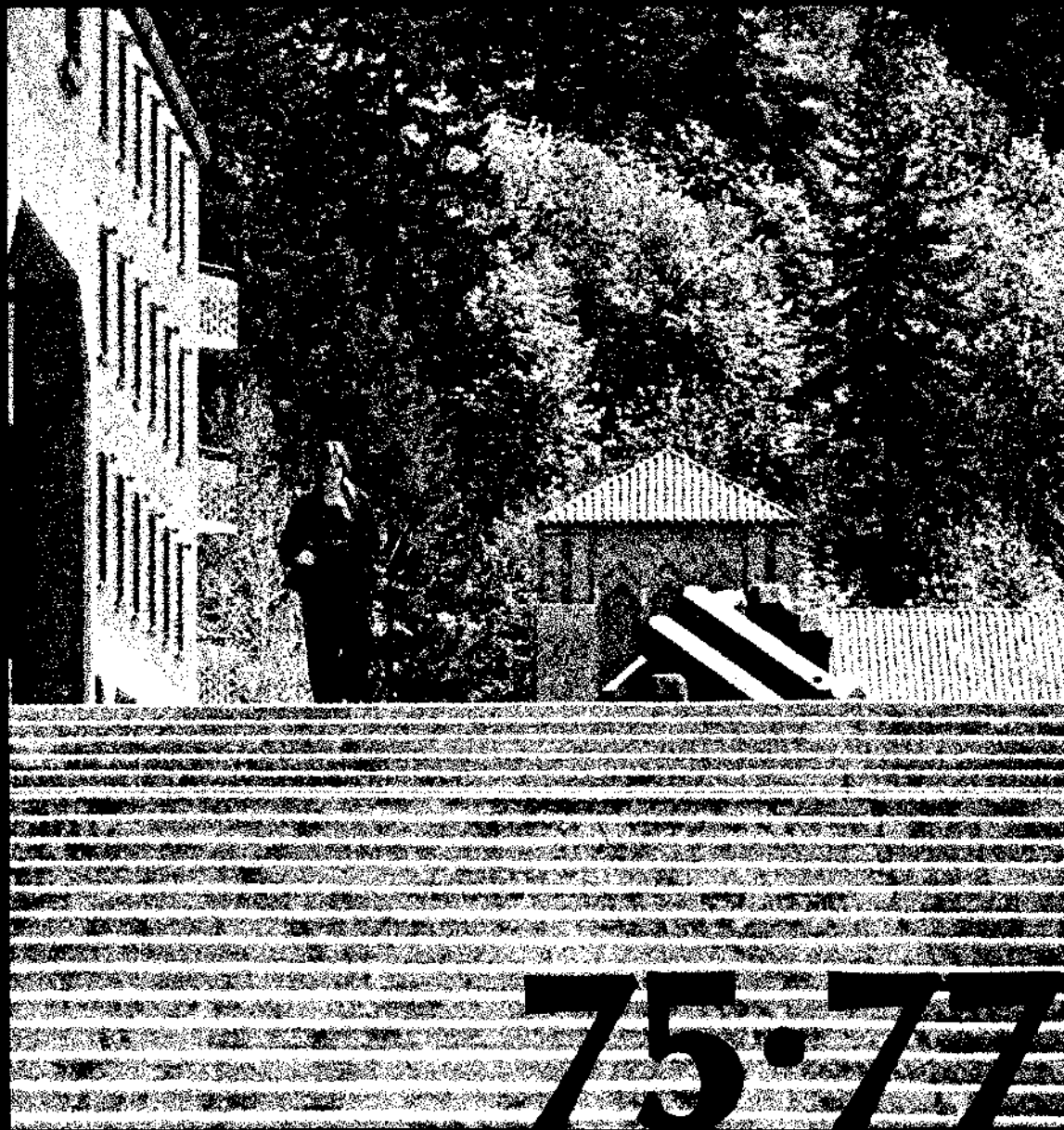


WESTERN WASHINGTON STATE COLLEGE BULLETIN

General Catalog / Biennial Issue 1975-76 1976-77



75•77



WESTERN WASHINGTON STATE COLLEGE BULLETIN

Vol. 71

July, 1975

No. 1

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CONTENTS

- 2 Campus Map
- 4 College Calendar

- 7 THE COLLEGE
 - 7 Accreditation
 - 7 Objectives
 - 8 Non-Discrimination
 - 8 The Campus
 - 8 The Library
 - 8 The Computer Center
 - 9 Shannon Point Marine Center
 - 9 Research

- 10 ADMISSION, REGISTRATION AND FINANCES
 - 10 Admission
 - 13 Registration
 - 13 Finances
 - 15 Financial Assistance

- 18 HOUSING AND STUDENT SERVICES
 - 18 Student Living
 - 20 Student Affairs Office
 - 21 Student Counseling Center
 - 21 Health Services
 - 22 Student Activities
 - 24 Career Planning and Placement Center

- 25 ACADEMIC AND PROFESSIONAL PROGRAMS
 - 25 Programs Leading to Degrees
 - 26 Professional Programs
 - 28 Professional Transfer Programs

- 36 ACADEMIC REGULATIONS
 - 36 Bachelor's Degree Requirements
 - 36 Credits and Load

- 37 Course Numbering
- 37 Scholarship Standards
- 42 Master's Degree Requirements
- 43 Continuing Studies Programs
- 44 Foreign Study
- 44 Veterans
- 44 Student Records Policy
- 46 Student Rights and Responsibilities
(see page 343 for complete text)

- 47 COLLEGE OF ARTS AND SCIENCES
 - 48 Degree Requirements
 - 48 General College Requirements
 - 52 Orientation

- 53 DEPARTMENTS AND COLLEGES
(alphabetically: Art to Technology)

- 93 EDUCATION
 - 95 Preparation for Teaching
 - 95 Teacher Certification Requirements
 - 96 Admission to Teacher Education
 - 97 Campus-Based and Field-Centered Programs
 - 99 Professional Certification Programs
 - 102 Fifth Year of Study

- 129 COLLEGE OF ETHNIC STUDIES

- 137 FAIRHAVEN COLLEGE

- 199 HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES

- 332 COLLEGE PERSONNEL
 - 332 Board of Trustees
 - 332 Administration
 - 335 Faculty

- 342 Enrollment and Degrees Granted

Map key

AA	ART ANNEX
AH	ARNTZEN HALL
AM	AUDITORIUM-MUSIC BUILDING
AT	ART/TECHNOLOGY
BH	BOND HALL
BK	BOOKSTORE
BT	BUCHANAN TOWERS (Residence)
BW	BIRNAM WOOD (Residence)
CH	COLLEGE HALL
CM	COMMISSARY
CV	CARVER GYMNASIUM
EH	EDENS HALL
EN	EDENS HALL NORTH (Residence)
ES	ENVIRONMENTAL STUDIES CENTER
FC	FAIRHAVEN COLLEGE (Residence & Dining)
HG	HIGGINSON HALL (Residence)
HH	HAGGARD HALL
HI	HIGHLAND HALL (Residence)
HS	HIGH STREET HALL
HU	HUMANITIES BUILDING
LH	LECTURE HALLS
MA	MATHES HALL (Residence)
MH	MILLER HALL
MP	MAINTENANCE/MOTOR POOL
MX	MUSIC ANNEX
NA	NASH HALL (Residence)
OM	OLD MAIN
PH	PRESIDENT'S HOUSE
PP	PHYSICAL PLANT
RA	RIDGEWAY ALPHA (Residence)
RB	RIDGEWAY BETA (Residence)
RC	RIDGEWAY COMMONS (Dining)
RD	RIDGEWAY DELTA (Residence)
RG	RIDGEWAY GAMMA (Residence)
RK	RIDGEWAY KAPPA (Residence)
RO	RIDGEWAY OMEGA (Residence)
RS	RIDGEWAY SIGMA (Residence)
SH	STEARNS HOUSE
SO	SECURITY OFFICE
SP	STEAM PLANT
VA	VIKING UNION ADDITION
VC	VIKING COMMONS (Dining)
VP	VISITORS' PARKING
VU	VIKING UNION
WL	WILSON LIBRARY

