT PERIODS (4 ea)

Prereq: the chronologically appropriate courses from either History 105, 106, 107 or Lib St 121, 122, 123 sequences are recommended as background for comparative study of East Asia. Need not be taken in sequence. A survey of East Asian aesthetic, literary and philosophical traditions and their interaction with the evolving political, social and economic institutions of China, Japan, Korea and Mongolia.

301 Prehistory to c. 1000 A.D. The founding of high civilization in China and the early stages of its transmission to Japan, Korea and Mongolia.

302 c 1000 to 1800 A.D. The Chinese universal state at the height of its aesthetic and technological creativity and influence within East Asia and beyond. The feudal and early modern culture of Japan and the alternative routes to sophisticated culture in Korea and Mongolia.

303 1800 to the present. East Asia's transition to the contemporary order in the presence of Western civilization's intrusion into East Asia.

310 MONGOLIA AND THE MONGOLS (4)

Prereq: East Asian 301 or 302 or 303 recommended. An introductory survey of the art, architecture, history, languages, literature, music, peoples and religions of Mongolia.

311 KOREA: ITS PEOPLE, CULTURE AND HISTORY (5)

Prereq: Hist 280 or one of the East Asian 301-303 sequence. A general survey of the history of the Korean people and the evolution of their culture and society from prehistoric times to the present, including the period of Japanese imperial control, 1910-1945, and the contemporary epoch of division, 1945-present.

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, 394; Fair 129; Geog 315; Hist 280, 281, 390 (relevant topics), 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, 417d, 430, 431, 476.

Interdisciplinary

The Center for East Asian Studies also offers tutorials in Advanced Chinese, Advanced Japanese and Advanced Korean.

For further information and advisement, consult the director of the East Asian Studies Program, Dr. Ellis Krauss, or one of the following participating faculty: M. Fisher (liberal studies, Inoia), E. Kaplan (history, China), H. C. Kim (education, Korea), L. Kimball (anthropology, Southeast Asia), E. Krauss (political science, Japan), R. Loftus (history, Japan), H. Schwartz (history/political science, China/Central Asia), T. Takemoto (foreign languages, Japan).

ETHNIC STUDIES

College of Arts and Sciences

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 Chicanos, Native Americans, Asian Americans and Blacks is the basic context for the study of ethnicity and ethnic groups; however, 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, ES 202, ES 203, ES 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, 461, 462; Ed 410, 464; Eng 234, 461; Lib St 371, 372; Hist 361, 375, 387; Pol Sci 313, 346; Soc 367

Minor — Ethnic Studies 30 credits

Required Courses

- Two from ES 201, ES 202, ES 203, ES 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.

COURSES IN ETHNIC STUDIES

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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 CHICANO HISTORY, SOCIETY AND CULTURE (3)

The history, society and culture of Mexicans in the U.S. from the times of exploration and settlement; historic conflicts affecting economic and political institutions; immigration and settlement; Chicano 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 man and society in American ethnic literature; Black, Asian American, Native American, Irish American, Chicano and Jewish-American literatures.

GENERAL SCIENCE

College of Arts and Sciences

Recommendation for teaching competence 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, 500; 417; 445 are described on page 32 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.

**Irwin L. Slesnick, Department of Biology and coordinator for Science Education, is the adviser for this program.*

GERONTOLOGY

*College of Arts and Sciences
Fairhaven College*

Gerontology — the study of aging and of subjects especially relevant to older people — is a comparatively new field of academic research and teaching. Perhaps the field's oldest and largest

body of knowledge is biomedical in nature, but most other traditional disciplines also have focused on aging and offer knowledge essential to balanced perspectives of the subject.

The multidisciplinary minor spans departmental and collegiate boundaries and meets the following needs: (1) to provide academic background in gerontology for students planning to enter fields which offer services to older adults. The minor complements these students' major programs; (2) to provide knowledge for those already working in the field of aging; (3) to provide all students with opportunities for understanding the change in their lives that occur as they grow older and for orienting their discoveries to structured knowledge from a variety of disciplines.

Minor 25 credits

The minor in gerontology, applicable to either the Bachelor of Arts or the Bachelor of Science degree, may be elected by students majoring in a wide variety of fields. Refer to catalog sections of cooperating academic units for descriptions of the following courses:

- Required courses: Fairhaven 231, Biol 334, Soc 333, Psych 357, Anth 426, Fairhaven 235
- Recommended courses for further exploration and for tailoring the minor to specific vocational goals: Fairhaven 422, 465; Home Econ 421; Human Services 335; Recreation & Parks 421; Nursing 410; Sociology 324, 334, 336

For further information and advisement, consult Dr. Douglas D. Rich, Fairhaven College 329.

HUMAN SERVICES PROGRAM

School of Education

The Human Services Program (HSP) is an upper-division program leading to a Bachelor of Arts degree. Curricular goals stress the knowledge needed for effective work in human service activities.

The curriculum is interdisciplinary, systems oriented, and based on concepts from social science and organizational development perspectives. The curriculum is also designed to use current work experience as a laboratory, and students must work for 16 or more hours per

Interdisciplinary

week in human services organizations providing or facilitating human services to clients. This work experience provides a context in which knowledge can be applied and tested. Placement in human services agencies helps clarify career opportunities and interests.

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.

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 fellowship (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).

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.

HUMAN SERVICES FACULTY

JOHN W. RIETZ (1976) Acting Director.
Lecturer. BA, University of Miami; MEd, Western Washington University; JD, University of Florida.

DAVID ALEGUIRE (1980) Lecturer. AB, University of Redlands; MA, Simon Fraser University.
PAUL DAVID (1976) Deputy Director, Lecturer. BA, University of Washington; MA, Antioch University.
GRETCHEN HEGEMAN (1976) Lecturer. BA, City University of New York. MA, University of Chicago.
MORGAN LIVINGSTON (1977) Lecturer. BA, MA, University of Oregon.

COURSES IN HUMAN SERVICES

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

Core Series

The **Core** courses provide a coordinating framework for the two years a student spends in the program. The six-quarter sequence begins at the level of individual functioning and moves quarter by quarter through increasingly larger systems to conclude with an examination of the broader societal issues affecting human service delivery. The **Core** series utilizes a systems theory approach toward understanding interaction.

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.

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.

Seminar Series

Track A: Helping Relationship

- 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.
- 340 **DREAM THEORIES (3)**
Theory beginning with Freud and Jung through contemporary researchers is examined with the intent of developing understanding of the dream process. This course is directed to students in mental health settings.
- 442 **HUMAN SEXUALITY (3)**
Human sexual response, sexual life styles and conflicts in sexual values are examined within the context of the human services field.
- 444 **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.
- 446 **BEHAVIORISM: THEORY AND PRACTICE (3)**
Introduction to the basic principles of behavior theory. Major issues and methods in research and treatment application are explored.

Track B: Human Development

- 331 **DEVELOPMENTAL PATTERNS: CHILDREN (3)**
Examination of the developmental stages and tasks of infancy, childhood and adolescence, with emphasis on the problems of services.
- 333 **DEVELOPMENTAL PATTERNS: ADULTS (3)**
Examination of the developmental stages and tasks of adulthood, with emphasis on the conflicts and pressures of adulthood relative to the human services field.
- 335 **DEVELOPMENTAL PATTERNS: SENIORS (3)**
Examination of the developmental stages and tasks of the aged. Attitudes toward aging and services for the elderly are examined.
- 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.

- 430 **TRADITIONAL PERSONALITY THEORY (3)**
Introduction to the traditional major theories of personality development, psychopathology and modes of therapy. Theorists discussed include Freud, Jung, Adler and Reich.
- 432 **CONTEMPORARY PERSONALITY THEORY (3)**
Examination of contemporary theories and theorists of personality development, such as existentialism, and the emergence of humanistic psychology, including Perls, Berne and Schutz.
- 434 **WOMEN IN TRANSITION (3)**
Examination of changes occurring in women's roles. Emphasis on personal awareness as well as social, political and economic issues of particular interest to women.
- 436 **MEN IN TRANSITION (3)**
Examination of changes occurring in men's roles. Emphasis on personal awareness as well as social, political and economic issues of particular interest to 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.

Track C: Agency Management

- 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.
- 385 **PROGRAM EVALUATION (3)**
Study of techniques for the systematic feedback of information used to improve client services. Methods of obtaining feedback from planning stages through long-term program implementation are analyzed.
- 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 **HUMAN SERVICES ACTION RESEARCH (3)**
Study and application of research techniques leading to direct social action and agency intervention.
- 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.
- 488 **ORGANIZATIONAL DEVELOPMENT (3)**
Issues to be covered include the roles of internal and external organizational change agents, levels and strategies of interventions and evaluations methodologies.

Track D: Society and Human Services Systems

- 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.
- 375 LAW AND MINORS (3)
Examinations 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, compulsory education, delinquency, juvenile crime, treatment and corrections.
- 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.
- 472 DESCRIPTIVE AND EXPLANATORY MODELS: ASSUMPTIONS AND TECHNIQUES (3)
Understanding as revealed in assumptions, structures suggested by assumptions, and development of techniques related to human service systems. Activities include examining existing models, developing models and understanding approaches to models.
- 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.

Practicum Seminar Series

The Practicum Seminars will focus on theory/practice models and the strategies of application.

- 320a,b,c PRACTICUM SEMINAR — FIRST YEAR (1 ea)
Prereq: must be taken concurrently with HS 390a,b,c. Readings and discussion on the application of Human Services concepts, with emphasis on individuals and groups.
- 420a,b,c PRACTICUM SEMINAR — SECOND YEAR (1 ea)
Prereq: HS 320a,b,c must be taken concurrently with HS 490a,b,c. Readings and discussion on the application of Human Services concepts with emphasis on agencies and organizations.

Theory/Practice Integration

Field placement with a human services agency provides a maximum of four credit hours per quarter, which are integrated with eight classroom credit hours to provide the full-time human services student with 12 credits per quarter. Since the theory/practice integration is the work experience accompany-

ing academic study, the theory/practice integration credits relate to all of the classroom work assumed by the student. Within the 90-hour program, a student in human services will accumulate 66 classroom credits and 24 theory/practice integration credits.

A student in human services must work a minimum of 16 hours per week with a human services agency. The field credits cannot be obtained without the corresponding classroom study to provide theory/practice integration.

The objectives of the work setting are to:

1. Provide an environment for the application of ideas and methods.
2. Provide a source of problems and issues for academic study.
3. Provide a reality test for ideas and methods, as well as working context for criticism of ideas and methods in human services.
4. Provide a means of developing professional competency in human services work.
5. Provide a means of developing and testing new human services technology.
6. Provide an opportunity for the maintenance of a continuing integrated relationship between the two areas of work and study.

390a,b,c THEORY/PRACTICE INTEGRATION — FIRST YEAR (4)

Prereq: must be taken concurrently with Human Services 320a,b,c. S/U grading. 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.

490a,b,c THEORY/PRACTICE INTEGRATION — SECOND YEAR (4)

Prereq: must be taken concurrently with Human Services 420a,b,c. S/U grading. 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.

The following provides a sample full-time program for the two-year Human Services Program sequences.

First Year and Second Year

FALL: Core; Seminar; Practicum Seminar; Theory/Practice Integration. **WINTER:** Core; Seminar; Practicum Seminar; Theory/Practice Integration. **SPRING:** Core; Seminar; Practicum Seminar; Theory/Practice Integration. **SUMMER:** Opportunity to pursue workshops and seminars.

Two-Three Year Credit Hour Totals: The General Pattern

Core Groups	24 credits
Seminars	18 credits
Practicum Seminars	6 credits
Theory/Practice Integration	24 credits
Electives	18 credits
TOTAL	90 credits

INDIAN EDUCATION SPECIALISTS

School of Education

The Center for Indian Education Specialists was initiated in 1977 as a field-based training pro-

gram for paraprofessional educators of Indian students. The major function of the Center is to offer training and advisement to counselor aides and teacher aides who provide compensatory services through tribal and school based education programs. The Center is located within the School of Education and works in conjunction with the Department of Education and Psychology and the Office of Indian Education in Olympia.

In addition to aide training, the Center provides resources and in-service training to certified counselors and teachers who work with Indian students. Special Project courses in education and/or psychology can be arranged on a contractual basis with the director of the Center, Dr. Susanna Hayes, Miller Hall 333.

CERTIFICATE OF STUDY PROGRAMS (NON-DEGREE)*

The programs for paraprofessional educators consist of four required core courses and two applied courses specifically related to the teacher aide and/or counselor aide roles. Upon successful completion of the appropriate six courses, students will receive a certificate of study from Western Washington University in recognition of their training as Indian education specialists in either the teacher aide or counselor aide roles.

Following is a list of the courses offered in the field by the Center.

Required Core Courses

Ed 109, Introduction to Education (3 credits)
Psych 220, Human Adjustment (3 credits)
Ed 340, Paraprofessional Advisement (3 credits)
Ed 391, Human Relations (3 credits)

Applied Courses for Teacher Aides

Ed 221, Teacher Aide Consultation (3 credits)
Ed 222, Issues in Indian Education for Teacher Aides (3 credits)

Applied Courses for Counselor Aides

Psych 245, Current Issues for Counselor Aides (3 credits)
Psych 246, Field Experiences for Counselor Aides (3 credits)

*To be offered subject to funding arrangements.

INDUSTRIAL DESIGN

College of Arts and Sciences

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.

Industrial design students must complete the usual general university requirements. They should be aware of the prerequisite for Math 155 (Math 124, 220, 240 depending on options). They should take Chemistry 115 and Physics 131 as part of the general university science requirement.

While it is possible to complete the requirements for the Bachelor of Science degree within four years, students who do enter the program as freshmen or students who desire to take elective courses outside of the areas included in the Industrial Design Program should recognize that additional work beyond the usual four-year period may be required. Notice the options for professional enrichment specified as a guide, not required for graduation.

Students are advised to carefully plan to meet the minimum requirements for WWU graduation: fulfill the general university requirements, acquire 60 upper-division credits (the ID program totals approximately 48 upper-division credits) and accrue a minimum of 180 total credits.

Early consultation with the adviser of the Industrial Design Program, Mr. Marvin A. Southcott, Department of Technology, is essential. Approved by the Industrial Designers Society of America (IDSA).

BACHELOR OF SCIENCE

Major 110 credits

Basic Core: Industrial Design/Technology
60-62 credits

- Tech 210, 214, 215, 221 or 222 or 223, 224, 231
- Tech 309, 311, 313, 315, 316, 318, 333
- Tech 416

Supporting Courses: 49-54 credits

- BA 301, 330
- Psych 201 or Lib St 105
- Physics 131, 132
- Art 101 or 320, 202, 370
- Art Hist 230*, 240*

Interdisciplinary

- Math 155 & 156 or 220, any Computer Science programming course

Recommended: These courses are suggested for a more comprehensive foundation for professional practice.

- Tech 222 or 223, 240, 260, 391, 400, 418
- BA 271
- Home Econ 175, 375
- Art Hist 220*
- Chem 115*, 208, 209
- Physics 133
- PE 301

For extension of experience and professional enrichment (not required for graduation):

- Tech 402 (up to 15 credits)
- Tech 303, 323, 328, 335, 421, 422, 434

Minor 25 credits

Approved courses selected from the Industrial Design major basic core, under advisement of Industrial Design program adviser

LATIN AMERICAN STUDIES

College of Arts and Sciences

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. Hillier, Department of History.

*Courses applicable to general university requirements, 50-70 credits required.

LINGUISTICS

College of Arts and Sciences

Linguistics provides valuable background information about man's use of language, knowledge of which is essential to careers in teaching language and helpful to those in anthropology, psychology, speech and education.

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 departments of anthropology, English, foreign languages and speech.

Basic Courses

- Linguistics 201, 301, 302, 303
- Speech 373

Additional work according to department chosen:

- English (Arts and Sciences) — add English 370, 470, 471
- English (Teacher Education) — see English minor with Linguistics Emphasis
- Foreign Languages (either degree) — add six credits selected under departmental advisement in a foreign language
- Anthropology (Arts and Sciences) — add Anth 448 and 5 additional credits selected under departmental advisement
- Speech (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, 500; 417; 445 are described on page 32 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 MORPHEMICS (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.
- 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.

PHYSICAL SCIENCE

College of Arts and Sciences

BACHELOR OF ARTS IN EDUCATION

Major — Secondary 45 credits

- Gen Sci 405 or equivalent
- Chem 121, 122, 251
- Physics 241, 242, 341, 344 (or 131, 132, 133)
- Sci Ed 399, 492
- Electives selected under advisement to include at least one upper-division course

Bachelor of Arts in Education programs leading to teaching certification in earth science-physical science and in biology-physical science are available. For these programs, see the Geology Department and the Biology Department listings, respectively.

For the physical science majors, Dr. John Miller, Chemistry Department, is the adviser.

SCIENCE EDUCATION

College of Arts and Sciences

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 Irwin L. Slesnick, Department of Biology, 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, 500; 417; 445 are described on page 32 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.

Interdisciplinary

- 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.

Graduate Courses

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.
- 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.

SOCIAL STUDIES EDUCATION

College of Arts and Sciences

The interdisciplinary programs emphasize history and the social sciences. Students electing these programs develop academic areas most frequently represented in common school curricula. Majors develop one area in depth plus support areas.

For advisement or approval of these majors, students should consult the advisers listed under each major or Dr. Peter J. Hovenier, director of Social Studies Education.

BACHELOR OF ARTS IN EDUCATION

Major-Minor Concentration in History-Social Studies

Adviser: Dr. Harry D. Jackson

History-Social Studies for junior and senior high school teacher Option I — 95 credits

- History — 50 credits
- | | |
|-----------------|---------------|
| — European | two courses |
| — Non-west | two courses |
| — United States | three courses |
- (two of which must be upper-division)

- Hist 391
- Social Studies Education 426
- History electives under advisement to total 50 credits

- Social Sciences — 45 credits
 - Geography or Political Science 25 credits
 - Social Science 20 credits
(from two social science areas not otherwise developed in the program)

(Successful completion of this program with a 2.5 GPA leads to teaching competency recommendations for both history and the social studies.)

Major-Minor Concentration in Geography-Social Studies

Adviser: Dr. Robert W. Teshera

Geography-Social Studies for junior or senior high school teachers Option II — 93 credits

- Geography Secondary Education major: 45 credits (see Geography section of this catalog)
- Other social sciences: 48 credits
 - Hist 391
 - Other history or political science: 25 credits including at least 10 hours of upper-division credit
 - Other social science: 20 credits in any combination from any two social sciences not otherwise developed in the program

(Successful completion of this program with a 2.5 GPA leads to certification of teaching competency in both geography and the social studies.)

Major-Minor Concentration in Political Science-Social Studies

Adviser: Dr. Siegrun F. Fox

Political science-social studies for junior and senior high school teachers Option III — 94 credits

- Political Science — 48 credits: Pol Sci 101, 250, 270, 291, 311 or 313, 320, and/or any other 400-level course (under advisement); political science electives under advisement to total 13 credits
- History — 23 credits: Hist 391; history electives under advisement to total 20 credits

- Social Science — 20 credits: electives under advisement from anthropology, economics, geography, psychology and sociology
- Social Studies Education — 3 credits: Soc St Ed 426

(Completion of this program with a minimum 2.5 GPA leads to teaching competency recommendations for both political science and the social studies.)

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 or Econ 204
- Electives — 16 credits under advisement in one of the following six fields: anthropology, economics, geography, history, political science or sociology

Extended Minor 35 credits

Adviser: Dr. Peter J. Hovenier

- 20 credits from one of the social sciences or history
- 15 credits from two other social sciences or history
- A minimum of 15 of the 35 credits must be from upper-division work

A minimum GPA of 2.5 is required to secure approval of the major and extended minor for graduation.

COURSES IN SOCIAL STUDIES EDUCATION

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

- 425 SOCIAL SCIENCE FOR THE ELEMENTARY SCHOOL (3)
Prereq: Psych 316 (or 352). The development of social science concepts and skills in the elementary program.
- 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. (Recommended spring of junior year.)
- 430 CURRENT ISSUES FOR THE ELEMENTARY SOCIAL STUDIES CLASSROOM (3)
A course designed to identify resources and methods for integrating current social issues into the content areas of social studies with special emphasis on the valuing process and the influence of the television media on values and behavior.

Interdisciplinary

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.

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.

Housed in the Urban League Building at the corner of 14th Avenue and Yesler in Seattle, the center provides an academic program which builds upon the skills, competencies and knowledge which students have gained from experience. Center classes are small, the setting is supportive, and individual counseling and advisement are readily available. 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.

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, urban studies and business. In addition students may, in conjunction with a faculty committee, develop a proposal for their own interdisciplinary concentration. The 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, 105 14th Avenue, Seattle, Washington 98122, phone 464-6103 (SCAN 576-6103).

URBAN CENTER FACULTY

LAURENCE P. JACOBS (1979) Acting Director. BA, Harvard; MD, State University of New York, Downstate.

JEROME RICHARD (1969) Associate Professor. MA, San Francisco State; MA, New School for Social Research; BA, University of Pennsylvania.

INTERDISCIPLINARY BACHELOR OF ARTS DEGREE

Required of All Students

- General University Requirements (GUR COURSES ARE NOT OFFERED AT CUS)
- General Foundation Skills Requirement: CUS 221*, 241, 255, 261, 271, 281 (*a writing placement exam is given to determine if this course is required)
- 50-60 credits in elective courses
- CUS 498

Social Services Concentration 49 credits

- CUS 303, 321, 323, 324, 334, 335, 336, 418, 438, 439, 440, 441, 442, 443
- 6 credits of electives and/or Independent Study

Urban Studies Concentration 61 credits

- CUS 201, 202, 303, 306, 307, 308, 315, 316, 317, 341, 342, 343, 345, 355, 410, 412, 419, 461, 471

Business Concentration 56 credits

- CUS 201, 202, 251, 252, 298, 301, 303, 310, 311, 322, 330, 360, 370

Student-Designed Concentration

45 credits

- Individual program to be approved by the Concentration Committee

COURSES FOR URBAN CENTER

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

201 PRINCIPLES OF ECONOMICS I — INTRODUCTION TO MACRO-ECONOMICS (5)

An overview of the modern economic problems of our time. Designed to introduce the general student to the most visible economic aspects of modern society, such as inflation, economic growth and recession, pollution, unemployment, etc.

- 202 **PRINCIPLES OF ECONOMICS II — INTRODUCTION TO MICRO-ECONOMICS (4)**
 Analysis of the operation and decision making of economic units in a market economy. An evaluation of successes, deficiencies and possible alternative futures.
- 221 **WRITING IMPROVEMENT (3)**
 This course is designed to help students improve their writing ability by prescribed exercises and study of the way our language functions with emphasis on composition of different forms: essays, argument, letters, etc.
- 241 **RHETORIC (3)**
 Prereq: CUS 221 or placement. Writing of non-fiction prose. Informative and persuasive writing; the personal essay, biographical sketch, extended argument and other forms.
- 251 **PRINCIPLES OF ACCOUNTING (4)**
 Introduction to the theory and practice of accounting, including financial statements.
- 252 **PRINCIPLES OF ACCOUNTING (4)**
 Prereq: CUS 251. Emphasis on partnership and corporation accounting.
- 255 **ORAL COMMUNICATION SKILLS (3)**
 Focuses on the verbal and organizational skills necessary for the effective preparation and delivery of oral communications, i.e., small group discussions, impromptu situations, structured presentations. Special attention will be given to the uses of language, correctness, appropriateness and the techniques of achieving self-confidence.
- 261 **CRITICAL THINKING (3)**
 Introduction to the practical analysis of argument and reasoning as an aid to clear and concise writing and speaking. Development of procedures for critically assessing arguments in newspaper, advertisements, textbooks, speeches and ordinary conversations. Discussion of common fallacies.
- 271 **STATISTICS (5)**
 Prereq: college algebra or permission. The nature of statistical reasoning. Descriptive statistics, mean, variance, distributions, sampling and testing of statistical hypotheses. Ideas of probability and measurement.
- 281 **TECHNIQUES OF RESEARCH (3)**
 How to find, organize and report information. Use of standard bibliographic sources and citation indexes. Writing research reports.
- 298 **QUANTITATIVE ANALYSIS (5)**
 Prereq: CUS 271. Quantitative methods used in business: differential calculus, rates, maxima and minima; linear algebra and an introduction to linear programming; introductory computer programming.
- 301 **INTRODUCTION TO MANAGEMENT (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.
- 303 **HUMAN RELATIONS IN ORGANIZATIONS (4)**
 Prereq: CUS 301 or permission. Individual and group behavior in organizations. Case problems and experiential learning exercises are utilized.
- 306 **HISTORY OF THE CITY (3)**
 Traces the physical, social and political development of cities. Examples include Jericho, Athens, Rome, medieval cities and American settlements from colonial times to the present.
- 307 **THE HISTORY OF ETHNIC GROUPS IN URBAN LIFE (3)**
 Prereq: CUS 306. Analyzes the role various ethnic groups have played in the development of urban American communities.
- 308, 309 **INTRODUCTION TO URBAN LAW (3 ea)**
 This course will cover 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. It is an introductory course designed to examine these rights and how they are enforced. The course will be offered for two consecutive quarters for three credits per quarter. Students will participate in a mock trial one quarter and a mock administrative hearing the other quarter for their grades.
- 310 **BUSINESS COMMUNICATIONS (3)**
 The use of written and verbal communication in the business setting: business letters, reports and other documents, presentations, advertising.
- 311 **CORPORATE FINANCE (4)**
 Prereq: CUS 298 and 301. Structure and operation of financial management; problems of internal financial analysis, forecasting, planning and control, capital supply and budgeting; dividend policy, mergers, acquisitions.
- 315 **INTRODUCTION TO URBAN PLANNING (3)**
 This course introduces the fundamentals of physical and social planning in urban areas. Physical systems include transportation, sewers, water, energy and environment. Social systems include the delivery of education, health and welfare services.
- 316 **CITY PLANNING: HOUSING (3)**
 Prereq: CUS 315. A continuation of CUS 315 with emphasis on the historical, economic, social, legal and political factors effecting housing development in a city. Includes the study of the relation of industrialization, commercial activity and physical infrastructures to housing development.
- 317 **URBAN DYNAMICS (3)**
 Prereq: CUS 316. 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 in the community and internally.
- 322 **PERSONNEL ADMINISTRATION (4)**
 Prereq: CUS 301. Recruitment, selection, utilization and development of human resources, with emphasis on employee-management relations and relevant behavioral regulations.
- 323 **CHILD DEVELOPMENT (3)**
 Study of the normal development of the child or adolescent. Determination and diagnosis of abnormal development.
- 324 **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.
- 330 **PRINCIPLES OF MARKETING (4)**
 Prereq: CUS 310. Institutions, functions, problems and policies in the distribution of industrial and consumer goods; pricing, costs and governmental regulations.

Interdisciplinary

334 OTHER CULTURES, OTHER LIVES (3)

Customs, conditioning values, attitudes in various cultures the caseworker may encounter. The similarities and differences of other cultures. Guest lecturers from different ethnic backgrounds.

335 PSYCHOLOGICAL IMPACT OF POVERTY (3)

Prereq: CUS 334. 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.

336 PSYCHOLOGICAL INSIGHTS IN LITERATURE (3)

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.

341 CITY VS. COUNTRY IN AMERICAN LITERATURE (3)

Two philosophies of life which divide the American experience as encountered in several works of literature.

342 CONTEMPORARY MINORITY LITERATURE (3)

This course will provide background information about contemporary minority writers for students who wish to expand their perception and knowledge of this literature, particularly as it relates to the urban experience. The emphasis will be on writing from the late sixties to the present.

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, Campanella, Huxley, Skinner and others; the Oneida and Amana communities; modern communal and utopia experiments.

345 INTRODUCTION TO URBAN POLITICS (3)

The history of the urban political structures, political problems of governance, current political conflicts.



- 355 **URBAN ART HISTORY (3)**
Exploring art in one's environment through field trips, lectures and visits to city museums, with Seattle's art world and its resources as a focus. Also, some drawing to experience one's creative self. Both with the intent of enriching one's life and knowledge of the city and its many cultures through the multi-faceted art world.
- 360 **OPERATIONS MANAGEMENT (4)**
Prereq: CUS 298, 301, 303. Fundamental of operations management including tools for analyzing, designing and controlling operating systems.
- 370 **LAW OF COMMERCIAL TRANSACTIONS (4)**
Prereq: CUS 251. Legal principles underlying the law of contracts, personal property and secured transactions.
- 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 **THE FUTURE OF THE CITY (3)**
Future prospects for the city. Study of the ideas of Solari, Fuller and others regarding new forms and relations in cities.
- 417 **SEMINAR IN BUSINESS (3)**
Prereq permission of instructor. Selected topics in business. May be repeated for credit.
- 418 **SEMINAR IN URBAN STUDIES (3)**
Prereq: permission of instructor. Selected topics in urban studies. May be repeated for credit.
- 419 **SEMINAR IN SOCIAL SERVICES (3)**
Prereq: permission of instructor. Selected topics in social services. May be repeated for credit.
- 420 **BUSINESS ADMINISTRATION (5)**
Prereq: CUS 322. Organization and structure of the business enterprise. Management of human, financial and physical resources, interpersonal relations, communications, leadership styles, individual and group behavior, motivation of employees.
- 421 **PERSONNEL AND INDUSTRIAL MANAGEMENT (3)**
Prereq: CUS 420. Managing human resources, recruitment, personnel systems, labor relations, disciplinary procedures, compensation, performance evaluation, career development, affirmative action.
- 429 **BUSINESS STRATEGY AND POLICY (3)**
Prereq: CUS 330 and 360. Case studies of policy and administration of business; planning techniques and decision-making processes are reviewed and analyzed. Course includes games, simulation, case studies and field research assignment.
- 438 **THEORIES OF PERSONALITY (3)**
This course presents 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.
- 439 **THE HELPING RELATIONSHIP (3)**
Prereq: CUS 438. This course presents some ideas on how people help other people to change and grow. It includes some of the common issues that arise in individual and family relationships, and how these can be dealt with to help others reach their goals and fulfill their potential.
- 440 **PROBLEMS IN HELPING (3)**
Prereq: CUS 439. Group supervision of the kinds of interpersonal problems that arise in the student's work, with feedback from the instructor and the other students about what is going on between the people involved and how the relationship can be improved.
- 441 **TECHNIQUES OF CASEWORK (3)**
Approaching the family, interviewing skills, clarifying goals, etc.
- 442 **ROLE OF THE CASEWORKER (3)**
Prereq: CUS 441. Functions of caseworkers in today's society; the tasks caseworkers perform; the jobs they do; their responsibilities.
- 443 **CASEWORK THEORIES (3)**
Prereq: CUS 442. Controversies and conflicts within the profession; aims and goals of casework.
- 461 **FUNDAMENTALS OF SOCIAL RESEARCH (3)**
Prereq: CUS 271 and 281. 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: CUS 461. Practice in community needs assessment in Seattle neighborhoods; research paper required.
- 498 **FINAL PROJECT SEMINAR (5)**

VISUAL COMMUNICATION EDUCATION (VICOED)

College of Arts and Sciences

The Bachelor of Science degree program in VICOED is designed to prepare graduates to 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, Dr. Ray A. Schwalm, is essential.

BACHELOR OF SCIENCE

VICOED Concentration 110 credits

- Art 101; Art 270 or Tech 214
- Art 371 or Tech 440; Art Hist 240
- Eng 201 or 202 or 301 or 302 or 401 or Journ 104
- Speech 340
- Tech 210b, 240, 260, 340, 341, 379, 444, 447, 448

Interdisciplinary

- Take 19 credits from two of the following areas; maximum of 9-10 from one area:
 - Industrial Graphics (technology)
 - Graphic Arts (technology)
 - Photography (technology)
 - Graphic Design (art and technology)
 - Professional Writing (English and journalism)
 - Educational Media (speech TV production courses and technology)
- Chem 208, 209
- Acctg 241; BA 330; Econ 338
- Math 124 or 240, or Comp Sci 110 or 107
- Anth 431
- Psych 320
- 11 credits selected from art, economics, business, sociology, anthropology, psychology, mathematics, physics, chemistry, educational psychology, computer science

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 two (2) extra quarters to complete.

WOMEN'S STUDIES

College of Arts and Sciences Fairhaven College

The Women's 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 the other relevant courses in the various departments.

Dr. Kathryn Anderson, Fairhaven College, is the adviser for this minor.

Minor 30 credits

Core: 16 credits.

- WS 111: Introduction to Women's 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
 - Fairhaven 329: Political Economy and the Status of Women (4)
 - Health Ed 152: Society and Sex (2)
 - Hist 390: Topics in History (3-5)
 - Home Econ 33C: Legal Environment of the Family (3)
 - Pol Sci 345: Women and Politics (3)
 - Psych 217: Psychology of Human Sexuality (3)
 - Soc 368: Sex Roles and Social Structure (5)
 - Speech 492: The Rhetoric of Social Movements (4)
 - WS 311: American Women's Studies I (5)
 - WS 313: American Women's Studies II (5)
 - WS 315: Issues of the Women's Movement (3)

COURSES IN WOMEN'S STUDIES

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

111 INTRODUCTION TO WOMEN'S 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'S STUDIES I (5)

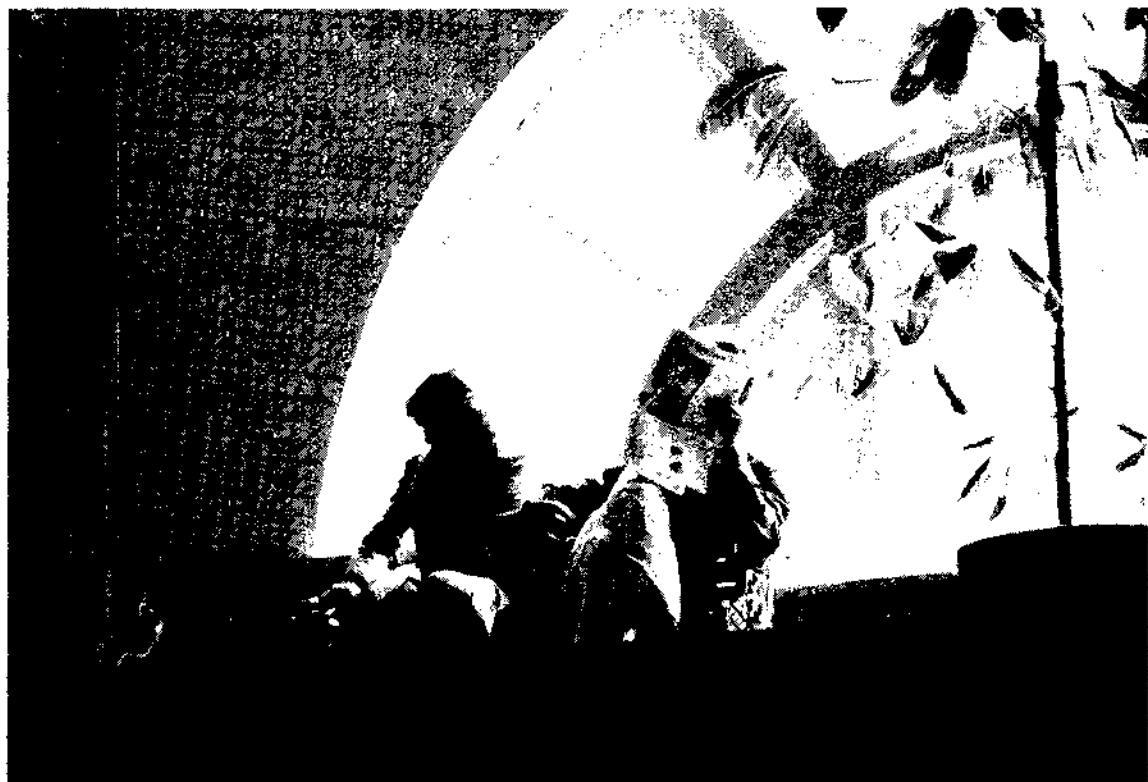
Prereq: Hist 103 or 104 or Eng 216 or 217 or another WS course. Women's role in American society from colonial times to the mid-nineteenth century, with attention to differences of race and class. Emphasis on changing sex roles for both women and men as a result of changes in the structure of the family, 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'S STUDIES II (5)

Prereq: Hist 103 or 104 or Eng 216 or 217 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.



JOURNALISM

College of Arts and Sciences

The Journalism Department offers a theoretical and practical communications major and minor in a liberal arts setting. Students gain practical experience on Western's prize-winning student publications, and majors additionally take field internships with newspapers, broadcast stations or with other professional organizations.

Courses emphasize the gathering, writing and ethical presentation of news, developing skills and general knowledge that serve more than communications careers. Students are challenged to master a broad range of other disciplines. They are encouraged to undertake double-majors or major-minor combinations offering depth in one or more specialized areas. They are helped to learn to write with accuracy, precision and clarity. By enriching their language skills and understanding of news processes, they learn to communicate swiftly and lucidly in a changing world.

Graduates find careers in newspapers, magazines, radio, television, publishing, advertising, public relations, teaching and throughout gov-

ernment and industry wherever communications skills, with general knowledge, are vital.

JOURNALISM FACULTY

- R. E. STANNARD JR. (1969) Chairman.
Associate Professor. BA, University of Washington; MA, Cornell University.
- LYLE E. HARRIS (1976) Associate Professor. BA, MA, University of Montana; PhD, University of Missouri.
- GERSON F. MILLER (1967) Professor. AB, University of California, Berkeley; MA, Pennsylvania State 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

Journalism

- 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 related academic areas selected under advisement of journalism faculty
- Cumulative GPA of 2.25 or higher

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, 500, 417, 445 are described on page 32 of this catalog.

- 104 NEWSWRITING (3)
Prereq: ability to type 25 or more words per minute. Writing for news media; news elements and values; gathering news, structure and style of news stories; covering speeches and meetings, interviewing.
- 111, 112, 113, 114 NEWSPAPER STAFF (2 ea)
Prereq: freshman 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, headline, 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. Newspaper copy desk operations; editing, heading writing; dummyping; 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, Speech 342 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 449 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.

490 THE NEWS PROFESSIONAL (5)

Prereq: permission of the Journalism Program. In-depth studies with visiting news media professionals in their specialties, including individual and/or team projects. Repeatable to 15 credits.





LIBERAL STUDIES

College of Arts and Sciences

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. program in liberal studies. This program permits development, under direction of liberal studies faculty, of integrated courses of study across traditional disciplinary lines.
3. The department offers interdisciplinary minor programs in humanities and 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 (Miller Hall 361).

LIBERAL STUDIES FACULTY

- WILLIAM K. B. STOEVEY (1970) Chairman. Professor. BA, Pomona College; MDiv, Yale Divinity School; MPhil, PhD, Yale University.
- ROSCOE L. BUCKLAND (1970) Professor. BA, MA, University of Idaho; PhD, State University of Iowa.
- NITA CLOTHIER (1964) Assistant Professor. BA, MEd, Western Washington University.
- MICHAEL H. FISHER (1978) Assistant Professor. BA, Trinity College. MA, PhD, University of Chicago.
- MILTON H. KRIEGER (1970) Associate Professor. BA, Reed College; PhD, University of Toronto.
- STUART LASINE (1977) Assistant Professor. BA, University of Michigan; MA, PhD, University of Wisconsin.
- 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.
- WILLIAM L. WALLACE (1970) Associate Professor. BS, Appalachian State University (North Carolina); MA, PhD, Ohio University.

BACHELOR OF ARTS IN LIBERAL STUDIES

Major 60 credits

This major is intended for students whose academic needs are best served by interdisciplinary study in humanities and the liberal arts. It offers integrated study for students who wish broad study in humanities or comparative cultures, or who wish to focus their college major on an interdisciplinary academic problem. The program is appropriate for students who do not anticipate work beyond the B.A. and for students contemplating graduate study in humanities, liberal studies, certain field- or area-studies and certain of the professions. Each major student, in consultation with liberal studies faculty, develops an individual program of study, comprising courses from appropriate academic fields subject to department approval.

Required core:

- Lib St 201
- Lib St 301
- Lib St 499
- Electives under departmental advisement

No program may substantially duplicate an existing major. Normally, not more than 30 of the 60 credit hours required may be taken from any one department, other than Liberal Studies; normally, not more than 20 credit hours taken prior to enrollment in Lib St 301 may be applied to the major, and at least 35 credit hours applied to the major must be 300 level or above. Competence in a foreign language is recommended for all liberal studies majors and may be required in conjunction with some. A more detailed description of this major, together with examples of various concentrations, are available in the Liberal Studies office.

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. Through such study students seek to understand the role of religion in human existence and the complex relationship between religion and other cultural forms and also to gain informed acquaintance with a variety of religious expressions.

- Lib St 331
- Three courses from Lib St 235, 272, 278; Hist 267, 287; Phil 113
- Remaining credits from the following: Anth 330; Eng 336; Lib St 233, 331, 332; Hist 387; Psych 346; Soc 363; other appropriate courses under advisement.

LIBERAL STUDIES COURSES

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

105 BEHAVIORAL SCIENCE (5)

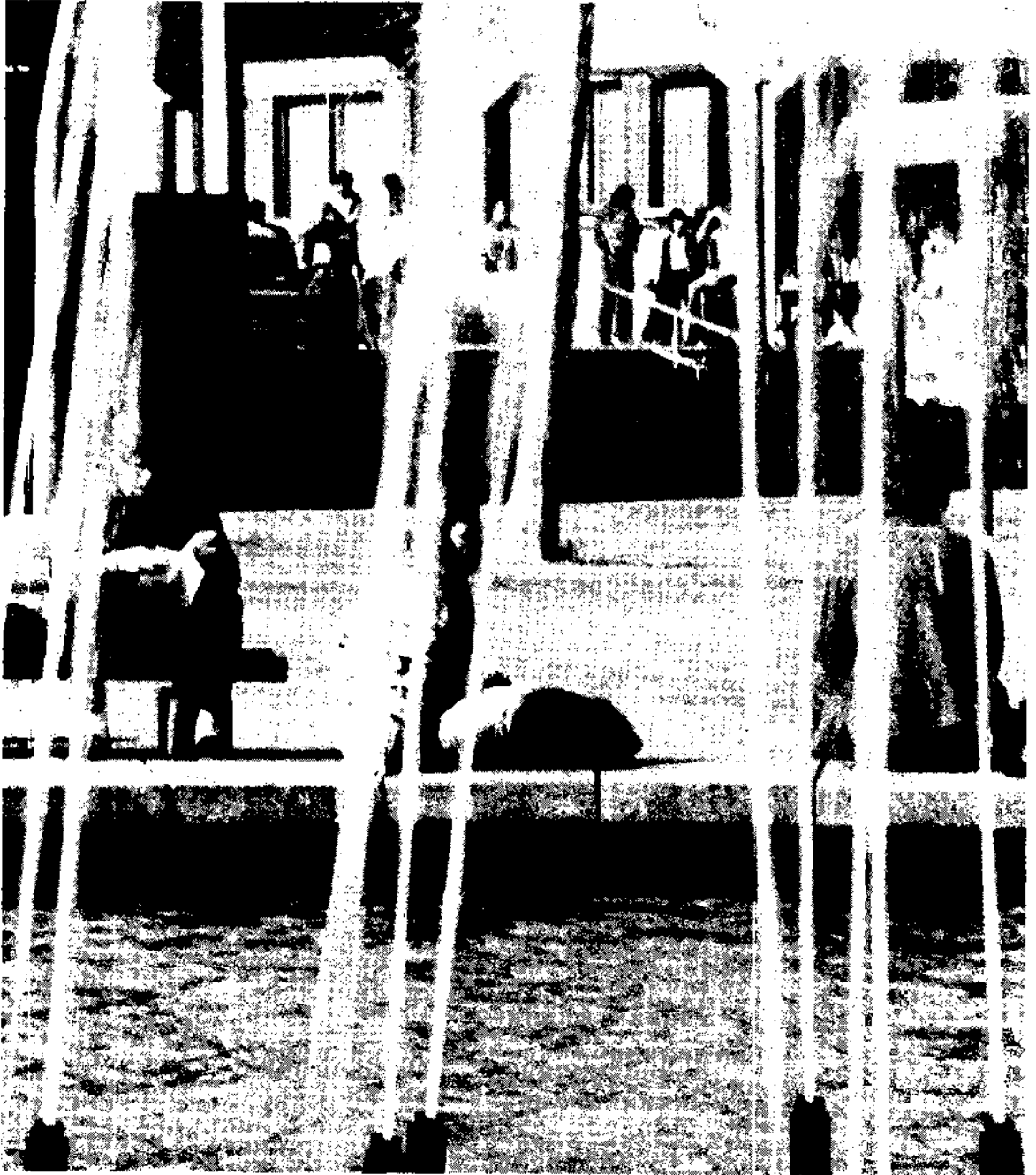
Man as a biological, psychological and social organism; the processes of perception, learning and motivation, and their social and cultural context.

121, 122, 123 HUMANITIES (5 ea)

(These courses need not be taken in sequence.) Interdisciplinary introduction to significant cultural themes from art, music, history, philosophy, literature in the western tradition.

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.
- 201 **INTRODUCTION TO INTERDISCIPLINARY STUDIES (4)**
Methods and principles of interdisciplinary studies through investigation of an interdisciplinary problem; consult department for current topic.
- 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.
- 233 **RELIGION IN AMERICA (4)**
Religious values, traditions and institutions in American culture, from historical, social-scientific and religious-phenomenological perspectives; directed toward fuller understanding of contemporary issues and events.
- 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.
- 271 **HUMANITIES OF INDIA (4)**
The Indian experience and the development of its cultural unity; the challenge of Islam and the British colonial experience; the conditions of modernization and the emerging synthesis of values.
- 272 **MYTHOLOGY/RELIGION AND SOCIETY IN CHINA AND JAPAN (4)**
Study of formal religious thought and of popular religion in traditional Chinese and Japanese cultures, the impact of Christian denominations, and the character of contemporary religious life.
- 273 **ARTISTIC EXPRESSION AND SOCIETY IN CHINA AND JAPAN (4)**
Studies of the aesthetic traditions of East Asia, courtly and popular, secular and religious; the impact of foreign ideas and the role of art in recent propaganda, architecture and industrial design as well as in traditional modes of expression.
- 274 **SOCIETY AND LITERATURE IN CHINA AND JAPAN (4)**
Study of Chinese and Japanese authors from traditional and modern times; emphasis on forms of literary expression as a guide to social attitudes and value systems.
- 275 **HUMANITIES OF JAPAN (4)**
Interdisciplinary introduction to Japanese civilization, both traditional and modern, with particular emphasis on religions, historical, artistic, and literary patterns, societal and cultural ideals.
- 276 **HUMANITIES IN AFRICA (4)**
Introduction to 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 that heritage.
- 278 **RELIGIONS OF INDIA (4)**
Evolution of religious thought in India; Vedic religion; the Upanishads, Buddhism; Classical Hinduism; systems of meditation; devotional poetry; Sikhism, Sufism, Epic, Puranic and popular mythology; village religion.
- 301 **SPECIAL PROBLEMS (2-5)**
Prereq: Lib St 201. Directed readings; development of student plan of study, preparation of bibliography, planning for a final project; for liberal studies majors.
- 311 **GREAT BOOKS REPRESENTATIVE OF THE HUMANITIES (3-4)**
Prereq: junior status. Reading list, instructor and syllabus announced prior to registration.
- 331 **MAGIC, ASTROLOGY, WITCHCRAFT, DEMONOLOGY: THE ACADEMIC STUDY OF OCCULTISM (4)**
Prereq: junior status. Academic analysis of magic, astrology, witchcraft, demonology, Cabala, numerology, divination, alchemy, magical medicine from historical, social-scientific and philosophical points of view.
- 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 religious-phenomenological 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.
- 432 **AMERICAN FOLKLORE (4)**
Prereq: Lib St 232 or one course in American history or American literature. American folk tale, folk song and dance, proverb, superstition, nature lore, myth, and hero legend.
- 480 **STUDIES IN HUMANISTIC EDUCATION: THE HUMANITIES APPROACH (3)**
Prereq: permission of department. Foundations of humanistic education; effective curriculum design; techniques for presenting humanities materials; individual projects.
- 499 **SPECIAL PROBLEMS (3)**
Final project embodying student's interdisciplinary focus; for liberal studies majors.



MATHEMATICS & COMPUTER SCIENCE

College of Arts and Sciences

The Department of Mathematics and Computer Science offers majors and minors in mathematics, applied mathematics, mathematics education and computer science. Joint majors are offered in mathematics and computer science, biology and mathematics, chemistry and mathematics, economics and mathematics, geology and mathematics, physics and mathematics, accounting and computer science, and business administration and computer science. The department also offers a Master of Science degree in 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. Anyone planning a career in almost any field will find his/her opportunities for interesting and challenging positions enhanced by the study of mathematics and computer science. A person who develops quantitative skills increases his/her 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 requires 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 more electives.

COMPUTER SCIENCE

Computer science is a steadily growing area of human endeavor; its impact is felt in nearly every part of our society. It provides opportunities for employment in business, industry, government and teaching. It also provides a wealth of problems of intellectual interest. It is an area in which systematic habits of thought are combined with creative impulses to produce achievements aesthetically pleasing and of practical significance.

The curriculum in computer science is broad and well-balanced. In addition to the usual introductory courses, the department offers assembler language programming, automata theory, advanced features of programming languages, computer organization, data structures, compiler design and implementation, operating systems, and simulation and modeling. There are also courses oriented toward business applications; namely, data base management; business computer systems, computerware and systems analysis. Finally, there are courses oriented toward mathematical and scientific applications; namely, the numerical analysis sequence and the linear programming, operations research sequence.

The Department of Mathematics and Computer Science has a Computer Science Laboratory which provides hands-on experience for computer science majors. The equipment in the laboratory includes an Interdata 70 system and a DEC LSI-11/23 system. Both systems have disc storage and various terminals. In addition there is a line printer and a card reader.

The Computer Center has a DEC VAX-11/780 terminal system, an IBM 4341 remote-job-entry system and additional equipment for interactive computing and graphics. All of this equipment is available for student use.

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 concen-

trates on the elementary level. Those who intend to pursue one of these concentrations must complete at least one course in algebra and one course in geometry on the upper-division level. Secondary teachers will find that calculus, linear algebra, number theory, statistics, probability and the course in mappings and continuity are of considerable value to them. 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.

ACADEMIC PLACEMENT

Students seeking advise in registering for courses in mathematics or computer science should go to the departmental office in Bond Hall 202.

Requirements for Admission to a Major

The department may be forced to limit enrollment in certain majors. In this case, preference will be given to students who have a high grade point average or who obtain a strong recommendation from a professor who has instructed the student.

Enrollment Preference for Majors

The department will give enrollment preference to its majors.

Advise 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-half year 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 103; students deficient in (c) should enroll in Math 104; Math 105 covers the topics listed in (d). These courses, if needed, should be completed before enrollment in Math 124.

Mathematics and 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 202.

Freshmen may begin study in computer science with the course CS 210 (Programming I) if they have had four years of high school mathematics including an introduction to calculus. Those without such preparation should complete Math 124 (Calculus and Analytic Geometry) before registering for CS 210. The latter group of students may, if they wish, take CS 107 (Programming in BASIC) and/or CS 110 (Introduction to Programming) before completing Math 124. Students with fewer than three years of high school mathematics should seek advise in the department office before registering for computer science courses. It is not essential that computer science majors complete more than CS 210 in their first year of study.

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, probability theory and mathematical statistics are also good preparation.

Computer science majors who expect to enter Western from a two-year college should complete as many mathematics courses and computer science courses as possible. They should, if possible, learn to program in a higher level language such as Fortran, PL/1 or Algol. 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 and 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

Those interested in study of computer science or mathematics are welcome to write, telephone, or visit the Chairman of the Department of Mathematics and Computer Science, Western Washington University, Bellingham WA 98225. Telephone: (206) 676-3785.

MATHEMATICS AND COMPUTER SCIENCE FACULTY

- RICHARD G. LEVIN (1967) Chairman. Associate Professor. BS, University of Pennsylvania; PhD, University of California, Davis.
- 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. DUEMMELE (1966) Associate Professor. BA, MA, PhD, Ohio State University.
- ARBERT J. FRODERBERG (1968) Associate Professor. BS, MS, PhD, University of Washington.
- SARA JEANNE GAMLEN (1967) Associate Professor. BA, Linfield College; MA, Bowling Green State University; PhD, Washington State University.
- GLENN B. GOODRICH (1978) Assistant Professor. BS, University of Washington.
- NEIL R. GRAY (1964) Associate Professor. BA, San Francisco State College; MS, PhD, University of Washington.
- JOSEPH HASHISAKI (1962) Professor. BA, Montana State University; MA, PhD, University of Illinois.
- FRANCIS H. HILDEBRAND (1968) Associate Professor. BS, Kent State University; MS, University of Illinois; PhD, Michigan State.
- JAMES L. HILDEBRAND (1952) Associate Professor. BA, MA, North Texas State University.
- FRED M. IVES (1971) Associate Professor. BA, MS, PhD, Washington State University.
- ROBERT I. JEWETT (1970) Professor. BS, California Institute of Technology; MS, PhD, University of Oregon.
- ROBERT M. KAUFFMAN (1967) Professor. BA, The University of the South; MS, PhD, Louisiana State University.
- NORMAN F. LINDQUIST (1967) Associate Professor. BA, Linfield College; PhD, Oregon State University.
- LARRY DEAN MENNINGA (1970) Associate Professor. BA, University of Iowa; MA, PhD, University of Washington.
- MARTIN L. OSBORNE (1977) Assistant Professor. BA, Hamilton College; MA, University of Oregon; 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.
- DONOVAN F. SANDERSON (1963) Associate Professor. BS, MS, PhD, Iowa State University.
- GEORGE E. WITTER (1955) Associate Professor. BA, MA, Miami University.
- JOHN W. WOLL (1968) Professor. BS, Haverford College; PhD, Princeton University.

BACHELOR OF ARTS IN EDUCATION

Major — Elementary 45 credits

- Math 124, 125, 241, 281, 305, 481
- Math 307 or 401
- Math 360 or 460
- Math 240 or 341
- CS 107 or 110 or 210
- Electives under departmental advisement

Major — Secondary 45 credits

- Math 124, 125, 126, 205, 241, 341, 483
- Math 305 or 312
- Math 307 or 401
- Math 360 or 460
- CS 210
- Electives under departmental advisement

Minor 30 credits

- Math 124, 125
- Math 481 or 483
- CS 107 or 110 or 210
- Electives under departmental advisement, including no fewer than two courses in mathematics numbered 300 or above

Combined Major Concentration

See the Chemistry Department section for Mathematics-Chemistry major. See the Physics/Astronomy Department section for the Physics-Mathematics major

Teaching Competence

Recommendation for teaching competence normally requires completion of the appropriate major with a minimum grade point average of 2.50.

Qualification for teaching competence for junior high (grades 6-9) school level mathematics may be obtained as above, or by completing with a minimum grade point average of 2.50, an augmented minor which includes Math 124, 125, 126 or 205, 241 or 305, 360 or 460, 307 or 401, 483.

BACHELOR OF SCIENCE

Major — Mathematics

69 credits plus Supporting Courses

- Math 124, 125, 126, 224
- Math 205

- CS 210
- Not fewer than 20 credits in approved mathematics or mathematics-computer science courses numbered 400 or above except Math 481, 483, 494, and 495
- Electives under departmental advisement
- Supporting courses: one approved sequence in an area of application. Some acceptable sequences are: Phys 241, 242, 341, 344; Econ 203, 204, 301, 302; Psych 306, 307, 311; CS 310, 311, 312; Chem 121, 122, 123
- Language competency in French, German or Russian is strongly recommended for those students who may go to graduate school

Major — Applied Mathematics

88 credits plus Supporting Courses

- Math 124, 125, 126, 205, 224
- CS 210 and one other computer programming class at the 200 or 300 level
- Math 312, 331, 332, Math-CS 335, 375
- Math 341, 342 or 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
- Phys 241, 242, 341, 344. Students electing the Operations Research Concentration may be able to obtain permission from their department adviser to substitute an appropriate 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 107 or 110 or 210
- Electives under departmental advisement

Major — Computer Science

74 credits plus Supporting Courses

- CS 123, 210, 211, 217, 301, 310, 311, 312, 410, 440
- Math-CS 335 and 375
- Math 124, 125, 126, 205

Mathematics/Computer Science

- 12 additional credits in 400 level computer science courses, which may include a maximum of six credits in CS 400 or math-computer science courses and which may not include CS 470 or 471
- At least 12 credits in an area of application. Acceptable sequences are: Acct 241, 242, 243; Phys 241, 242, 341, 344; 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 26 credits
(Not available to mathematics majors.)

- CS 210
- CS 211 or 217
- CS 310 or 351 or 353
- Math 124 or 156 or 220
- 10 to 12 additional credits, no fewer than 8 of which must be in upper-division courses in computer science

Major — Mathematics-Computer Science 86 credits plus Supporting Courses

- Math 124, 125, 126, 224; 205, 312, 331; 332 or 430; 401 or 404
- Three of the courses Math-CS 335, 435, 375, 475
- CS 210, 310, 311
- 21 additional credits in computer science and mathematics as advised
- Supporting courses: at least 12 credits in an area of application. Acceptable sequences are: Acctg 241, 242, 243; Phys 241, 242, 341, 344; Econ 203, 204, 475; Chem 121, 122, 123; Geol 211, 212, and one 300 level course; Biol 121, 122, 123; Psych 306, 307, 311

Combined Majors

The Mathematics and Computer Science Department 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—Mathematics: See Physics Department section for details.

Geology-Mathematics: See Geology Department section for details.

Accounting-Computer Science: See Accounting Department section for details.

Business Administration-Computer Science: See Business Administration 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; X57; 300, 400, 500; 417, 445 are described on page 32 of this catalog.

(Courses in Mathematics-Computer Science and in Computer Science are listed after the listings in Mathematics.)

103 ALGEBRA (5)

Prereq: clearance of mathematics proficiency entrance requirement and an arithmetic skills test which will be given during the first week of the quarter. Intended for students who have had one year of high school mathematics. Polynomials, first and second degree equations and inequalities, graphs, quotients of polynomials, roots and radicals, an introduction to the quadratic formula. Basic computational algebraic skills are emphasized. Students who have a reasonably good knowledge of two and one-half years of high school mathematics should take Math 105 rather than Math 103. Cannot be counted toward majors or minors in mathematics or computer science.

104 TRIGONOMETRY (3)

Prereq: Math 103 or two years of high school mathematics; basic computational algebraic skills are a prerequisite. Angles and angle measurement, trigonometric functions, identities, trigonometric equations, inverse trigonometric functions. Students with a reasonably good knowledge of high school trigonometry should not take Math 104. Cannot be counted towards majors or minors in mathematics or computer science.

105 COLLEGE ALGEBRA (5)

Prereq: basic algebraic skills comparable to those described under Math 103 and Math 104 (Math 104 may be taken concurrently). Students who do not intend to enroll in Math 124 should consider taking Math 155 instead of Math 105. Complex numbers; arithmetic and geometric progressions; quadratic equations and the quadratic formula; the binomial theorem; exponential and logarithm functions; introduction to conic sections (circles, parabolas, hyperbolas and ellipses). Accurate graphing is emphasized throughout the course. Students with four years of high school mathematics are usually well advised to skip Math 105 and go directly to a more advanced course.

124 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: knowledge of topics listed under Math 104 and 105. Coordinate geometry for the plane, differentiation, rules for computing derivatives, anti-derivatives, and an introduction to the definite integral.

125 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: Math 124. Application of the definite integral to area, volume, planar motion, etc. Logarithmic and exponential functions. Techniques of integration. Taylor's Theorem, improper integrals and separable differential equations.

- 126 **CALCULUS AND ANALYTIC GEOMETRY (5)**
 Prereq: Math 125. Conic sections, polar coordinates, vectors in two and three dimensions, differentiation of vector-valued functions, optimization in two or three variables.
- 151 **INTRODUCTION TO MATHEMATICS (3)**
 Prereq: clearance of mathematics entrance test. Not open to students with credit in Math 105. Introduction to the methods of thought and logic in mathematics. A cultural approach to mathematics which emphasizes historical aspects of mathematics and the influence of mathematics upon modern society. Students interested in studying a single area of mathematics in detail should consider substituting a course from Math 105, 124, 155, 205, 220, 240, 241.
- 155 **ALGEBRA WITH APPLICATIONS TO ECONOMICS AND BUSINESS (4)**
 Prereq: Math 103 or qualifying examination (to be given on the first day of class). 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 is the preferred prerequisite (Math 105 also suffices). Functions and limits; differential and integral calculus, including partial differentiation.
- 205 **VECTORS AND MATRIX ALGEBRA (4)**
 Prereq one course from Math 124 or 156 or 220. Matrices, determinants, matrix algebra, linear equations, linear transformations, characteristic roots and characteristic vectors, orthogonally.
- 220 **SURVEY OF CALCULUS (5)**
 Prereq: Math 103 or equivalent. This course is intended to introduce students to the basic notions and computational techniques of calculus for a limited range of functions. Students who complete the course will find they understand many articles or lectures in which calculus is used, but they will not have sufficient knowledge to use calculus in unfamiliar situations as a problem-solving tool in their disciplines. Those who wish to use calculus actively should consider the sequence Math 124, 125, 126.
- 224 **MULTIVARIATE CALCULUS (5)**
 Prereq: Math 126. Vector functions and their derivatives, partial differentiation, multiple integration, vector fields, infinite sequences and series.
- 240 **INTRODUCTION TO STATISTICS (3)**
 Prereq: Math 103 or equivalent. 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.
- 241 **INTRODUCTION TO PROBABILITY (3)**
 Prereq: Math 105. Introduction to probability with applications.
- 281 **THEORY OF ARITHMETIC (4)**
 Prereq: Math 103 and an arithmetic skills test. 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 205 or 125. The properties of integers, Euclid's algorithm, Diophantine equations, congruences, continued fractions and residues.
- 307 **THE ALGEBRAIC FOUNDATION OF MATHEMATICS (4)**
 Prereq: Math 125. Not open to students with credit in Math 401. Algebraic systems; the concepts of order and completeness; the natural numbers and construction of rational and real numbers.
- 312 **MAPPING AND CONTINUITY (4)**
 Prereq: Math 126 and one of 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.
- 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: Math 105 or 155; 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 (3)**
 Prereq: Math 205 or 125. 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 205, 331; 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.
- 430 **FOURIER SERIES AND PARTIAL DIFFERENTIAL EQUATIONS (4)**
 Prereq: Math 331 and 224. 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 224 and 205; each course prerequisite to the next. Probability theory; development of distributions; generating functions; averages, moments, regression, correlation, variance, and statistical inference.
- 460 MODERN GEOMETRY (4)
Prereq: Math 205. General geometric structures, topics from affine and projective geometries. Offered in alternate years. To be offered in 1982-83.
- 461 MODERN GEOMETRY (4)
Prereq: Math 401. Bilinear functions, orthogonal groups, general symmetries. Offered in alternate years. To be offered in 1982-83.
- 481 MATHEMATICS IN GRADES K THROUGH 8 (4)
Prereq: Math 281 and an arithmetic skills test. 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 own teaching.
- 495 MATH ALIVE
Prereq: one year of teaching experience. Preparation of models and materials for teaching mathematics. Survey of teaching strategies, concept development and problem solving.
495a Primary (4)
495b Intermediate (4)
495c Middle School (4)
- 510 MATHEMATICAL MODELING (3)
Prereq: Math 404. The use of mathematics to model problems in the real world.
- 517 TOPOLOGY (3)
Prereq: Math 423. Topological spaces, metric spaces, connectedness, compactness, product and quotient spaces, function spaces.
- 519 ALGEBRAIC TOPOLOGY (3)
Prereq: Math 402. A course designed to acquaint the student with the use of algebraic methods in topology. Details available from program adviser.
- 520 LEBESGUE MEASURE AND INTEGRATION (3)
Prereq: Math 423, corequisite Math 404. Lebesgue outer measure and measure, Lebesgue integral or 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.
- 531 THEORY OF FUNCTIONS OF A COMPLEX VARIABLE (4)
Prereq: Math 423. Complex numbers, the extended complex plane, analytic functions, power series, elementary functions, integrals, Cauchy's theorem, Cauchy's formula. Taylor's and Laurent's series, differential equations with analytic coefficients, calculus of residues, Roche's theorem, infinite products.
- 541 PROBABILITY (3)
Prereq: Math 441. Probability theory, both discrete and continuous. The Central Limit Theorem.
- 545 STOCHASTIC PROCESSES (3)
Prereq: Math 404 and 441. Topics from Markov and sequential decision processes, renewal theory, inventory theory, stochastic control, etc.
- 564 GRAPH THEORY (3)
Prereq: graduate status in mathematics. Basic properties of graphs, planar graphs, duality theory, intersection graphs, interval graphs, trees, path problems (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.
- 570 OPTIMIZATION (3)
Prereq: Math 404 and 423. Advanced topics in optimization.

Graduate Courses

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.

- 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.

- 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 DIFFERENTIATION 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 method.

COURSES IN COMPUTER SCIENCE

- 107 PROGRAMMING IN BASIC (3)
Prereq: Math 103 or equivalent. An introduction to computer programming and problem solving using the computer language BASIC. This course is intended primarily for students who wish to use BASIC in applications to social and physical science. Students who may wish to major or minor in mathematics or computer science should usually begin with CS 210 (or perhaps with CS 110 if so advised) rather than with CS 107.



- 110 INTRODUCTION TO PROGRAMMING (4)
Prereq: Math 103 or equivalent. Basic concepts of computer programming. 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. Persons 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.
- 123 ALGOL (1)
Prereq: CS 110 or 210. Programming using an ALGOL based programming language. S/U grading.
- 124 FORTRAN (1)
Prereq: CS 110 or 210. Programming using the FORTRAN language. S/U grading.

Mathematics/Computer Science

- 210 PROGRAMMING I (4)**
Prereq: Math 124 or 220 or 156. Intended as an introduction for students who plan to take upper-division courses in computer science. Design and implementation of algorithms. Includes overview of machine level programming and operating systems. Emphasis on good programming practices which are transferable between programming languages.
- 211 PROGRAMMING II (4)**
Prereq: CS 210. Design and implementation of large programs. Emphasis on programming techniques which contribute to efficiency, legibility, generality, and correctness of programs.
- 217 COBOL (3)**
Prereq: CS 210. COBOL programming with emphasis on business applications using auxiliary storage.
- 301 INTRODUCTION TO DISCRETE STRUCTURES (4)**
Prereq: CS 110 or 210. Basic algebraic structures; Boolean algebra and propositional logic; elementary graph theory; applications to computer science.
- 310 311 COMPUTERS AND ASSEMBLER LANGUAGE PROGRAMMING (4 ea)**
Prereq: CS 110 or 210; to be taken in sequence. Computer structure and system organization. Machine language, instruction execution, addressing techniques and digital representation of data; structure of assemblers; program segmentation and linkage; input/output and interrupts; operating system services; laboratory computer experience.
- 312 COMPUTERS AND ASSEMBLER LANGUAGE PROGRAMMING (3)**
Prereq: CS 311. A continuation of the CS 310, 311 sequence.
- 350 DATABASE MANAGEMENT (3)**
Prereq: CS 211 or 217. A theoretical introduction in which students are not required to write computer programs. (See CS 351.) Basic concepts, storage structures, data description and management languages, techniques of organization and access, security and integrity of databases. The course includes case studies and case problems.
- 351 APPLIED DATABASE MANAGEMENT (2)**
Prereq: CS 211 or CS 217; the student must register for CS 350 concurrently. Computer programming for problems in database management.
- 352 BUSINESS COMPUTER SYSTEMS (3)**
Prereq: CS 211 or 217. Management information systems, components of a business computer system, controls and feedback, analysis of business data; applications in general accounting, inventory, sales and ordering. (See CS 353.)
- 353 BUSINESS COMPUTER SYSTEMS PROJECT (2)**
Prereq: CS 217 and concurrent registration in CS 352. Programming for business computing; maintenance and modification of an existing system and the coding of a module in a new system.
- 391 INTRODUCTION TO CAI PROGRAMMING (5)**
Prereq: one year of teaching experience. The rudiments of Computer-Assisted Instruction (CAI) programming including the two languages BASIC and PILOT; also the editing of CAI materials by making alterations to existing programs. Over half of the terminal time will be devoted to production of, and testing of, instructional computer programs in the student's field of interest. (Normally offered summers only.)
- 401 INTRODUCTION TO AUTOMATA THEORY (4)**
Prereq: CS 301. Finite- and infinite-state machines, recursive functions, effective computability, the halting problem and other unsolvable problems.
- 405 DESIGN AND ANALYSIS OF ALGORITHMS (4)**
Prereq: CS 211 and 301. Design of efficient algorithms, examples of efficient algorithms. Computational models and measures of complexity. Correctness proofs for algorithms. Examples of problems for which no "good" algorithms can exist.
- 410 PROGRAMMING LANGUAGES (4)**
Prereq: CS 123, 211, 217 and 311. Introduction to the structure of programming languages; syntax and semantics; properties of algorithmic languages; special purpose languages.
- 417 SEMINAR IN SPECIAL TOPICS (4)**
- 420 COMPUTER ORGANIZATION (4)**
Prereq: CS 211, 301 and 311. Basic digital circuits, Boolean algebra and combinatorial logic, digital arithmetic; input-output facilities, system organization, reliability; features for multiprogramming, multiprocessing, and realtime systems; alternate organizations.
- 439 COMPUTER MODELING AND SIMULATION (4)**
Prereq: a college-level course in statistics; a college-level course in calculus; CS 110 or 210; and any one of BA 302, 403, Geog 430, Hux 435, Pol Sci 427, Psych 307, Soc 421, or 15 upper-division credits in mathematics and/or computer science. Basic concepts of dynamic modeling and system simulation, design and methodology of simulation models, model validation, simulation languages, application to decision making.
- 440 DATA STRUCTURES (4)**
Prereq: CS 211, 301, and 311. Basic concepts of data; storage management and operations on structures; searching and sorting; data structures in programming languages.
- 450 COMPILER DESIGN AND IMPLEMENTATION (4)**
Prereq: CS 440; 410 may be taken concurrently. Lexical and syntactical analysis; code generation and optimization; implementation of compilers and interpreters.
- 460 OPERATING SYSTEMS (4)**
Prereq: CS 420, 440. Principles of operating systems. Batch processing; multiprogramming and multiprocessing; time sharing; input-output; storage allocations; virtual memory; file system design and management.
- 470 COMPUTERWARE AND INSTALLATION MANAGEMENT (3)**
Prereq: CS 350 or 352. Selection of computer and communications hardware within technical and financial constraints. Evaluation of both hardware and software. Management of a computer installation. Visits to computer installations. Computerware selection project.
- 471 SYSTEMS ANALYSIS, DESIGN, AND IMPLEMENTATION (3)**
Prereq: CS 352. 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.
- 496 SEMINAR (1)**
Prereq: one 400-level computer science or mathematics-computer science course. Survey of field applications. Field trips, investigation of hardware and software products including mini- and micro-computers and their applications.