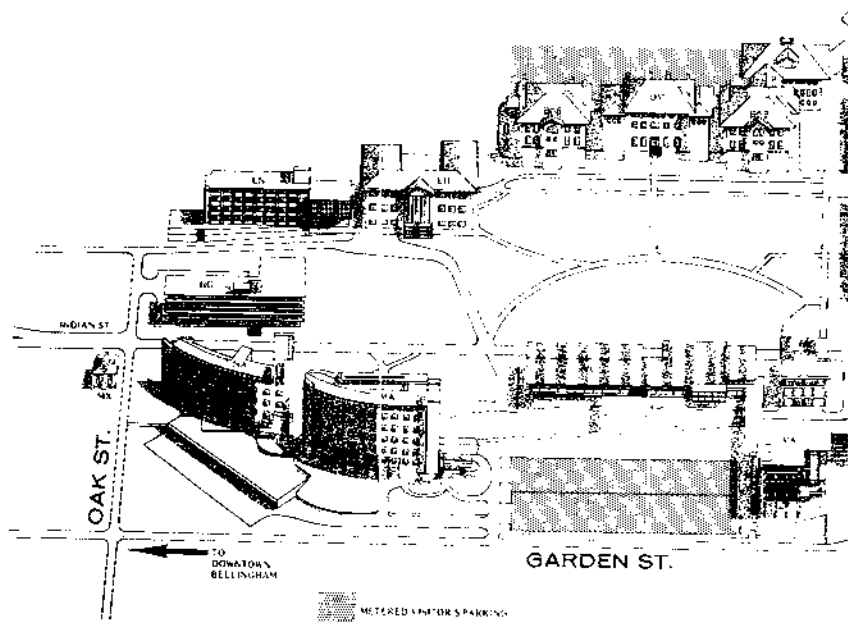
Departments

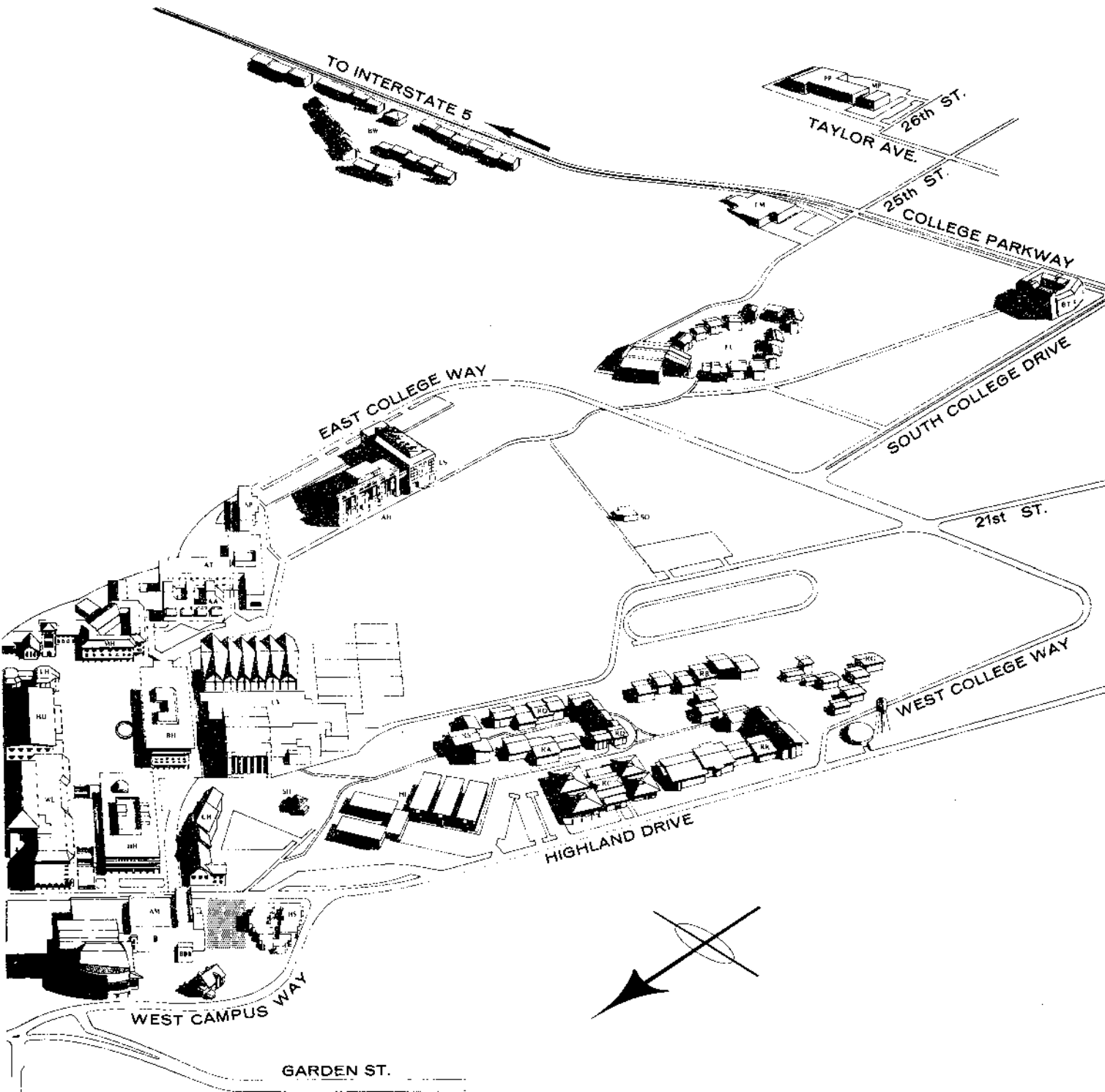
ART	(AA, AT) Art/Technology
BIOLOGY	(HH) Haggard Hall
CHEMISTRY	(HH) Haggard Hall
CONTINUING STUDIES	(EH) Edens Hall
ECONOMICS AND BUSINESS	(AH) Arntzen Hall
EDUCATION	(MH) Miller Hall
ENGLISH	(HU) Humanities Building
FOREIGN LANGUAGES	(HU) Humanities Building
GENERAL STUDIES	(MH) Miller Hall
GEOGRAPHY & REGIONAL PLANNING	(AH) Arntzen Hall
GEOLOGY	(ES) Environmental Studies Center
HISTORY	(HU) Humanities Building
HOME ECONOMICS	(HS) High Street Hall
LIBRARY SCIENCE	(MH) Miller Hall
MATH/COMPUTER SCIENCE	(BH) Bond Hall
MUSIC	(AM) Auditorium-Music Building
PHILOSOPHY	(HU) Humanities Building
PHYSICAL EDUCATION, HEALTH EDUCATION AND RECREATION	(CV) Carver Gymnasium
PHYSICS AND ASTRONOMY	(BH) Bond Hall
POLITICAL SCIENCE	(AH) Arntzen Hall
PSYCHOLOGY	(MH) Miller Hall
SOCIOLOGY/ANTHROPOLOGY	(AH) Arntzen Hall
SPEECH	(CH) College Hall
TECHNOLOGY	(AT) Art/Technology

COLLEGE OF ETHNIC STUDIES
& HUMAN SERVICES (EH) Edens Hall

FAIRHAVEN COLLEGE (FC) Fairhaven College

HUXLEY COLLEGE (ES) Environmental Studies Center





TO INTERSTATE 5

TAYLOR AVE.
26th ST.

25th ST.
COLLEGE PARKWAY

SOUTH COLLEGE DRIVE

21st ST.

EAST COLLEGE WAY

WEST COLLEGE WAY

HIGHLAND DRIVE

WEST CAMPUS WAY

GARDEN ST.



ACADEMIC YEAR COLLEGE CALENDAR 1975-76

SEPTEMBER

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Fall Quarter 1975

September 22

Registration

September 24, 8:00 a.m.

Classes begin

October 27

Veterans Day Holiday

November 26, noon-December 1,
8:00 a.m., Thanksgiving Recess

December 8-12

Final examination week

Winter Quarter 1976

January 5

Registration

January 6, 8:00 a.m.

Classes begin

February 16

Washington's Birthday Holiday

March 15-19

Final examination week

Spring Quarter 1976

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 1976

June 21-July 30

Six-Week Session

June 21-August 22

Nine-Week Session

June 21

Registration

June 22

Classes begin

July 5

Independence Day Holiday

ACADEMIC YEAR COLLEGE CALENDAR 1976-77

The calendar for 1976-77 includes only dates for academic quarters. The complete calendar including holidays will be published in July 1976.

Fall Quarter 1976

- September 20
Registration
- September 22
Classes begin
- December 6-10
Final examination week

Winter Quarter 1977

- January 3
Registration
- January 4
Classes begin
- March 14-18
Final examination

Spring Quarter 1977

- March 28
Registration
- March 29
Classes begin
- June 3-9
Final examination week
- June 10
Commencement

Summer Quarter 1977

- June 20-July 29
Six-Week Session
- June 20-August 19
Nine-Week Session

SEPTEMBER

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JULY

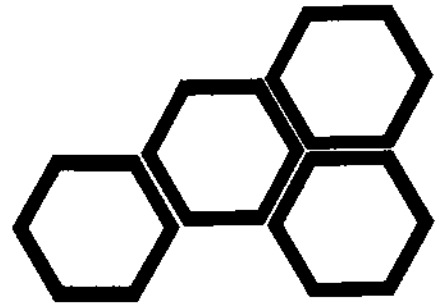
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THE COLLEGE



Western Washington State College is one of four state colleges which, along with two universities 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 on Higher Education to coordinate their planning and efforts to provide adequate higher education for the college population of the state.

Western Washington State College is located in Bellingham, a city of 40,500 in the northwestern corner of the state near the Canadian border. Its historical antecedent was the State Normal School established by act of the legislature in 1893, with actual operations commencing in the fall of 1899. From a normal school, the institution evolved into a degree-granting institution in 1933, College of Education in 1937, and to State College in 1961.