MUSIC

College of Fine and Performing Arts

At Western we believe music is doing — performing, composing, searching for new insights and sharing the joy of the art 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, 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 an associate 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

Music

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. We also provide 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 (206/676-3131).

Many music courses and activities are open to majors and non-majors. Students may select from among University Choir, Concert Choir, Chamber Choirs, Symphonic Band, Wind Ensemble, Jazz Ensembles, University Symphony Orchestra, Chamber Music, Opera, and Collegium Musicum.

MUSIC FACULTY

- ALBERT C. SHAW (1978) Chairman. Professor. BME, Wheaton College; MME, Drake University; DME Indiana University.
- AMERICOLE BIASINI (1970) Associate Professor. BS, MS, New York State University.
- BARTON FRANK (1969) Professor. Curtis Institute of Music; BM, MM, Tulsa University.
- CHARMIAN GADD (1977) Associate Professor. Teacher's and Performer's Diploma, New South Wales Conservatorium, Sydney, Australia.
- JEROME GLASS (1955) Associate Professor. BS, New York University; MMus, University of Southern California.
- WAYNE D. GORDER (1980) Associate Professor. BS, University of Wisconsin, Milwaukee; MS, EdD, University of Illinois.
- 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.
- C. BRUCE PULLAN (1975) Associate Professor. BA, MA, Cambridge; Diploma of Ed, Oxford
- SCOTT D. REEVES (1976) Lecturer. BM, Indiana University.
- CARLA S. RUTCHMAN (1975) Associate Professor. BA, 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.
- DAVID B. SCHAUB (1953) Professor. BA, MusB, Lawrence College; MA, Harvard University; PhD, University of California, Berkeley.
- PAUL H. STONER (1961) Associate Professor. BM, University of Kansas; MA, University of Iowa; DMA, University of Southern California.
- 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.

Adjunct Faculty

Richard Goldner
Edward Rutschman

Affiliate Music Faculty

Byron Akita, woodwinds
Scott Bajema, voice
Phillip Brink, trombone
Nicholas Bussard, oboe
Dan Dean, electric bass
Susan Erickson, voice
David Feingold, classical guitar
Karla Flygare, flute
James Fricke, jazz guitar
Stephen Keene, trumpet
Christopher Leuba, horn
Francine Peterson, bassoon.
Sally Walker, voice
Nancy Bussard, professional accompanist
Lucille Oster, professional accompanist

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 majoring in music performance may, under advisement, substitute up to 12 credits in chamber music for this requirement. Jazz studies majors may substitute up to 12 credits in chamber jazz ensembles under advisement. Performance ensembles may be repeated for credit.

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 quarter classes and during the first week of winter and spring quarter classes. 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:

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. Major and harmonic minor scales, hands together four octaves. It is expected that three pieces be prepared from different style periods and that at least one be played from memory. Sight reading will also be a part of the audition.

VIOLIN — Mazas, "Special Studies," opus 36, Book 1, edited by Hermann or Saenger; Handel, Corelli, Vivaldi or other sonatas. Solo pieces through five positions; scales two octaves (major and melodic minor).

VIOLA — Handel, Purcell or other sonatas; Telemann Concerto in G major or Vivaldi Concerto in E minor. Scales two octaves (major and melodic minor).

VIOLONCELLO — Completion of the Lee, "Method" Book 1 or Dotzauer "Studies" Book 1 or Grutzmacher "Studies" Book 1; short pieces or a sonata of the difficulty of Vivaldi or Marcello. Scales through the fourth position.

DOUBLE BASS — Simandl, "New Methods for the Double Bass," Book 1. Scales through half, first and second positions.

FLUTE — Any Handel sonata (except the E minor Sonata) [select at least one sonata]. Any etude from Anderson Etude Method, opus 41 [select any two of the 18 studies]. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

OBOE — Handel Sonata No. 1; Bach "Gavotte in D Major"; Grieg "Solvejg's Song" [select any two]. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

CLARINET — Any two etudes from "Thirty-two Etudes for Clarinet" by C. Rose, or from "Preliminary Studies for the Accomplished Clarinetist," Vol. I, by R. Jettel. One solo work comparable in difficulty to the Weber "Concertino" or Hindemith "Sonata." Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

BASSOON — Three or four selected studies from the Weissenborn Complete Method. Any two studies from the Weissenborn Advances 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 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 — Any characteristic study from Arban Complete Method. Haydn "Concerto" (first and second movements), or Vidal "Concertino" or Thome "Fantasy in Eb" or Corelli "Sonat VIII," edited by Fitzgerald. Major and minor scales through four sharps and four flats (two octaves when possible).

TROMBONE (TENOR AND BASS TROMBONE) AND EUPHONIUM — Two or three studies from "Melodious Etudes" by Rochut, Book I (bass trombone should play one octave lower where feasible). Studies one through ten of the Blashevich Flef 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 Weckselblatt. 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 considerable 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. In any category a minimum of two prepared pieces (one to be memorized) and demonstrated ability on selected sight-reading, is necessary for entrance to program of studies. Prior experience on piano is encouraged.

Music

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 versions. 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 AND MUSIC HISTORY 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.

The Music History Placement Examination is no longer administered as an entering transfer requirement. Transfer students will be expected to meet the junior-level music history requirement as stated in the catalog. Music history courses numbered at the 100 and 200 level will not be accepted in lieu of the requirement.

PIANO COMPETENCY

All music majors are required to pass a functional keyboard proficiency examination in order to complete this program. Students who enter as freshmen *must* take it by the end of their sophomore year. Transfer students should take the examination during their first quarter at Western; they must take it before completing their first full year at this University.

SCHOLARSHIPS

In addition to general university scholarships, several awards are available from off-campus music organizations. 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 "Arts, Interdisciplinary" in the Interdisciplinary Programs section of this catalog for full details of the major.

BACHELOR OF MUSIC

Music Education Major 91 credits (plus School of Education professional courses)

- Musicianship: Music 131, 132, 133, 231, 232, 233
- Music History/Literature: Music 342, 343; Music 341 or 344
- Conducting: Music 307; Music 308 or 309
- Applied Music: on major instrument or voice each quarter in residence except quarters student teaching — minimum of three credits in courses numbered 311-316 or above
- Music 351 and 451 (elementary emphasis) or Music 462 and 463 (secondary emphasis)
- Pedagogy for instrumental specialists: Music 105, 106, 301, 302, six quarters of Music 209. Pedagogy for choral and elementary specialists: Music 105, 106, 301, two quarters of 2C9. Vocal majors do not take Music 105, 106 and must add two credits to their music electives (see below)
- Music electives (under advisement): choral and elementary specialists are required to select five additional music credits except that those who are vocal majors must select seven additional music credits (see Pedagogy above)

- Major performing ensemble
- Successful completion of student teaching in music.

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.

Basic Core (required for all professional majors) 72 credits

- Musicianship: Music 131, 132, 133, 231, 232, 233
- Music History/Literature: Music 342, 343; Music 341 or 344
- Conducting: Music 307; Music 308 or 309
- Area Majors: Performance, Composition, Music History/Literature or Jazz Studies (see major requirements)
- Chamber Music: 6 credits to be selected under advisement from Music 425, 426, 427, 434, and 440
- Major performing ensembles

Performance Major 53 credits

- Entrance by performance audition — student must expect to achieve upper-division applied instruction by sophomore year
- Applied music: on major instrument or voice, 30 credits, minimum of 3 credits in courses numbered 411-416
- Music History: 4 credits additional beyond core requirement
- Chamber Music: 2 credits additional beyond core requirement
- Music electives (under advisement): 14 credits
- Successful completion of junior and senior recitals: 3 credits

Performance majors may substitute up to 12 credits in chamber music for the major performing ensemble requirement: Pianists-Music 426; Classical Guitarists-Music 440.

Composition Major 53 credits

- Entrance by compositional accomplishment and interview — student must qualify for upper-division composition courses by junior year
- Courses in composition: 21 credits
- Applied music on major instrument or voice: 12 credits, minimum of 3 credits in courses numbered 311-316 or above
- Music 331, 333, 6 credits

- Music 420, 4 credits
- Instrumental Techniques: Music 209 & 301, 3 credits
- Music electives (under advisement): 4 credits
- Successful completion of a senior recital of original compositions: 3 credits

Music History/Literature Major

53 credits

- Entrance by interview and distinguished accomplishment in musicianship
- Music 331, 332, 333, 9 credits
- Applied music on major instrument or voice: 12 credits, minimum of 3 credits in courses numbered 311-316 or above
- Music History: 4 credits additional beyond core requirement
- Chamber Music: 2 credits additional beyond core requirement (total of 4 credits required in Music 440)
- Music 444, 3 credits
- Music 446 or 443, 12 credits
- Music 490, 3 credits
- Music electives (under advisement): 8 credits

Jazz Studies Major 53 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
- Music 250, 3 credits
- Jazz Improvisation: Music 328, 329, 330, 9 credits
- Jazz Arranging: Music 428, 430, 436, 9 credits
- Applied music on major instrument or voice: 14 credits, minimum of 3 credits in courses numbered 311-318 or above
- Jazz Ensembles: Music 229, 425, 429, 8 credits
- Music electives (under advisement): 7 credits
- Successful completion of jazz recital demonstrating mastery in improvisation and writing/arranging: 3 credits

Jazz Studies majors who play piano, guitar or electric bass may substitute up to 12 credits in jazz ensembles (Music 229, 425, 429) 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." 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)

- Musicianship: Music 131, 132, 133, 231, 232
- Music History/Literature: Music 342, 343; 341 or 344
- Education: Music 251, 451
- Methods: Music 105, 106, 107. Those with voice as major instrument, replace Music 105, 106, 107 with equal credits in music electives under advisement
- Applied Music: major performing instrument or voice, minimum 6 quarters, with a minimum of 3 credits numbered 311-316 or above
- Major performing ensembles as stated above for all majors
- Music 233 recommended as an elective as it is prerequisite to graduate study

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, 500; 417; 445 are described on page 32 of this catalog.

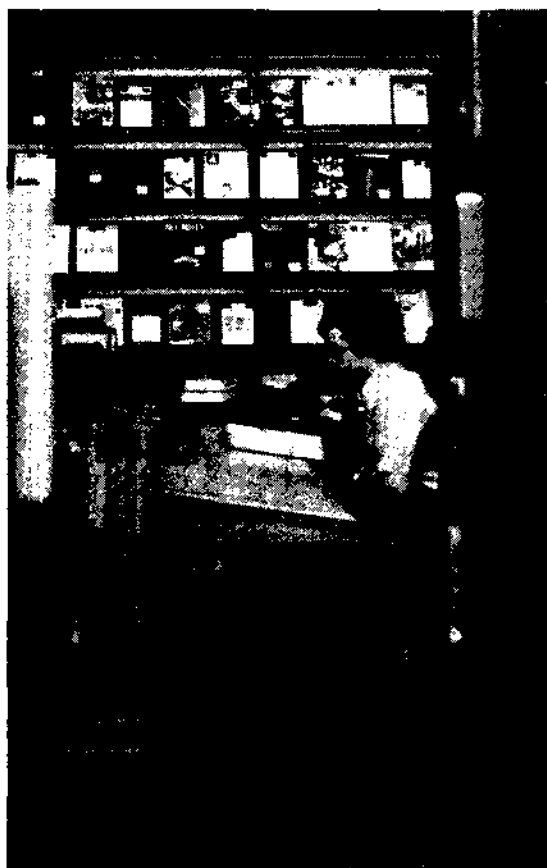
- 101, 102, 103 BEGINNING CLASS PIANO (1 ea)
Prereq: open to music majors only; each course prerequisite to the next. Basic techniques, sight reading skills and functional application of the scale and harmonic materials learned in theory class.
- 105 CLASS VOICE AND PEDAGOGY (1)
Prereq: open to music majors only; each course prerequisite to the next. Tone production, song repertoire interpretation and pedagogy for non-voice majors.
- 106, 107 CLASS VOICE AND SIGHTSINGING (1 ea)
Prereq: open to music majors only; each course prerequisite to the next. Continuing emphasis on content of Music 105 with additional emphasis on sight singing.
- 128 INTRODUCTION TO MUSIC THEORY AND NOTATION (3)
(Open to non-majors) Basic components of music notation; major and minor scales, intervals, triads and keys.
- 129 INTRODUCTION TO MUSIC THEORY AND EAR-TRAINING (3)
Prereq: Music 128. Continuation of Music 128 with added emphasis upon ear-training and writing skills.
- 130 INTRODUCTION TO MUSICIANSHIP (3)
Prereq: Music 129. Continuation of Music 129 with expansion of harmonic vocabulary and emphasis upon practical applications.

- 131, 132, 133 MUSICIANSHIP I (4 ea)
Prereq: open to music majors only; each course prerequisite to the next. The developmental process of dealing with the musical parameters of pitch, duration, timbre, amplitude and structural forms through performance, writing, aural and analytical skills. Major stylistic emphasis upon functional harmony of the 17th, 18th and 19th centuries with possible exploration into 20th century techniques.
- 140 THE ART OF LISTENING TO MUSIC (3)
Non-technical basis for enjoyable listening to music; performance practices relating to symphony orchestras, instrumental ensembles, opera, choral groups, and solo performance.
- 201, 202, 203 INTERMEDIATE CLASS PIANO (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 examinations.
- 209 INSTRUMENTAL LAB FOR SECONDARY INSTRUMENTS (1)
Prereq: open to music majors only. Laboratory in comprehensive musicianship and instrumental pedagogy for all instruments. Performance on major and secondary instruments, conducting, developing teaching strategies with goals and objectives. May be repeated for credit.
- 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 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.
- 223 SYMPHONIC BAND (2)
Prereq: permission of instructor. Preparation and performance of major band works. Open to all students with band experience.
- 229 JAZZ ENSEMBLES (2)
Prereq: by audition. Performance and interpretation of contemporary jazz in an ensemble situation.
- 231, 232, 233 MUSICIANSHIP II (4 ea)
Prereq: Music 133; open to music majors only; each course prerequisite to the next. Continuation and intensification of the processes developed in Music 131, 132 and 133 with expansion of stylistic considerations to cover the full musical scope of Western civilization from the Middle Ages through the 20th century.
- 250 JAZZ: GENESIS AND EVOLUTION (3)
Open to all students. Personalities, styles and social/cultural influences on jazz from its beginning to the present day.
- 280 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. May be repeated for credit.

- 281 COMPOSITION IN POPULAR IDIOMS (1-2)
Prereq: permission of instructor, and Music 128. Creating of ballads, blues, combo charts and the making of tapes for demonstration. May be repeated for credit.
- 301, 302 STRING TECHNIQUE AND PEDAGOGY (1 ea)
Prereq: open to music majors only; each course prerequisite to the next. Principles and techniques of playing and teaching string instruments.
- 307 BASIC CONDUCTING (3)
Prereq: Music 233 and music major status. Basic conducting, conducting techniques, score reading and interpretive analysis.
- 308 INSTRUMENTAL CONDUCTING (3)
Prereq: Music 307 and music major status. Advanced instrumental techniques, score reading, interpretive analysis and rehearsal techniques.
- 309 CHORAL CONDUCTING (3)
Prereq: Music 307 and music major status. Advanced choral techniques, score reading, interpretive analysis and rehearsal techniques.
- 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
- 328 JAZZ IMPROVISATION I (3)
Prereq: open to all accepted jazz majors or Music 232 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.
- 329 JAZZ IMPROVISATION II (3)
Prereq: Music 328. Study of altered chords, scales and patterns with improvisation based on these principles. Analysis of transcribed solos, study of jazz repertoire and ear-training.
- 330 JAZZ IMPROVISATION III (3)
Prereq: Music 329. 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.
- 331 COUNTERPOINT (3)
Prereq: Music 131 and music major status. Modal counterpoint in the style of the 16th century. Two-voice motets. composition and analysis.
- 332 COUNTERPOINT (3)
Prereq: Music 331 and music major status. Modal counterpoint in the style of the 16th century. Composition and analysis in three and more voices.
- 333 COUNTERPOINT (3)
Prereq: Music 233 and music major status. Tonal counterpoint in the style of the 18th century. Compositions in the style of the Bach two- and three-part inventions. Introduction to the fugue.
- 338 STRING INSTRUMENT TECHNOLOGY (3)
History, construction, maintenance and repair of string instruments especially oriented to the needs of public school and studio teachers. Laboratory experience stressed and students must supply basic lab tools and materials. Summers only.
- 341 HISTORY OF MUSIC TO 1600 (4)
Prereq: Music 232 and music major status. Main styles, forms, terminology and composers up to 1600. Individual research projects.
- 342 HISTORY OF MUSIC 1600-1750 (4)
Prereq: Music 232 and music major status. Main styles, forms, terminology and composers from 1600-1750. Individual research projects.
- 343 HISTORY OF MUSIC 1750-1900 (4)
Prereq: Music 232 and music major status. Main styles, forms, terminology and composers from 1750 to 1900. Individual research projects.
- 344 HISTORY OF MUSIC 1900 TO PRESENT (4)
Prereq: Music 232 and music major status. Main styles, forms, terminology and composers from 1900 to present. Individual research projects.
- 350 MUSIC FOR ELEMENTARY TEACHERS (3)
For elementary classroom teachers, *not music majors*. The skills of singing, reading, writing, playing, and hearing music; techniques and materials used in the elementary grades.
- 351 ELEMENTARY MUSIC EDUCATION (3)
Prereq: Music 232 and music major status. Teaching techniques, materials and organization of the elementary music program; observations and laboratory experience.
- 380 COMPOSITION (3)
Prereq: Music 233 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. May be repeated for credit.
- 405 VOCAL TECHNIQUE AND PEDAGOGY (2)
Vocal problems and their corrections; suitable collections of repertoire for young soloists.
- 409 CHORAL CONDUCTING PRACTICUM (1)
Prereq: Music 307 and 309, and permission of instructor. Direction of student chamber ensemble under faculty supervision. Project includes rehearsal techniques, repertoire research and public performance. May be repeated for credit. Subject to availability of small vocal ensembles.
- 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
- 420 ELECTRONIC MUSIC LABORATORY (4)
Instruction in the use of the ARP Synthesizer, tape recording techniques, audio generators and modifiers for use in electronic music, composition and performance. Equipment for teaching electronic music on a low budget. Group instruction and studio time in the use of this equipment. Open to non-majors.

Music

- 421 **CONCERT CHOIR (2)**
Prereq: by audition. Selected group experience, vocal ability, reading skill, musicianship and interest in serious choral music considered for membership.
- 422 **UNIVERSITY SYMPHONY ORCHESTRA (2)**
Prereq: by audition; open to all students who qualify.
- 423 **WIND ENSEMBLE (2)**
Prereq: by audition.
- 424 **OPERA PRODUCTION (1-2)**
Admission by audition. Preparation of opera scenes or a major musical production to include a public performance each quarter.
- 425 **CHAMBER JAZZ ENSEMBLE (2)**
Prereq: by audition; Music 328 or 428 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.
- 426 **APPLIED CHAMBER MUSIC (2)**
Open to string and piano performers by permission of instructor.
- 427 **CHAMBER VOCAL ENSEMBLES (2)**
Prereq: permission of instructor. May be repeated for credit.
- 428 **JAZZ ARRANGING I (3)**
Prereq: Music 233 or 328. Writing and arranging for small jazz ensembles. Analysis of small jazz ensemble styles.
- 429 **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.
- 430 **JAZZ ARRANGING II (3)**
Prereq: Music 428. Writing and arranging for a variety of instrumental combinations. Analysis of jazz ensemble styles.
- 431 **ORCHESTRATION (3)**
Orchestration, with special reference to the needs of the instrumental director. Offered irregularly.
- 434 **APPLIED CHAMBER MUSIC — WINDS (2)**
Prereq: permission of instructor. Open to brass/woodwinds and percussion performers.
- 435 **COMPOSITION (3)**
Prereq: Music 380 for at least two quarters. Writing pieces of broad proportions for various media. May be repeated for credit.
- 436 **JAZZ ARRANGING II (3)**
Prereq: Music 430. Writing and arranging for large jazz ensemble. Analysis of large jazz ensemble styles.
- 440 **COLLEGIUM MUSICUM (2)**
Music literature studies from an analytical and performance viewpoint from early to pre-classic music culminating in a public performance each quarter.
- 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
- 444 **NOTATION (3)**
Reading and interpreting early, contemporary or other extant systems.
- 446 **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. On-going results of this research will be shared with other members of the seminar. Focus of the course will vary from quarter to quarter. Course may be repeated for credit.
- 451 **ADVANCED METHODS FOR ELEMENTARY SCHOOLS (3)**
Prereq: Music 350 or 351. Introduction to Kodaly method; advanced teaching techniques, activities, materials and literature for elementary music teaching.
- 458 **CHAMBER MUSIC READINGS (6)**
Prereq: permission of instructor. Selected quartet and quintet music from the classic, romantic, impressionistic and modern periods with special emphasis on sight reading and style. Open to string, woodwind and brass players and pianists. Offered summers only.
- 460 **MARCHING BAND TECHNIQUES (3)**
Marching band organization, parade marching, and show routine.



- 462, 463 SECONDARY SCHOOL MUSIC ADMINISTRATION AND MUSIC IN GENERAL EDUCATION (3 ea)
Philosophy, curriculum development, teaching strategies, materials, evaluation and administrative problems for secondary music teachers with emphasis on comprehensive musicianship as well as traditional methods and materials. Students will be expected to research, sing, compose, perform, improvise, conduct, instruct and react to live musical thought. Must be completed prior to student teaching.
- 467 BIRCH BAY BAND MUSIC WORKSHOP (2)
Offered summers only. May be repeated for credit.
- 490 SENIOR THESIS (3)
Prereq: admission to program; permission of instructor. S/U grading.
- 499 SENIOR RECITAL (3)
Prereq: approval of Recital Committee. A full-length public recital approved by the student's Recital Committee. S/U grading.
- 515 INDIVIDUAL INSTRUCTION — ADVANCED VOICE (3)
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.
- 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 436. Composition in the classic forms for solo instruments or small ensembles.
- 535 COMPOSITION (4)
Prereq: Music 436. Composition for solo voice accompanied by piano or small ensembles; composition of choral works both a capella and accompanied.
- 536 COMPOSITION (4)
Prereq: Music 436. 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.M. 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.
- 545 SEMINAR IN THE HISTORY OF MUSIC (3)
Prereq: permission of instructor. Detailed study of a particular period or phase of the history of music designed to give students a first-hand acquaintance with one special area of musical literature and with musicological method.
- 690 THESIS (4-6)
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.

Graduate Courses

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.
- 502 CHORAL CONDUCTING AND LITERATURE (3)
Successful techniques in developing and conducting choral groups, score analysis of outstanding choral works; laboratory experience in conducting.
- 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)
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)
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)
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)
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.



NURSING

College of Arts and Sciences

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 stimuli and encourages the client to assume increasing responsibility and participation in his or her own health care. The purpose of nursing is to assist the client in maintaining a steady state of health, to 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 requires that health care be offered in a variety of community settings. Nursing collaborates with the client to assist in the most economical use of resources to maintain a good state of health. These nursing activities are applicable to: (1) the physiological changes and adaptations of all individuals regardless of their health state; (2) the

psychological coping of all individuals; and (3) the social, cultural and economic situations encountered throughout a lifetime.

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; the gaining of proficiency in nursing skills for the delivery of health care; and the utilization of research findings. With further academic preparation the nurse becomes 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 of the significance of phenomena. The responsibility for learning is mutually shared

between learner and teacher in an atmosphere of respect. Each learner has unique needs, abilities and motivation.

THE DOMAIN OF RESEARCH

Research contributes to nursing through investigations into health. Nursing studies and the generation of questions concerning the findings are its 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, continuing education to meet the needs of practicing nurses and consultation to service and educational agencies. The faculty members of the Department of Nursing participate in professional, community and governmental health-care organizations. Through participation in these activities, the Department of Nursing responds to the health needs of citizens of the State of Washington.

The Department of Nursing serves two groups of students:

Pre-Nursing

Western Washington University offers a one-and a two-year pre-nursing program designed to assist students in meeting the requirements for admission to a nursing program. A student may become a Registered Nurse by completing a nursing program in a community college (two year) or baccalaureate degree program in a college or university (four year) and successfully completing State Board Examination for licensing. Requirements for these programs vary; students are advised to seek individual guidance from the nurse adviser. No assurance can be given that all applicants admitted to the University and successfully completing lower-division work will be admitted into an upper-division nursing program.

RN-BSN Program

The program is designed for graduates of Associate Degree in Nursing and Diploma Schools of Nursing wishing to obtain a Bachelor

of Science in Nursing. The graduate of the Western Washington University program will utilize the nursing process, have skills in client teaching, communication and leadership, and have a commitment to personal and professional growth.

ADMISSION PROCEDURE

The Registered Nurse applicant is encouraged to seek guidance from the Department of Nursing prior to course selection.

Admission to the program is competitive. All materials, test results and other items necessary for the admission of the applicant must be received by the Department of Nursing by February 1.

The Admission Committee of the Department of Nursing will review all applicants and make the final determination of admission to the program. Applicants will be notified of the decision of the committee as soon as possible after the complete application has been received. The Department of Nursing is committed to assuring non-discrimination based on race, color, religion, national origin, sex, age, marital status, or the presence of any sensory, mental or physical handicap. In addition, the Department of Nursing adheres to the principles of affirmative action in admissions.

ADMISSION REQUIREMENTS FOR THE DEPARTMENT OF NURSING

1. A valid Washington State License to practice professional nursing.
2. Admission to Western Washington University.
3. A minimum grade point average of 2.50 ("C+").
4. References from the following persons: (a) dean/chairperson or nursing instructor; (b) a nursing supervisor (if you have not been employed as a nurse, please substitute reference from a second nursing instructor); (c) a peer who can evaluate your nursing practice.
5. A statement of your nursing career goals and why you want to obtain the BSN.
6. An employment history including nursing practice.
7. Evidence of current professional liability insurance must be submitted to the department before beginning the nursing course.
8. Interview with the Department of Nursing Admissions Committee. Applicants will be notified of time and place of the interview.

Nursing

9. Applicants who have taken science courses more than seven years before the quarter of admission will be required to establish competency in such courses before they can be admitted to the department.

Both ADN graduates from a program not accredited by the NLN and Diploma Graduates from a program accredited by the NLN must obtain college credit for nursing courses completed in these programs by satisfactorily completing four ACT PEP examinations. Forty nursing credits will be granted if results of the ACT PEP examinations are at the standard score of 45 or above on each of the tests. These will be recorded as transfer credits and carry no grade or quality point value.

Diploma graduates from a program not accredited by the NLN: The graduate of a Hospital Diploma Program which was not accredited by the NLN is not eligible to apply for admission to the Department of Nursing.

ACT PEP TESTING

The ACT PEP examinations will be given at Western Washington University Testing Center. Testing dates usually occur during the months of November, February, May and July. Please contact the Testing Center, Old Main 120, phone 676-3080, for information concerning these examinations.

NURSING FACULTY

- ANN HARLEY (1980) Chairman.
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.
MARYANNE SPEAR (1980) Assistant Professor. BSN, MHS, University of California.

BACHELOR OF SCIENCE

Courses prerequisite to the nursing major:

- Eng 101
- Speech 101
- Psych 201, 316
- Anth 201 or Soc 202
- Math 103
- Biol 101
- Chem 115, 251
- Microbiology
- Human Anatomy and Physiology (2 quarters)

Major Concentration 65 credits

- Nurs 320, 330, 420, 425, 430, 440, 445, 450

- Supporting Courses: Chem 371, 375; Anth 424; Biol 351; Home Econ 250; Math 240
- Electives, selected under departmental advisement in nursing, humanities, non-Western and minority cultural studies to total 94 credits

A minimum of 180 quarter hours of credit is required for a Bachelor of Science degree in Nursing.

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; X37; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

- 320 NURSING OF ADULTS (6)
Prereq: Chem 371, 375; Anth 424. The nursing process as applied to adults and families to facilitate health; includes clinical application.
- 330 PARENT AND CHILD NURSING (6)
Prereq: Nurs 320, Biol 351. The nursing process as applied to parents and children to facilitate health; includes clinical application.
- 410 GERONTOLOGICAL NURSING (6)
Prereq: Nurs 320; Chem 371, 375; Biol 351. Application of the nursing process to older persons to facilitate health; includes clinical application.
- 411 YOUNG ADOLESCENT HEALTH CARE (6)
Prereq: Nurs 320, 330, 450. Application of the nursing process to facilitate and promote health in the young adolescent; includes clinical application.
- 420 ANALYSIS OF CARE SYSTEMS (3)
Prereq: Nurs 320, 330, 440, 450. The action research design applied to health-care systems as they influence nursing.
- 425 MANAGEMENT OF CARE SYSTEMS (8)
Prereq: Nurs 320, 330, 430, 440, 450. Health-care management system in nursing service, quality assurance; role of nurse and client. Clinical application.
- 430 PSYCHOSOCIAL NURSING (6)
Prereq: Nurs 320, 330, 440, 450. The nursing process applied to families and groups having multiple, developmental and evolutionary crisis; 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. Community analysis, case finding and referral of individual, groups and community; includes clinical application.



OFFICE ADMINISTRATION & BUSINESS EDUCATION

College of Business and Economics

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 the offices of business, industry, and government. A knowledge of the skills of office workers, as well as a knowledge of the concepts of office organization, system design and management, and of the changing trends in office operations are included in the coursework for this major. The Bachelor of Science degree is awarded upon successful completion of the program.

Major course requirements are designed to provide a healthy balance in the management tools and include work in office administration, busi-

ness administration, accounting, economics and computer science. Elective options are available, depending upon the student's interest.

The business teacher education program has the responsibility for the preparation of competent business education 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 each of the business subjects, and a minor in business administration 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) Chairman.
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.
- LYNN M. YUROVCHAK (1979) Assistant Professor. BA, MEd, Western Washington State College.

BACHELOR OF ARTS

Minor — Business Education 25 credits

- Courses to be selected under departmental advisement

BACHELOR OF ARTS IN EDUCATION

Major — Business Education
Secondary 93 credits

- Off Admin 215, 222, 223, 241, 242, 243, 301, 310, 412
- Bus Ed 319, 421, 422, 423, 450, 490
- Econ 203, 204, 311 (or BA 341)
- BA 271, 301, 330
- Acctg 241, 242, 243
- Math 155

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
103-104 credits

- Off Admin 215, 222, 223, 224, 241, 242, 243, 301, 310, 412
- Acctg 241, 242, 243
- BA 255, 271, 301, 303, 341*, 330
- Econ 203, 204, 311*
- Math 155, Comp Sci 110 or 117
- Electives: 18 credits under departmental advisement

*Elect from BA 341 or Econ 311

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, 500; 417; 445 are described on page 32 of this catalog.

- 116 BASIC TYPEWRITING (3)
Development of the basic techniques of typewriting. Emphasis will be on the use of the typewriter as a communication tool.
- 117 INTERMEDIATE TYPEWRITING (3)
Prereq: Off Admin 116 or equivalent. Continued development of skills and techniques with emphasis on the application of skill to a variety of communication activities.
- 120 BEGINNING SHORTHAND (5)
Prereq: Off Admin 116 or equivalent. Mastery of Gregg shorthand theory with development of reading skill and an introduction to recording and transcribing skills.
- 121 INTERMEDIATE SHORTHAND (4)
Prereq: Off Admin 120 or equivalent. Continued development of theory and reading skill 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 skill development with application to various communication tasks, such as rough drafts, tabulations, reports, business and legal forms. Completion of in-basket projects and a unit in power typewriting is required.
- 222 ADVANCED SHORTHAND (4)
Prereq: Off Admin 121 or equivalent. Continued development of reading skills with increased attention on 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 skills with increased attention to production ability.
- 224 OFFICE PROCEDURES (3)
Prereq: Off Admin 117 or equivalent. Development of skills and procedures for performing office duties.
- 241 BUSINESS MACHINES (3)
Development of proficiency in the operation of electronic business machines.
- 242 MACHINE TRANSCRIPTION (2)
Prereq: Off Admin 117 or equivalent. Development of the nontranscription skills and skill in producing written communications from recorded media.
- 243 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 and management of office records systems, development of skills in the use of records and the managerial aspects of records management. Case problem approach is used.
- 412 **OFFICE ADMINISTRATION AND MANAGEMENT (4)**
Prereq: Off Admin 224, 310. Emphasis on organizing and planning office services; planning and implementing efficient work flow; staffing, training, orienting and promoting office personnel; controlling office administrative operations; and the business information processing systems
- 490 **INTERNSHIP IN OFFICE ADMINISTRATION (4-12)**
Prereq: Off Admin 412. Practical application of skills and theories learned in the classroom. Additionally, "hands-on" experience can be offered which cannot be a part of classroom instruction. 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 typewriting skill, 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 and equipment. Student teaching demonstrations.
- 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

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.



PHILOSOPHY

College of Arts and Sciences

The Department of Philosophy offers a wide range of courses in most of the traditional areas of philosophical concern. These may be combined into programs leading to a major or minor in philosophy, and in several cases may be taken to satisfy general educational requirements of the University.

Work in philosophy also fits well into many pre-professional programs. For example, for purposes of preparation for law school it is highly desirable; indeed some law schools historically have listed it as the preferred undergraduate major. It is also a preferred major for jobs in government, business, and so on, which require a liberal arts background.

Philosophy is among the oldest of intellectual disciplines. Many areas of study now separate from philosophy, for example, the various sciences, may be regarded as offspring of philosophy which have come of age. Nevertheless,

the central philosophical questions remain as vital as ever.

Historically, philosophy has been regarded by many as the most basic of intellectual disciplines; it is the firm conviction of the faculty of the Department of Philosophy that it is among the most relevant. Among the questions dealt with in one philosophy course or another are "What is knowledge?" "What is truth?" "Can we gain knowledge?" "Can we know the truth?" "Are there such things as right and wrong?" "Does God exist?" "What is the nature of the distinction between minds and bodies?" "Are persons machines?" and the like. The department believes that consideration of these and related questions is fundamental to being educated and as such should be of interest to all students; moreover the department believes that many students are sufficiently able and mature intellectually to pursue answers to these questions at an advanced level with profit, and the faculty invite them to join in this pursuit.

PHILOSOPHY FACULTY

HUGH FLEETWOOD (1962) Chairman.
Associate Professor. AB, MA, PhD, The University of Michigan.

STANLEY M. DAUGERT (1962) Professor. AB, MA, PhD, Columbia University.

THOMAS E. DOWNING (1968) Assistant Professor. AB, Wayne State University; PhD, Stanford University.

PHILLIP MONTAGUE (1966) Professor. BS, Loyola University; PhD, Stanford University.

PAUL J. OLSCAMP (1975) Professor of Philosophy and President of the University. BA, MA, University of Western Ontario; PhD, University of Rochester.

RICHARD L. PURTILL (1962) Professor. BA, MA, PhD, University of Chicago.

BACHELOR OF ARTS

Major 50 credits

- Phil 102, 111, 112
- Phil 202
- Phil 303, 304, 306, 310
- One course from Phil 305, 307, 308
- Phil 410, 417, 420, 425
- Electives under departmental advisement

Minor 25 credits

- Phil 102, 111, 112, 310
- Electives under departmental advisement

TEACHER EDUCATION

Minor 25 credits

- Phil 102, 111, 112, 310
- Electives under departmental advisement

COURSES IN PHILOSOPHY

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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.

- 111 INTRODUCTION TO PHILOSOPHY: PHILOSOPHICAL PROBLEMS (3)
Great recurrent philosophical problems and some of the answers which have been developed; reading and discussion of selected writings.

- 112 INTRODUCTION TO PHILOSOPHY: MORAL PHILOSOPHY (3)
Nature of moral problems and judgments; emphasis upon meaning of such concepts as "goodness," "rightness," "evil," "duty," and "happiness."
- 113 INTRODUCTION TO PHILOSOPHY: PHILOSOPHY OF RELIGION (3)
Nature of religion, especially theism. Nature and existence of God, problem of evil. Selected subjects from the following: role of faith and reason, religious experience and religious language, immortality, free will.
- 202 INTERMEDIATE LOGIC (4)
Prereq: Phil 102. Systems of logic and their application to philosophical problems.
- 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.
- 301 MORAL PROBLEMS IN BIOMEDICINE (3)
Prereq: one philosophy or one biology course. An investigation of moral problems that arise in connection with medical practice and research in the life sciences. Some of the more prominent of these concern genetic engineering, euthanasia, etc.
- 302 ADVANCED LOGIC (4)
Prereq: Phil 202. Further development of the tools and techniques of logic; applications in mathematics, science and philosophy.
- 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 AND TWENTIETH CENTURIES (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.

Philosophy

308 AMERICAN PHILOSOPHY (3)

Prereq: one course in philosophy. Main currents in American philosophical thought from Jonathan Edwards to the present. Normally offered in odd-numbered academic years

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.

350 ORIENTAL PHILOSOPHY AND RELIGION (3)

Prereq: upper-class standing. Major philosophical and religious traditions of the Orient.

405 PHILOSOPHY OF ART AND CRITICISM (3)

Prereq: upper-class standing. Philosophical study of beauty and the creation, appreciation and criticism of works of art.

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.

411 PHILOSOPHY OF SCIENCE (3)

Prereq: permission of instructor. Varying theories as to the nature, presuppositions, limitations and interrelations of the sciences.

420 ETHICAL THEORY (3)

Prereq: Phil 112. Critical analysis of writings of several major theorists in ethics — ancient, modern, and contemporary — and the 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

College of Arts and Sciences

The department offers a variety of major/minor options for students interested in professions related to physical education, health, recreation and parks. Students may pursue career interests in public education or in industrial/commercial or governmental agencies in fitness, health maintenance programs, community health, recreation. Concerns in society for health, fitness and life-time recreational skills offers new career opportunities in programs for the young adults as well as in senior centers, health and sports clubs. Sports journalism, coaching, cardiac rehabilitation, pre-physical therapy and exercise sciences are career goal possibilities.

The department has expanded the sports and exercise science laboratory facility to afford students in-depth study in exercise physiology and biomechanics as applied to health and sports medicine. Considerable practical experience using laboratory equipment enables a stu-

dent to develop skills in cardiorespiratory, strength and flexibility and weight/percent body fat assessments using treadmills, ergometers and a Beckman Metabolic Measurement cart.

In addition to major/minor programs, a broad selection of activities is offered for students interested in developing life-time sports skills and/or in the promotion of personal fitness and health. In addition to team and individual sports classes, courses are offered in outdoor pursuits, including skiing, mountaineering, sailing, horsemanship, ice skating, hiking and alpine travel.

Western students are generally highly interested in participating in sports, dance, 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 are available for students.

PHYSICAL EDUCATION, HEALTH AND RECREATION FACULTY

- M. CHAPPELLE ARNETT (1960) Chairperson. Professor. BS, Centenary College; MS, Purdue University; EdD, University of Missouri
- MARGARET H. AITKEN (1946) Professor. BA, University of Washington; MA, EdD, Teachers College, Columbia University.
- 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.
- JILL HECKATHORN (1980) Assistant Professor. BS, MA, Michigan State University.
- KATHLEEN KNUTZEN (1977) Assistant Professor. BA, MA, Western Washington State College.
- BOYDE LONG (1966) Associate Professor. BS, MA, University of New Mexico.
- JAMES R. LOUNSBERRY (1959) Associate Professor. BA in Ed, Central Washington State College; MS, EdD, University of Washington.
- JAMES E. MOORE (1977) Assistant Professor. BA, University of Oregon; MEd, PhD, Oregon State University.
- CHARLES RANDALL, JR. (1962) Associate Professor. BA, Eastern Washington State College; MA, Washington State University.
- RONALD D. RIGGINS (1977) Assistant Professor. BA, Laverne College; MS Recreation, Indiana University.
- 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.
- EVELYN D. WISEMAN (1970) Associate Professor. Teacher Training — Homerton College, Cambridge, England; Dip in Ed, University of Birmingham; MEd, Western Washington State College

Coaching Associate

- Lynja M. Goodrich (1973) Women's Athletic Director. BA in Ed, MA, Western Washington State College.
- Denny Huston (1981) Men's Basketball Coach. BA, MA, Western Washington State College.

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
- Professional activities and skill competencies: select 12 credits from PE 100- and 200-level courses; departmental advisement is required in this selection

- Exercise and sport science: select 25 credits from PE 301, 302, 303, 307, 402, 485, 490; Biol 348 or 349
- Socio-cultural aspects of sports and physical education: 12 credits in PE 308, 309, 310, 407, 409
- PE 491 (6 credits)
- H Ed 252 or 352
- Specialization area: select 25 credits from one of the following specializations:
 - Coaching of Sports: PE 304; PE 341-347; PE 380-387; PE 406, 410
 - Journalism: complete the journalism minor; see Journalism Department section of General Catalog
 - Dance: complete dance minor
 - Recreation and Parks Option: complete the recreation and parks minor; see Recreation and Parks section of General Catalog
 - Pre-Physical Therapy: see requirements listed in the Professional Transfer Programs section of General Catalog
 - Business Administration: complete the business administration minor; see Business Administration section of General Catalog
- Health and Exercise Science; 25-30 credits (students are required to take PE 301, 302, 303, 402, 485, Biol 348 as part of the major)
 - H Ed 349
 - H Ed 350
 - PE 304, 409, 412, 413
 - Additional credits selected from: Psych 326, 357, Biol 334, Home Ec 250, Soc 325. H Ed 447

Minor — Physical Education 30 credits

- PE 200
- 8-10 credits from professional activities PE 203-256
- 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 — Athletic Coaching

(Men & Women) 30 credits

- 7-9 credits selected from PE 380-387
- 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 348-349 recommended. Concentrated study in one sport is recommended with additional participation in activity classes and intercollegiate teams in other sports.

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 64 credits

- Prerequisite: RP 171
- Phase I: RP 271, 272, 274, 275, 276
- Phase II: RP 372, 373, 374, plus 2 of 3: RP 375, 376, 377
- Phase III: RP 471
- Phase IV: RP 444, 446, 450, plus 2 of 3: RP 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, nature resource management, environmental planning, physical education, cultural arts, commercial recreation, biology.

Minor 34 credits

- Prerequisite: RP 171
- Complete Phases I and II

BACHELOR OF ARTS IN EDUCATION

Physical Education Majors

Physical education major programs are available for men and women students. Three options within the program prepare students for teaching physical education: option I for grades K-12; option II for secondary schools (this major should be accompanied by another academic major or minor); option III for elementary schools which requires an elementary education minor. The three options have similar requirements derived from four core areas: Core A: Professional Activities - 200-level courses; Core B: Exercise and Sport Science and History; Core C: Curriculum, Methods, Practicum; Core D: Professional, Socio-cultural. Physical Education 200 is required the first quarter a major enters the program.

Students should first select an option as a major; then in each of the four core areas, the number of credits to be taken in each core is indicated. Selection of courses to be taken from each of the four areas must be under departmental advisement.

K-12 Physical Education Specialist - Option I

Education/Psychology Requirements

- Ed 310, 398

Physical Education

- Psych 351, 352, 353
- Education Clinical Program (Student Teaching) 2-3 quarters. Obtain detailed information from the department office
- Physical Education courses: 61 credits
- PE 200

Core A

- 14 credits in at least ten courses and one course from each of the following areas: team sports, individual and dual sports, dance, aquatics, gymnastics. In addition, students must show advanced proficiency, two credits, in intercollegiate activities and/or in officiating courses. PE 211 and 251 are required
- It is recommended that students take additional credits in outdoor pursuits: PE 157, 158 or 159, 160, 161 or 167, 170, 171
- Additional activities may be taken from PE 203, 208, 209, 223, 232, 234, 236, 238, 241, 242, 244, 245, 247, 250, 254, 256

Competency above the beginning level must be established prior to taking 200-level courses. Beginning courses in the above areas cannot be applied to the major/minor requirements.

Core B: Exercise and Sport Sciences: History

- 17 credits from: PE 301, 302, 303, 307, 407, 485

Core C: Curriculum: Methods, Practicum 15 credits

- PE 306 required
- PE 326, 402, 413, 492 are optional (Credit for PE 313, 401, 491 is included in the Educational Clinical Program)

Core D: Professional; Socio-Cultural 12 credits

- PE 304, 308, 309, 310, 409, 410, 490
- H ED 352 is required
- Supporting course: Biol 348

Secondary (Grades 7-12) -- Option II

See: Education Department section for education/psychology requirements.

It is recommended that a second academic teaching major/minor accompany this major.

- Physical Education courses: 51 credits
- PE 200

Core A:

- 14 credits in at least 10 courses and one course from each of the following areas: team sports, individual and dual sports, dance, aquatics, and gymnastics. In addition, students must show advanced proficiency in intercollegiate activities, two credits, or in officiating courses
- PE 251 is required
- Additional courses are taken from PE 203, 208, 209, 211, 223, 232, 234, 236, 238, 241, 242, 244, 245, 247, 250, 254, 256
- It is recommended that students take additional credits in outdoor pursuits: PE 157, 158 or 159, 160, 161, 166, 167, 170, 171

Competency above the beginning level must be established prior to taking 200-level courses. Beginning courses in the above areas cannot be applied to major/minor requirements.

Core B: Exercise and Sport Sciences

- 17 credits: PE 301, 302, 303, 307, 407, 485

Core C: Curriculum: Methods: Practicum 8 credits

- PE 401, 491 or 492 are required

Core D: Professional: Socio-cultural 8 credits

- PE 304, 308, 309, 310, 409, 410, 490
- H Ed 352 is required
- Supporting course: Biol 348

Elementary School Physical Education: Option III

This major must be accompanied by an Elementary Education teaching minor: see the Education Department for education/psychology requirements. The student must complete an equivalent 8-16 credits in elementary school physical education.

- Physical Education courses: 46 credits
- PE 200

Core A:

- 8 credits in six courses and one course from each of the following areas: team sports, individual sports, dance, aquatics, and gymnastics
- PE 211 is required
- Additional courses are taken from 203, 208, 209, 223, 232, 234, 236, 238, 241, 242, 244, 245, 247, 250, 254, 256

Competency above the beginning level must be established prior to taking 200-level courses.

Beginning courses in the above areas cannot be applied to major/minor requirements.

Core B: Exercise and Sport Sciences: History

- 17 credits, PE 301, 302, 303, 307, 407, 485

Core C: Curriculum, Methods, Practicum
14 credits

- PE 306, 326, 491, or 492 are required
 PE 313, 402, 413

(PE 313 and 491 credits may be arranged in Education Department clinical program.)

Core D: Professional: Socio-Cultural 5 credits

- PE 304, 308, 309, 310, 409, 410, 490
 H Ed 352 is required
 Supporting course: Biol 348

Teaching Competence

PE 401 (secondary), PE 306 (elementary) and H Ed 352 must be taken prior to student teaching.

K-12 specialist requires a student teaching at both the elementary and secondary levels, one level for 16 credits and the other for 8 credits, to receive teaching competency for kindergarten through twelfth grade.

Recommendation for teaching competence for physical education normally requires a completion of a major or an augmented minor (30 credit hours) with a minimum grade average of 2.5. Participation in intramural and/or club sport activities is encouraged for all majors and minors during four quarters of the first two years.

Health Education Option

School Health Education: 65 credits

This option provides a program for students interested in teaching health in grades 7-12. See Education Department for requirements in education/psychology.

- H Ed 349, 350, 352, 407, 447, 450, 460, 470 (25 credits)
 Home Econ 250
 Biol 348, 349
 Chem 115, 251
 17 credits to be taken in the social sciences under departmental advisement

Minor — Physical Education Secondary 27 credits

(For teaching competency, 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 intercollegiate teams in other sports.

Minor — Physical Education Elementary 25 credits

(For teaching competency, 30 credits)

- 8 credits: PE 209, 211, 244, 251, 256
 8 credits: PE 301, 302, 303, 307, 485
 7-9 credits: PE 306, 326, 313
 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 380-387
 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 intercollegiate teams in other sports.

Completion of the athletic coaching minor does not meet requirements for teaching competency in physical education.

Minor — Health Education 30 credits

- H Ed 349, 350, 352, 447, 450, 460
 Home Econ 250
 Biol 348
 4 credits under departmental advisement
 Biol 349 recommended

Minor — Educational Dance 25 credits

- PE 122, 209, 223, 326
 16 credits under departmental advisement

Physical Education

Minors must plan, under departmental advisement, to take additional course work to attain teaching competency.

- Biol 345, 348, 349
- Psych 201
- Soc 202, Speech 204
- PE 303

BACHELOR OF SCIENCE

Major — Community Health 85 credits

The community health education major provides training for students who are interested in health education careers in public, voluntary and private health agencies and in industry.

- H Ed 349, 350, 352, 407, 447, 450, 451, 460
- Home Econ 250
- Chem 115, 251

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

GRADUATE STUDY

For concentrations leading to the Master of Education degree, see Graduate section of the catalog.



COURSES IN PHYSICAL EDUCATION

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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
- 103 Jogging (repeatable to a maximum of 3 credits)
- 108 Weight training (repeatable to a maximum of 3 credits)

111-119 AQUATICS (1 ea)

- 112 Beginning Swimming (for non-swimmers)
- 113 Intermediate Swimming
Prereq: PE 112 or ability to swim twenty-five yards and support self in deep water.
- 114 Advanced Swimming
Prereq: PE 113 or ability to swim 100 yards with one stroke and to use a variety of other strokes.

120-129 DANCE (1 ea)

(See Theatre/Dance Department for additional dance offerings.)

- 120 Beginning Social Dance
- 122 Beginning Folk and Square Dance
- 123 Intermediate Folk and Square Dance

130-139 DUAL SPORTS (1 ea)

- 130 Beginning Handball
 - 131 Beginning Squash
 - 132 Beginning Badminton
 - 133 Intermediate Badminton
 - 134 Beginning Fencing
 - 136 Beginning Tennis
 - 137 Intermediate Tennis
 - 138 Beginning Wrestling
 - 139 Beginning Racquetball
- The student furnishes equipment for PE 130, 131, 132, 133, 136, 137, 139.

140-149 TEAM SPORTS (1 ea)

- 141 Field Hockey
- 142 Basketball
- 143 Softball
- 144 Soccer
- 145 Volleyball
- 148 Lacrosse
- 149 Rugby

150-173 INDIVIDUAL SPORTS (1 or 2 ea)

- 150 Archery
- 151 Gymnastics
- 152 Beginning Bowling
- 153 Intermediate Gymnastics
Prereq: PE 151 or equivalent.
- 154 Golf
- 156 Track and Field
- 157 Beginning Skiing
- 158 Intermediate Skiing
- 159 Advanced Skiing

- 160 Sailing and Canoeing
Prereq: swimming test.
- 161 Mountain Climbing (2)
- 162 Basic Horsemanship
- 163 English or Western Equitation
Prereq: PE 162.
- 166 Ice Skating
- 167 Bicycling (1)
- 168 Karate (1)
- 170 Hiking and Alpine Travel (2)
- 171 Kayaking (2)
- 172 Crew (1)
- 173 Riflery (1)

The student enrolling in 152, 157, 158, 159, 160, 161, 162, 163, 166, 170, 171 and 173 pays cost of transportation and individual instruction. Students in 157, 158, 159, 161, 165, 166, 167 also furnish own equipment.

180-193 INTERCOLLEGIATE SPORTS (2 ea)

- 180m Intercollegiate Football
- 181 Intercollegiate Basketball
- 183 Intercollegiate Track and Field
- 185 Intercollegiate Golf
- 186 Intercollegiate Tennis
- 189 Intercollegiate Cross Country
- 190 Intercollegiate Crew
- 192w Intercollegiate Volleyball
- 193 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.

203-256 PROFESSIONAL ACTIVITIES

Selectively required of majors and/or minors in physical education. Prereq: competency in skills and knowledge of the sport

- 203 Aquatics (or demonstrated advanced competence) (1)
- 208 Weight Training and Body Conditioning (2)
- 209 Recreational Dance (2)
- 211 Educational Gymnastics (2)
- 223 Modern Dance (2)
- 232 Badminton (1)
- 234 Fencing (1)
- 236 Tennis (2)
- 238 Wrestling (2)
- 241 Field Hockey (1)
- 242 Basketball (2)
- 244 Soccer (2)
- 245 Volleyball (2)
- 247 Football Techniques (2)
- 250 Archery (1)
- 251 Gymnastics (3)
- 254 Golf (1)
- 256 Track and Field (2)

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.

Physical Education

- 280 **SPORTS CONDITIONING (1)**
A program of conditioning established in consultation with the instructor to meet specific athletic needs of the student. May not be repeated for credit.
- 301 **BIOMECHANICS (4)**
Prereq: Math 105 or 151. 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 neuromuscular activity, circulation and respiration adjustment during exercise, metabolic and environmental aspects, fatigue and training, fitness and health; includes laboratory experiments.
- 304 **ATHLETIC INJURIES AND TRAINING (3)**
Prereq: Biol 348. Care and prevention of athletic injuries; procedures for building physical stamina; experience in taping procedures. Laboratory fee.
- 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 203-256. 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.
- 313 **PHYSICAL EDUCATION LABORATORY EXPERIENCE WITH CHILDREN (2-4)**
Prereq: PE 306.
- 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.
341 Football
342m Basketball
342w Basketball
343 Track and Field
345 Volleyball
346 Gymnastics
347 Wrestling
- 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)
384 Wrestling (2)
385 Volleyball (2)
386 Gymnastics (2)
387 Tennis (2)
- 399 **KEELBOAT SAILING (1)**
Prereq: pass swim test. Opportunity to learn sailing skills and knowledges under expert instructor in a Sceptre "36" class boat. The boat is rigged, designed for Pacific Northwest racing and International Ocean Racing Handicapped formula. S/U grading.
- 401 **SECONDARY SCHOOL METHODS AND PROFESSIONAL PRACTICUM (5)**
Prereq: junior status and completion of 20 hours in the major program. Seminar, observatiuon, 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.
- 406 **THE ADMINISTRATION OF ATHLETICS (3)**
Prereq: senior status. Organization and administration of policies and procedures for interschool athletic programs with special emphasis on a 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.
- 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.
- 412 **CIRCULORESPIRATORY AND ANTHROPOMETRIC EVALUATION (3)**
Cardiopulmonary and anthropometric evaluation of the body at rest and during exercise. Emphasis on stress testing techniques, electrocardiography and pulmonary function testing.
- 413 **EXERCISE PRESCRIPTION AND IMPLEMENTATION (3)**
Prereq: PE 302, 303. Administration and implementation of fitness programs will be explored. Fitness modalities including swimnastics, parcourse, aerobic dancing, etc , will be examined and evaluated.



- 480 **TEACHING PHYSICAL EDUCATION IN ELEMENTARY SCHOOL: INSTRUCTIONAL MODULES PROVIDING FOR EQUAL OPPORTUNITIES (1-4)**
Prereq: PE 211 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 211 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: A MOVEMENT EDUCATION APPROACH FOR 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.
- 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.
- 496 **MOVEMENT 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
- 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, human growth and motor development.
- 503 **PHYSICAL EDUCATION EQUIPMENT AND FACILITIES (3)**
Functional design and planning of gymnasiums and other physical education facilities, and the purchase and care of athletic and physical education equipment.
- 504 **CURRICULUM IN PHYSICAL EDUCATION (4)**
Prereq: teaching experience. Physical education programs, based on the needs, interest, abilities of students.
- 506 **RESEARCH DESIGN IN PHYSICAL EDUCATION (4)**
Prereq: graduate status. 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: permission of instructor. 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.
- 511 **PHYSICAL ACTIVITY AND AGING/CARDIAC REHABILITATION (3)**
Prereq: PE 412. 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.
- 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.

Physical Education

- 540 SEMINAR: APPLIED EXERCISE PHYSIOLOGY AND DESIGN OF PHYSICAL ACTIVITY PROGRAMS (3)
Prereq: permission of instructor. Scientific and behavioral bases of exercise and stress treating exercise prescription, stress and adaptation to stress, cardiovascular and respiratory dynamics, metabolism, counseling and exercise programming.
- 541 SEMINAR: SPORT PSYCHOLOGY (3)
Prereq: teaching experience. Application of data from psychology to sport activity, athletics, performance and coaches.
- 542 SEMINAR: SOCIOLOGY OF SPORT (3)
Prereq: teaching experience. 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: permission of instructor. Application of mechanical principles to analysis of motor skills and athletic events.
- 545 SEMINAR: PERCEPTUAL-MOTOR DEVELOPMENT: IMPLICATIONS FOR PROGRAM (3)
Prereq: PE 485. Review of research in perceptual-motor development and implications for program.
- 592 FIELD EXPERIENCE IN ADULT FITNESS EDUCATION (2-6)
Prereq: graduate status; PE511 and permission of instructor. Supervised field experiences in developing, designing, managing and evaluating adult fitness/health management programs.
- 690 THESIS OR FIELD PROJECT (3-6)
Prereq: formal advancement to candidacy for the master's degree.
- 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: junior status; H Ed 150, 151, and 152 recommended. Topics covered: overweight/obesity and weight control, consumer health, human sexuality and licit and illicit drugs.
- 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 BASIC 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.
- 406 HEALTH OF THE YOUNG CHILD (3)
Prereq: junior status. Health needs of children; concepts of appraisal and referral; utilization of school/community health services; healthful school environment.
- 407 HISTORICAL PERSPECTIVES OF HEALTH EDUCATION (3)
Prereq: junior status, health science major or minor, H Ed 349, 350 and 447 or permission of instructor. Analyze definitions of health, evaluate philosophical approaches to health education; determine rationale behind different concepts of health education; identify factors which contribute to formation of health education concepts; identify significant movements and events which have contributed to progress in the field of health education. Normally offered alternate years.

COURSES IN HEALTH EDUCATION

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

- 150 CONSUMER HEALTH (2)
Analysis, selection, and evaluation of health products and services; appraisal of health information, misconceptions, superstitions; consumer protection agencies.
- 151 SOCIETY AND DRUGS (2)
Classification, psychopharmacology, use and misuse of mood and behavior modifying drugs; research; public law, and use and misuse of over-the-counter drugs.
- 152 SOCIETY AND SEX (2)
Sociological, psychological, and biological aspects of human sexuality.
- 201 INTRODUCTION TO HEALTH PROFESSIONS (2)
For students interested in health-oriented disciplines. Professional philosophies, educational requirements and occupational opportunities.
- 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.
- 447 COMMUNITY HEALTH (3)
Prereq: 10 credits in biology, health education, home economics, or Huxley. Analysis of health-care delivery systems; community, national and world health issues; models of health behavior; development of community health programs; 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 (16)
Prereq: H Ed 349, 350, 447 and health education major (community health). 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 HEALTH EDUCATION CURRICULUM DESIGN (3)
Prereq: senior status. Identification and application of concepts of curriculum design in school and community health education. Analysis of existing curriculum. Students will prepare, utilize and critique materials.

- 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.

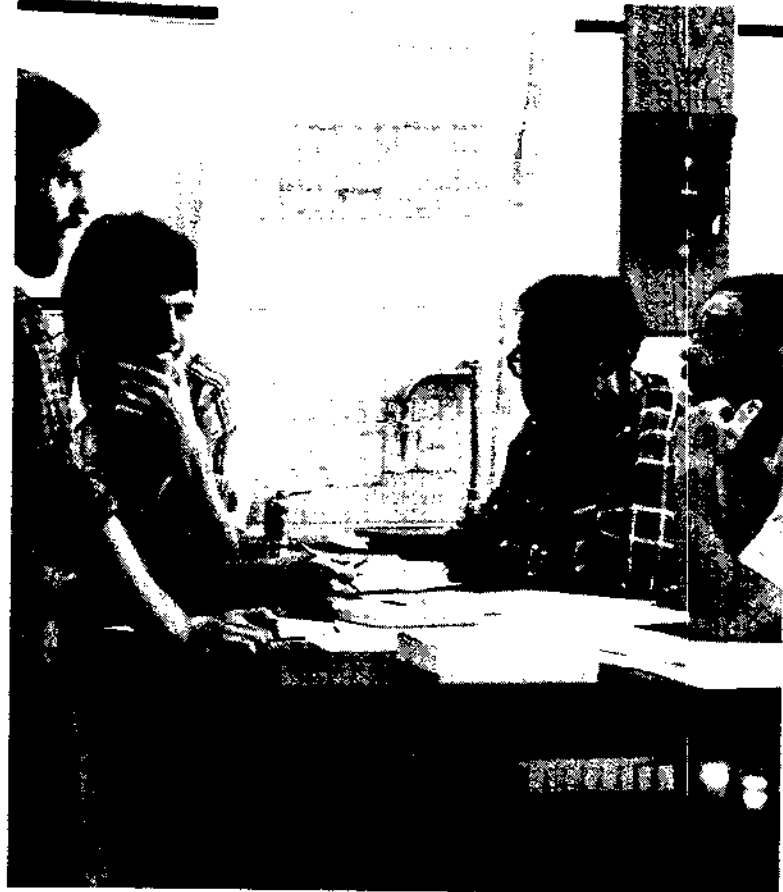
Graduate Courses in Health Education

- 506 HEALTH AND THE CHILD (3)
Prereq: graduate status or permission of instructor. Health needs and problems of children; concepts of appraisal and referral; utilization of school/community health services; healthful school environment.

COURSES IN RECREATION AND PARKS

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

- 171 FOUNDATIONS OF RECREATION AND LEISURE (3)
Professional course dealing with the background, present status, future goals and challenges of leisure and the recreation service professions.
- 271 COMMUNITY RECREATION AND LEISURE SERVICES (4)
Prereq: RP 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: RP 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.
- 273 CAMP COUNSELING AND ORGANIZATION (3)
Camp program components, counseling skills; types of organized camp settings; American Camping Association standards.
- 274 INTRODUCTION TO RECREATION AND SPECIAL POPULATIONS (4)
Prereq: RP 171; majors and minors only. Overview of special populations, including implications and principles for recreation service providers.
- 275 PROFESSIONAL PRACTICUM (2)
Prereq: RP 171; majors and minors only. Participation in a recreation and park agency in the delivery of recreation services.
- 276 RECREATION PROGRAMMING I (2)
Prereq: RP 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 (3)
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.
- 375 INTERPRETATION IN RECREATION SETTINGS (3)
Prereq: Phase I or appropriate experience. Philosophy, organization, content and process of interpretation in human and natural environments. Equal emphasis placed on classroom instruction and field technique.
- 376 ADAPTIVE PROGRAMMING IN RECREATION (3)
Prereq: Phase I or appropriate experience. 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. Analysis of process of providing recreation services and/or products in business or industrial settings: planning, organization, marketing, leadership and evaluation.
- 421 RECREATION, AGING AND RETIREMENT (3)
Prereq: Phase III or appropriate experience. Leisure needs, concerns and potentials of older persons. Emphasis on theory, principles and techniques for provision of recreation services.
- 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 ON RECREATION AND PARKS (3)
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. 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. 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.



PHYSICS & ASTRONOMY

College of Arts and Sciences

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, 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 or environmental pollution.

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) Chairman.
Professor. BSc, MSc, Panjab University; PhD, University of British Columbia.
- CHARLES T. ARDARY (1980) Assistant Professor. BA, UCLA; MS, Oregon State University.
- 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.
- WILLARDA 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 (1980) 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) Associate 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. VAWTER (1968) Associate Professor. BS, Texas Technological University; MS, State University of Iowa; PhD, State University of New York.
- J. JOSEPH VEIT (1963) Professor. BSc, University of London; MSc, University of Birmingham; PhD, University of London.

Research 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; Math 124, 125, 126, 205
- Physics 341, 342, 343, 344, 345, 346, 379; Math 224, 331, 332
- Physics 381, 382, 383, 384, 385, 386

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, 416

Chem 121 and Computer Science 210 are recommended for both concentrations.

Minor 25 credits plus supporting courses

- Physics 241, 242
- Physics 341, 342, 343, 344, 345, 346
- Math 124, 125, 126

BACHELOR OF SCIENCE

Major 110 credits

Core Courses (required of all BS majors)

- Physics 241, 242; Math 124, 125, 126, 205; Chem 121
- Physics 341, 342, 343, 344, 345, 346, 379; Math 224, 331, 332; Comp Sci 210
- Physics 381, 382, 383, 384, 385, 386
- Physics 421, 422, 471

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

BACHELOR OF ARTS IN EDUCATION

Teaching Competence

Recommendation for teaching competence normally requires completion of the appropriate major with a minimum grade point average of 2.50.

Each of the major concentrations below provides competence 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 70 credits

- Physics 241 and Math 124

Physics/Astronomy

- 20 credits in physics under departmental advisement
- 20 credits in mathematics under departmental advisement
- 20 additional credits including methods courses in one or both of these fields

Major Concentration — Chemistry/Physics

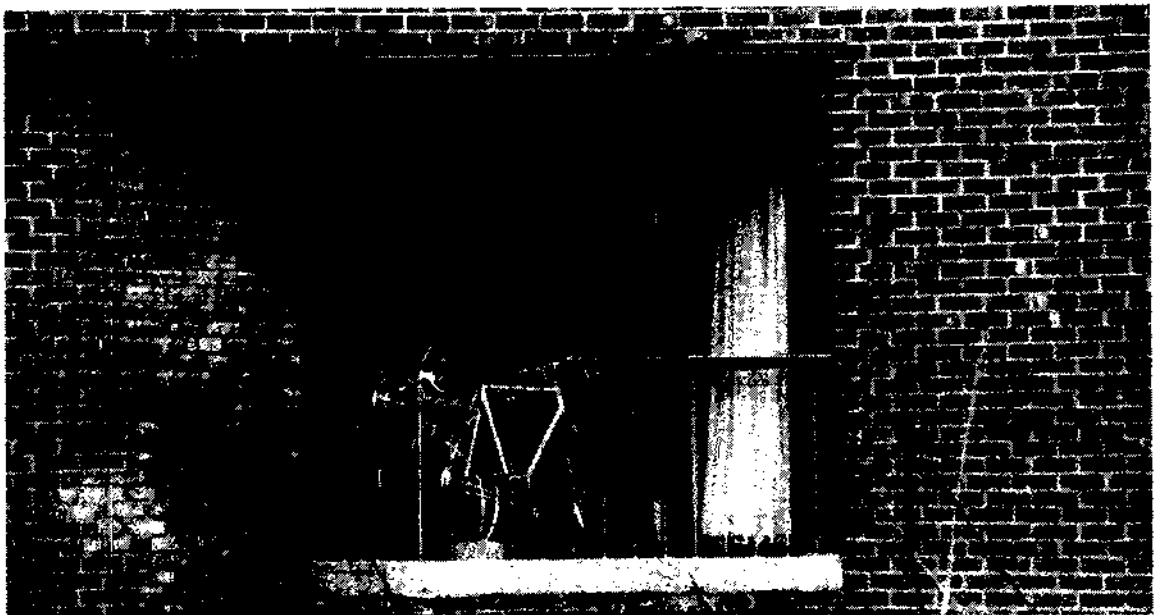
See Chemistry Department section of catalog for details.