The College is a multipurpose institution offering degree programs in the arts and the sciences and in professional education for teachers at both the undergraduate and graduate levels. These are:

- Bachelor of Arts
- Bachelor of Science
- Bachelor of Arts in Education
- Master of Arts
- Master of Science
- Master of Education

Preprofessional studies are available for transfer to universities and professional schools.

Administratively the College is organized into a Graduate School, and four semi-autonomous undergraduate colleges: The College of Ethnic Studies, Fairhaven College, Huxley College, and The College of Arts and Sciences.

Accreditation

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

OBJECTIVES

Western Washington State College strives to provide its students with the opportunity and incentive for gaining a higher education which will develop their intellectual powers, enlarge their understanding and appreciation of man's heritage, and stimulate their abilities to create and to share ideas. This spirit of inquiry is appropriate to the development of citizens in a free society. It provides a sound basis for any vocational pursuit, and should continue long beyond the termination of formal college study.

The College provides a broad general education, intensive studies aimed at developing scholarly competence, and professional education for those who are preparing to teach in the public schools. Graduate studies leading to advanced degrees in education and in a variety of fields of the arts and sciences are offered.

The College recognizes its responsibility to extend man's knowledge through the active participation of faculty and students in research, and to contribute to the advancement of the humanities, the sciences, the social sciences, and the arts through creative endeavor. Its intellectual resources are made available as a service to the community—local, state, national.

POLICY OF NONDISCRIMINATION

It is the policy of the Board of Trustees of Western Washington State College to provide equal employment opportunity for all employees and applicants for employment regardless of race, color, religion, national origin, sex, age, marital status, or the presence of any physical, sensory or mental handicap.

It is the responsibility of each member of the college community to insure that meaningful equal employment opportunity exists.

The College will continue to cooperate with agencies of the federal and state governments in fulfilling its legal and moral obligation in Equal Employment Opportunity.

The Board of Trustees further pledges that every effort will be made to provide resources for corrective and affirmative action programs to implement the above policy.

The Affirmative Action Office is also concerned with equal opportunity for students. Title IV of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972 prohibit discrimination on the basis of race, color, national origin and sex in student admissions, programs and the provision of services, as well as in employment.

As a federal contractor, WWSC is obligated to and is committed to assuring equal opportunity. Persons having questions regarding the implementation of these policies should consult with the Affirmative Action Office.

THE CAMPUS

The main campus and its 64 buildings occupy 200 acres along Sehome Hill overlooking Bellingham Bay and downtown Bellingham. Other College-owned properties support regional educational and conservancy programs such as the recently completed marine laboratory at Shanron Point near Anacortes.

Most College facilities are new, having been renovated or constructed during recent years of rapid enrollment growth and program development. Teaching and

research functions have been aided by major additions and expansion of the library, a computer center, the educational media center and a recital hall, as well as sophisticated laboratories and classrooms.

The College has on-campus residence halls and student apartments for 3,600 students.

The quietly beautiful natural setting for the campus and the award-winning architecture combine to make Western Washington State College a pleasant place to work and study.

THE LIBRARY

The Mabel Zoe Wilson Library houses more than 600,000 items, including 304,000 volumes of cataloged books and bound periodicals; 300,000 units of microtext, and large collections of federal and state government publications, curriculum materials, pamphlets and college catalogs. The Library maintains subscriptions to over 4,500 current periodicals and newspapers.

The Library provides open stacks for the collections, together with reading and study areas, carrels and seminar rooms. The Library also maintains a branch Music Library in the Auditorium-Music Building which includes an extensive collection of scores and recordings as well as books about music.

THE COMPUTER CENTER

The Computer Center operates IBM 360/40 and 7090 computers and two Interdata 7/32 computers, with appropriate peripheral equipment. A terminal network provides problem-solving and computer-assisted instruction services. The equipment, partly funded with National Science Foundation grants in 1962 and 1968, a U.S. Navy gift in 1971, and a Health, Education and Welfare grant in 1974, serves most of the instructional, research and administrative needs on campus and does instructional processing for local high schools. In addition there is an Interdata 70 computer system in Huxley College, two small computers in the Psychology Department and another in the Geology Department.

SHANNON POINT MARINE CENTER

Shannon Point Marine Center, located near the Washington State Ferry Terminal west of Anacortes, Washington, is a laboratory and classroom facility used by students attending state-supported colleges, community colleges and universities.

The center is administered by Western Washington State College. Director of the facility is Dr. William C. Summers, who is also a member of the faculty at Huxley College of Environmental Studies at WWSC, formerly with the Marine Biological Laboratory at Woods Hole, Massachusetts.

The facility serves a consortium of colleges including Eastern, Central and Western Washington state colleges, Skagit Valley College, and Everett and Edmonds community colleges.

Property upon which the laboratory, classroom building and sea-water pumping system are located consists of approximately 70 acres, including 2,900 feet of salt-water shoreline, a freshwater pond and a forest area composed largely of Douglas fir.

RESEARCH

Faculty research and the training of students in scientific and scholarly methods and techniques have received considerable impetus through recent foundation and government grants. Awards have been made by a wide range of agencies and foundations. Among them are the National Science Foundation, the U.S. Office of Education, the Atomic Energy Commission, the Office of Economic Opportunity, the Arco Foundation, the Shell Foundation, the Ford Foundation, the Rockefeller Foundation, the ESSO Foundation, the Carnegie Foundation, the U.S. Department of Interior, the U.S. Department of Commerce, and several agencies of the State of Washington, the City of Bellingham, and various Canadian provincial and university grants.

The Bureau for Faculty Research has been established to encourage and coordinate faculty research (and creative scholarly endeavor) in all departments. The director of the bureau obtains funds for curricular development programs and for research, and administers these programs. A manuscript typing service, a staff artist and research assistants are on call at the bureau.



ADMISSION, REGISTRATION, FINANCES

ADMISSION

General Policy

The College makes every effort to provide an opportunity for higher education to all qualified applicants in areas in which it offers programs. Candidates are accepted, on the basis of criteria described below, as applications are received.

The acceptance of a student for admittance and enrollment at Western Washington State College constitutes an agreement of mutual responsibility. The student's part of this agreement is to accept established College rules and policies, to respect the laws of the city and the state, and to act in a responsible, mature manner appropriate to these laws, rules, and policies. The College's part is to provide an appropriate academic atmosphere and representation for students in those matters with which they are directly concerned.

Time of Application

Applications and credentials for the fall quarter should be filed by September 1; application by April 1 is desirable. Completed applications should be on file by December 1 for winter quarter, March 1 for spring quarter, and June 1 for summer session.

Students may apply for admission while still enrolled in high school or other colleges. An offer of admission made on the basis of incomplete records is granted with the understanding that the student will later furnish completed records which indicate that all admission requirements as set forth here have been satisfied.

Admission Requirements by Class

The admissions standards below are described in terms of the traditional A-F grading continuum. Students who present a number of non-traditional grades will be considered for admission on an individual basis and may be asked to submit additional evidence in support of their applications (i.e. entrance examinations, interviews and letters of recommendation).

FRESHMEN

The application for Admission to Washington Higher Institutions is required of all freshmen candidates. It may be obtained from any Washington high school or college, or from the Admissions Office.

Graduates of Washington State high schools are ordinarily admitted if their high school records indicate: (a) a cumulative grade average of at least 2.50; or (b) a rank in the upper half of the graduating class. Students whose records do not satisfy either of these criteria may seek additional consideration from the Admissions Committee by submitting such additional evidence as requested by the Director of Admissions. The College is able to grant admission to a limited number of students who can give other evidence of their ability and motivation to succeed in an academic program.

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

Admission of Students Without a High School Diploma

The College recognizes that many mature individuals have not completed the typical college preparatory high school program. Applications are welcomed from such persons, and admission will be considered on an individual basis. Arrangements for testing and an interview may be made through the Admissions Office. Experience in other than formal educational institutions is also considered as a basis for determining admission.

TRANSFER STUDENTS

The Application for Admission with Advanced Standing is available from any Washington community college or

from the Admissions Office. Candidates for admission as transfer students should submit this form in advance of the deadlines published above, and must also request that an official transcript be forwarded directly 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 is in good standing at the last institution attended is ordinarily admitted if he or she: (a) satisfies requirements for freshman admission (above) and has attained a cumulative grade average of 2.00 (C) in college-level study; or (b) does not satisfy freshman admission requirements but has achieved a cumulative grade average of 2.00 based upon at least 40 transferable credits, or 2.50 on at least 25 transferable credits. The grade average used for determining admission is calculated by counting all grades earned in transferable courses.

Exceptions to these standards may be made when additional evidence (such as test scores, maturity, etc.) indicates that previous grades alone are not accurate predictors of the student's chances for success at Western.

Students are granted advanced standing for college-level work (except sectarian religious study) completed at other accredited institutions. Students planning to transfer are urged to study the academic program of the college or department of their choice in the succeeding sections of this catalog to plan carefully for appropriate course selection. Guides to parallel courses or appropriate substitutions have been supplied to counselors at all Washington community colleges and are also available in the Admissions Office.