COURSES IN PHYSICS

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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. 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) W,S
Prereq: Physics 132. Geometrical and wave optics; relativity; atomic and nuclear physics. Laboratory.
- 201 THE SCIENCE OF HIGH FIDELITY (3) W,S
High-fidelity audio components. Basic principles applied to the recording and reproduction of music. Operation and evaluation of tape recorders, turntables, phonocartridges, amplifiers, loudspeakers, etc. Laboratory.
- 203 MUSICAL ACOUSTICS (3) F
Physical and subjective characteristics of sound; synthesis and 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,S
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.
- 215 AIR QUALITY CONTROL INTERNSHIP (1-5)
Prereq: permission of department. Part-time internship with the Northwest Air Pollution Authority. Requests for internships should be filed with the department one quarter in advance of registration. Normally offered alternate years.
- 217 RADIOLOGICAL PHYSICS (3)
Prereq: Physics 133 and Math 10S. Designed to provide a working knowledge of radiation and its physical and biological effects. Radiation hazards to man and the environment from a variety of radiation sources. Development of radiation protection standards and procedures. Normally offered alternate years.
- 219 ATMOSPHERIC PHYSICS (3)
Prereq: one year of college physics. The structure, energetics and motion of the atmosphere, especially as related to the diffusion and transport of air pollutants. Normally offered alternate years.
- 241 PHYSICS WITH CALCULUS I (5) F,W
Prereq: Math 124. Kinematics and dynamics of particles; work and energy; collisions and conservation of momentum. Laboratory.
- 242 PHYSICS WITH CALCULUS II (5) W,S
Prereq: Physics 241 and Math 125. Rotational kinematics and dynamics; oscillations; gravitation; fluid statics and dynamics; waves and sound. Laboratory.
- 341 ELECTRICITY AND MAGNETISM (4) F,S
Prereq: Physics 242 and Math 126. Concurrent enrollment in Physics 344 required for physics majors. Electrostatics; magnetic fields of steady currents; time-varying electric and magnetic fields; DC and AC circuits; electromagnetic waves.
- 342 GEOMETRICAL AND PHYSICAL OPTICS (4) W
Prereq: Physics 242 and Math 126. Concurrent enrollment in Physics 345 required for physics majors. Reflection and refraction at plane and spherical surfaces; thin lenses and their aberrations; optical instruments; interference and interferometers; diffraction; polarization.
- 343 THERMAL PHYSICS (4) S
Prereq: Physics 242 and Math 126. Concurrent enrollment in Physics 346 required for physics majors. Thermal properties of matter; kinetic theory; laws of thermodynamics; thermodynamic potentials and Maxwell's relations.
- 344 E AND M LABORATORY (1) F,S
Prereq: concurrent enrollment in Physics 341.
- 345 OPTICS LABORATORY (1) W
Prereq: concurrent enrollment in Physics 342.
- 346 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; Boolean algebra; TTL and CMOS logic; microprocessors and noise. Laboratory.
- 357 SELF-DIRECTED DIGITAL LABORATORY (2) S
Prereq: Physics 355. Self-paced study in advanced digital electronics using the Euc Books; gating, counters, decoders, multiplexers, shift registers and semiconductor memories.

- 379 **INTRODUCTION TO SPECIAL RELATIVITY (3) F**
Prereq: Physics 341 (may be taken concurrently). The relationship of space and time and the Michelson-Morley experiment; the Lorentz-Einstein transformations; time dilation and the Lorentz contraction; spacetime events and world lines; relativistic dynamics; relativity and electromagnetism.
- 381 **QUANTUM PHYSICS (4) F**
Prereq: Physics 341, 342, 379 and Math 332. Concurrent enrollment in Physics 384 required for physics majors. Dual nature of radiation and matter; the Bohr atom; Schrodinger's theory applied to the square well, the harmonic oscillator and one-electron atoms.
- 382 **ATOMIC AND SOLID-STATE PHYSICS (4) W**
Prereq: Physics 381. Concurrent enrollment in Physics 385 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 386 required for physics majors. Structure, properties and decay of atomic nuclei; detection of nuclear radiation; nuclear reactions; introduction to elementary particles.
- 384 **QUANTUM PHYSICS LABORATORY (1) F**
Prereq: concurrent enrollment in Physics 381. Selected experiments in quantum physics.
- 385 **ATOMIC PHYSICS LABORATORY (1) W**
Prereq: concurrent enrollment in Physics 382. Selected experiments in atomic, molecular and solid-state physics.
- 386 **NUCLEAR PHYSICS LABORATORY (1) S**
Prereq: concurrent enrollment in Physics 383. Selected experiments in nuclear physics, including nuclear reactions using a particle accelerator.
- 395 **MILESTONES IN MODERN PHYSICS (3)**
Prereq: one college-level physics course. Important discoveries in modern physics: special relativity; discovery of nuclei; X-rays and elementary particles; atomic and nuclear models; Schrodinger wave equation; the uncertainty principle; fission and fusion. Not intended for physics majors. (Summer 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, 343 and Math 332. 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. Fresnel diffraction; theory of partial coherence with applications to Fourier transform spectroscopy, speckle and stellar interferometry; spatial filtering; holography. Laboratory.
- 411 **ELECTRO-OPTICS (3) W**
Prereq: Physics 382. Principles of electro- and acousto-optic modulation of laser light; beam deflection; wave propagation in non-linear anisotropic media; optical second-harmonic generation; phase matching; parametric oscillation. Applications.
- 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.
- 451 **NUCLEAR PHYSICS (3) S**
Prereq: Physics 383. Basic nuclear properties; nuclear models; interaction of radiation with matter; radioactive decay; elementary nuclear reactions.



Physics/Astronomy

47 ELECTROMAGNETIC THEORY (4) S

Prereq: Physics 341 and Math 224 and 332. Integral representation of electric and magnetic field laws; Maxwell's equations; propagation of electromagnetic waves; reflection and refraction between media; rectangular wave guides; electromagnetic radiation; relativistic field transformations.

475, 476 CLASSICAL DYNAMICS (3 ea)

Prereq: Physics 341 and Math 332. Lagrangian mechanics; perturbation techniques for dynamical systems; theory of oscillations; central forces and scattering theory. Normally offered alternate years; alternates with 485, 486.

479 RELATIVITY THEORY (3)

Prereq: Physics 379 and 471. 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 491.

485, 486 MATHEMATICAL METHODS OF PHYSICS (3 ea)

Prereq: 20 credits in physics; Math 331 and 205. Introduction to and applications of linear vector spaces, operators, Fourier transforms, Green's functions, etc. Physics 486 — Introduction to and applications of group theory, probability theory and numerical analysis. Normally offered alternate years; alternates with 475, 476.

491 STATISTICAL PHYSICS (3)

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 479.

495 CURRICULUM DEVELOPMENT FOR PHYSICS TEACHERS (1-6)

Prereq: permission of instructor.

COURSES IN ASTRONOMY

103 ASTRONOMY FOR THE LIBERAL ARTS (4) F,W,S

A survey of astronomy including the solar system, stellar evolution, galactic structure and cosmology. Not recommended for science majors.

105 THE EVOLVING UNIVERSE (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.

315 SOLAR SYSTEM ASTRONOMY (4) F

Prereq: Physics 131 or equivalent. Motions of the planets, satellites and minor members of the solar system, with special emphasis on the earth and the moon. Current techniques used to determine the physical properties, geology and atmospheres of planets and satellites. Theories of the origin of the solar system.

316 STELLAR ASTRONOMY (4) W

Prereq: Physics 131 or equivalent. The structure and evolution of stellar systems. Binary stars; nebulae; star clusters; galaxies. Other topics include neutron stars, black holes, white dwarfs, quasars, etc.

333 EXTRATERRESTRIAL LIFE (3) W

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.

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.

415 GALAXIES (3) S

Prereq: Astron 316. Radio signals from space; molecules between the stars; exploding galaxies; quasars; the structure of galaxies. Offered alternate years; alternates with Astron 416.

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 Astron 415.

Graduate Courses

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.

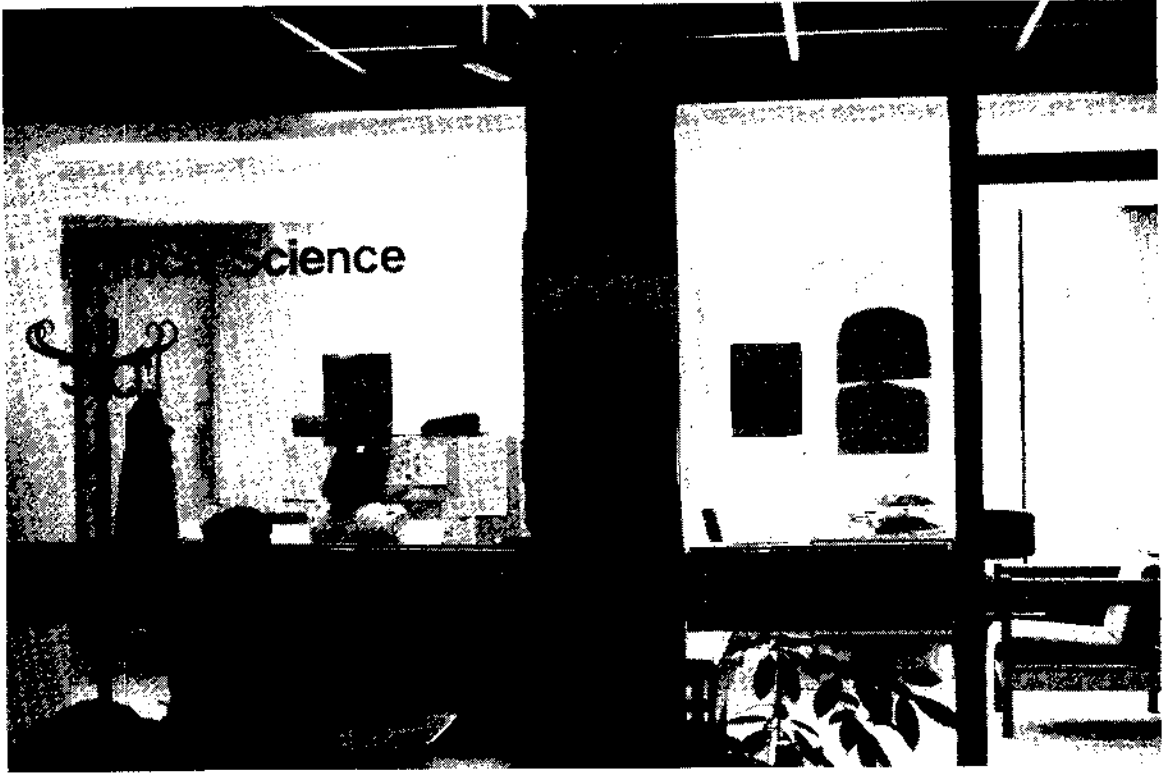
598 GRADUATE SEMINAR (1-3)

690 RESEARCH (3-12)

Prereq: permission of instructor and department chairman. Investigation of an original problem in physics under supervision terminating in a master's thesis.

699 SPECIAL PROBLEMS IN ADVANCED PHYSICS (3-6)

Prereq: graduate standing and permission of instructor. Detailed study of a special problem in physics.



POLITICAL SCIENCE

College of Arts and Sciences

Politics and government affect the lives of all of us. There are few activities that we undertake, and there are few questions with which we are concerned, that are not affected by the actions or the inaction of the political bodies and the political leaders who make decisions on our behalf at the local, state and national levels. Moreover, the objectives and policies of other nation-states 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, and the study of politics and government has flourished as the relations between persons, groups and nation-states have become more complex in an increasingly interdependent world. 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.

Courses in political science attract the interests not only of political science majors and minors, but also those of the many other students concerned with today's important social, economic and political issues. In addition, these courses meet the interests of students contemplating careers in public affairs. An understanding of politics and government is important to the well-educated individual, essential to the preparation of the effective public servant, and critical to the maintenance and to the ethical progress of a free society.

THE CURRICULA

The Political Science Department offers several curricula leading to the Bachelor of Arts and the Master of Arts degrees. These curricula are summarized below and their details are set forth following the faculty listing.

Political Science

Bachelor of Arts

Majors and Concentrations: political science, public policy and administration.

Minors: political science, Canadian-American studies, East Asian studies.

Bachelor of Arts in Education

Majors and Concentrations: political science, social studies.

Minors: political science, Canadian-American studies, East Asian studies

Master of Arts in Political Science

Master of Arts in political science (public policy and administration).

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.

Comparative Politics: Pol Sci 291, 301-309, 343, 365 or 366; 401, 402, 406, 416, 418a, 418b, 418c, 418g, 430, 431, 471

Politics and Government: Pol Sci 340, 343, 345, 346, 353, 364, 365 or 366, 418d, 423, 426, 427, 429, 440, 441, 443, 445b, 449, 450, 454, 471, 480, 481, 490

Public Policy and Administration: Pol Sci 320, 345, 346, 353, 365 or 366, 413, 415, 418f, 420, 421, 422, 423, 424, 425, 426, 427, 429, 444a,b, 454, 481

Public Law: Pol Sci 311, 313, 365 or 366, 410, 413, 415, 416

Political Theory: Pol Sci 360, 365, 366, 418e, 424, 460, 461, 462, 463, 464, 465, 467, 480, 481

International Relations: Pol Sci 270, 305, 365 or 366, 376, 418a, 418b, 418c, 470, 471, 476

Minor 25 credits

- Pol Sci 250
- Remaining credits from at least 2 areas

Minor — Canadian-American Studies

30 credits

Program Adviser: Dr. Gerard Rutan

See 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. Henry Schwarz

This may be added to the major for a major concentration.

POLITICAL SCIENCE FACULTY

- RALPH E. MINER (1970) Chairman. 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 and Dean of the College of Arts and Sciences; 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.
- SIEGRUN F. FOX (1977) Assistant Professor. BA, MA, University of Technology, Munich; 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) Associate 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.
- HENRY G. SCHWARZ (1969) Professor of Political Science and History. BA, MA, PhD, University of Wisconsin.
- JOHN J. WUEST (1980) Professor. BS, MS, University of Southern California; PhD, University of California, Los Angeles.
- 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) 676-3468. Written inquiries should be

See Interdisciplinary Programs section for specifications.

Major-Minor Concentration — Public Policy and Administration

99 credits, minimum

Program Adviser: Dr. Charles J. Fox

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, 313 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) BA 322 (BA 301 a prerequisite), Pol Sci 418f or 422
 - (2) Pol Sci 345, 346, 420, 421, 467, or Hux 430, or one course from the Ethnic Studies program
 - (3) Pol Sci 414, 425, 426, Econ 410 (Econ 204 or permission of instructor required), or 442
 - (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 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.

BACHELOR OF ARTS IN EDUCATION

Program Adviser: Dr. Siegrun F. Fox

The Political Science Department participates in four programs for the student who is preparing to teach at the elementary and secondary levels. This participation is designed to help the student achieve the following objectives:

- (1) To learn the basic concepts of political science.
- (2) To know, to evaluate, and to be able to utilize current political science curricula.
- (3) To relate political issues to social studies education.

Those preparing for secondary school teaching may take either the political science-social studies major-minor concentration or a major approved by the School of Education plus the minor in political science, East Asian Studies, or Canadian-American Studies. The minor is optional and intended for students who wish to broaden their teaching competency. (See also Program I Secondary Teaching under Education section.) Those preparing for elementary school teaching may take the political science courses which satisfy the academic study in-depth requirement for the elementary teacher professional concentration.

Major-Minor Concentration — Political Science-Social Studies

94 credits

See Interdisciplinary Programs section for specifications.

Minor — Political Science 35 credits

- Pol Sci 101, 250, 270, 481, and/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 teaching competency recommendation in political science.)

Minor — East Asian Studies 30 credits

See Interdisciplinary Programs section for specifications.

Minor — Canadian-American Studies
30 credits

See Interdisciplinary Programs section for specifications.

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). 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, 500; 417; 445 are described on page 32 of this catalog.

- 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 Lib St 200 with permission of instructor) 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 170 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.
- 308 SUB-SAHARAN AFRICAN POLITICAL SYSTEMS (5)
Prereq: Pol Sci 101 or 291. Sub-Saharan Africa in post-colonial transition and development. Not offered every year.
- 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 (or Lib St 200 with permission of instructor). Origin and development of basic concepts and practices of law with emphasis upon legal reasoning and values in contemporary societies.
- 313 AMERICAN CONSTITUTIONAL LAW (5)
Prereq: Pol Sci 250 and upper-division standing. Supreme Court decisions interpreting major parts of the Constitution; separation of powers, federal division of powers and individual civil rights.
- 320 PUBLIC ADMINISTRATION (5)
Prereq: Pol Sci 250 (or Lib St 200 with permission of instructor), 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 (or Lib St 200 with permission of instructor). 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 (or Lib St 200 with permission of instructor). 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 (or Lib St 200 with permission of instructor). 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 (or Lib St 200 with permission of instructor). 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 (or Lib St 200 with permission of instructor). Sub-national levels of government and inter-governmental 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 (or Lib St 200 with permission of instructor). 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 (or Lib St 200 with permission of instructor). 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 (or Lib St 200 with permission of instructor). 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 Lib St 200 with permission of instructor) 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 (or Lib St 200 with permission of instructor). 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 313 and 320. 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.
- 415 **CRIMINAL JUSTICE SYSTEMS (3)**
Prereq: permission of instructor. Criminal law; law enforcement; judicial administration; the administration of penal and correctional policy in the United States.
- 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 ENVIRONMENTAL POLITICS AND ADMINISTRATION (5)
Prereq: Pol Sci 320. Problems in air and water pollution, forest policies, food supply, minerals, recreation and wilderness areas, and power. Not offered every year.
- 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 (or Lib St 200 with permission of instructor). 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 or Lib St 200 with permission. 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 (or Lib St 200 with permission of instructor). 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 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.
- 430 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 (or Lib St 200 with permission of instructor). 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 internship 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 or Lib St 200. 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 (3)
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 (3)
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.

- 462 **POLITICAL IDEOLOGY (3)**
Prereq: Lib St 123 or Hist 107 or Pol Sci 360. Origin and evolution of ideology. Liberalism, conservatism, socialism, anarchism, Marxism, fascism, national socialism, and their contemporary variants.
- 463 **AMERICAN POLITICAL THOUGHT (5)**
Prereq: Hist 103, 104, or equivalent, or Pol Sci 101 and/or 250 (or Lib St 200 with permission of instructor). 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 (3)**
Prereq: Pol Sci 360. Survey and analysis of theories of democracy, from ancient to modern. Normative and empirical theories with emphasis on contemporary theory and research findings. Not offered every year.
- 467 **POLITICS, TRANSFORMATION AND ENVIRONMENT (4)**
Prereq: Pol Sci 101 or 250. Incompatibility between the growth-oriented goals of contemporary political cultures and environmentally derived "steady state" imperatives. The politics of transformation and value-change. (Also offered as 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.
- 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.
- 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.
- 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.
- 506a,b **ADVANCED TOPICS IN COMPARATIVE GOVERNMENT AND POLITICS (5 ea)**
Prereq: permission of instructor and graduate adviser. Advanced comparative consideration of the political systems of selected nation-states.
- 510 **SEMINAR IN PUBLIC LAW (5)**
The tradition and emerging trends.
- 520 **SEMINAR IN PUBLIC ORGANIZATIONAL THEORY (3)**
Organizational theory and practice in public settings.
- 521 **SEMINAR IN PUBLIC POLICY ANALYSIS (3)**
Advanced problems in public policy and analysis.
- 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.
- 528a,b **SPECIAL PROBLEMS IN PUBLIC POLICY AND ADMINISTRATION (1-5)**
Prereq: permission of instructor and graduate adviser. The consideration of special problems and the conduct of independent study under the guidance and supervision of a member of the faculty.
- 540 **SEMINAR IN THE POLITICAL PROCESS (5)**
The influence of organizations and individuals in the formation of public policy. Includes study of the role of beliefs in the political process.
- 542 **PUBLIC SERVICE INTERNSHIP (5-10)**
Prereq: Pol Sci 501, 503 and permission of department. Work as research and management assistant with a local, state or federal government body (executive, legislative or judiciary), political party, interest group or private, non-profit organization. Work-load: 15 hours/week for 5 credits and 30 hours/week for 10 credits. (Repeatable to a maximum of 10 credits.)
- 550 **SEMINAR IN STATE AND LOCAL GOVERNMENT (3)**
Problems at sub-national levels, both American and other, internally and in relation to national levels.
- 560a,b **SEMINAR IN POLITICAL THEORY (5 ea)**
Function and history of political theory; the crisis in traditional theory; emerging trends.
- 570a,b **SPECIAL PROBLEMS IN POLITICAL SCIENCE (1-5)**
Prereq: permission of instructor and graduate adviser. The consideration of special problems and the conduct of independent study under the guidance and supervision of a faculty member.
- 690 **THESIS/THESIS RESEARCH (6-9)**

Graduate Courses

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

- 501 **POLITICAL SCIENCE AS A DISCIPLINE (5)**
History of political science; description and critique of fields; trends and challenges.



PSYCHOLOGY

College of Arts and Sciences

For much of the recorded history of serious inquiry about the nature of things, scholars have repeatedly called for the study of man himself. Yet the study of psychology as the scientific investigation of man's behavior and experience is, in this decade, rounding out only its first century of existence. As a new field of inquiry, psychology offers an unusually large number of unexplored and dynamic frontiers for those who are seriously interested in understanding man's adjustments and maladjustments to his complex environment.

Although psychologists are now found in a vast number of different areas of employment, they are basically distributed into two broad categories: research and applied psychology. Psychologists may now be found in the communication media, aerospace industry, computer technology, social service, environmental protection, mental hospitals and mental health clinics, population control, vocational guidance clinics, public schools, foreign service, engineering design, advertising, personnel work and many other fields. The largest numbers will be found in the

practice of counseling and psychotherapy and in the colleges and universities doing teaching and research.

Active participation by students in this rapidly-expanding branch of knowledge is a major goal of the programs of undergraduate study of psychology at Western. This participation takes a number of different forms but among the most significant of these are:

- Formal classwork and seminars
- Individual research which can begin early in the student's university career
- Work on individual projects jointly with faculty members
- Participation in selected off-campus field experiences which cannot be duplicated in classroom or laboratory.

With a faculty of more than 30 men and women, all of whom hold the doctoral degree, the department is able to offer a general program and advanced study in most of the specialized areas of psychology. A core program in general

psychology is offered to insure that all students will experience a sound basic background that will provide effective preparation for advanced study as well as a meaningful basis for 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. Planned concentrations 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: Mental Health Services, Child Development, Social Psychology, Industrial/Organizational Psychology, Biopsychology, Humanistic Psychology, and Awareness and Reasoning. These concentrations are described following the description of the core requirements. Additional concentrations can be designed in cooperation with the student's adviser.

Recognizing that active learning experiences are most beneficial to the student, the department encourages students to become personally involved in research projects of their own design or in the many on-going research interests of the faculty. The core curriculum includes experiences which develop the student's ability to participate effectively in a wide variety of research activities.

In addition to its undergraduate offerings the department offers the M.S. degree with concentration available in School Psychology, Counseling Psychology and General Experimental Psychology. In cooperation with the Department of Education, the M.Ed. degree is offered in School Counseling. Complete descriptions of these programs are included in the Graduate section of the catalog.

PSYCHOLOGY FACULTY

- PETER J. ELICH (1961) Chairman.
Professor. BA, University of Washington; MEd, Western Washington State College; PhD, University of Oregon.
- HENRY L. ADAMS (1957) Professor Emeritus. BA, MA, University of Kentucky; PhD, University of Illinois.
- DON F. BLOOD (1951) Professor of Psychology and Director of Testing; BA in Ed, Central Washington State College; MA, PhD, State University of Iowa.
- WILLIAM C. BUDD (1953) Professor. BA, Hamline University; BS, MA, PhD, University of Minnesota.
- 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.
- GEORGE T. CVETKOVICH (1969) Professor. BA, Youngstown State University; MA, Akron State University; PhD, Kansas State University.
- CAROL J. DIERS (1963) Professor. BA, BA in Ed, Western Washington State College; MA, University of British Columbia; PhD, University of Washington.
- FREDERICK W. GROTE, JR. (1970) Associate Professor. AB, Dartmouth College; PhD, University of North Carolina.
- ELVET G. JONES (1957) Professor. BA, MA, University of British Columbia; PhD, University of Minnesota.

- 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. MARX (1970) Associate Professor. AB, University of Michigan; PhD, University of Illinois.
- EVELYN P. MASON (1959) Professor. BA, Mills College; MA, PhD, Washington University.
- ROBERT D. MEADE (1965) Professor. BA, Indiana University; MA, PhD, University of Pennsylvania.
- HAYDEN L. MEES (1970) Professor. AB, University of California; MS, PhD, University of Washington.
- LAURENCE P. MILLER (1968) Associate 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.
- RICHARD W. THOMPSON (1967) Professor. BA, MA, PhD, Michigan State University.
- ROBERT M. THORNDIKE (1970) Professor. BA, Wesleyan University; PhD, University of Minnesota.
- JOSEPH E. TRIMBLE (1978) Associate 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.
- JAMES W. WILKINS, JR. (1967) Associate Professor. AB, MA, Kent State University; PhD, Michigan State University.
- PAUL WOODRING (1839) Distinguished Service Professor Emeritus of the University. BSEd, Bowling Green State University; MA, PhD, Ohio State University. Honorary degrees: LHD, Kalamazoo College; PhD, Coe College; LittD, Ripon College; LHD, Bowling Green State University; LL.D., University of Portland.

BACHELOR OF ARTS

Major 60 credits

Required Courses

- Psych 201, 306, 307
- Two courses from Psych 311-316
- Two courses from Psych 321-326
- One course from Psych 401-403

Psychology

- One course from Psych 404-406
- One course from Psych 411-412
- In addition to the required courses, an additional 15 elective credits in psychology are required. 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: Advisers — C. Diers and P. Elich.

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 each of the following groups: Psych 401-403; 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

Humanistic-Phenomenological Psychology: Advisers — J. Wilkins, R. Meade, E. Mason

- 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.

Mental Health Services: Advisers — R. Marx and D. Panek

- Core program to include: Psych 313, 314, and one course from 311, 312, 315, 316
- Psych 402, 432, 433
- Two quarters of Psych 449

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 towards the 15 credits in the Human Development concentration for those students who are taking the psychology major along with an elementary education minor

Social Psychology: Adviser — G. Cvetkovich

- Core program to include Psych 315, 403
- Two of the following: Psych 335, 440, 441
- See Sociology for related course offerings.

Industrial/Organizational Psychology: Adviser — C. Taylor.

- Core program to include Psych 311, 313, 315, 321, and 322 (312 and 313 recommended)
- Psych 320 and 420

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; Biol 310, 312, 370, 424, 460, 465, 467, 490

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 305, 306, 307 are recommended)

BACHELOR OF ARTS IN EDUCATION

Major Elementary

Prospective elementary teachers are advised to take the Arts and Sciences concentration in Child Development.

Minor 20 credits

- Psych 201
- 15 credits in psychology other than the required professional educational psychology courses; recommended courses include Psych 306, 307

DEPARTMENTAL HONORS

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, 500; 417; 445 are described on page 32 of this catalog.

Courses in educational psychology include Psych 316, 351, 352, 353, 371, 372, 451. With the exception of Psych 316 and 353, these courses are not applicable to the arts and sciences major or minor. Also see Liberal Studies 105.

- 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)
Major personality theories and their philosophical assumptions; historical perspective and empirical findings about sex roles, culturally and cross-culturally. Psychological ramifications of sex role development for men and women.
- 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.
- 245 CURRENT ISSUES FOR COUNSELOR AIDES (3)
Prereq: permission of instructor. Designed for counselor aides employed in schools and tribal education programs. Identification of the responsibilities and roles of counselor aides. Students will identify the responsibilities and roles which are a part of their work as counselor aides.
- 246 FIELD EXPERIENCES FOR COUNSELOR AIDES (3)
Prereq: permission of instructor. Designed for counselor aides employed in schools and tribal education programs which offer services to Indian students and community members. Aides will learn how to develop work schedules, plans for referrals, and planning meetings with parents, students and school staff.
- 305 ADVANCED GENERAL PSYCHOLOGY (5)
Prereq: Psych 201. An integrative course covering broad philosophical issues in psychology as well as more specific issues of content and methodologies in psychology: psychophysics, perception, learning and memory, cognitive processes, motivation, and analyses of decision making and problem solving.
- 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.
- 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.
- 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.

Psychology

- 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.
- 330 CONSUMER PSYCHOLOGY (3)**
Prereq: Psych 201. Psychological factors useful to suppliers, and users, of goods and services; perception, attitudes, emotions, motivation, decision-making and communication relevant to product design, packaging, advertising, merchandising and customer service.
- 335 SOCIAL BEHAVIOR IN ANIMALS (3)**
Prereq: Psych 201. Comparison of social organization and behavior patterns in various species; aggression, population control, communication systems; evolution of behavior. 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 AND INSTRUCTION (3)**
Prereq: Lib St 105 or Psych 201; not open to those with credit in 321. Application of psychological principles of learning to classroom teaching.
- 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.
- 353 ADOLESCENT PSYCHOLOGY (4)**
Prereq: Psych 351 or 2C1. 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.
- 372 EVALUATION IN THE ELEMENTARY SCHOOL (2)**
Basic techniques for evaluation of student achievement, with particular emphasis on observational techniques and standardized tests appropriate to grades K-6.
- 396a,b,c HONORS TUTORIAL (2-5)**
- 401 SEMINAR IN INDIVIDUAL DIFFERENCES AND PSYCHOLOGICAL MEASUREMENT (3)**
Prereq: Psych 307 (may be taken concurrently with permission of instructor), 311 or 312. Major issues and methods in the study of individual differences and measurement. Laboratory and research.
- 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 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 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 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 research.
- 406 SEMINAR IN COMPARATIVE AND PHYSIOLOGICAL PSYCHOLOGY (3)**
Prereq: Psych 307 (may be taken concurrently), 325 or 326. Major issues and methods in the study of comparative and physiological psychology. Laboratory and research.

- 411 SEMINAR IN HISTORY AND SYSTEMS OF PSYCHOLOGY (4)
Prereq: junior standing, permission of instructor. 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 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 and 320. 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.
- 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: acceptance in mental health concentration or 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.
- 433 MENTAL HEALTH PRINCIPLES, PROGRAMS AND PROBLEMS (3)
Prereq: Psych 432 (must be taken concurrently with or prior to 449). Community problems and resources as they affect the psychological welfare of the individual; current approaches, facilities and philosophies in community mental health.
- 440 SOCIAL PSYCHOLOGY AND SOCIAL ISSUES (3)
Prereq: Psych 306, 315. Application of recent empirical and theoretical work on selected problems of social behavior. Issues studied vary with instructor. Examples are environment and population, violence and aggression, and minority mental health.
- 444 SEMINAR IN CROSS CULTURAL PSYCHOLOGY (3)
Prereq: Psych 306 and 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 (Psych 433, or concurrent, required for students in mental health concentration). 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.
- 452 GUIDANCE STRATEGIES FOR TEACHERS (3)
Prereq: educators or educators in training or permission of the instructor. Principles of interpersonal behavior and development of skills needed to interact effectively with students, fellow professionals and parents. Appropriate use of psychological education materials in curriculum explored.
- 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 371 or 311. Standardized group tests commonly used in the public schools; selection and administration of tests; interpretation of norms.

Graduate Courses

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.

Psychology

502 QUANTITATIVE METHODS I (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 QUANTITATIVE METHODS II (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 QUANTITATIVE METHODS III (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 II (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, repeatable to a maximum of 6 credits)

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. 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.

528 SEMINAR IN SOCIAL PSYCHOLOGY (3)

Prereq: permission of instructor.

529 SEMINAR IN BEHAVIOR PATHOLOGY (3)

Prereq: permission of instructor.

530 SEMINAR IN ADVANCED MEASUREMENT THEORY (3)

Prereq: permission of instructor.

531 SEMINAR IN EDUCATIONAL PSYCHOLOGY (3)

Prereq: permission of instructor.

552 STRATEGIES OF BEHAVIOR CHANGE (3)

Prereq: admission to M.S. program. Study of selected current approaches to behavior change with particular attention to application with children.

553 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.

- 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.
- 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 **INDIVIDUAL 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 558 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.
- 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. Courses can be repeated. 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. S/U grading. Student initiates and conducts a project under faculty supervision.
- 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

College of Arts and Sciences

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. There are two social psychology laboratories for the experimental study of social behavior. 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 eleven members, all holding the doctoral degree, the department is able to offer degree concentrations in general sociology, social psychology, demography/ecology, criminology, aging and applied sociology. In addition, students interested in pre-professional training in social services will find an adviser and suggested curriculum in the department.

The department has programs leading to the B.A. 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) Chairman.
Professor. BA, Chico State College; PhD, University of Oregon.
- DONALD J. CALL (1958) Associate Professor. BA, MA, PhD, University of Oregon.
- GEORGE F. DRAKE (1968) 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) Assistant Professor. BA, University of the Pacific, Stockton; MA, PhD, University of California, Davis.
- EDWIN ROSENBERG (1978) Assistant Professor. BA, Michigan State University; MA, PhD, University of Southern California, Los Angeles.
- 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 — LaFreniere

- Core program
- Soc 303, 330, 321
- Additional sociology electives to total 70 credits

Applied Sociology: Adviser — Simpson, LaFreniere

- Core program
- Soc 272, 311, 373
- Recommended: Soc 471, 473, 475
- Additional sociology electives to total 70 credits

Criminology: Advisers — Paulus, Call

- Core program
- Soc 351, 352, 353, 354, 452
- Soc 454
- Soc 380
- Additional sociology electives to total 70 credits

Demography/Ecology: Advisers — Gossman, Mazur

- Core program
- Soc 321, 322, 323, 415, 421, 422
- Math 105, 220
- Comp Sci 110
- Geog 440
- Additional sociology or mathematics electives to total 70 credits

Gerontology: Adviser — Rosenberg

- Core program
- Soc 324, 333, 334, 336
- Additional sociology 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.

Sociology

Minor 25 credits

- Soc 202
- Soc 302
- Soc 321 or 330
- Electives under departmental advisement

BACHELOR OF SCIENCE

Major 90 credits. Adviser — Stephan

- Math 105, 220, 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, 500, 417, 445 are described on page 32 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, conditions and issues from the sociological perspective.

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.

272 APPLIED SOCIOLOGY (5)

Prereq: Soc 202. Introduction to the major area in which sociological knowledge and methods are applied to understand and change social systems. An overview of the major approaches sociologists use to evaluate and direct attempts at social change in such areas as social and welfare services, criminal justice, urban planning and bureaucratic structure.

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, 272. The logic and methodology of evaluating the effectiveness of social programs; research strategies for collecting appropriate information; methods of analyzing whether findings indicate program success; survey research methods, time series analysis, problems of logical inference.

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.

- 334 SOCIAL PROBLEMS OF AGING (5)**
Prereq: Soc 202, 333. Effects of social problems on the older population in the United States; economic, political, legal, familial, occupational, medical and social-psychological factors; death and dying in America.
- 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.
- 336 COMPARATIVE STUDIES IN AGING (5)**
Prereq: Soc 202 and 333. Social aspects of aging in different societies and periods in history; comparisons over time and between societies; particular emphasis on factors related to longevity.
- 338 SOCIOLOGY OF SEXUAL BEHAVIOR (5)**
Prereq: Soc 202. Forms of sexual behavior; patterns of heterosexual behavior over time and by age, sex, race, social class, residence, religion and values; the sexual revolution; sexual behavior as a business; socialization patterns leading to forms of sexual behavior; "deviant" sexual behaviors.
- 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. Adult crime as defined within a legal context. The extent and meaning of crime as documented by available data. Various forms of crime, their relationship to specific sociological variables and explanation of their causation.
- 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. The police, courts and correctional institutions. Community-based corrections and probation and parole.
- 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. Schooling as a major form of socialization and status placement in society.
- 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.
- 366 SOCIOLOGY OF SPORT (5)**
Prereq: Soc 202. The impact of sports on American society and of American society on sports; the relationship between sports and religion, politics, education and economics; the role of sport in promoting American values; racial and sexual discrimination in sports.
- 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.
- 371 SOCIAL WORK AND GROUPS (5)**
Prereq: Soc 202. History, development, and current use of group social work; major strategies in group social work and the assumptions and outcomes of each.
- 373 PLANNED SOCIAL CHANGE (5)**
Prereq: Soc 202, 272. Historical and current analyses of government-sponsored attempts to engineer social change; intellectual and social bases of major social engineering attempts; current literature on social planning; practical application of sociological knowledge and perspectives.
- 380 SOCIOLOGY OF CHILDHOOD AND ADOLESCENCE (5)**
Prereq: Soc 202. Age-sex status definition and role taking; institutional and processual aspects of maturation.
- 396a,b,c HONORS TUTORIAL (3-5 ea)**

Sociology

- 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.
- 422 ADVANCED SOCIAL ECOLOGY (3)
Prereq: Soc 322. Review of contemporary research in human ecology. Offered in alternate years.
- 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.
- 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 SOCIO-LEGAL CONCERNS OF WOMEN (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.
- 475 SOCIAL SERVICE DELIVERY (3)
Prereq: Soc 202, 272, 473. Analysis of the organizational relationships among private and governmental social service-related agencies. Course will analyze political and social determinants of funding patterns, and organizational networks between funding agencies and delivery agencies, and among delivery agencies in different areas. Emphasis placed on detailed analysis of Washington State patterns.
- 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.
- 494 TEACHING-LEARNING PROCESSES IN INTRODUCTORY SOCIOLOGY (3)
Prereq: 25 credits in sociology and written permission required from instructor before registering. Practicum as discussion leaders in Soc 202.
- 496a,b,c HONORS TUTORIAL (3-5 ea)

Graduate Courses

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 (3-6)

Prereq: formal advancement to candidacy for the M.A. in sociology. S/U grading.



SPEECH

College of Arts and Sciences

The Department of Speech offers majors in speech communication and broadcast communication and specialized majors in speech education. Four speech 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 in speech 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.

SPEECH COMMUNICATION

Concentrations in speech communication at the bachelor level are useful as bases 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: an extensive program of forensic activities in which students may participate regardless of their chosen major and a speakers' bureau, offering speaking experience before schools and community organizations.

BROADCAST COMMUNICATION

A major concentration 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 production 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 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. The Department of Speech offers an interdisciplinary major in Speech/English to prepare 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 offers broad opportunities for learning. Further information and guidance may be obtained by speaking with the department chairman, College Hall 209 or calling (206) 676-3891 or 676-3870.

SPEECH FACULTY

LARRY S. RICHARDSON (1970) Chairman.

Associate Professor. BA, Western Washington State College; MEd, Central Washington State College; MA, PhD, Washington State University (Speech Communication, Debate/Forensics).

SENER, CARLILE (1947) Professor. BA, BS, Fort Hays, Kansas State College; MA, Colorado State College; PhD, University of Wisconsin (Speech Communication, Speech Pathology/Audiology).

PAUL E. HERBOLD (1952) Associate Professor. BA in Ed, Western Washington State College; MA, University of Washington; PhD, University of Minnesota (Speech Communication, Broadcast Communication, Speech Education).

MARVIN L. OLMSTEAD (1969) Associate Professor. BS in Ed, Black Hills Teachers College; MA, Washington State University; PhD, University of Washington (Speech Communication).

J. DAN ROTHWELL (1980) Assistant Professor. BA, University of Portland; MA, University of Oregon; 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 Communication, Speech Pathology and Audiology, Interpersonal Communication).

BACHELOR OF ARTS

Major — Speech Communication

73 credits

- One of the following: Speech 101, 302
- Speech 204, 205, 304, 309, 315, 319, 350, 407, 490
- 20 credits in speech under departmental advisement

- 17 credits in supporting courses taken outside the Speech department under departmental advisement

(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

Major — Broadcast Communication

73 credits

- One of the following: Speech 101, 302
- Speech 240, 304, 309 or 405, 340, 343, 449
- 30 credits from Speech 204, 241, 300, 309, 315, 319, 341, 342, 350, 373, 400, 401, 404, 405, 407, 409, 441, 442, 443, 444, 481, taken under departmental advisement
- Journ 104 and 18 credits of additional supporting courses taken outside the Speech Department under departmental advisement

Minor — Broadcast Communication

30 credits

- One of the following: Speech 101, 302
- Speech 240, 241, 304, 319, 340, 342, 343
- Journ 104
- Electives under departmental advisement

BACHELOR OF ARTS IN EDUCATION

Major — 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 — General Classroom for Elementary Teachers 25 credits

- One of the following: Speech 101, 302
- Speech 484

Speech

- 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 — Secondary Teachers 60 credits

- One of the following: Speech 101, 302
- Speech 202, 204, 304, 319, 350, 407, 485
- Completion of six courses, three from each of two of the following modules:
 - Broadcasting: Speech 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 — Secondary Teachers 30 credits

- One of the following: Speech 101, 302
- Speech 202, 204, 205, 304, 319, 350, 485
- Recommend Th/D 212, 370
- Electives under departmental advisement

Interdisciplinary Speech/English Major Concentration 90 credits

(Satisfies both major and minor and leads to teaching competency 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: Speech 240, 241, 340, 342
 - Communication Theory: Speech 309, 315, 350, 405
 - Forensics: Speech 205, 206 (4 credits), 406
 - Theatre: Th/D 101, 212, 360, 370
- Electives in speech under departmental advisement

English (See listings under English)

45 credits

GRADUATE STUDY

For concentration in speech leading to the Master of Arts degree, see Graduate section of the catalog.

COURSES IN SPEECH

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

For a listing of speech courses which satisfy the General University Requirements, see the College of Arts and Sciences section 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.
- 202 PARLIAMENTARY PROCEDURE (1)
Parliamentary principles and procedures.
- 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 (2)
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.
- 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: Speech 240 or permission. Laboratory practice in applying communication skills to broadcast media; gathering, preparation and delivery of radio news.
- 302 SPEECH FOR THE TEACHER (3)
Prereq: junior standing. Open only to teacher education students without Speech 101. 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 (3)**
Prereq: Speech 203 or equivalent experience in speaking proficiency. Art and techniques of oral interpretation as method of literary criticism and means of communicating total meaning of a literary work to an audience.
- 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: Speech 241, 340. Laboratory practice in production of radio news and public service programs.
- 342 **T/V PRODUCTION I (3)**
Prereq: Speech 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: Speech 240 and Journ 104. The preparation of news, advertising and public service copy for radio and television.
- 350 **BASES OF SPEECH (4)**
Prereq: Speech 101. Bases of verbal communication, physical, physiological and phonetic. Practice in phonetic transcription.
- 373 **PHONETICS (3)**
Prereq: junior standing. Training in recognition and production of sounds of spoken English through use of the International Phonetic Alphabet.
- 401 **SPEECH WRITING (3)**
Prereq: Speech 304. Manuscript preparation for selected audiences; theory and practice.
- 404 **SMALL GROUP LEADERSHIP (4)**
Prereq: Speech 204. Exploration of concepts of leadership of small groups in both formal and informal settings. Development of leadership skills.
- 405 **PERSUASION (4)**
Prereq: Speech 205. Study of principles that influence attitudes and opinions in persuasive situations.
- 406 **ADVANCED FORENSICS AND DEBATE (2)**
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 in speech.
- 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. 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.
- 419 **ADVANCED ORAL INTERPRETATION (3)**
Prereq: Speech 203, 319. Techniques in communicating effectively the intellectual and emotional meanings of prose, poetry and drama. Reading aloud of dramatic monologues and soliloquies; activities in Readers Theatre.
- 441 **PRODUCING AND DIRECTING THE BROADCAST PROGRAM (4)**
Prereq: Speech 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.
- 442 **TELEVISION NEWS PRODUCTION (2)**
Prereq: Speech 241, 342, Journ 104 and written permission of instructor. Development of broadcast communication skills. Practice in preparation and presentation of televised news. A maximum of 6 credits may be earned. (Concurrent enrollment in Journ 431, 432 or 433 recommended.)
- 443 **T/V PRODUCTION II (3)**
Prereq: Speech 342 and written permission of the broadcast adviser. Advanced theory and technique of television production. Laboratory experience utilizing instructional media facilities.
- 444 **PRODUCING AND MODERATING TELEVISION DISCUSSION (3)**
Prereq: Speech 204. Theory and practice in planning and leading on-camera discussion. Topic determination, panelist selection, outline writing, pre-airing briefing, facilitation of participation, and criticism of videotaped playbacks.
- 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.
- 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.

Speech

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.

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 communications, and extra curricular speech activities.

486 DIRECTING THE FORENSICS PROGRAM (4)

Prereq: Speech 205 or 206 (taken for 4 credits). Conducting tournaments, criticizing debates and individual events, budgeting.

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.)

487 DISCUSSION TECHNIQUES FOR TEACHERS AND ADMINISTRATORS (3)

Cultivation of attitudes and skills to aid teachers and administrators to engage in and lead discussions with greater competency.

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.
- 495 **CAMPAIGN SPEAKING: ANALYSIS AND CRITICISM (3)**
Prereq: junior standing. Intensive study of the speaking of political office seekers. When appropriate, emphasis will be upon those seeking the presidency; however, regional, state and local figures will also be studied. (Summer only.)
- 499 **FIELD INTERNSHIP IN SPEECH COMMUNICATION (3-12)**
Prereq: junior standing and written permission of instructor. Supervised work in speech communication for an educational institution, public agency or private enterprise. S/U grading.
- 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, seminar 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.
- 594 **FIELD INTERNSHIP IN PUBLIC INFORMATION/ MASS COMMUNICATION (6-12)**
Prereq: permission of instructor. On-the-job experience in public information/mass communication work in an agency of government, educational institution, public service organization or broadcasting station or other private enterprise as approved by the Speech Department Graduate Committee. A field project report will be required. This report may be applied in partial fulfillment of the M.A., Option II requirement.
- 595 **SEMINAR IN RHETORICAL CRITICISM (4)**
Prereq: graduate status and Speech 501. Literature of rhetorical criticism and the application of rhetorical theory so gleaned in the criticism of significant speeches.
- 690 **THESIS (6-9)**
- 691 **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.

Graduate Courses

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

- 501 **INTRODUCTION TO RESEARCH IN SPEECH (4)**
Interpretation and evaluation of research outcomes; purpose and design of various methods, with particular emphasis on historical and descriptive methods.
- 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)**
Interpersonal communication in both groups and dyadic situations; communication choice, social context, channels and nonverbal interaction.
- 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.



SPEECH PATHOLOGY & AUDIOLOGY

College of Arts and Sciences

THE DISCIPLINE

Speech pathology and audiology are disciplines which have developed out of a concern for people with speech, language and hearing disorders. Preparation leading to a degree in speech pathology and/or audiology includes a wide range of coursework and a variety of clinical practicum opportunities working with handicapped adults and children. Students intending to enter this profession, whether in the public schools or in clinics, rehabilitation centers or hospitals, are advised that clinical certification by the American Speech/Language and 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 Committee."

Those who intend to be classroom teachers at the elementary school level often find the speech pathology and audiology major (Bachelor of Arts in Education) or coursework in speech and lang-

uage development helpful in understanding and working with children. Such a program often combines the speech pathology and audiology major and an elementary minor; however, it does not lead to certification as a CDS.

DEGREE PROGRAMS

The Department of Speech Pathology and Audiology offers three different academic degrees: the Bachelor of Arts, the Bachelor of Arts in Education 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 fifth-year level. The Bachelor of Arts in Education program often is combined with an elementary teaching minor, preparing the student for classroom teaching. The Master of Arts degree is considered a professional degree and facilitates certification at both the state and national level. Also, a fifth-year program is available for those not seeking the advanced degree.

Due to the clinical requirements of the program, enrollment in the undergraduate major may be limited.

CERTIFICATION IN SPEECH PATHOLOGY/AUDIOLOGY

Two types of professional certification are available: state certification, which is necessary for public school employment, and national certification, which is often necessary to work in hospitals and clinics. The program leading to certification as a speech pathologist and/or audiologist in the public schools has been formulated by a "Program Committee" consisting of Western, the Washington Speech and Hearing Association and a participating school district. For details regarding academic, clinical and externship requirements, please consult the departmental handbook.

The American Speech/Language and Hearing Association's recommendation for certification of speech therapists includes a minimum of 50 quarter hours of academic preparation as well as required supervised clinical hours. Such preparation would extend into the fifth-year or graduate degree program. Consult the departmental handbook for details.

UNDERGRADUATE CLINICAL COMPETENCY

In addition to meeting academic requirements, students specializing in speech/language pathology and 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 chairman, College Hall 103 (206) 676-3885.

SPEECH PATHOLOGY/AUDIOLOGY FACULTY

- MICHAEL T. SEILO (1970) Chairman. Associate Professor. BS, Northern Michigan University; MA, University of Arizona; PhD, Ohio University (Audiology/Aural Rehabilitation/Experimental Phonetics).
- SENER, CARLILE (1947) Professor. BA, BS, Fort Hays, Kansas State College; MA, Colorado State College; PhD, University of Wisconsin (Speech Communication/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).
- ERHART A. SCHINSKE (1957) Professor. BA, Hamline University; MA, PhD, University of Minnesota (Speech/Language Pathology).

- ARTHUR L. SOLOMON (1969) Professor. BA, Antioch College; MA, University of North Carolina; PhD, Stanford University (Speech Communication/Speech Pathology/Interpersonal Communication).
- 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).

Affiliated Clinic Staff

- JILL K. HUNT-THOMPSON (1977) Clinical Supervisor. BA, MA, Western Washington University (Speech/Language Pathology).
- RUTH PRATT OLSCAMP (1975) Clinical Coordinator. BA, Heidelberg College; MA, Ohio University (Speech/Language Pathology/Diagnostics).
- BARBARA J. WELLS (1979) Extern Coordinator. BA, 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

BACHELOR OF ARTS IN EDUCATION

Major — Speech Pathology & Audiology

45 credits

Minor in elementary education required.

- SPA 351, 352, 353, 354, 356, 361, 454, 455, 456, 461, 463
- Electives under departmental advisement

BACHELOR OF ARTS OR BACHELOR OF ARTS IN EDUCATION

Minor — Speech Pathology & Audiology

25 credits

(A minimum of 25 credits. More than 25 are recommended.)

- SPA 351, 354, 356, 361, 461
- Electives under departmental advisement

GRADUATE STUDY

For concentrations in speech pathology and audiology leading to the Master of Education or Master of Arts degree, see Graduate section of catalog.

COURSES IN SPEECH PATHOLOGY AND AUDIOLOGY

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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 (4)
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.
- 452 DIAGNOSTIC METHODS IN SPEECH AND LANGUAGE DEVELOPMENT (4)
Prereq: SPA 351, 352, 353, 354, 356, 373 or written permission of instructor. Methods, procedures, techniques and instruments; supervised practice.
- 453 PRACTICUM IN DIAGNOSTIC METHODS (3)
Prereq: SPA 452 and written permission of instructor. Clinical practicum in the administration of diagnostic tools in speech and language pathology.
- 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. Recommended for those students who have had no prior experience in the public schools.
- 456 ORGANIC SPEECH DISORDERS (3)
Prereq: SPA 458. Symptomatology, etiology and therapy for cerebral palsy, cleft palate, aphasia, dysarthria and laryngectomy.
- 457 METHODS IN SPEECH THERAPY (5)
Prereq: SPA 356. Directed observation and evaluation of the methods, materials and techniques used in treating a variety of communication disorders.
- 458 INTRODUCTION TO CLINICAL PRACTICE IN SPEECH/LANGUAGE THERAPY (2)
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. Introduction to the theory and application of pure tone, impedance and speech audiometry to assessment of hearing function; implications for rehabilitation covered.
- 463 AURAL REHABILITATION (4)
Prereq: SPA 461. Auditory training, speech, reading and language training for the aurally handicapped.
- 465 SIGN LANGUAGE OF THE DEAF (2)
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 Amslan (sign language used by deaf people).
- 466 MEDICAL AUDIOLOGY (3)
Prereq: SPA 461, 462. The medical pathologies of the hearing mechanism and their auditory manifestations. Problems of diagnosis, referral and report writing.
- 467a,b,c CLINICAL PRACTICE IN AURAL REHABILITATION (2 ea)
Prereq: SPA 463. 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 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

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.
- 545 **CONTEMPORARY ISSUES IN SPEECH PATHOLOGY AND AUDIOLOGY (3)**
Prereq: graduate status and permission of instructor. Investigation of contemporary issues in speech pathology and audiology research trends. Current developments, topics, problems confronting clinical practice and professional conduct.
- 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 **SEMINAR IN SPEECH DISORDERS: THEORY AND THERAPY (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 (4)**
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.
- 553 **SEMINAR: LANGUAGE DISORDERS (3)**
Prereq: SPA 354, 361, or written permission of instructor. Abnormal speech and language acquisition and development with special focus on current research findings.
- 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.



Speech Pathology/Audiology

- 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 syntax and semantics; origins and growth of symbolic processes; factors influencing learning of speech and language.
- 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.
- 569 **AUDITORY PROCESSING (3)**
Prereq: graduate status or B.A. degree and permission of instructor. Effective auditory processing; its impact on the developing child; techniques and practicum in identifying, assessing, developing, monitoring auditory processing skills.
- 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.
- 573 **ADVANCED PHONETICS (3)**
Prereq: SPA 373. The phonetic transcription of dialects and disordered speech.
- 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.
- 599a,b **GRADUATE EXTERNSHIP IN SPEECH PATHOLOGY/AUDIOLOGY (8 ea)**
Prereq: completion of the undergraduate major requirements, permission of department, graduate status and demonstrated proficiency in clinical skills. Supervised experience providing opportunities to develop and demonstrate clinical competence in the management of communication disorders. S/U grading.
(Only 3 + 3 credits applicable toward M.A. degree.)
- 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.



TECHNOLOGY

College of Arts and Sciences

Many students are surprised and pleased to hear that Western offers technical education programs on its campus. Students enroll in the technology courses either because they are interested in completing one of the six major programs offered or because they are pursuing other majors or careers which are enhanced by skill and knowledge in a technical field. Some students take a limited number of technical courses because they enjoy working and learning in the shop setting and wish to include these activities in the elective portion of their university experience.

Courses can be divided, for convenience, into six major categories:

Graphic Communications Technology: These are the courses which deal in two-dimensional media and which involve the various ways by which man transmits information and thoughts through visual means. Included in this category are courses in industrial graphics and drafting, the graphic arts and photography. Actual courses included in this category are 210, 210b, 211, 240, 260, 309, 310, 311, 312, 313, 340, 341,

344, 360, 363, 413, 417r, 419, 440, 441, 442, 443, 444, 447, 448, 449, 460, 468, 469, 540, 544, 545.

Materials and Manufacturing Technology: Courses in this category deal with skill and information pertaining to the ways man copes with his physical and material environment and with which he modifies and shapes basic materials for his own use. Included in the category are courses in material science, metallurgy, material testing, wood technology (furniture design and construction, laminations), metals technology (cold forming, casting, forging, welding and machining), and polymer science (plastics, thermoplastics and thermosets). The specific courses offered in this area include 220, 221, 222, 223, 224, 225, 231, 303, 320, 321, 323, 325, 328, 331, 333, 335, 421, 422, 423, 424, 425, 428, 429, 433, 434, 438, 439.

Mechanical and Electrical Technology: This category includes a study of power — its generation, transmission, control and utilization, and deals with the topics of fluid power (hydraulics, fluidics, pneumatics), power generation (internal

Technology

heat engines, external combustion, solar energy), instrument control systems and power measurement, electrical power (motors, generators, transformers, distribution and control), communication (radio, television, facsimile, teletype), industrial (control and instrumentation), and electronics. Courses in this category include 270, 271, 280, 281, 370, 371, 372, 375, 379, 380, 381, 382, 383, 473, 474, 479, 484, 489, 580.

Industrial Design: This is a study of the human and material factors, functional requirements and aesthetic considerations which are combined to solve the problems of product design. The courses offered in design include product design, design history, design factors and techniques. The Western Design Center, offered jointly by home economics and technology, is described on the pages following and relates to the design work of the Technology Department. Design courses offered include 214, 215, 311, 315, 316, 318, 416, 418.

Driver Education: In order to teach driver education in Washington schools, four courses are required, including three of the following: 480, 481, 482, 483, 485, 487.

General and Professional Courses: These are the professional courses for those who wish to teach or for those from other departments or off-campus who have specific interests. One course (391) is for those who wish to study about the relationship of man and technology. Included here are 101, 301, 302, 350, 391, 392, 393, 394, 400, 402, 435, 450, 459, 488, 490, 490a, 491, 492, 493, 495, 496, 499, 550, 590, 591, 592, 593, 594, 595.

PROGRAMS

A variety of programs are sponsored by the Technology Department that are designed to enhance articulation of community college students, preserve academic and research skills, and placement of graduates. A brief explanation of these programs is provided.

Direct Transfer Program

A technical "block" transfer program has been approved at WWU. The program accepts transfer of 90 credits* applicable to the 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.

Vehicle Research Institute

The Vehicle Research Institute 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.

Placement

The Department of Technology does not comprise a vocational/technical program to the extent that it seeks to guarantee placement upon graduation. However, in its history 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. Technology majors study a balanced program of both relevant technology and the liberal art which allows them to stand in an advantageous placement position regardless of the nature of current economic conditions. In short, technology does not rely upon narrow vocational goals and does not justify its effort solely upon placement possibilities. However, it is proud of its placement record and a prognosis which appears to be excellent.

The Western Design Center

The Western Design Center (WDC) is a vehicle which serves to provide students with realistic design problems which are drawn from the actual needs of the surrounding area. The WDC is in constant correspondence with various governmental, charitable and similar non-profit agencies in order to seek out design problems which can be structured into assignments for the design students of home economics and technology. These assignments, then, become on-the-job situations and involve students in actual work with design clients.

*Excluding sub-college and/or remedial courses.

Students interested in Design Center projects should consult the WDC personnel in home economics and technology.

MAJORS

Six undergraduate majors are administered by the department, i.e., Industrial Arts Teacher Education, Industrial Design, Industrial Technology, Manufacturing Engineering Technology, Visual Communications Education, and Vocational Industrial-Technical Teacher Education. All six of these majors lead to the Bachelor of Science degree.

Industrial Arts Teacher Education

This teacher preparation program has been offered for over 70 years and is a traditional strength at Western. The program prepares teachers of technical subjects for the junior and senior high schools. Some graduates, if occupationally qualified, choose to teach in the vocational and technical programs of community colleges and technical institutes. For elementary teachers, industrial arts offers an activity approach to all subjects and ways of installing career awareness in the entire elementary program. The department houses a laboratory which features an individualized all-media approach to the content in career and technical education.

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 esthetics 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 esthetic expression. The course arrangement is designed to prepare professional graduates to enter our industrial culture as designers, planners, managers, illustrators, or specialists in industrial production or marketing. A complete description of the program is offered in this catalog under "Interdisciplinary Programs."

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 support-

ing 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, Industrial Engineer. This program has been accredited by the National Association of Industrial Technology.

Manufacturing Engineering Technology

This major is designed for those students interested primarily in the technical aspects of the manufacturing industries. Students in this program take courses related to specific manufacturing technologies and a prescribed sequence of courses in science and mathematics. Positions taken by recent graduates include the following: Manufacturing Methods Analyst, Production Planner, Production Supervisor, Production Management. Prospective students are encouraged to include physics, chemistry and mathematics in their high school preparation.

Visual Communications 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 this catalog under the "Interdisciplinary Programs" listing.

Vocational Industrial-Technical Teacher Education

This degree program is designed to meet the needs of those individuals entering the field of vocational education. It is specifically designed for those individuals in the trade, industrial and technical education fields. It is the responsibility of the individual to meet the Washington State

Technology

Certification requirements for trade, industrial and technical vocational education teachers. The professional vocational education courses that are a component of this degree program are set up to meet the state certification standards. It is recommended that individuals entering this degree program possess the necessary qualifications to meet the work experience component of the Washington State Vocational Education certification standards.

TECHNOLOGY FACULTY

- CLYDE M. HACKLER (1974) Chairman. Associate Professor. BS, Eastern Kentucky University; MEd, University of Illinois; EdD, University of Maryland.
- JOSEPH E. BLACK (1967) Associate Professor. BS, Lehigh University; BME, Cooper Union, New York; MME, New York University; PhD, Lehigh University. Registered Professional Engineer, Washington and California.
- 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.
- CLAUDE E. HILL (1967) Associate Professor. BA, MA, University of Washington.
- MAICOLM H. KENYON (1978) Assistant Professor. BA, BS, MA, University of New Mexico.
- DONALD E. MOON (1966) Associate Professor. BS in Ed, California State College, California, Pa.; MA, Teachers College, Columbia University; EdD, Oregon State University.
- 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 of Technology and Director, Visual Communications Education. 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. SOUTHCOTT (1969) Associate Professor. BA, University of Washington; MFA, Maryland Institute; IDSA.
- JOHN L. UNDERWOOD (1980) Assistant Professor. BS, MS, Eastern Kentucky University.
- ELSIE M. VASSOAL (1977) Assistant Professor. BS, MEd, Western Washington State University.
- RICHARD F. VOGEL (1971) Associate Professor. BA, MAT, Washington State University; EdD, Texas A. & M. University.

BACHELOR OF SCIENCE

Major — Industrial Arts Education Teacher Education

74 credits minimum

- Breadth requirement — 38-40 credits*
From the following: Tech 131 or 231, 210, 213, 225, 240, 270 or 271, 280, 302, 333
- Depth requirement — 12-14 credits*
From one or more of the following:

- (a) Graphic Communication Technology (industrial graphics, photography, industrial design)
- (b) Materials and Manufacturing Technology (woods, metals, materials science, plastics, crafts)
- (c) Mechanical and Electrical Technology (electricity, electronics, power mechanics)

- Supporting Courses — 11-14 credits*
Any computer science programming course
Physics 131 or 101; Chem 115 or 101
- Professional — 13 credits*
Tech 391, 488, 491, 493, 496

Note: Tech 302, 488, 491, 493, 496 must be enrolled in concurrently.

Minor 25 credits

Courses selected under departmental advisement.

Teaching Competence

Recommendation for teaching industrial arts certification requires the completion of the major and an overall GPA of 2.5 or better.

Contact Office of Admissions and Advisement in Miller Hall 202 for information concerning professional studies programs.

Major — Technology

Option I — Industrial Technology 110 credits
(includes Supporting Courses)

- Technology Core — 27 credits: Tech 210, 220, 223, 231, 270, 333*
- Technology Emphasis — 23 credits. From one or more of the following areas:*
 1. Graphic Communication
 2. Materials and Manufacturing
 3. Mechanical and Electrical
- Supporting Courses — 59-60 credits:*
 - Mathematics — 20-21 credits. Math 103¹, 104², 155, 156, Any Computer Science Programming course
 - Science — 15 credits. Chem 115³, Physics 131³, Chem 251³, or Physics 132
 - Management — 24 credits. Acct 251, BA 271³, Econ 202³, BA 301, plus two courses from the following: BA 303, 322, 330, 401, 425, 428, 432, 471

¹Waived if not needed for Math 155.

²Waived for those students who have taken high school trigonometry.

³Fulfills part of the GUR.

Minor 25 credits

Courses selected under departmental advisement.

Option II — Manufacturing Engineering Technology⁴ 104-105 credits

- Manufacturing Core — 65 credits:
Tech 210, 220, 221, 222, 223, 224, 231, 270, 309, 333, 383, 421, 422, 424, 425, 433, 473, 474
- Support Courses — 39 or 40 credits:
Math 105, 124, 240; any computer science programming course; Chem 121, 122; Physics 131, 132; Eng 401

Minor 25 credits

Courses to be selected under departmental advisement.

⁴Careful selection of elective courses may qualify the Manufacturing Engineering Technology graduate for entry into the master's degree in business administration. Consult with adviser.

Visual Communications (VICOED) Concentration

See Interdisciplinary Programs section for specifications.

Industrial Design

See Interdisciplinary Programs section for specifications.

Major—Vocational Industrial-Technical Teacher Education 110 credits

- 59 credit hours in technical courses, as follows:
 - (1) 45 credits for occupational competency *or*
 - (2) 45 credits in selected courses in area of specialization, *or*
 - (3) Combination of (1) and (2) to total minimum 45 credits, *plus*
 - (4) 14 credit hours in area of specialization *or* courses that are related to *or* complement the area of specialization (these courses will be selected under advisement of the major adviser to provide the student with maximum depth in his particular occupational area and may well be of a scientific or technical nature)
- Tech 392, 393, 394, 442, 490, 490a, 495, 498, plus 9 credit hours selected by advisement

from Tech 215, 391, 488, 492, 494, 496, to total 44 credits in professional vocational education

- 7 credits in psychology: Psych 351, 353

GRADUATE STUDY

For a concentration in industrial arts leading to the degree of Master of Education, see Graduate section of the catalog.

COURSES IN TECHNOLOGY

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 of this catalog.

Courses in technology cover a wide range of subject areas. For ready reference, courses may be classified as follows:

Graphic Communications Technology — 210, 210b, 211, 240, 260, 310, 311, 312, 313, 340, 341, 342, 344, 360, 363, 413, 417r, 419, 440, 441, 442, 443, 447, 448, 449, 460, 466, 469, 540, 544

Materials and Manufacturing Technology — 220, 221, 222, 223, 224, 225, 231, 303, 320, 321, 323, 325, 328, 331, 333, 335, 421, 422, 423, 424, 425, 428, 429, 433, 434, 438, 439

Mechanical and Electrical Technology — 270, 271, 280, 281, 370, 371, 372, 375, 379, 380, 381, 382, 383, 473, 474, 479, 484, 489, 580

Industrial Design — 214, 215, 311, 315, 316, 318, 416, 418

Driver Education — 480, 481, 482, 483, 485, 487

General and Professional Courses — 101, 301, 302, 350, 391, 392, 393, 394, 400, 402, 435, 450, 459, 488, 490, 490a, 491, 492, 493, 495, 496, 499, 550, 590, 591, 592, 593, 594, 595

101 ORIENTATION TO INDUSTRIAL ARTS AND TECHNOLOGY (2)

The areas of technology, programs of studies, and career opportunities. Recommended for freshmen and new transfer students who seek information on the area. S/U grading.

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 (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. Introduction to team dynamics through creative problem solving.

Technology

- 211 INDUSTRIAL GRAPHICS (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.
- 215 EVOLUTION IN INDUSTRIAL DESIGN (3)**
Interrelationship with the arts, sciences, and society; designers, their philosophies and resultant impact on culture.
- 220 MANUFACTURING MATERIALS (4)**
Prereq: Chem 115 or 121. Materials of industrial technology: metals, ceramics, polymers, cements and glasses; and basic materials science.
- 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)**
Prereq: Tech 231. Tools, materials and techniques used to produce foundry patterns and principles and practices employed in the contemporary metal-casting industry. Lab fee.
- 223 MACHINE METAL PROCESSES (5)**
Prereq: Tech 210 recommended. Basic concepts and skills in machine metal processes; shaping metal by machine tools, chipless machining, automation of machine tools and cold forming processes. Lab fee.
- 224 INTRODUCTION TO STRENGTH OF MATERIALS (3)**
Prereq: Physics 131. Elementary statics, stress and strain in members; riveted and bolted joints; statically determined beams; and torsion in shafts.
- 225 GENERAL METALS FOR INDUSTRIAL ARTS (5)**
A survey course in metals processes designed to prepare industrial arts teachers for instruction in the general shop format, particularly at the middle school level.
- 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 communications theory, information design, reproduction, presentation, and management; involves the print and non-print media. Lab fee.
- 260 GENERAL PHOTOGRAPHY (4)**
Fundamentals of film developing, enlarging, print finishing. Basic elements of black and white composition and visualization. Lab fee.
- 270 BASIC ELECTRICITY (4)**
Principles and concepts of electricity; laboratory experiences with electrical components, circuits and measuring equipment.
- 271 ELECTRONICS FOR INDUSTRIAL ARTS (5)**
Prereq: declared major in industrial arts. Basic principles and concepts of electricity/electronics. Techniques and projects useful in teaching electricity/electronics in the secondary schools.
- 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.
- 302 MAINTENANCE OF INDUSTRIAL EQUIPMENT (3)**
Prereq: Tech 225, 231, 271. This course will include 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 systems or procedures, maintenance of specific stationary machines and hand tools in the following areas: industrial plastics, industrial wood processing, machine metals, automotive maintenance systems. Offered summer only.
- 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; Tech 214 and 310 recommended. 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. Visitation to observe current drafting practices in industry.
- 313 ARCHITECTURAL DESIGN AND HOUSE PLANNING (3)**
Prereq: Tech 210. Historical development; considerations of design; analysis of needs; utilization of sites, preparation of plans.
- 315 INDUSTRIAL DESIGN PROCESSES (5)**
Prereq: Tech 311. 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. Application of multi-view projections, pictorials, mock-ups and prototypes to the resolution of a design problem.
- 318 **PRODUCT SYNTHESIS IN INDUSTRIAL DESIGN (5)**
Prereq: Tech 316. 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.
- 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 operation. Lab fee.
- 321 **METAL FABRICATION (4)**
Prereq: Tech 210 and 221; Tech 214 recommended. A course in design and fabrication of metal structures, including layout, cold forming, hot joining and analysis of strength, safety, utility, aesthetics and cost.
- 323 **MECHANICS OF MATERIALS (4)**
Prereq: Math 124 and Tech 224. Internal response of engineering members to forces, principal stresses and strains and stress concentrations.
- 325 **INDUSTRIAL METALLURGY (3)**
Prereq: Tech 220. Production of the common metals from their ores; industrial processing, heat treatments and alloying; properties of metals as related to manufacturing operations.
- 328 **METALLOGRAPHY (2)**
Prereq: Tech 220 and permission of instructor. Microscopic and related techniques applied to metal specimens.
- 331 **ADVANCED WOODS (4)**
Prereq: Tech 231. Skill and development in the more complex woodworking processes with related information on the woodworking industry.
- 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. Lab fee.
- 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. Lab fee.
- 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.
- 350 **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.
- 360 **ADVANCED PHOTOGRAPHY (3)**
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. Lab fee.
- 383 **COLOR PHOTOGRAPHY (3)**
Prereq: Tech 360. Fundamentals of color theory; techniques of producing color transparencies and prints. Lab fee.
- 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.
- 372 **INDUSTRIAL ELECTRONICS (4)**
Prereq: Tech 371. Theory and application of circuits using semi-conductor devices such as: diacs, triacs, silicon control rectifiers, unijunction transistors, field effect transistors and integrated circuits.
- 375 **INDUSTRIAL ELECTRICITY (4)**
Prereq: Tech 270. Study of single- and three-phase motors, motor controls, generators and transformers. Measurement of torque, horsepower, power factor and efficiency.
- 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 (3)**
Prereq: Math 105, Physics 131. 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 society.
- 392 **INDUSTRIAL AND OCCUPATIONAL COURSE ORGANIZATION (3)**
This course is designed to provide the student with an opportunity to apply the principles and practices involved in planning and organizing of courses of study for industrial and occupational instructional purposes.