Transfer credit is accepted within the limits of an institution's accreditation. College level credits earned at a two-year community college are acceptable to a maximum of 90 quarter hours. (Exceptions to this limit may be made only upon petition to the Admissions Committee. Such petitions are to be filed with the Director of Admissions after enrollment.) Transfer students should note specific course requirements and recognize that such requirements, including minimum residence, must be met to obtain a degree, regardless of the amount of previous credit accepted.

SPECIAL STUDENTS AND AUDITORS

The College welcomes the enrollment of 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; continued enrollment requires a new application. Permission to enroll as a special student or auditor implies no commitment on the part of the College regarding later admission to a degree program.

FORMER WWSC STUDENTS

Western students who have interrupted their studies for one or more quarters (except summer) may advance register with their class if they file the *Application for Registration* at least two weeks prior to advance registration. Forms are available upon request from the Office of Admissions.

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

Acceptance of transfer credit earned subsequent to the student's initial admission to Western Washington State College is governed by regulations applicable to transfer students as outlined above.

A student who was eligible to continue at WWSC at the time of departure (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 WWSC the cumulative grade average for all such study must be at least 2.00 (C) and the student must be in good standing in the last institution attended. Exceptions to these standards can 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 WWSC must be reinstated by the Academic Standing Committee. Petitions for this purpose are available in the Admissions Office.

GRADUATE STUDENTS

For admission to graduate standing as a candidate for a master's degree, see *Graduate Bulletin*. Candidates for fifth year study for a standard teaching certificate or for teacher certification through special programs for graduate students will make application through the Office of Teacher Education Advisement and Certification.

INTERNATIONAL STUDENTS

Canadian students who qualify for admission to major universities in their home province are considered for admission under the same general procedures as are citizens of the United States.

A limited number of students are accepted from other countries. Such students, to be eligible, must have completed the university preparatory program in their own country and give evidence of ability to succeed in college study. They must also demonstrate competence in the use of the English language and be able to pay the cost of each year they plan to study at the College. Letters from sponsors, family members or banking officials are required in order to demonstrate that sufficient finances are available, since the College has no 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.

ADMISSION TO FAIRHAVEN COLLEGE, HUXLEY COLLEGE, and THE COLLEGE OF ETHNIC STUDIES

The admission requirements and procedures described here apply to all divisions of Western Washington State College. The three semi-autonomous cluster colleges (Fairhaven College, Huxley College and the College of Ethnic Studies) have additional requirements and select students on an individual basis. Interested students should apply through the WWSC Admissions Office in the same manner as all other students and should print clearly at the top of the application the name of the

cluster college to which admission is sought. When the student is admitted to Western Washington State College he or she will then receive additional forms required by the cluster college (see cluster college sections for detailed information).

HONORS PROGRAM

Freshmen are invited into the Honors Program on the basis of entrance exams, high school grade averages, and/or recommendation. Students already enrolled in college enter the program on the above bases or may be recommended by a college instructor. See Honors Program under Interdepartmental Programs for further information.

ACCEPTING AN OFFER OF ADMISSION

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

HEALTH HISTORY

A health history, as well as a chest x-ray or negative tuberculin test, is required of all entering students. Necessary forms are sent to each student who accepts an offer of admission. The form must be completed and returned to the Health Services Office prior to registration.

The protection of immunization is strongly urged. A requirement of immunization at student expense may be instituted at the discretion of the Health Service.

REQUIRED EXAMINATIONS

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

A. Freshmen

The Washington Pre-College Test is required of all entering freshmen who are graduates of Washington high schools. It should be completed during the junior or senior year of high school. Students unable to take the test while still enrolled in high school will do so during orientation.

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. The 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 nonresident freshmen, the Washington Pre-College Test need not be taken during orientation.

B. Transfers

Undergraduate transfer students who have completed fewer than 40 transferable credits at their previous college must present Washington Pre-College Test scores or complete the School College Abilities Test (SCAT) during orientation. Transfer students who have graduated from an out-of-state high school may submit SAT or ACT scores prior to registration.

REGISTRATION

The first day of each quarter is normally reserved to complete registration procedures. A special schedule for advisement and program planning is provided for entering students.

Registration During the College Year

During the fall, winter and spring quarters, students in attendance are given the opportunity to register for the following quarter. This customarily begins about mid-term. After registration, the student will be mailed a statement for the amount of his fees and tuition; payment must be received at a specified date prior to the opening of the quarter. Registration will be cancelled if payment is not received by the published deadline.

Instructors are not obligated to accept students who have missed the first class session.

See *Academic Regulations* for rules pertaining to changes of registration and withdrawals.

Late Registration

Students may not enter or register for classes after the first five days of instruction. Students registering or paying late, or failing to meet a registration appointment at the scheduled time pay a penalty fee of \$10.

Changes in Registration

Policies concerning changes in registration, such as withdrawal from a course, or from the College, are described in the section entitled "Academic Regulations."

FINANCES

Tuition and Fees

Checks and money orders for fees or living expenses should be made payable to Western Washington State College.

Quarterly Charges – Full-time Students

(Students registering for seven or more credits pay full fees)

<i>Student Classification</i>	<i>Quarterly Total</i>
Southeast Asian Veteran	\$120.00*
Resident ¹ , General	169.00
Non-Resident, General	453.00
Resident ¹ , Graduate Degree	189.00
Non-Resident, Graduate Degree	473.00

¹ *Residency – Washington State law on residence classification requires that a student be domiciled (i.e., physically present with the intent to remain) in the State of Washington for one year immediately prior to the beginning of the quarter for which he claims the right to pay resident tuition and fees. In addition, he 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 who is employed not less than 20 hours per week at a Washington public institution of higher education, and the children and spouses of such persons; military personnel and federal employees residing or stationed in the State of Washington, and the children and spouses of such persons; and all veterans 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 military service.*

**Fees listed here are subject to modification as a result of state legislative action or by the Board of Trustees.*

Quarterly Charges – Part-time Students

(Students enrolling for a maximum of six credits)

For each credit:

General	\$ 17.00*
Graduate Degree	19.00*
Southeast Asian Veteran	15.00*

(The minimum fees are \$34, \$38 and \$30 respectively.)

Auditors

Without credit, each course \$10.00*

Full-time students may audit a course without an additional fee; part-time students may audit courses by paying the auditor's fee additionally.

Continuing Studies

For each off-campus credit:

General	\$17*
Graduate Degree	\$19*
Southeast Asian Veteran	\$12*

Description of Tuition and Fees

	Tuition	Service and Activities Fee	Operations Fee
Resident, General	\$25.00	\$52.50	\$ 91.50
Non-Resident, General	96.00	48.50	308.50
Resident, Graduate	25.00	52.50	111.50
Non-Resident, Graduate	96.00	48.50	328.50
Southeast Asian Veteran	24.00	47.00	49.00

Tuition—Tuition is used for the construction of academic facilities. It is not used for Housing and Dining System buildings or support of the College's operating budget.

Service and Activities Fee—The Service and Activities Fee is used to amortize, in part, the residence, dining halls and student activities facilities, Associated Students administration, and student activities such as theatre, forensics, musical activities, intramural and intercollegiate athletics.

*Fees listed here are subject to modification as a result of state legislative action or by the Board of Trustees.

Operations Fee—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 College.

Miscellaneous Service Charges

Parking** (per quarter)

On-campus parking	\$ 18.00
Peripheral parking	\$4.00-\$8.00
Motorcycle parking	\$1.50

Late Class Changes: A fee of \$5.00 is charged if a student changes his class after the first five days of instruction in a quarter.

Entrance Test Fees: Freshmen who have not submitted appropriate examination results will complete the Washington Pre-College Test at a fee of \$8. Transfer students without appropriate test results will complete the School & College Abilities Test (SCAT) at a fee of \$1.

Special Examination Charge: Those who seek college credit through examination pay \$2 per credit.

Graduation Fees:

Baccalaureate Degree	\$ 8.00
Master's Degree	5.00
Placement Service fee for student with prior degree who earns teaching certificate only	2.00
Provisional Teaching Certificate	10.00
Standard Teaching Certificate	10.00

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

Music Rentals: Pipe organ, other instrument, or practice space rental costs \$2 per quarter.

Transcripts: A reasonable number of transcripts will be issued free of charge. Orders are requested one week in advance of need.

**Estimated at time of printing.

Parking and Traffic

It is recommended that vehicles not be brought to the campus unless absolutely necessary. Due to the geographical location of the campus the parking currently available on and around the campus is not adequate to cover the desires of the college community.

Western Washington State College 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 the time of official registration. The current parking permit fees vary from \$4 to \$18 per quarter depending on the location of the parking lot. Violators of parking regulations are towed away. For further information contact the campus Safety and Security Department.

Refund of Fees

In ordinary circumstances, a student who withdraws prior to the sixth day of instruction in a quarter will receive a full refund of tuition and fees except that the initial registration deposit required of new students is not refundable.

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 thirty calendar days following the first day of instruction. After the 30th day, no refunds are granted.

Note: The advance payment of \$50 required of new students is in all cases non-refundable.