Technology

- 393 TEACHING OF INDUSTRIAL EDUCATION (3)**
Prereq: professional involvement in trade, industrial, technical or health occupations vocational education or upper-division standing. Basic principles and techniques for effective instruction in the trade, industrial, technical and health occupations vocational education areas. Designed to meet the vocational teacher education certificate requirements as prescribed in the Washington State Plan for Vocational Education.
- 394 OCCUPATIONAL ANALYSIS (3)**
Prereq: professional involvement in trade, industrial, technical or health occupations vocational education or upper-division standing. Basic principles and techniques for performing analysis operations to develop course content for trade, industrial, technical and health occupations vocational education areas of instruction. Designed to meet vocational teacher education certification requirements as described in the Washington State Plan for Vocational Education.
- 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.
- 416 STRUCTURAL—AESTHETIC FACTORS IN INDUSTRIAL DESIGN (5)**
Prereq: Tech 316. Tectonic principles applied to consumer products, problems related to functional and emotional factors of environmental design involving space, structure, furniture and lighting.
- 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.
- 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 MANAGEMENT (3)**
Prereq: one course in computer programming. Manufacturing process planning, operations scheduling and control, facilities layout, cost analysis, material requirements planning and quality assurance.
- 423 MANUFACTURING SYSTEMS (3)**
Prereq: upper-division standing. Manufacturing science techniques, automation, work measurement, time and motion study, wage incentives and process optimization.
- 424 MANUFACTURING IMPLEMENTATION (3)**
Prereq: Tech 210 and 223 required; Tech 221, 222, 320 highly recommended; permission of instructor. Design, fabrication and employment of jigs, fixtures and special tooling for manufacturing; experience in organizing, analyzing and modifying line production processes. A comprehensive mechanical product will be manufactured.
- 425 NUMERICAL CONTROL OPERATIONS (1)**
Prereq: Tech 223 and one course in computer programming. This course provides students with the opportunity to actually program simple parts for NC manufacture and to set up and operate NC equipment using their own programs.
- 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 take three times.
- 431 WOODCARVING (3)**
Prereq: art or industrial arts teaching experience.
- 432 WOOD SCULPTURE AND DESIGN (3)**
Prereq: Tech 431.
- 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 (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 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. Lab fee.
- 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. Lab fee.
- 442 INSTRUCTIONAL MATERIALS (5)**
Prereq: senior or graduate status. Design and production of instructional materials; single concept motion pictures, slide presentations, video tapes and printed materials for course outlines are developed. (Offered alternate summers.)

444 COMPUTER PHOTO COMPOSITION (3)

Prereq: Tech 240, 340, 341 and Computer Science 110 and permission of instructor. The theory and practical applications of computer-operated photocomposition equipment. Lab fee.

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. Lab fee.

448 VISUAL COMMUNICATION (5)

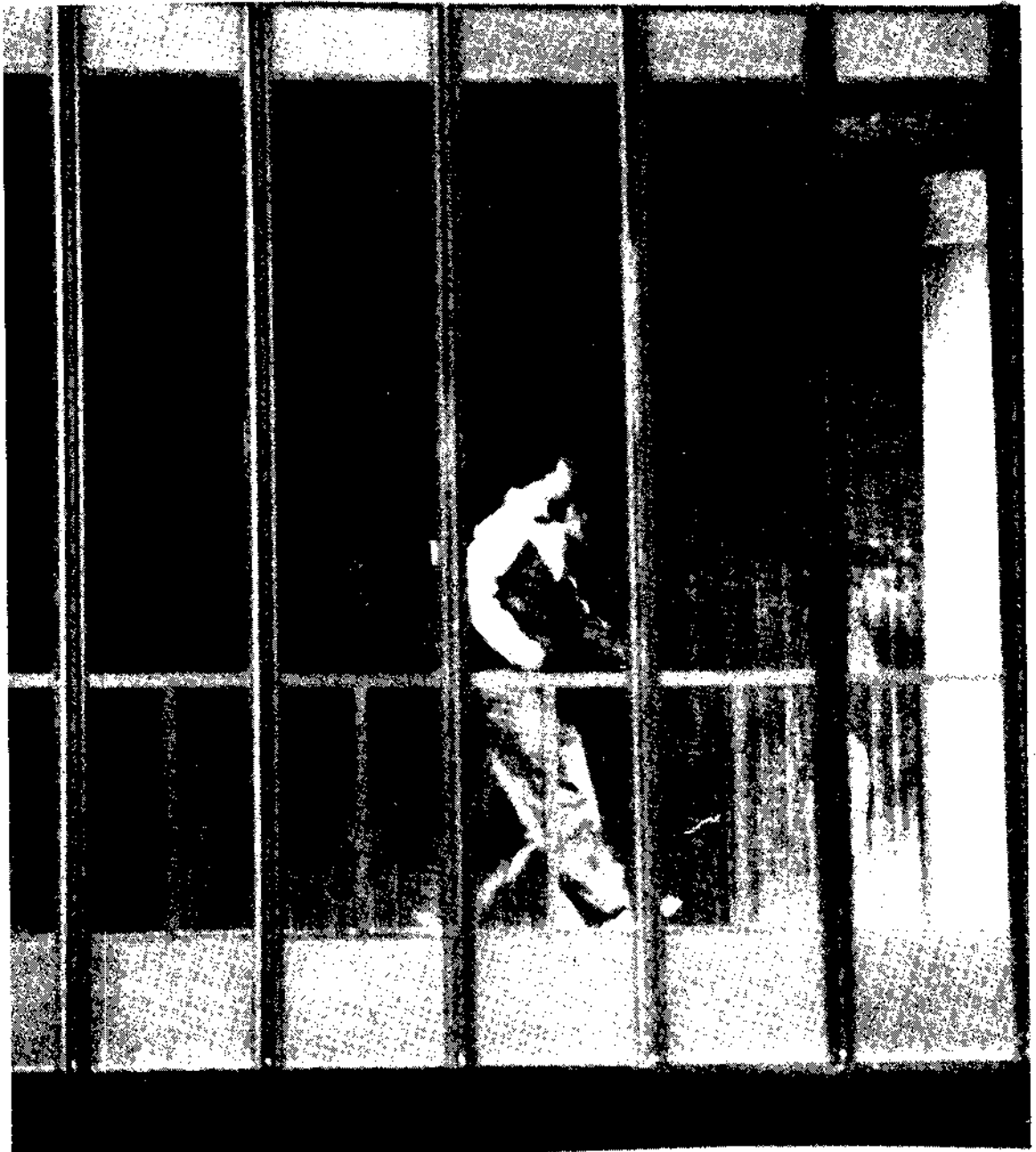
Prereq: completion of the VICOED sequence. Synthesis of basic concepts, models, and theories, the perceptual, social, cultural, and technological determinants of visual form, style and content. Lab fee.

449 DIRECTED RESEARCH IN VISUAL COMMUNICATION (1-3)

Prereq: Tech 240, 340, 341. Selected problems in visual communication. Repeatable.

450 CAREER DEVELOPMENT ACTIVITIES (1-3)

Prereq: teaching experience or senior status in teacher education. An activity approach to the relationships between occupations, the process of occupational choice, and aspects of the elementary school curriculum. Examples and applications for incorporating career concepts into the regular curriculum. Skill development in the use of constructive classroom activities.



Technology

- 451 INTRODUCTION TO VALIDATED PROGRAMS (1-4)
Prereq: teaching experience at appropriate level. A survey of selected educational programs which have been validated to be included in the National Diffusion Network. Programs presented vary with student populations (elementary, secondary, special interest) and are presented by the staff of the funded program.
- 452 INDIVIDUALIZING INSTRUCTION FOR OCCUPATIONAL VERSATILITY (3)
Prereq: teaching experience.
- 453 STUDENT MANAGEMENT SYSTEMS (3)
A class designed for teachers wishing to incorporate the student management and direction system of the "Occupational Versatility" program.
- 459 DIRECTED RESEARCH IN INDUSTRIAL ARTS FOR THE ELEMENTARY SCHOOL (1-3)
Prereq: Tech 350. Developing industrial arts content with emphasis on the relationship between industrial arts and the elementary school curriculum. May be taken three times.
- 460 ADVANCED SEMINAR IN PHOTOGRAPHY (3)
Prereq: Tech 360 or 363. Application of photographic theory and techniques to selected problems. May be repeated for credit.
- 468 PHOTOGRAPHY WORKSHOP FOR TEACHERS (1-4)
The workshop stresses the fundamentals of photography. Included are basic film developing and printing, how to see with the camera, and a familiarization with the history and applications of the medium. The work of well-known photographers will be discussed. Of interest to teachers on all levels from college to elementary school who wish to incorporate photography in the classroom or simply expand their own awareness of the potentials of the medium. Skills and knowledge of photography will be developed by laboratory, lecture, fieldwork and discussion. Each student will be assigned an individual enlarger, and lab time will be unlimited. A camera is required for the course.
- 469 DIRECTED RESEARCH IN PHOTOGRAPHY (1-3)
Prereq: Tech 260. Research problems in photography chosen and conducted under supervision. May be taken three times. Lab fee.
- 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.
- DRIVER EDUCATION: Tech 480, 481, 482, and either 485 or 487 (total of 12 credits) are required for a certificate to teach driver education in a state approved course.*
- 480 SAFETY EDUCATION (3)
The cause, incidence, and effect of home, school, recreational and vocational accidents; education programs and practices to reduce accidents. (Normally offered summers.)
- 481* BASIC DRIVER AND TRAFFIC SAFETY EDUCATION (3)
Knowledge, attitudes and skills needed to teach driver education in the secondary school; classroom instruction and in-the-car teaching experiences. (Normally offered summers.)
- 482* ADVANCED DRIVER AND TRAFFIC SAFETY EDUCATION (3)
Driver and traffic safety and methods of teaching in the secondary school; classroom and in-the-car teaching experience. (Normally offered summers.)
- 483* DIRECTED RESEARCH IN DRIVER AND TRAFFIC SAFETY EDUCATION (1-3)
A special problem in driver and traffic safety. (Normally offered summers.)
- 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.)
- 485* DRIVING SIMULATORS AND MULTIPLE-CAR DRIVING RANGES (3)
Prereq: Tech 481 and 482 or concurrent enrollment. Aims, objectives and role of laboratory, programs in driver and traffic safety education. Directed experiences in both the simulator and multiple-car driving range methods of laboratory instruction. This course or Tech 487 is required for certification of high school driver education teachers. (Offered alternate summers.)
- 487* ORGANIZATION, ADMINISTRATION AND SUPERVISION OF TRAFFIC SAFETY EDUCATION PROGRAMS (3)
Prereq: Tech 481 and 432 or concurrent enrollment. Organizational, administrative and supervisory aspects of traffic safety education programs in the public schools. (Offered alternate summers.)
- 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 393, 394, 392 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.

*Not applicable to undergraduate or graduate programs in technology.

- 491 **HISTORY AND PHILOSOPHY OF VOCATIONAL EDUCATION (3)**
Evolving issues, objectives, programs and legislation in vocational education.
- 492 **FACILITIES FOR INDUSTRIAL ARTS (3)**
Prereq: senior standing in teacher education. Planning, development and utilization of industrial arts facilities.
- 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.
- 495 **EVALUATION IN INDUSTRIAL AND OCCUPATIONAL EDUCATION (3)**
Measuring student progress, preparation of measuring devices, interpretation of standardized test results, analyses of test data and the improvement of instruction.
- 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 **STUDENT LEADERSHIP DEVELOPMENT (3)**
Prereq: professional involvement in trade, industrial, technical or health occupations vocational education or upper-division standing. Basic principles and techniques for effecting student leadership development in their respective vocational education programs. Designed to meet vocational teacher education certification requirements as described in the Washington State Plan for Vocational Education.
- 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.
- 550 **FOUNDATIONS OF VOCATIONAL EDUCATION (3)**
Examination of the historical and philosophical foundations of vocational education. Major legislation, social and economic factors which have influenced the development of vocational education will be considered as well as the scope and purpose of vocational education as it relates to education in general.
- 580 **DEVELOPMENTS IN AUTOMOTIVE EMISSION CONTROL SYSTEMS (3)**
Prereq: Tech 280 and 380 or permission of instructor. Experimental research in emission control on live laboratory engines. Topics center around temperature control on NO_x, new methods of optimizing stoichiometric combustion, and thermal and catalytic exhaust treatment.
- 590 **CURRICULUM PROBLEMS IN INDUSTRIAL EDUCATION (3)**
Derivation and organization of content and experience for industrial arts courses.
- 591 **INDUSTRIAL TECHNOLOGY (3)**
Development of trade, technical, industrial technology; motivating forces, philosophical concepts, issues, trends.
- 592 **CURRICULUM DEVELOPMENT IN INDUSTRIAL ARTS (3 ea)**
Prereq: public school teaching experience in the area of concern. Development of content, laboratory experiments, projects and teaching aids useful in updating specific industrial arts curriculum areas to include recent and current industrial developments in that curriculum area.
- 592a Electronics
592b Drafting/Design
592c Metals
592d Plastics
592e Power Mechanics
592f Woods
592g Vicoed
592h Photography
592j Man/Technology
592k Manufacturing
592m Construction
- 593 **SUPERVISION OF INDUSTRIAL EDUCATION (3)**
Prereq: teaching experience in industrial education. Principles and practices of supervision of industrial education at the state, district and department level. Responsibilities of district directors and department chairpersons.

Graduate Courses

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

- 540 **VISUAL COMMUNICATIONS TECHNOLOGY (3)**
Prereq: undergraduate concentration in the visual communications field. The technological changes in the visual communications industry and the responses.
- 544 **SEMINAR: CURRENT VISUAL COMMUNICATIONS TOPICS (3)**
Prereq: undergraduate concentration in the visual communications fields. Research and discussion concerning pertinent problems in the visual communications industry.
- 545 **ADVANCED PHOTOCOMPOSITION AND ITS APPLICATIONS (5)**
Prereq: Tech 444. Current problems and advances in the typesetting industry with advanced applications of computer-operated photocomposition.
- 594 **RESEARCH IN INDUSTRIAL ARTS (2)**
Readings and discussion in current research topics in industrial arts.
- 595 **GRADUATE SEMINAR (2)**
Contemporary issues in industrial arts.
- 599 **TECHNOLOGICAL DEVELOPMENTS (1-5)**
a-h
Prereq: teaching experience in the area of study. Familiarization with latest technological innovation in area of concern. Class activities will involve assigned readings, laboratory experiments, industrial visits and written reports.
- 599a Electronics
599b Drafting/Design
599c Metals
599d Plastics
599e Power Mechanics
599f Woods
599g Vicoed
599h Photography



THEATRE/DANCE

College of Fine and Performing Arts

The Department of Theatre/Dance offers academic majors and minors in both dance and theatre. 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 specialities, to prepare for teaching careers.

THEATRE

Theatre study leading to the Bachelor of Arts degree is composed of three elements: core, concentration and electives. The core courses provide breadth of understanding of the art of theatre. Beginning with an introduction to the art of theatre, the core provides entry-level training in every area of theatre arts and literature. An area of concentration, selected by the student, provides study in depth of one of the areas introduced in the core: acting, directing, dramatic writing, literature, children's theatre, technical theatre (including design) and dance.

Elective courses of study provide an opportunity to explore other areas of theatre arts past the introductory level.

An active production program is maintained by the department to provide practical application of studio, laboratory and classroom training. During the school year, a regular program of faculty directed and choreographed shows are 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 and Dance On Tour puts two or three 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 study leading to the Bachelor of Arts degree offers courses in dance technique (modern, ballet, jazz), choreography, history and philosophy of dance. An emphasis is placed on performance and choreographic skills with studio or main stage public performances offered every quarter and a lecture/demonstration dance tour scheduled for winter quarter. Choreographic independent study is possible with attention paid to individual problems and needs. Aside from the regular degree in dance, it is possible in conjunction with the School of Education to earn an extended teaching minor (36 credit hours) in dance.

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 chairman of the department, Mr. Dennis Catrell, Performing Arts Center 395, (206) 676-3878. Graduate students should contact the chairman or the director of graduate study, Dr. Daniel Lerner, Performing Arts Center 389, (206) 676-3876.

THEATRE/DANCE FACULTY

- DENNIS E. CATRELL (1966) Chairman. Associate Professor. BA, University of Michigan; MA, Northern Illinois University.
- KIM ARROW (1979) Assistant Professor. BS, Temple University; MFA, New York 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. AB, Harvard College; MS, PhD, University of Wisconsin, Madison.
- BYRON E. SIGLER (1963) Associate Professor. BA, MFA, Tulane University; PhD, Stanford University.
- DOUGLAS 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

- Peggy Cicierska (1979) BFA, Juilliard School of Music.
 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 324, 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, 236, 238, 239, 241, 242, 331, 332, 333
 - d. Directing: Th/D 260, 314, 470, 471 and 3 credits under advisement
 - e. Literature: Th/D 324, 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, 424, 453, 462

Minor — Theatre 30 credits

- Th/D 101, 160, 212, 222
- Th/D 201 or 231 or 250 or 285 or 260 (repeated once)
- Th/D 314 or 322 or 350 or 370 or 385
- Electives under advisement

Major — Dance 100 credits

- Theatre: Th/D 101, 160, 213, 215
- Dance Theory, Literature, History: Th/D 231, 336, 431, 432, 433, 434
- Dance Technique: Th/D 235, 238, 333, 339, 439, 440
- Dance Improvisation & Composition: Th/D 241, 242, 342, 442
- Music 128, Biol 348, Int Arts 110
- Elective courses — select 4 credits from following courses: PE 326, Th/D 139, 232, 233, 234, 332
- Proficiency in technical skill above the beginning level should be established before taking a dance major

Theatre/Dance

A minor is recommended in one of the following areas: theatre, music, literature, art.

Minor — Dance 30 credits

- Th/D 231 — recommended to be taken as part of the GUR program
- 6-9 credits selected from Th/D 336, 431, 432, 433, 434
- 12 credits from Dance Technique, 200 level or above
- 5-6 credits selected from Th/D 241, 242, 342, 442
- 3-4 credits under advisement

Extended Teaching 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 234
- 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 leading to teaching certification in dance.

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 Interdisciplinary Programs section of this catalog for full details of the major.

COURSES IN THEATRE AND DANCE

Courses numbered X37; X97; 300, 400, 500; 417; 445 are described on page 32 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 twice for credit. Open to non-majors.
- 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 twice for credit. Open to non-majors.
- 139 MODERN JAZZ DANCE (2)
Emphasis on control and isolation of body parts, rhythm and alignment. Repeatable twice for credit.
- 160 INTRODUCTION TO ACTING (3)
Prereq: Th/D 101. Fundamentals of acting; emphasis on basic techniques and tools used by the actor, including improvisation, resume writing, auditioning, vocal, physical and emotional awareness. Although permission of the instructor is required to enroll, this course is 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.
- 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.
- 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 twice for credit. 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 twice for credit. Open to non-majors.
- 241 **DANCE 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 (2ea)**
Prereq: permission of instructor. Instruction and experience in all aspects of theatre organization and production. A maximum of six credits may be earned. S/U grading.
- 260 **ACTING: STUDIO I (3)**
Prereq: Th/D 160 and 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 once for credit 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.
- 332 **INTERMEDIATE JAZZ DANCE (2)**
Prereq: Th/D 135 and 139. A continuation of 139 with increasing difficulty in jazz dance techniques.
- 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.

Theatre/Dance

- 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 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 once for credit by permission of instructor.
- 370 PLAY DIRECTION I (3)
Prereq: Th/D 101. Theory and practice of stage direction including selection of play, casting and blocking, and production of a scene for public performance.
- 380 INTRODUCTION TO HISTORY OF THE THEATRE (5)
Development of theatre arts from primitive origins 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.
- 415 STAGE COSTUMING (3)
Prereq: Th/D 315. Costume design and execution; specific emphasis on basic sewing, use of patterns, materials and costume crafts, costume plots and wardrobe supervision.
- 421, 422, 423 DEVELOPMENT OF THE ENGLISH DRAMA (3 ea)
Prereq: Th/D 222 and 322. Historical and critical survey of the English drama, with emphasis upon the greater writers (exclusive of Shakespeare); medieval and Elizabethan-Jacobean; 1660-1900; 20th century.
- 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.
- 439 ADVANCED BALLET TECHNIQUE (3)
Prereq: Th/D 339 and/or audition/instructor approval. Intense technical ballet syllabus geared to obtain a pre-professional level. Includes advanced theory and terminology. Pointe, variation, preparatory partnering exercises. Repeatable three times for credit by permission.
- 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.
- 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.
- 444a,b BILL EVANS SUMMER INSTITUTE IN DANCE (2-10)
Comprehensive study for the serious student of modern dance, beginner to professional. (Summer quarter only.) Contact the Director of Academic Credit, Department of Theatre/Dance for details.
- 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 370. Producing and directing a one-act play for public performance; special emphasis on working with the actor.
- 471 PLAY DIRECTION III (5)
Prereq: Th/D 470. 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.)
- 480 HISTORY OF THE THEATRE II (3)
Prereq: Th/D 380. Significant practices, trends and figures in contemporary European and American theatres.
- 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.
- 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.
- 690 THESIS/THESIS RESEARCH (1-9)
Option I: Thesis.
Option II: Planning and execution of a publishable scholarly paper.

Graduate Courses

*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
528b British
528c Continental



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Associate Professor Emeritus of English. AB, Winthrop College; MA, Teachers College, Columbia University.

HAROLD O. PALMER

Professor Emeritus of Business Education. BA, College of Emporia, Kansas; EdM, University of Oregon; EdD, Oregon State University.

RUTH PLATT

Associate Professor Emeritus of Zoology. BS, MS, University of Washington; University of California.

HAZEL JEAN PLYMPTON

Associate Professor Emeritus of Art. PhD, University of Chicago; MA, Teachers College, Columbia University; Reed College; Portland School of Art.

LORRAINE POWERS

Emeritus Dean of Women. BA, University of Wisconsin; MA, University of Iowa.

FRANK N. PUNCHES

Associate Professor Emeritus of Education. BA, University of Washington; MA, Washington State University.

BERNARD W. REGIER

Professor Emeritus of Music. BSM, Kansas State Teachers College; MMus, University of Michigan; DMA, University of Southern California.

CHARLES M. RICE

Associate Professor Emeritus of Industrial Arts. BFA, MA, Washington State University; University of Washington; University of Oregon; Carnegie A.I.A. Art Sessions; EdD, Oregon State University.

J. ALAN ROSS

Professor Emeritus of Education and Psychology. BA in Ed, Western Washington State College; MA, PhD, Yale University.

MARJORIE RYAN

Professor Emeritus of English. AB, MA, University of Michigan; PhD, University of Minnesota.

BEARNICE S. SKEEN

Professor Emeritus of Education. BS, MS, University of Oregon; EdD, Washington State University.

LEONA M. SUNDQUIST

Distinguished Service Professor Emeritus of the College. BA, MS, University of Washington; Teachers College, Columbia University.

ADA SWINEFORD

Professor Emeritus of Geology. SB, SM, University of Chicago; PhD, Pennsylvania State University.

RALPH H. THOMPSON

Professor Emeritus of Education. BA, Dickinson College; MA, University of Delaware; EdD, University of Illinois.

COLIN E. TWEDDELL

Professor Emeritus of Anthropology and Linguistics. BA, MA, PhD, University of Washington.

MANFRED C. VERNON

Professor Emeritus of Political Science. LLB, University of Cologne; JD, University of Berlin; PhD, Stanford University.

ADA L. WALTER

Assistant Professor Emeritus of Business Education and Economics. BS, Winthrop College; MBA, University of Denver.

DON C. WALTER

Associate Professor Emeritus of Music. BA, Wartburg College; MA, Colorado State College; EdD, University of Oregon.

EVELYN M. WELLMAN

Associate Professor Emeritus of Music. BA, MA, Western Washington State College.

PAUL WOODRING

Distinguished Service Professor Emeritus of the University, Education/Psychology. BSEd, Bowling Green State University; MA, PhD, Ohio State University. Honorary degrees: LHD, Kalamazoo College; PhD, Coe College; LittD, Ripon College; LHD, Bowling Green State University; LL.D, University of Portland.

FACULTY

Ager, Phillip / Fairhaven
Aitken, Margaret H. / Physical Education
Albers, James R. / Huxley
Alexander, Marian L. / Library
Aiper, Donald / Political Science
Ames, Evelyn E. / Physical Education
Amundsen, Darrel W. / Foreign Language
Anastasio, Angelo / Anthropology
Anderson, Kathryn L. / Fairhaven
Ardary, Charles T. / Physics
Arellano, Raul / Ethnic Studies
Arnett, M. Chappelle / Physical Education
Arrow, Kim / Theatre/Dance
Atkinson, Charles M. / Education
Atneosen, Richard A. / Physics/Astronomy

Babcock, Randall S. / Geology
Baird, Herbert Leroy, Jr. / Foreign Languages

- Balas, Robert S. / Foreign Languages
 Barrett, W. Louis / Physics
 Beck, Myrl E., Jr. / Geology
 Beldin, Horace O. / Education
 Benson, Earl D. / Business Administration
 Berg, Richard H. / Arts & Sciences
 Besserman, Marion / Chemistry
 Bettis, Joseph D. / Fairhaven
 Biasini, Americole / Music
 Billings, Thomas / Education
 Bishop, Richard T. / Education
 Black, Joseph E. / Technology
 Blackwell, Leslie / Education
 Blood, Don F. / Psychology
 Bosch, James W. / Anthropology
 Bouverat, Roberta A. / Education
 Boylan, Bernard L. / History
 Brakke, David / Huxley
 Broad, A. Carter / Biology
 Brockhaus, Henrich / Foreign Languages
 Brown, Don W. / Education
 Brown, Edwin H. / Geology
 Brown, Herbert A. / Biology
 Brown, Robert D. / English
 Brown, Willard A. / Physics/Astronomy
 Bryan, Cody, Jr. / Accounting
 Bryant, William H. / Foreign Languages
 Buckland, Roscoe L. / Liberal Studies
 Budd, William C. / Psychology
 Bultmann, William A. / History
 Burnett, Michael J. / Fairhaven
 Butler, Roosevelt / Business Administration
- Call, Donald J. / Sociology
 Carlile, Sene R. / Speech Pathology/Audiology/Speech
 Carmean, Stephen L. / Psychology
 Cary, Meredith B. / English
 Catrell, Dennis E. / Theatre/Dance
 Chalice, Donald R. / Mathematics
 Chaney, Robin W. / Mathematics
 Chetham, Doris / Art
 Christman, Robert A. / Geology
 Clarke, David E. / Political Science/Huxley
 Clevidence, William Gary / Fairhaven
 Clothier, Nita / Liberal Studies
 Clumpner, Roy A. / Physical Education
 Collier, Robert P. / Economics
 Concordia, Louis / Business Administration
 Conton, Leslie / Anthropology
 Covington, Richard J. L. / Education
 Craswell, Keith / Mathematics
 Critchfield, Howard J. / Geography
 Crook, Joseph R. / Chemistry
 Cross, Robert J. / Library
 Crow, Lowell T. / Psychology
 Cvetkovich, George T. / Psychology
- Dalias, Lee A. / Education
 Darrow, Helen F. / Education
 Daugert, Stanley M. / Philosophy
 Davidson, Melvin / Physics/Astronomy
 Davis, James W. / Political Science
 Davis, J. Ronnie / Economics
 DeLorme, Rolend L. / History
 Diers, Carol J. / Psychology
 Dittrich, William J. / Physics/Astronomy
 Donker, Marjorie J. / English
 Downing, Thomas E. / Philosophy
 Drake, George F. / Sociology
 Dresbeck, Sandra / History
- Driver, Crystal / Huxley
 Dube, Maurice / Biology
 Duemmel, James E. / Mathematics
- Easterbrook, Don J. / Geology
 Eaton, Marie D. / Education
 Eddy, Lowell P. / Chemistry
 Eklund, Donald D. / History
 Elich, Peter J. / Psychology
 Ellis, Ross C. / Geology
 Elmendorf, William E. / Foreign Languages
 Embrey, Robert D. / Technology
 Erickson, John E. / Biology
 Evans, Howard M. / Education
- Faber, Eunice D. / Foreign Languages
 Faulkner, Constance P. / Fairhaven
 Feinberg, Richard / Physics
 Fennimore, Flora / Education
 Feringer, F. Richard / Education
 Fisher, Michael H. / Liberal Studies
 Fleetwood, A. Hugh / Philosophy
 Flora, Charles J. / Biology
 Foisy, Maurice H. / Political Science
 Fonda, Richard W. / Biology
 Ford, Paul / Education
 Foss, Ione A. / Art
 Fowler, Richard J. / Technology
 Fox, Charles J. / Political Science
 Fox, Sheila / Education
 Fox, Siegrun F. / Political Science
 Francis, Richard L. / English
 Frank, Berton / Music
 Frazier, Thomas / Library
 Freeman, Kenyth D. / Fairhaven
 Froderberg, Albert J. / Mathematics
 Frye, Richard / Economics/Huxley
 Furlong, Peter R. / Accounting
- Gadd, Charmian / Music
 Gallegos, Arnold / Education
 Gamlen, Sara Jeanne / Mathematics
 Garcia-Barragan, Guadalupe / Foreign Languages
 Gates, June C. / Home Economics
 Gayden, Ernst L. / Huxley
 Gelder, Harvey M. / Fairhaven
 Gerhold, George A. / Chemistry
 Glass, Jerome / Music
 Glenn, Paul C. / Fairhaven
 Goodrich, Glenn B. / Mathematics
 Gorder, Wayne / Music
 Gossman, Charles / Sociology
 Goto, Kent A. / Technology
 Grabert, Garland F. / Anthropology
 Grey, Neil R. / Mathematics
 Greenstein, Susan M. / English
 Gregory, William A. / Theatre/Dance
 Grote, Frederick W., Jr. / Psychology
 Grover, Burton L. / Education
 Gutchow, Monica C. / Theatre/Dance
- Haag, Enid / Library
 Hackler, Clyde M. / Technology
 Haglund, Byron E. / Accounting
 Hanson, Lawrence / Art
 Harder, K. Peter / Economics
 Harley, Ann / Nursing
 Harris, Howard / Anthropology
 Harris, Lyle / Journalism
 Heselbauer, Kathleen J. / Library

University Personnel

- Hashisaki, Joseph / Mathematics
Hebal, John J. / Political Science
Heckathorn, Jill / Physical Education
Heid, William H. / Fairhaven
Hefgott, Leonard M. / History
Herbold, Paul E. / Speech
Higbee, C. Max / Education
Hildebrand, Francis H. / Mathematics
Hildebrand, James L. / Mathematics
Hill, Claude E. / Technology
Hill, Ford D. / Music
Hillar, Harley E. / History
Hiraoka, Jesse / Ethnic Studies/Human Services
Hitchman, James H. / History
Hite, F. Herbert / Education
Hogan, Eugene J. / Political Science
Horn, Thomas C. / History
Hovenier, Peter J. / Education
Huff, Robert E. / English
- Inniss, Kenneth B. / English
Ives, Fred M. / Mathematics
- Jack, Rand F. / Fairhaven
Jackson, Harry D. / History
Jacobs, Lawrence / Center for Urban Studies
Jensen, Robert A. / Art
Jewett, Robert I. / Mathematics
Johnson, Ellwood, G. / English
Johnson, H. Thomas / Accounting
Johnston, Thomas A. / Art
Jones, Elvet G. / Psychology
- Kaplan, Edward H. / History
Kasprisin, Lorraine / Education
Kaufman, Robert M. / Mathematics
Keep, William C. / English
Keleman, Kenneth / Business Administration
Keller, Robert H. / Fairhaven
Kelly, Samuel P. / Education
Kendall, Ronald J. / Huxley
Kenyon, Malcolm H. / Technology
Kikuchi, Louise S. / Foreign Languages
Kim, Robert H. / Education
Kimball, Linda A. / Anthropology
Kimeini, Arthur S. / Foreign Languages
King, Donald M. / Chemistry
King, Maxwell / Business Administration
Kintz, B. L. / Psychology
Klein, Marvin L. / Education
Kleinknecht, Ronald A. / Psychology
Knight, John J. / Education
Knutzen, Kathleen / Physical Education
Kohn, Hubertus E. / Biology
Kraft, Gerald F. / Biology
Krauss, Ellis S. / Political Science
Krieger, Milton H. / Liberal Studies
Kriz, George S., Jr. / Chemistry
- LaBounty, Edwin M. / Music
Lamb, George S. / Education
Lampman, Gary M. / Chemistry
Langran, Kenneth J. / Geography
Larner, Daniel M. / Theatre/Dance
Larrabee, Edith B. / Home Economics
Larsen, Golden L. / English
Lasina, Stuart / Liberal Studies
Lawyer, W. Robert / Library, English
Lee, Lawrence L. / English
Levin, Richard G. / Mathematics
Lewis, Merrill E. / English
- Lindquist, Norman F. / Mathematics
Lindsay, Richard H. / Physics/Astronomy
Lippman, Louis G. / Psychology
Lippman, Marcia Z. / Psychology
Long, Boyde / Physical Education
Lonner, Walter J. / Psychology
Lounsbury, James R. / Physical Education
- McClendon, John C. / Fairhaven
McCormick, Patrick F. / Art
McCracken, Robert A. / Education
McInnis, Raymond / Library
McIntyre, Mary A. / Art
McIntyre, Patrick / Education
McLeod, Donald B. / Fairhaven
McLeod, Raymond R. / Physics/Astronomy
McRandle, Carol C. / Speech Pathology/Audiology
MacKay, William R. / Psychology
Mahoney, Eldon R. / Sociology
Mammitzsch, Ulrich / Liberal Studies
Mariz, George Eric / History
Marsh, David F. / Art
Marx, Robert D. / Psychology
Mason, David T. / Fairhaven
Mason, Evelyn P. / Psychology
Mather, Dan / Library
Mayer, Erwin S. / Economics
Mayer, J. Richard / Huxley
Mazur, D. Peter / Sociology
Meade, Robert D. / Psychology
Mees, Hayden L. / Psychology
Meier, Robert C. / Business Administration
Menninga, Larry Dean / Mathematics
Merrill, Reed B. / English
- Miles, John C. / Huxley
Miles, William R. / Education
Miliicic, Vladimir / Foreign Languages
Miller, Gerson F. / Journalism
Miller, John A. / Chemistry
Miller, Laurence P. / Psychology
Miner, Raiph E. / Political Science
Mischaikow, Michael K. / Economics
Mitchell, Howard E. / Economics
Moerschner, Kurt W. / Foreign Languages
Monahan, Robert L. / Geography
Montague, Phillip / Philosophy
Mookherjee, Debnath / Geography
Moon, Donald E. / Education/Technology
Moore III, James E. / Physical Education
Moore, John S. / Business Administration
Moren, Karen D. / Nursing
Mork, Theodore A. / Education
Muldrow, George M. / English
Murphy, Dennis R. / Economics
- Nelson, David M. / Economics
Nelson, Martha H. / Home Economics
Neuzil, Edward F. / Chemistry
Nickelson, Alden L. / Education, Biology
Nugent, Frank A. / Psychology
- O'Brien, James H. / English
O'Keefe, Mary Ellen / Nursing
Obourn, Ann M. / Library
Olmstead, Marvin L. / Speech
Olscamp, Paul J. / Philosophy
Olsen, Fred A. / Technology
Osborne, Martin L. / Mathematics
Owens, Eugene / Business Administration
- Panek, David M. / Psychology