Change in Student Status

Students who have paid part-time fees and who add

classes bringing their total to 7 or more credits will pay the balance between fees already paid and the full-time fee. A full-time student who drops classes so that his remaining total is 6 or fewer credits will receive a refund of (a) the difference between full and part-time fees if the change is made before the sixth day of instruction; (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.

Changes in Fees

The College reserves the right to change the above charges moderately should conditions so require. The College will continue its policy of holding costs to a minimum commensurate with effective services.

Estimate of Total Costs

The total estimated expense for three quarters, including tuition and fees, books and supplies, housing and a moderate allowance for incidentals, is as follows:

If living in campus residence halls	\$2,550
If living in off-campus apartments	2,750
If living at home or working for room & board . .	1,450

FINANCIAL ASSISTANCE

It is the position of the College that the limited funds available for student aid programs are most legitimately used, not as an inducement to attend this institution, but as an aid to assist needy students when their attendance seems to be an educationally sound course of action and when, for financial reasons, it would otherwise not be possible.

The College expects that every student will supply part of his own funds through savings from summer employment and that parents will contribute in proportion to their financial ability.

The College will make every effort to provide financial assistance to eligible applicants commensurate with indicated need. This assistance may take the form of loan, work, scholarship, or grant, or a combination thereof, designed to best meet the needs of the individual student.

Federal Programs

Federal financial aid programs are designed specifically to benefit dependent students from low income families. A student must demonstrate financial need to qualify.

In the utilization of Federally funded programs, the College adheres to policies and guidelines established by the Department of Health, Education and Welfare. The Parents' Confidential Statement prepared by the College Scholarship Service is used in assessing financial need.

National Direct Student Loan (NDSL)

This is a long-term loan program available to undergraduate and graduate students. The size of the loan granted depends on the student's financial need and on the funds available. Repayment of the loan begins nine months after the borrower ceases to be at least a half-time student. Repayment may be deferred while the borrower is serving with the Armed Forces, the Peace Corps or as a Vista volunteer.

Educational Opportunity Grants — Basic (BEOG) and Supplemental (SEOG)

Grants are available to a limited number of undergraduate students who demonstrate an exceptional financial need. Grants are awarded as "gift aid;" repayment is not required.

Basic Grants (BEOG): This is a new federal grant program available to undergraduates who began post high school education after April 1, 1973. Eligibility is based on financial need as determined by a formula developed by the Office of Education. Students must also be enrolled full time (12 credit hours per quarter). Grants range from \$50 to \$1,400 per academic year. *A separate application is required.* Application forms are available at high schools, post offices and the Financial Aid Office at WWSC.

Supplemental Grants (SEOG): Individual grants range from \$200 to \$1,500, but may not exceed more than one-half of the total assistance given the student. Grants must be matched equally with institutionally administered loans, scholarships or guaranteed employment. Student must submit a Parents' Confidential Statement to the College Scholarship Service for determination of eligibility.

College Work—Study Program (CWSP)

Students, particularly those with great financial need, who need a job to help pay for college expenses are potentially eligible for employment under the College Work—Study Program.

Part-time jobs are available both on and off campus. Earnings from these positions range from \$300 to \$800 for a school year.

Full-time summer positions are also available under the College Work—Study Program. To qualify for summer employment, the applicant must be enrolled at WWSC for the following academic year. Students working full-time during the summer are expected to save a substantial portion of their earnings to be applied toward meeting college expenses.

Institutional Scholarships

Each year a number of scholarships are made available through gifts, grants, and bequests from alumni and friends of the College to the Western Washington State College Foundation. Scholarships are one-year awards from \$100 to \$300 and are made in two categories: Academic Scholarships and Special Ability Awards. Special Ability Awards are given to students who demonstrate outstanding performance in art, athletics, speech-drama, or music.

Note: To be eligible for either of these Institutional Scholarships, students must also be able to demonstrate financial need, and be nominated by the sponsoring department.

Application Procedure

Applications should cover the academic year, October 1 to June 15, or any quarter thereof. Applications received by March 1 will be responded to by June 15. Late applications will be processed by July 15 if funds are available.

The application forms include a College Financial Aid Application and the Parents' Confidential Statement. The College application may be obtained by writing the Student Financial Aids Office. The Parents' Confidential Statement may be acquired from high school and community college counselors. Send the PCS directly to the College Scholarship Service in Berkeley, California. Return the College Financial Aid Application to the Student Financial Aids Office.

Other Financial Aid

Federally Insured Student Loan Program (FISL)

All graduate and undergraduate students are eligible to borrow through this program provided they are enrolled or have been accepted for enrollment at least half-time.

Loans are made upon application by the student through the College to participating banks or credit unions. Students may borrow up to \$2,500 per academic year, or a combined total of \$7,500 for all years, depending upon the amount of money available for such loans.

Repayment begins nine months after the borrower leaves school and may be deferred while the student is in graduate school, the Armed Forces, Vista or the Peace Corps. Students who qualify on a need basis may have the interest on the loan paid by the federal government while they are in school and during the deferment period. Borrowers who do not qualify for the interest benefits will pay seven per cent simple interest per year from the time the loan is granted.

Application forms may be obtained from the Financial Aids Office.

Important: This FISL program differs from the NDSL program in that it is not funded through the College. Application for this loan is made by the student to the lending institution of his choice.

Part-Time Employment

All students who are carrying 12 quarter hours of credit are eligible to work on campus. There are job openings in many college departments and offices throughout the year. Employment is usually obtained through direct contact with these campus agencies.

Designated Scholarships

A limited number of scholarships in specified areas of study are awarded to students. For more information consult the Student Financial Aids Office. Entering freshmen are urged to explore scholarship opportunities from hometown organizations with the aid of their high school counselors.

Departmental and Graduate Assistantships

Each department has funds available for assistantships to qualified undergraduates. Recipients are awarded a quarterly stipend of \$270. For information and application, see department chairmen.

A limited number of graduate assistantships in departments of the College are available to qualified students. Stipends vary depending upon the nature of duties assigned with a maximum of \$2,880. Upon re-application, a graduate assistantship may be extended to a total of two years. Graduate assistants may, under advisement, carry a maximum of 14 quarter hour credits and must be registered for at least seven quarter hour credits. Inquiries should be addressed to the Dean of the Graduate School.

Further information concerning financial aid may be obtained from:

Director, Student Financial Aids
Western Washington State College

HOUSING & STUDENT SERVICES

STUDENT LIVING

The College considers group living an important phase in the total college experience and is therefore directly concerned in maintaining high standards in its housing accommodations. A wide variety of housing accommodations are provided by the college. There are residence halls for single men, single women and coed living accommodations. The College also has apartments for single students and for married students. Assignments to on-campus housing and listings of off-campus housing accommodations are made without reference to race, age, marital status, creed or national origin.

The College does not maintain regulations as to where students must live. However, students are encouraged to investigate housing accommodations thoroughly to assure themselves against conditions which would interfere with their academic and personal development.

College Residence Halls

Rooms are furnished with a single bed, mattress and pad, desk, desk lamp, telephone, TV cable, and a wardrobe or closet. The occupant furnishes pillow, sheets, pillow cases, blankets, towels, alarm clocks and other personal necessities. Rooms are generally for double occupancy. Kitchenette and laundry facilities are provided in central areas. Electric open-element appliances are not permitted in student rooms. A recreation room, a reception area, small area lounge, special study rooms, vending machines and 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 residences. Students living in residence halls must take their meals in the dining halls. All dining halls are coeducational and

serve twenty-one meals per week plus special dinners and banquets.

Reservations for accommodations in the residence halls are made by sending a completed application to the Director of Housing, Western Washington State College, Bellingham, Washington 98225. *No deposit is required with the application.* Applications will be accepted only if the student meets one of the following conditions:

1. He has been admitted to the College as a new student and has prepaid the advance registration fee.
2. He is presently enrolled or has previously been enrolled at Western Washington State College.

Space in the residence halls is assigned according to the date of receipt of the application for room in a hall. The room assignment is made when the student moves in. Official assignments are made by mid-June for fall quarter and one month prior to the beginning of other quarters. Students making application and later deciding they do not want accommodations must cancel reservations by notifying the Director of Housing in writing prior to acceptance of a residence hall assignment.

In accepting an assignment to a residence hall each assignee must agree to the Conditions of Occupancy and make a security deposit of \$50. Deadlines for the payments are July 1st for fall quarter, or two weeks after the assignment is made. The \$50 security deposit will be retained by the College as a damage and/or reservation deposit as long as the student lives in the Housing system.

Once the payment of the security deposit is made, cancellation of a reservation cannot be made without penalty. Cancellations received after the payment is

made, but prior to August 1st for fall quarter, December 1st for winter quarter, and February 15th for spring quarter will result in a forfeiture of \$20. Cancellations made between August 1st and September 15th for fall quarter, between December 1st and December 20th for winter quarter or between February 15th and March 5th for spring quarter will result in a forfeiture of \$40. Cancellations made after the above stated deadlines will result in forfeiture of the entire \$50 deposit unless, due to unusual circumstances, a refund is granted by the Director of Housing.

Charges for damage or loss of residence hall property in the custody of the student or for damage to the hall premises will be billed to the student or withheld from any refund due him.

If a student is found ineligible for admission to the College, his entire deposit will be refunded.

Meals are not served during vacation periods.

Apartments for Single and Married Students

Birnam Wood consists of 132 apartments for 532 students on a wooded seven-acre site next to the campus. Each apartment has a living room, dining room, kitchen, two compartment 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 and television-FM cable.

Assignments to the single apartments are made by date of application, preference is given to older students, those with advanced class standing, those who are presently living on campus and groups of four persons. A \$50 deposit is required from each student when assignments are made.

Buchanan Towers is an eight-floor apartment-style residence hall which houses 404 students in one- and two-bedroom apartments at the south end of the campus. Each standard unit has a living-dining-kitchen area, two large bedrooms and a bathroom. The lower floor of the building has a recreation area and a central lobby. Furnishings, utilities, telephone service, television cable and extra storage space is also provided at no additional cost.

Residence for Foreign Language Study

One of the dormitories has been set aside for the use of students desiring to live in an environment in which foreign languages are spoken. Please inquire at the Housing Office.

Quiet Hall

One large coed hall has been established as a quiet hall where the residents set quiet hours that are respected by all residents. Other groups of students within halls often elect to make their wing or floor quiet also.

Cooperative Hall

Several small dormitory buildings in the Fairhaven complex are set up as co-ops where 25 to 35 students prepare their own food in a central kitchen and share cooking, cleanup, budgeting and purchasing responsibilities.

Living Costs

The following rates for multiple room and board will be in effect for the 1975-76 academic year.

Double room and 21 meals per week, academic year	\$1,260.00
Double room and 15 meals per week, academic year	\$1,240.00
Double room and 10 meals per week, academic year	\$1,190.00

Rates on a quarterly basis are slightly higher. Breakfast, lunch and dinner are served seven days per week in the dining halls. Students may take 10, 15 or all 21 of the meals in the dining hall each week. Meal tickets are good seven days per week.

Rates for subsequent years may be slightly higher due to inflationary factors. All rates are available from the Housing Office upon request.

Apartment rates for 1975-76 will be as follows:

Birnam Wood

Furnished two-bedroom unit with all utilities monthly cost (quarterly contract)	\$200-\$230
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Buchanan Towers

Furnished two-bedroom unit
with all utilities
monthly cost (yearly contract) \$157-\$189

Bakerview Mobile Homes

Unfurnished two-bedroom unit
without utilities, per month \$120-\$190

Other rates and facilities are created each year to meet the requests for other varieties of housing. Updated information may be requested from the Housing Office at any time.

Off-Campus Housing

The off-campus listing service carries listings of all available off-campus rentals; however, because of the constant change of availability, these are not printed for mailing. Available rentals are in great demand. It is to the student's advantage to arrive in Bellingham prior to the start of the quarter to make living arrangements. Although the office does not make individual rental agreements, nor assume responsibility for the condition or suitability of rental listings, it offers helpful information on renters' insurance, contracts with landlords, a guide book for renters and a mediation service for disputes between tenants and landlords. Information concerning the off-campus listing service can be acquired by writing to the AS Housing/Employment Commission, Viking Union, Bellingham, Washington 98225.

For Information

Further information concerning on-campus housing and dining may be obtained by writing to: Director of Housing and Dining, Western Washington State College, Bellingham, Washington 98225.

STUDENT AFFAIRS

The College does not consider that its responsibility to students ceases with the provision of good instruction and instructional facilities. As a unique individual, each student is recognized as having his own patterns of

circumstances, goals and needs. The Student Affairs division consists of a number of service and developmental resources designed to help each student become increasingly aware of his own potential and increasingly able to take advantage of the College's diverse learning opportunities. Services and activities included in the Student Affairs division are as diverse as providing financial assistance for students needing funds for school; preventing and diagnosing illness; helping students explore alternative life directions and assess career options; providing a broad range of co-curricular learning experiences many of them initiated and administered by students including entertainment, educational and social activities in residence halls, the Viking Union and off campus; developing support services for handicapped students; enhancing the experiences of minority students; advising students who have not yet declared a major; assisting graduating students with job placement; and counseling with students who are experiencing life problems and pressures.

While the Vice President for Student Affairs is administratively responsible for the division, policy governing the services and activities of the Student Affairs division is formulated by the College Services Council, a student-faculty-administration body which is part of the College Senate structure. A number of policy-formulating subcommittees report to the College Services Council, and students interested in serving on these bodies are encouraged to contact the Associated Students or Student Affairs office.

The Student Affairs Office

The Associate and Assistant Deans of Students, who comprise the Student Affairs Office, function as ombudspersons attending to the general welfare of the college community. They provide academic counseling including administration of scholastic standing procedures, counsel with students with individualized problems, and facilitate the College judicial process. In addition they attempt to identify common student problems or aspects of the College climate suggesting a need for change and initiate action toward such change. Students are urged to see one of the Associate or Assistant Deans if they need specific information or are unsure about procedures for resolving a particular problem.

Educationally disadvantaged students are offered tutorial services, academic advisement and peer group counseling through the Assistant Dean for Minority Affairs in the Student Affairs Office. The minority affairs staff is concerned with the basic improvement of reading and writing skills and offers an optional class for skills refinement. Tutors are available to any student at no charge. The office is engaged in the active recruitment of ethnic minority students, undergraduate as well as graduate. Additionally, it coordinates representative ethnic student organizations and encourages an active membership. These organizations are dedicated to establishing strong community ties in conjunction with the minority affairs staff.

Academic advisement for new students and those who have not declared majors is provided through the Assistant Dean for Academic Affairs in the Student Affairs Office. The Academic Information Center, also located in that office, offers a trained student staff to answer specific academic questions, to make referrals to offices or agencies with complete information, and to assist students generally in selecting a major, utilizing special academic opportunities and making course selections. (Each of the colleges—Arts and Sciences, Fairhaven, Huxley and Ethnic Studies—has special services for orientation of new students, freshman counseling and academic advisement. Students should read the chapter of this catalog dealing with the college of their choice and contact that college's office for specific academic concerns.)

Services for physically handicapped students are provided by the Student Affairs Office. As well as giving information regarding academic and housing concerns, the staff provides assistance in obtaining tutors, notetakers and readers. A room in Wilson Library is equipped with a tape recorder, and arrangements are made for securing tapes and records for blind students. The Student Affairs Office also provides liaison with state agencies, including Vocational Rehabilitation and State Services for the Blind.

Individuals desiring special instruction in swimming or physical exercise may contact the Physical Education Department for assistance.

Information on day-care facilities at the College and in Bellingham may be obtained from the Associate Dean in the Student Affairs Office. The College Cooperative Day Care Center is a student/parent cooperative operated in Fairhaven College buildings. The cooperative serves children of student parents and is in operation from 7:30 a.m. to 5:30 p.m. on the days that the College is in session. Children from two through five years of age may be enrolled. Fees are charged on a sliding scale depending on income and hours of use by the parents. Preference is given to low-income families. Parents and volunteers contribute work time to the Center.

STUDENT COUNSELING CENTER

The Counseling Center aids students to become more effective and productive persons so that they might attain greater benefit from their college careers. Comprised of professionally trained clinical and counseling psychologists, the staff provides services to improve decision making when social, educational, vocational, personal and marital conflicts arise. While it is usually necessary to make an appointment a few days in advance, a student will be seen without delay in instances of an emergency.

HEALTH SERVICES

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

The Health Service is located on the ground floor of Edens Hall. Its staff consists of physicians, registered nurses and receptionists. The Health Service is open weekdays 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 seen. Any student needing medical care should go directly to the Health Service. Any 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 referred to appropriate care in Bellingham or the student's home community. (Health insurance is a wise provision to obtain to help cover cost of any referrals and/or lab work.) Individual and group health care advice (e.g. diets, weight control, preventive health advice) is also available.

At times when the Health Service is closed, the Whatcom Emergency Service at St. Luke's Hospital is available for urgent care needs. *Note:* the College assumes no financial responsibility for care dispensed at the hospital emergency room. Students who engaged this service must plan to use private or health insurance funds to cover any expense incurred.

A health care package—the Student Health Service plus a dovetailed Supplemental Health Care Plan through Whatcom County Physician's Service (local Blue Shield plan)—is now available to students. Careful consideration of this health care package is suggested for each enrolling student. (See brochure describing benefits.) Sign-up time is at registration. The cost is exceedingly low compared with plans offering similar coverage.

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

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

Both of the above must be on file at the Health Service before the student will receive registration privileges. While it is *not* mandatory, the Health Service strongly encourages a complete physical examination by your physician if this has not been done recently.

For the Health Service to verify a student's absence from class due to illness, the student *must be seen at the Health Service* and must request a medical leave of absence. Those given a leave must check back with the Health Service before resuming classes. If an accident or illness requires the student's absence from campus, he/she may be placed on leave of absence by contacting the Student Affairs Office immediately.