- Parakh, Jal S. / Biology
 Param, Charles / Foreign Languages
 Park, Douglas / English
 Patton, Elizabeth / Accounting
 Paulsen, H. Neil / Accounting
 Paulus, Ingeborg L. E. / Sociology
 Pavia, Donald L. / Chemistry
 Payton, Rodney J. / Liberal Studies
 Peach, Janice R. / Home Economics
 Peters, Robert A. / English
 Petersen, Lois E. / Business Education
 Peterson, Gilbert A. / Huxley
 Peterson, Richard K. / Library
 Pevear, David R. / Geology
 Pielstick, Norval L. / Psychology
 Pinney, Robert H. / Education
 Plumlee, E. Leroy / Business Administration
 Polen, Samuel B. / Speech Pathology/Audiology
 Porter, Sam R. / Technology
 Prim, Merle M. / Psychology
 Pullan, C. Bruce / Music
 Purtili, Richard L. / Philosophy

 Quigley, Robert J. / Physics/Astronomy

 Radke, August / History
 Ramsland, Dorothy E. A. / Home Economics
 Randall, Charles R., Jr. / Physical Education
 Raney, Franklin C. / Geography
 Rangel-Guerrero, Daniel / Foreign Languages
 Rapoza, Nicole B. / Foreign Language
 Read, Thomas T. / Mathematics
 Reay, John R. / Mathematics
 Rees, Earl R. / Psychology
 Reeves, Scott D. / Music
 Rhoades, Frederick / Biology
 Rich, Douglas / Bridge Project
 Richard, Jerome E. / Center for Urban Studies
 Richardson, Cynthia / Library
 Richardson, John G. / Sociology
 Richardson, Larry S. / Speech
 Rieck, Robin E. / Business Administration
 Riepe, Julian / Arts, Interdisciplinary
 Riffey, Meribeth M. / Biology
 Riggins, Ronald / Physical Education
 Ritter, Harry Ray, Jr. / History
 Ritter, Marian B. / Library
 Robbins, Lynn A. / Huxley
 Roberts, Jane E. / Home Economics
 Robinson, Walter L. / Foreign Languages
 Roley, Paul L. / History
 Romine, Ray S. / Education
 Rosenberg, Edwin / Sociology
 Ross, Charles A. / Geology
 Ross, June R. P. / Biology
 Rothwell, J. Dan / Speech
 Rupaal, Ajit S. / Physics/Astronomy
 Russo, Salvatore / Chemistry
 Rutan, Gerard F. / Political Science
 Rutschman, Carla J. / Music
 Rygg, Paul T. / Mathematics

 Safavi, Farrokh / Business Administration
 Sailors, William M. / Accounting
 Sanderson, Donovan F. / Mathematics
 Savey, Ronald / Accounting
 Savitch, Leonard / Education
 Scandrett, Robert L. / Music
 Schaub, David B. / Music
 Schinske, Erhart A. / Speech Pathology/Audiology
 Schlotterback, Thomas / Art
 Schneider, David E. / Biology

 Schuler, Carl U. / History
 Schulz, Cynthia D. / Education
 Schwalm, Ray A. / Technology
 Schwartz, Maurice L. / Geology/Education
 Schwarz, Sy / Education
 Schwarz, Henry G. / Political Science/History
 Schwemmin, Donald J. / Biology
 Scott, James W. / Geography
 Scott, William H. O. / Library
 Seal, Michael / Technology
 Seilo, Michael T. / Speech Pathology/Audiology
 Senger, Clyde M. / Biology
 Shaffer, Ronald W. / Psychology
 Shaw, Albert C. / Music
 Sigler, Byron E. / Theatre/Dance
 Simpson, Carl H. / Sociology
 Singleton, William / Accounting
 Skinner, Knute / English
 Sleeman, Allan / Economics
 Slesnick, Irwin L. / Biology
 Smith, Alden C. / Speech
 Smith, Dale W. / Physics
 Smith, Gary C. / Huxley
 Smith, Richard G. / Geography
 Solomon, Arthur L. / Speech Pathology-Audiology/
 Speech
 Southcott, Marvin A. / Technology
 Spanel, Leslie / Physics/Astronomy
 Spangler, Val / Education
 Spear, Maryanne / Nursing
 Speirs, James A. / Speech Pathology/Audiology
 Spich, Robert S. / Business Administration
 Sprague, Donald L. / Physics/Astronomy
 Stannard, R. E., Jr. / Journalism
 Starbird, Richard O. / Education
 Steffens, Peter / Journalism
 Stephan, G. Edward / Sociology
 Stevenson, Joan C. Anthropology
 Stoeber, William K. D. / Liberal Studies
 Stoner, Paul H. / Music
 Suczek, Christopher / Geology
 Sullivan, Michael J. / Accounting
 Summers, William C. / Huxley
 Symes, Ken M. / English

 Takemoto, Toru / Foreign Languages
 Talbot, James L. / Geology
 Taylor, Christopher J. / Psychology
 Taylor, Herbert C., Jr. / Anthropology
 Taylor, Ronald J. / Biology
 Taylor, Sandra / Psychology
 Templeton, David E. / Art
 Terey-Smith, Mary / Music
 Terich, Thomas A. / Geography
 Teshera, Robert W. / Geography
 Thomas, Edward B. / Art
 Thomas, Leslie J. / History
 Thompson, Richard W. / Psychology
 Thoreson, Hubert N. / Business Education
 Thorndike, Robert M. / Psychology
 Tonjes, Marian J. / Education
 Towner, John C. / Education
 Trimble, Joseph / Psychology
 Truschel, Louis W. / History
 Tyler, Vernon O., Jr. / Psychology

 Underwood, John L. Technology
 Unger, Barbara J. / Business Administration
 Urso, Robert A. / Art
 Utendale, John F. / Education

 Vander Velde, Philip B. / Education
 Vander Yacht, Douglas R. / Theatre/Dance

University Personnel

Va n Wingerden, Stewart / Education
 Vassdal, Elsie / Technology
 Vawter, Richard D. / Physics/Astronomy
 Veit, J. Joseph / Physics/Astronomy
 Vernacchia, Ralph A. / Physical Education
 Vike, Gene E. / Art
 Vogel, Richard F. / Technology

Wallace, William L. / Liberal Studies
 Ward, Thomas E. / Theatre/Dance
 Warner, Daniel / Business Administration
 Waterman, C. Fred / Library
 Watrous, Mary W. / Education
 Webb, Loren L. / Speech Pathology/Audiology
 Webber, Herbert H. / Huxley
 Wegner, Walter F. / Art
 Werner, Homer A. / Art
 Werner, Ruth F. / Huxley
 Weiss, Rudolf / Foreign Language
 Weyh, John A. / Chemistry
 Wh tmer, John C. / Chemistry
 Wicholas, Mark L. / Chemistry
 Wilkins Jr., James W. / Psychology
 Williams, Don C. / Biology
 Wilson, H. William / Chemistry
 Wiseman, Don W. / Physical Education
 Wiseman, Evelyn D. / Physical Education
 Witier, George E. / Mathematics
 Wordzicki, Antoni / Geology
 Wolf, John W. / Mathematics
 Wonder, Bruce D. / Business Administration
 Wright, Evelyn C. / English
 Wuest, John J. / Political Science

Yu, Ming-Ho / Huxley
 Yurovchak, Lynn M. / Office Administration/Business Education

Ziegler, David W. / Political Science
 Zoro, Eugene S. / Music

DAN MATHER (1969) Associate Professor and Associate Director for Technical Services & Library Systems. BA, MLS, University of Washington.
 ANN M. OBOURN (1977) Assistant Professor and Head Acquisitions and Serials Librarian. BA, MLS, University of Washington.
 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.

SUMMARY OF ENROLLMENT — INDIVIDUALS

<i>Resident</i>	
Summer Quarter, 1980	4,197
Fall, Winter, Spring 1980-81	12,238
<i>Continuing Education</i>	
Independent Study	554
Off Campus	2,560
Total Continuing Education Enrollment	3,114

WILSON LIBRARY

W. F. ROBERT LAWYER (1960) Associate Professor of English and Director of the Library. BA, PhD, 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.

DEGREES AND CERTIFICATES

<i>Degrees granted from August, 1980, to June, 1981, inclusive:</i>	
Master of Education	179
Master of Arts	47
Master of Science	33
Master of Music	11
Master of Business Administration	6
Bachelor of Arts in Education	260
Bachelor of Arts	1,040
Bachelor of Science	320
Bachelor of Fine Arts	4
Bachelor of Music	52
Total	1,952
<i>Recommended for certification to the State Superintendent for Public Instruction — August, 1980, to June, 1981, inclusive:</i>	
Provisional Teaching Certificate	350
Standard Teaching Certificate	265

APPENDICES

Appendix A POLICY OF NON-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 department of Student Affairs. 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 E. The Affirmative Action Office is located at 400/410 Old Main, phone 3306. Joan Stewart is the Affirmative Action Director and Coordinator for 504, Title IX, Title VII and all other affirmative action/equal opportunity laws.

Appendix B STUDENT RIGHTS AND RESPONSIBILITIES

A complete list of Student Rights and Responsibilities is disseminated on campus and is available in the Office of Student Life.

Appendix C ACADEMIC DISHONESTY POLICY AND PROCEDURE

1. Policy

Western Washington University students have an obligation to fulfill the responsibilities of their particular roles as members of an academic community. Honesty is essential to learning. Without it, fair evaluation for all is impossible. Academic integrity is demanded, and academic dishonesty at Western Washington University is a serious infraction dealt with severely. Students shall not claim as their own the achievements, work or thoughts of others, nor shall they be a party to such claims.

It is the responsibility of the faculty to prevent and to detect acts of academic dishonesty. It shall be the instructor's responsibility to confront a student and to take appropriate action if academic dishonesty, in the instructor's judgment, has occurred.

2. Academic Dishonesty

Academic dishonesty includes the following acts:

- (a) Giving unauthorized information to another student or receiving unauthorized information from another student during any type of examination or test.
- (b) Obtaining or providing without authorization questions or answers relating to any examination or test prior to the time of the examination or test.
- (c) Using unauthorized sources for answers during any examination or test.
- (d) Asking or arranging for another person to take any examination or test in one's place.
- (e) Plagiarizing, 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 Life.

No student shall be allowed to withdraw from a course or from the University to avoid receiving a failing grade based upon academic dishonesty.

(B) Appeal: A student who receives an "F" grade for academic dishonesty and who feels wrongly accused by an instructor may appeal to the Dean of the School or College involved. The appeal must be lodged within ten (10) class days of receiving notice of the instructor's decision, and if not, any right or 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 E of the University's General Catalog.

Appendix D 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 insure that information contained in student records is accurate and is handled in a responsible manner by the university and its employees.

WAC 516-26-020 DEFINITIONS. For purposes of this chapter the following terms shall have the indicated meanings:

(1) "Student" shall mean any person who is or has been officially registered at and attending Western Washington University and with respect to whom the university maintains education records or personally identifiable information.

(2)(a) "Education records" shall refer to those records, files, documents and other materials maintained by Western Washington University or by a person acting for Western Washington University which contain information directly related to a student.

(b) The term "education records" does not include the following:

(i) Records of instructional, supervisory or administrative personnel

and educational personnel ancillary thereto which are in the sole possession of the maker thereof and which are not accessible or revealed to any other person except a substitute;

(ii) If the personnel of the university's Department of Safety and Security do not have access to education records under WAC 516-26-080, the records and documents of the Department which are kept apart from 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 (3) other information which would make it possible to identify the student with reasonable certainty.

(4) "Vice President for Student Affairs" shall refer to the Vice President for Student Affairs or his designee.

WAC 516-26-030 ACCESS TO RECORDS. (1) Except as provided in WAC 516-26-035, each student at Western Washington University shall have access to his or her education records. The right of access shall include the right to inspect, review, and obtain copies of education records.

(2) The Vice President for Student Affairs shall prepare a list of the types of student education records which are maintained by Western Washington University.

(3) A student wishing access to his or her education records shall submit a written request for access to the Vice President for Student Affairs. A request for access shall be acted upon by the Vice President for Student Affairs within a reasonable period of time, not to exceed twenty 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 insure the security and privacy of the institution's records while being inspected by students.

(5) The Vice President for Student Affairs will inform in writing a student who has requested access to his or her education records of the nature of any records which are being withheld from the student on the basis of the exceptions set forth in WAC 516-26-035. A student may challenge a decision by the Vice President for Student Affairs to withhold certain of the student's records by filing an appeal with the Student Rights and Responsibilities Committee.

(6) This section shall not prohibit the University Registrar from providing a student with a copy of the student's academic transcript without prior clearance from the Vice President for Student Affairs.

WAC 516-26-035 ACCESS TO RECORDS — LIMITATIONS ON ACCESS. (1) Western Washington University shall not make available to a student the following types of materials

(a) The financial records of the student's parents or any information contained therein.

(b) Letters or statements of recommendation, evaluation or comment which were provided to the university in confidence, either expressed or implied, prior to January 1, 1975, provided that such letters or statements shall not be used for purposes other than those for which they were originally intended.

(c) If a student has signed a waiver of the student's right of access in accordance with subsection (2) of this section, confidential records relating to the following:

(i) Admission to any educational agency or institution;

(ii) An application for employment; or

(iii) The receipt of an honor or honorary recognition.

(2) A student, or a person applying for admission to the university may waive his or her right of access to the type of confidential records referred to in subsection (1)(c) of this section, provided that such a waiver shall apply only if the student is, upon request, notified of the names of all persons making confidential recommendations, and such recommendations are used solely for the specific purpose for which the waiver has been granted. Such a waiver may not be required as a condition for admission to, receipt of financial aid from, or receipt of other services or benefits from the university.

(3) If any material or document in the education record of a student included 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 insure that the records are not inaccurate, misleading, or otherwise in violation of the privacy or other rights of the students;

(b) Have the opportunity to correct or delete inaccurate, misleading, or otherwise inappropriate data contained within education records;

(c) Challenge the release of education records to specific persons as contrary to the provisions of this chapter; and

(d) Challenge a decision by the university to deny the student access to particular types of records.

(3) A student shall not be permitted under this chapter to challenge the validity of grades given in academic courses, except on the grounds that, as a result of clerical error, the student's records fail to accurately reflect the grades actually assigned by an instructor.

WAC 516-26-060 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 of personally identifiable information contained therein without the written consent of the student to the following parties:

(a) University officials, including faculty members, when the information is required for a legitimate educational purpose within the scope of the recipient's official responsibilities with the university and will be used only in connection with the performance of those responsibilities;

(b) Federal or state officials requiring access to education records in connection with the audit or evaluation of federally or state supported educational programs or in connection

with the enforcement of federal or state legal requirements relating to such programs. In such cases the information required shall be protected by the federal or state officials in a manner which shall not permit the personal identification of students or their parents to other than those officials, and such personally identifiable data shall be destroyed when no longer needed for the purposes for which it was provided;

(c) Agencies or organizations requesting information in connection with a student's application for, or receipt of, financial aid;

(d) Organizations conducting studies for or on behalf of the university for purposes of developing, validating, or administering predictive tests, administering student aid programs, or improving instruction, if such studies are conducted in a manner which will not permit the personal identification of students by persons other than representatives of such organizations, and the information will be destroyed when no longer needed for the purposes for which it was provided;

(e) Accrediting organizations in order to carry out their accrediting functions; or

(f) Any person or entity authorized by judicial order or lawfully issued subpoena to receive such records or information, upon condition that the student is notified of all such orders or subpoenas in advance of compliance therewith by the university. Any university employee or official receiving a subpoena or judicial order for education records or personally identifiable information contained therein shall immediately notify the Assistant Attorney General representing the university.

(2) Education records of a student or personally identifiable information contained therein which are released to third parties, with or without the consent of the student involved, shall be accompanied by a written statement indicating that the information cannot subsequently be released in a personally identifiable form to any other party without the written consent of the student involved.

(3) The university shall maintain a record, kept with the education records of each student, indicating all parties, other than those parties specified in WAC 516-26-080(1)(a), which have requested or obtained access to the student's education records, and indicating the legitimate interest that each such party has in obtaining the records or information contained therein. This record of access shall be available only to the student, to the employees of the university responsible for maintaining the records, and to the parties identified under WAC 516-26-080(1)(a) and (c).

WAC 516-26-085 RELEASE OF INFORMATION IN EMERGENCIES. (1) The Vice President for Student Affairs

or his designee may, without the consent of a student, release the student's education records or personally identifiable information contained therein to appropriate parties in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of the student or other persons.

(2) The following factors should be taken into consideration in determining whether records may be released under this section:

(a) The seriousness of the threat to the health or safety of the student or other persons;

(b) The need for personally identifiable information concerning the student to meet the emergency;

(c) Whether the parties to whom the records or information are released are in a position to deal with the emergency; and

(d) The extent to which time is of the essence in dealing with the emergency.

(3) If the university, pursuant to subsection (1) of this Section, releases personally identifiable information concerning a student without the student's consent, the university shall notify the student as soon as possible of the identity of the parties and to whom the records or information have been released and of the reasons for the release.

WAC 516-26-090 DIRECTORY INFORMATION. (1) The university may release "directory information" concerning a student to the public unless the student requests in writing of the Vice President for Student Affairs that the student's directory information not be released except as provided in WAC 516-26-070, 516-26-075, 516-26-080 or 516-26-085.

(2) The term "directory information" shall include information relating to the student's name, local and home address, telephone listing, 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.

(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.

- 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 E - Affirmative Action Student Grievance Procedures.)

Appendix E STUDENT ACADEMIC GRIEVANCE POLICY AND PROCEDURES

1. Policy

Students have protection, through orderly procedures, against arbitrary or capricious actions or decisions by their instructors; students also have protection against erroneous actions or decisions by academic units. At the same time, students are responsible for achieving and maintaining the standards of academic performance and excellence which are established by their instructors and for complying with all relevant policies, standards, rules, and requirements which are formulated by the University and the University's academic units. A student wishing to pursue an academic grievance must use the following grievance procedure once having received notice of the action or decision which gives rise to the grievance. The emphasis of the grievance procedures is on informal resolution of the grievance. Grievances which involve hearings before the Student Academic Grievance Board should be rare.

Students who do not meet the deadlines given in the procedures shall be deemed to have waived their right to appeal. If any officer of the University or the Board fails to meet the deadlines established, the student may continue to the next level in the procedures. The deadlines are set to provide a rapid resolution of the grievance. However, unforeseen circumstances such as illness or absence from the campus may result in an extension of a deadline. Such extensions shall be recorded in writing by the unit head, dean or secretary to the Board, as appropriate.

2. Academic Grievances

Academic grievances are limited to the following:

- 1) A claim by the student that an assigned grade is the result of arbitrary or capricious application of otherwise valid standards of academic evaluation, or

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 for Student Affairs will serve as executive secretary to the Board and will be responsible for the arranging of meetings and the collection and maintenance of necessary documents. The Board, for any hearing, will be selected in the following manner—

- (a) The pool of Board members shall consist of six (6) faculty appointed by the Faculty Senate for three-year terms; six (6) undergraduate students and six (6) graduate students ap-

pointed 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.
- (b) *Mediation.* A mediator may be appointed by the Vice Provost for Instruction from a list of four persons previously appointed by 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 F CODE OF FACULTY ETHICS FOR THE FACULTY OF WESTERN WASHINGTON UNIVERSITY

This Code of Ethics was adopted by vote of the faculty of Western Washington University on November 2, 1971, and was endorsed for inclusion in the Faculty Handbook by the Board of Trustees on November 4, 1971.

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 his role as teacher, include obligations to respect the dignity of others, to acknowledge the right of others to express opinions which differ from his own, to foster learning; to defend intellectual honesty, freedom of inquiry, learning, and teaching; and to support freedom of expression on and off the 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

The Western faculty member, guided by a deep conviction of the worth and dignity of his role in the advancement and dissemination of knowledge, recognizes the special responsibilities placed upon him as a scholar. His primary responsibility to his subject is to seek and to state the truth as he, in consequence of his

academic competence, perceives it. To this end he devotes his energies to developing and improving his scholarly competence. He accepts the obligation to exercise critical self-discipline and judgment in using, extending and transmitting knowledge. He practices intellectual honesty. When he follows subsidiary interests, he must insure that these interests do not seriously compromise his freedom of inquiry nor the fulfillment of his academic responsibilities.

Section 2

As a teacher, the Western faculty member encourages the free pursuit of learning by his students. He demonstrates by example the best scholarly standards of his discipline. He respects his students as individuals and adheres to his designated role as intellectual guide and counselor. He makes every reasonable effort to foster honest academic conduct and to assure that his evaluation of students reflects their actual performance. He respects the confidential nature of the relationship between professor and student. He avoids any exploitation of students for his private advantage and acknowledges significant assistance from them. He strives to help them develop high standards of academic competency and respect for academic freedom.

Section 3

It is a teacher's mastery of his subject and his own scholarship which entitles him to his classroom and to freedom in the presentation of his subject. He thus avoids injecting into his classes material which has no relation to his subject and conscientiously develops the content of his course as announced to his 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 his membership in the community of scholars. He respects and defends the free inquiry of his associates and, in the exchange of criticism and ideas, he respects the opinions of others. He acknowledges the contributions of his colleagues and strives to be fair in his professional judgment of colleagues. He accepts his share of faculty responsibilities for the governance of his institution.

Section 5

As a member of his institution, the Western faculty member seeks above all to be an effective teacher

and scholar. Although he observes all regulations of the institution that do not contravene academic freedom, he maintains his right to criticize institutional regulations and to seek their revision. He determines the amount and character of work he does outside his institution with due regard to his paramount responsibilities within it. When considering the interruption or termination of his service, he recognizes the effect of his decision upon the program of the institution and gives due notice of his 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. He measures the urgency of these obligations in the light of his responsibilities to his discipline, to his students, to his profession, and to his institution. When he speaks or acts as a private individual, he avoids creating the impression that he speaks or acts 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 his obligations as a concerned citizen precludes the fulfillment of his academic obligations, he should either request a leave of absence or resign his 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 one's colleagues, intrude on the individual rights of others or damage institutional facilities or private or public property. All members of the academic community and visitors to the University must be assured of the right to be heard in an atmosphere of free inquiry and in a situation devoid of violence.

Section 9

It is presumed that members of the Western faculty will find this

Code of Ethics an adequate guide for the choices they must make in the fulfillment of their academic functions. If rules are needed to implement the principles inherent in this Code, they shall be developed by the faculty within the spirit of the Code, shall be in accordance with the 1940 AAUP Statement on Academic Freedom, and shall carry full provision for due process.

Appendix G AFFIRMATIVE ACTION STUDENT GRIEVANCE PROCEDURE

Persons who have questions or need assistance in processing a grievance should contact Joan Stewart, Affirmative Action Director, Old Main 400/410, Phone 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 3 working days.

The Affirmative Action Director or an investigator designated by him or her must meet with the grievant within 10 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 investi-

gate 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 \$2000 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 \$2000 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 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

Appendices

Bellingham, National Bank Bldg.
Bellingham, WA 98225
Phone: 676-2176

OR

Fourth Floor
1601 Second Avenue Building
Seattle, WA 98101
Phone: 442-0473

Office for Civil Rights,
Department of Health,
Education, and Welfare
Arcade Plaza Building MS 508
1321 Second Avenue
Seattle, Washington 98101
Phone: 442-0473

Office of Federal Contract
Compliance
Room 1023 Federal Office Building
909 First Avenue
Seattle, Washington 98174
Phone: 442-4508

Equal Employment Opportunity
Commission
414 Olive Way, Times Square
Building, Fourth Floor
Seattle, Washington 98101
Phone: 442-0968

U.S. Department of Labor,
Wage and Hour Division ESA
506 Second Avenue, Room 2008
Seattle, Washington 98104
Phone: 442-4482

Appendix H 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.

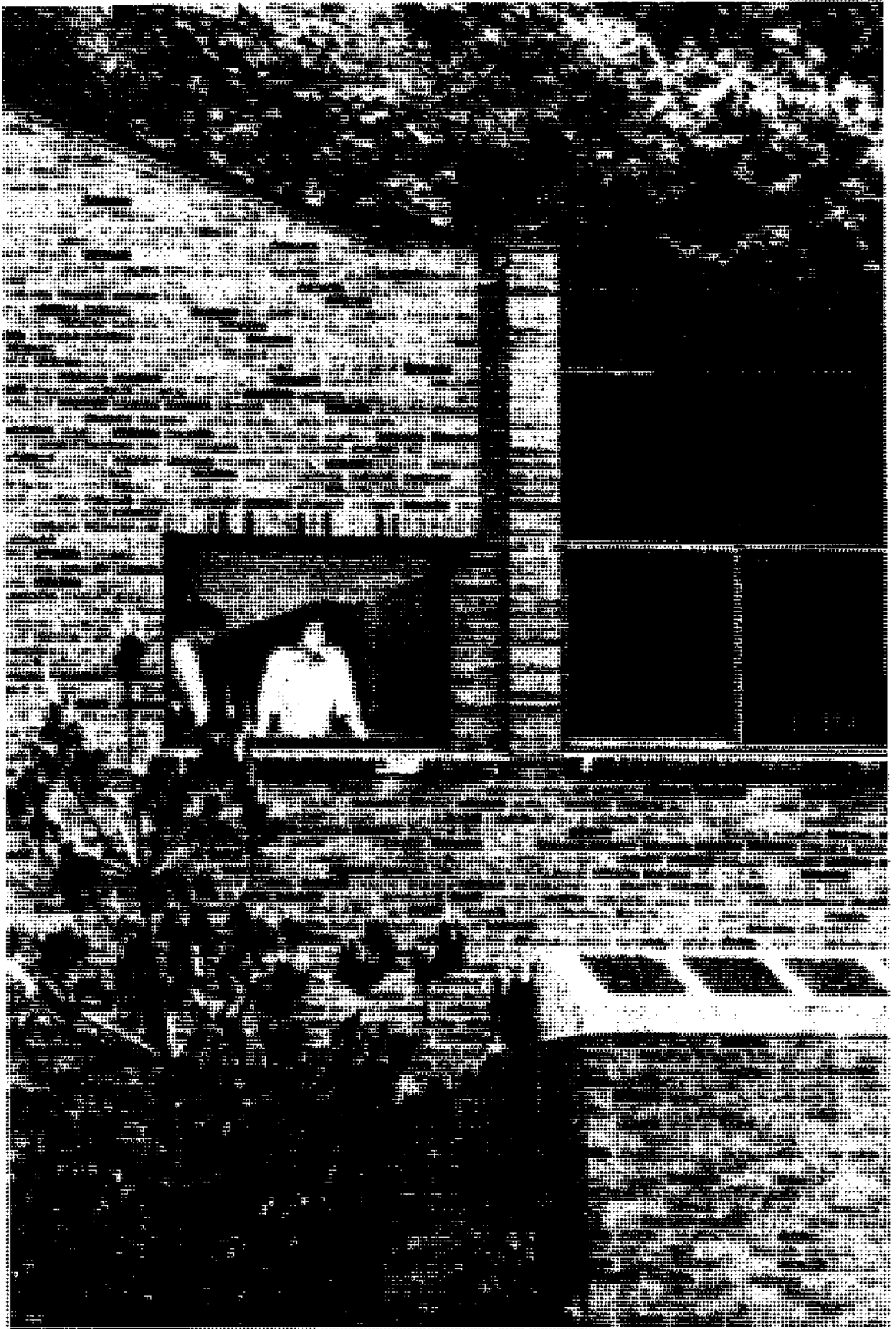
Western Washington University has established rules and regulations governing parking under Washington State Administrative Code 516-12. Although parking regulations are constantly under study and revision, all students who utilize parking facilities on campus are required to purchase a parking permit 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 \$5 to \$20 per quarter depending on the location of the parking lot. Violators of parking regulations are towed away. For further information contact the campus Department of Public Safety.

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 Joan Stewart at the Affirmative Action Office, Old Main 400 (676-3306).



INDEX

Academic Advisement	25	Continuing Education	44	Geology	181
Academic Dishonesty Policy	341	Counseling Center	26	Geophysics	183
Academic Facilities	9	Courses (see individual subjects)		German	171
Academic Grievance	344	Course Numbering System	32	Gerontology	219, 299
Academic Honors	36	Creative Writing	155	Grading System	34
Academic Probation	37	Credits, Definition of	32	Graduate Study	13, 64
Academic Programs	8, 51	Credits, Transfer Policy	11	Graduation Requirements	39
Academic Policies	31	Criminology	299	Greek	173
Accounting	96	Dance	327	Health Education	271
Accreditation of College	7	Daycare Facilities	29	Health History	15
Administrative Officers	334	Degrees Granted, 1980-81	340	Health Services	27
Admission, Freshman	11	Degrees Offered	8, 51	History	187
Admission, General	10	Demography	299	Home Economics	196
Admission, Graduate	84	Dental Hygiene (professional)	47	Honors Program	45
Admission, Transfers	11	Dentistry (professional)	47	Housing	22
Admission to Teacher Education	137	Deposit, Enrollment	14	Human Services	219
Advance Placement	31	Deposit, Housing	22	Huxley College of Environmental	
Affirmative Action -		Design Center	316	Studies	60, 202
Student Grievance Policies	347	Disability/Handicapped	28	Independent Studies	45
American Studies	213	Earth Science	182	Indian Education Specialists	222
Anthropology	99	East Asian Studies	216	Industrial Arts	317
Appendices	341	Economics	131	Industrial Design	223
Application Deadline	10	Education	136	Interdisciplinary Arts	215
Aquatic Studies Program	44, 214	Education, School of	54	Interdisciplinary Programs	213
Architecture (professional)	46	Elementary Education	141	Interior Design	197
Art	104	Employment, Part-time	21	International Students	13, 28
Art History	110	Engineering (professional)	47	Internships (see Field Experience	
Arts & Sciences, College of	51	English	153	Programs)	
Assistantships, Graduate	21, 64	Enrollment Summary, 1980-81	340	Intramurals & Athletics	30
Astronomy	278	Entrance Tests	14	Japanese	173
Attendance Requirements	33	Environmental Geology	183	Journalism	233
Auditors	18, 33	Environmental Studies	203	Latin	173
Bachelor Degree Requirements	52	Ethnic Studies	218	Latin American Studies	224
Biology	111	Examinations, Final	34	Law (professional)	48
Blue Book	15	Faculty	336	Leisure Studies (see Recreation & Parks)	
Bridge Project	58	Faculty Emeritus	335	Liberal Studies	236
Broadcast Communication	304	Faculty Ethics Code	346	Librarians	340
Business Administration	120	Fairhaven College	56, 160	Library Wilson	9
Business & Economics, College of	53	Family & Community Services	197	Library Science	152
Business Education	261	Fees	17	Linguistics	224
Calendar, Official	4	Field Experience	45	Living Costs	24
Campus Map	2	Fifth-Year Program for Teachers	143	Loans, Student	20
Canadian-American Studies	216	Finances	17	Major, Self Designed	52
Career Planning	25	Financial Assistance	20	Mathematics & Computer Science	240
Cartography	177	Fine & Performing Arts, College of	59	Mathematics Proficiency	
Certificates Issued, 1980-81	340	Fisheries (professional)	47	Requirements	38
Challenge, Course	32	Foreign Cultures Minor	188	Medical Technology (professional)	48
Changes in Registration	16	Foreign Languages & Literatures	167	Medicine (professional)	48
Chemistry	125	Foreign Study	45	Museum Training	106
Child Development & Family		Forestry (professional)	48	Music	249
Relationships	198	Former Students Returning	13	Non-Discrimination Policy	348
Chinese	169	French	170	Non-Resident Candidates	11
Classical Studies	169	Freshwater Studies	214	Nursing	258
Communications, Speech	304	General University Requirements	40	Nursing (Professional)	49
Computer Center	9	General Science	219	Occupational Therapy	
Computer Science	240	Geography & Regional Planning	175	(professional)	49

Office Administration	261	Termination of Enrollment	34
Optometry (professional)	49	Theatre/Dance	326
Orientation	15	Theology (professional)	50
Parking & Traffic	348	Transfer Programs	46
Parking Fees	18	Transfer Students	11
Part-time Employment	21	Trustees, Board of	334
Pass/Fail Grading	35	Tuition	17
Pharmacy (professional)	49	University Personnel	334
Philosophy	264	Urban Center	228
Physical Education	267	Urban & Regional Planning	177
Physical Science	225	Veterans	15
Physical Therapy (professional)	49	Veterinary Medicine (professional) ...	50
Physics & Astronomy	278	Visual Communication Education ...	231
Placement Services	25	Withdrawal from Courses/ University	33, 34
Political Science	283	Women's Literature	155
Prerequisites	32	Women's Studies	232
Probation, Academic	37		
Professional Transfer Programs	46		
Psychology	290		
Public Policy & Administration	285		
Re-admission	13		
Recreation & Parks	269		
Refund of Fees	19		
Registration	16		
Repeating Courses	36		
Required Entrance Exams	14		
Research	9		
Reservations, Room	22		
Residence Halls	22, 27		
Residence Status	17		
Roles & Missions	7		
Russian	173		
Scholarships	21		
Scholarship Standards	36		
Science Education	225		
Secondary Education	140		
Shannon Point	9		
Social Studies Education	226		
Social Work (professional)	50		
Sociology	298		
Spanish	173		
Special Education	142		
Special Students	13		
Speech	304		
Speech Pathology & Audiology	310		
Student Activities	28		
Student Affairs	25		
Student-Faculty Designed Majors (self-designed majors)	52		
Student Records Policy	342		
Student Rights/Responsibilities	341		
Sundquist Laboratory	9		
Supervised Teaching	138		
Teacher Certification	55		
Teacher Education Curriculum	140		
Technology	315		



WESTERN WASHINGTON UNIVERSITY
Bellingham, Washington 98225