RESIDENCE HALL PROGRAMS

The Office of Residence Hall Programs coordinates the efforts of live-in staff members and student leaders in each hall as they work individually and collectively to provide services and programs for resident students. Residence Hall staff members are employed in each hall to be responsible for assisting students in developing social and recreational activities, providing personal advice and counseling, assisting with academic advisement, providing information about housing and other aspects of college life, and referring students to specific campus agencies to meet specific student needs. Residence Hall Programs personnel work closely with hall students to develop their individual organizational skills as they serve their fellow students in a variety of volunteer leadership positions.

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 College; rather they are an integral and highly important part of the total range of educational experiences offered by the College. Students are encouraged to become involved in some aspect of the activity program as these activities provide educational and social experiences usually not available in the classroom situation.

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 to gain administrative experience. Students may also participate in the All-College Senate governance systems as elected or appointed members of the Senate and its councils and committees.

The opportunity to serve fellow students and develop skills in a para-professional capacity is available in a wide variety of student provided services. These include drug, employment, off-campus housing, legal, sex, and veterans information services, minority children tutorial projects, a Course Content Catalogue and a Cooperative Day Care Center.

Program Commission

From rock to Rembrandt, the Associated Students Program Commission coordinates and presents a large part of Western's entertaining, educational and social activities. Weekly films, art exhibits, coffee houses, dances, symposiums and festivals are regularly provided by the Program Commission. In addition it presents concerts and speakers such as War, Joan Baez, Randy Newman, Maria Muldaur, John Prine, Ralph Nader, Jane Fonda, Baba Ram Dass, Stewart Brand and Buckminster Fuller, all of whom have appeared at Western recently.

FM Radio

KUGS, at 89.6 on the FM dial, is Western's new student-managed radio station. With a complete range of music, news and educational programming, opportunities exist for participation as engineers, disc jockeys, newswriters and managers.

Outdoor Program

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, spelunking, camping, sailing, canoeing and kayaking, and many other activities. Included in the never-empty Outdoor Program Center are equipment rentals, environmental, map and outdoor libraries, sign-up sheets for trips, informal classes, and many special events for beginners and experts alike.

Club Sports

Competition and/or involvement is offered through the Club Sports program of the Associated Students in rugby, soccer, sailing, basketball, chess, bridge, archery, fencing, scuba, Go, karate, water skiing, canoeing and kayaking. All of these clubs offer instruction.

Special Interest Groups

Special interest organizations offer involvement in a wide range of activities. Over fifty different organizations exist within the Associated Students including groups such as the Ethnic Unions, ACLU, International Club, Cheerleaders, Radio Club, Women's Commission, Society of Automotive Engineers, Honors Club, Vietnam

Veterans, English Club and East Asian Studies Association. Many religious clubs also function at Western.

Departmentally Related Activities

Intramurals, Athletics, Forensics, Theater/Dance, Music, Performances and Publications also play an important part in the College activity program. Faculty from the 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, coordinated by the Physical Education Department, includes many individual and group sports. Through these activities students enjoy physical exercise and develop skills for leisure time activities.

Intercollegiate Athletics

Intercollegiate Athletics involves many students both as participants and spectators. Men's sports include football, basketball, track, cross country, tennis, baseball, golf, wrestling and crew. Interested women may participate in cross country, field hockey, volleyball, basketball, tennis, and track and field. The College is a member of the Evergreen Conference and the Northwest College Women's Sports Association.

Forensics and Theater

The Forensics Program offers opportunities for developing new interests and skills through tournaments ranging from local, low-key competitions to the National Debate Tournament. The Active Theater/Dance program continues throughout the regular academic year and summer. Experience in all phases of theater/dance activities is available. These are coordinated through the Speech and Drama Department.

Music Activities

Performing in a Music Department group is an activity open to students regardless of whether or not they wish academic credit or are music majors. The groups include band, orchestra, choir and opera, as well as stage band, jazz ensembles, a wide range of vocal ensembles and all varieties of chamber music.

Publications

Publications include the Western Front, a twice-weekly newspaper; Klipsun, a twice-quarterly magazine; and Jeopardy, the annual literary magazine. Student input is critical and new students at all academic levels are encouraged to join the staffs each quarter. Students may receive credit for working on any of these publications through the English Department and Journalism Program.

Viking Union

As the community center of the campus, the Viking Union is designed to play a supportive role in the co-curricular program. Housed within the Union are offices for the Associated Students' government, services and activities; the College newspaper and magazine; and the Viking Union/Student Activities administrative offices. Also located within the Union complex are meeting rooms, lounges, a music listening room/paperback library, several food service areas, an information center, a delicatessen, commercial banking facility, art gallery, games room and a vending area.

Recreational Opportunities

Recreational facilities available to the college community include Lakewood, a nine-acre site on Lake Whatcom, owned and operated by the Associated Students, which offers sailing, canoeing, swimming, boating and picnicking. Also the Associated Students 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, situated on a 13-acre tract on Sinclair Island and operated by the Women's Recreation Association, offers overnight accommodations at the entrance to the San Juan and Gulf islands.

CAREER PLANNING AND PLACEMENT CENTER

The Career Planning and Placement Center assists students to identify and evaluate career possibilities and assists prospective graduates to contact potential employers.

All students, regardless of the degree being earned, are urged to use the services of the Center *early* in their college career.

Career Planning Services Available to All Students

The Career Planning and Placement Center maintains a comprehensive library of career information. Students are encouraged to become familiar with the library no later than their sophomore year.

The library contains general career planning information, information relating academic majors to occupational areas, as well as labor market trends and needs. In addition, members of the staff are available to assist the student in exploring his interests and abilities as these relate to academic training and vocational planning.

Services Available to Prospective Graduates Ready for Job Placement

Prospective graduates are encouraged to establish credentials with the Placement Center during the first quarter of their senior year. It is each individual's responsibility to start his own file and to keep it up to date.

Students seeking degrees in education need to initiate the request for their teaching certificate by obtaining the Combined Major or Minor Approval and Teaching Recommendation from the Placement Center.

When credentials are on file in the Placement Center, the student is eligible to participate in on-campus interviews, to review job notifications and to use special aids in contacting potential employers. Credentials may also be used to facilitate an individual's entry into a graduate school.

Alumni of Western and Graduates of Other Institutions

Alumni may also obtain placement services if they wish to activate their credentials. Graduates of other institutions working toward an advanced degree or certificate may also participate. In addition, graduates of other schools who have thirty or more credits are also entitled to placement services.

The Placement Center subscribes to an open-door recruitment policy, and operates under federal and state non-discrimination statutes.

ACADEMIC & PROFESSIONAL PROGRAMS

ACADEMIC PROGRAMS LEADING TO UNDERGRADUATE AND GRADUATE DEGREES

College of Arts and Sciences

Accounting	BA
American Studies	BA
Anthropology	BA, MA
Art	BA, BA/Ed, M/Ed
Art History	BA
Biology	BA, BS, MS
Biology/Chemistry	BS, BA/Ed
Biology/Math	BS
Biology/Physical Science	BA/Ed
Broadcast Communication	BA
Business Administration	BA
Business Education	BA/Ed, M/Ed
Chemistry	BA, BS, MS, BA/Ed
Chemistry/Mathematics	BA/Ed
Chemistry/Physics	BA/Ed
Computer Science	BA
Dance	BA, BA/Ed
Earth Science	BA/Ed
Earth Science/Physical Science	BA/Ed
Economics	BA, BS, MA
Education (including specialized graduate programs for administration, counseling, and curriculum specialists)	BA/Ed, M/Ed
English	BA, MA, BA/Ed, M/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
General Science	BA/Ed
Geography	BA, MA, MS, BA/Ed, M/Ed
Geography/Social Studies	BA/Ed
Geology	BA, BS, MS
Geology/Math	BA
Geophysics	BS
History	BA, MA, BA/Ed, M/Ed
History/Social Studies	BA/Ed
Home Economics	BA, BA/Ed
Industrial Arts Education	BS, M/Ed
Industrial Design	BS
Journalism	BA
Liberal Studies	BA
Mathematics	BA, MA, MS, BA/Ed, M/Ed
Mathematics/Computer Science	BA

Mathematics/Economics	BA
Music	BA, MA, BA/Ed, M/Ed
Natural Science	M/Ed
Office Administration	BS
Philosophy	BA
Physical Education	BA, BA/Ed, M/Ed
Physical Geochemistry	BS, MS
Physical Science	BA/Ed
Physics	BA, BS, MS, BA/Ed, M/Ed
Physics/Astronomy	BA
Physics/Math	BA
Political Science	BA, MA, BA/Ed
Public Policy & Administration	BA
Psychology	BA, MA, MS, BA/Ed, M/Ed
Recreation & Park Management	BA
Science Education	M/Ed
Self-Designed Interdisciplinary Major	BA, BS
Social Studies	BA/Ed
Sociology	BA, BS, MA
Sociology/Anthropology	BA/Ed
Special Education	BA/Ed, M/Ed
Speech	BA, MA, BA/Ed, M/Ed
Speech/English	BA/Ed
Speech Pathology & Audiology	BA, BA/Ed, M/Ed
Technology/Industrial Technology	BS
Theater	BA
Urban & Regional Planning	BA
Visual Communications (VICOED)	BS

College of Ethnic Studies

College of Ethnic Studies	BA, BA/Ed
Ethnic Studies/Social Studies	BA/Ed
Human Services	BA

Fairhaven College

Fairhaven College	BA, BA/Ed
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Huxley College of Environmental Studies

Ecosystems Analysis	BS
Environmental Education	BS
Environmental Health	BS
Environmental Monitoring	BS
Environmental Planning	BS
Environmental Simulation & Modeling	BS
Environmental Studies	BA
Human Ecology	BS
Marine Resources	BS

PROFESSIONAL PROGRAMS

Western offers a wide variety of professional programs for those students interested in specific careers. All of these programs may be undertaken through the Bachelor's degree level at Western. However, some may require additional study at professional schools or at Western after the Bachelor's degree has been completed. *Students interested in these programs are urged to consult the appropriate adviser as soon as possible.*

Program	Consult Catalog Listing Under:
Accounting	Economics/Business
*Archivist	History
Art	Art
Audiology	Speech
Biology	Biology
Biology/Chemistry	Biology or Chemistry
Biology/Mathematics	Biology or Mathematics
Broadcasting	Speech
Business Administration	Economics/Business
Chemistry	Chemistry
Chemistry/Biology	Chemistry or Biology
Computer Science	Mathematics/Computer Science
Dance	Speech
**Dentistry	Professional Transfer Programs
Economics	Economics/Business
Economics/Mathematics	Economics/Business or Mathematics
Ecosystems Analysis	Huxley College
*Education	Education
Adult Education Administration	
Consultant, Early Childhood Education	
Curriculum Consultant, Secondary	
Early Childhood Education, Elementary	
Elementary Consultant Supervisor	
Elementary School	
Exceptional Children	
Junior High - Middle School	
Learning Resources Specialist	
Reading Consultant - Remedial Reading Teacher	
School Administration	
Secondary School	
Special Education	
Environmental Administration	Huxley College
Environmental Education	Huxley College
Environmental Geology	Geology
Environmental Health	Huxley College
Environmental Monitoring	Huxley College

Environmental Planning	Huxley College
Environmental Systems & Simulations	Huxley College
Ethnic Studies/Social Studies	College of Ethnic Studies
Geology	Geology
Geology/Mathematics	Geology or Mathematics
Geophysics	Geology
Health Education	Physical Education/Health Education
Home Economics	Home Economics
Human Ecology	Huxley College
Human Services	College of Ethnic Studies
Industrial Design	Interdepartmental Programs
Industrial Technology	Technology
Journalism	English
**Law	Professional Transfer Programs
Marine Resources	Huxley College
Mathematics/Biology	Mathematics or Biology
Mathematics/Computer Science	Mathematics/Computer Science
Mathematics/Geology	Mathematics or Geology
Mathematics/Physics	Mathematics or Physics
**Medicine	Professional Transfer Programs
Music	Music
Choral Director	
Consultant, Elementary	
Instrument Director	
Office Administration	Economics/Business
Physical Education	Physical Education/Health Education
Education	
Elementary School Consultant	
Physical Geochemistry	Geology
Physics	Physics
Physics/Mathematics	Physics or Mathematics
**Pre dentistry	Professional Transfer Programs
**Prelaw	Professional Transfer Programs
**Pre medicine	Professional Transfer Programs
Psychology	Psychology
School Counselor	
School Psychologist	
Public Policy & Administration	Political Science
Recreation & Park Management	Interdepartmental Programs
Self-Designed Interdisciplinary Major	General Studies
Social Studies/Ethnic Studies	College of Ethnic Studies
**Social Work	Sociology/Anthropology
Sociology	Sociology/Anthropology
Speech Pathology	Speech
*Student Personnel Administration Education	Graduate Catalog
Theatre	Speech
Urban & Regional Planning	Geography/Regional Planning
Visual Communications Education	
(VICOED)	Interdepartmental Programs

*Requires additional post-baccalaureate study at Western.

**Requires additional post-baccalaureate study at a professional school.

PROFESSIONAL TRANSFER PROGRAMS

In addition to the academic majors listed on the previous page, the College offers a variety of professional transfer programs. These programs may be begun at Western, but they must be supplemented by additional training at appropriate professional schools and universities.

CHART KEY: ■ Preparation available at Western ■ Additional training required at a university or professional school

Years of Preparation Required

1 2 3 4 5 6 7 8

Program	1	2	3	4	5	6	7	8
Agriculture	■	■	■	■	■	■	■	■
Architecture	■	■	■	■	■	■	■	■
Communications	■	■	■	■	■	■	■	■
Dental Hygiene	■	■	■	■	■	■	■	■
Engineering	■	■	■	■	■	■	■	■
Aeronautical	■	■	■	■	■	■	■	■
Chemical	■	■	■	■	■	■	■	■
Civil	■	■	■	■	■	■	■	■
Electrical	■	■	■	■	■	■	■	■
Industrial	■	■	■	■	■	■	■	■
Mechanical	■	■	■	■	■	■	■	■
Metallurgical	■	■	■	■	■	■	■	■
Nuclear	■	■	■	■	■	■	■	■
Fisheries	■	■	■	■	■	■	■	■
Forestry	■	■	■	■	■	■	■	■
*Home Economics	■	■	■	■	■	■	■	■
Dietetics	■	■	■	■	■	■	■	■
Fashion Design - Merchandising	■	■	■	■	■	■	■	■
Institution/Restaurant Management	■	■	■	■	■	■	■	■
Nutritionist	■	■	■	■	■	■	■	■
Medical Technology	■	■	■	■	■	■	■	■
Nursing	■	■	■	■	■	■	■	■
Occupational Therapy	■	■	■	■	■	■	■	■
Oceanography	■	■	■	■	■	■	■	■
Biological	■	■	■	■	■	■	■	■
Chemical	■	■	■	■	■	■	■	■
Geological	■	■	■	■	■	■	■	■
Physical	■	■	■	■	■	■	■	■
Optometry	■	■	■	■	■	■	■	■
Pharmacy	■	■	■	■	■	■	■	■
Physical Therapy	■	■	■	■	■	■	■	■
Veterinary Medicine	■	■	■	■	■	■	■	■

*Some programs are also available at Western.

PROFESSIONAL TRANSFER PROGRAMS

The following programs are listed for those students who anticipate transfer to another institution for the completion of professional training. Final acceptance and application of transfer credit is made by the institution to which the student transfers. Early contact with the on-campus faculty adviser and with the college, university or professional school is strongly encouraged.

All programs which follow are coordinated by the Office of Admissions and School/College Relations, where catalogs from other in-state colleges are available for student use, and assistance in clarifying the transfer procedure is offered.

It should be understood that all programs listed are based upon information available and current at the time catalog copy is submitted. Programs undergo constant revision, however, and as changes occur program recommendations become outdated. The student, therefore, must bear responsibility for early contact with the on-campus adviser and the professional school.

Persons seeking further information and assistance should visit the Professional Transfer Program Coordinator, Dr. George S. Kriz, Jr., in the Office of the Dean of the College of Arts and Sciences.

Agriculture

In colleges of agriculture, most agriculture courses are usually taken during the junior and senior years. During the first two years the student normally takes courses designed to satisfy general requirements and to build a foundation for advanced study. The student planning transfer from Western to study agriculture is advised to obtain the catalog of the college or university from which he expects to graduate and should correspond with the chairman of the appropriate department. Care must be taken to satisfy the general requirements of the other college or university so that the student will have time to complete required agriculture courses after transfer. The schedule below is generally suitable.

	<i>Credits</i>
English 101 plus 6 credits of additional composition or journalism	9
Economics 201, 202	9
Speech 100	3
Social science elective ¹	5-10
Humanities elective ¹	5-10
Chemistry 121, 122, 123	10
Appropriate mathematics ²	5-10
Biology 101	4
Biology 220, 221 and 311 or 312	12
Electives in accordance with interest	13-28

Total	90

Faculty Adviser: B. E. Omev, Registrar's Office

¹Take courses that will satisfy the general requirements of the transfer institution.

²Mathematics should be studied through at least Math 121 at Western.

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 on pages 63-72 and page 76 of the 1972-74 University of Washington General Catalog.

Washington State University also offers baccalaureate level architectural studies. Pre-major requirements include completion of the general university requirements and specifically recommended courses as listed on pages 69-70 of the 1974-75 Washington State University Bulletin.

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

Communications

For transfer to the University of Washington School of Communications: Complete as many courses as possible toward the University of Washington arts and sciences distribution in the natural sciences (20 credits), humanities (20 credits, 10 of which must be in literature), and accumulate not more than 20 credits toward the School of Communications requirement of 30 credits in the social sciences. Complete the foreign language and English composition requirements. Many

communications majors at the University take a second major in one of the following: political science, history, or sociology. Usually one additional quarter of work in the summer enables the student to acquire the double major. Equivalency credits for Communications 150 and 200, both required, are granted only by examination or institutional accreditation. Any other work in the communications area will be accepted as communications "x" credit in the elective category. Applications are considered from transfer students with 75 credits and a grade point of 2.9 in the last three consecutive quarters of academic performance.

For transfer to Washington State University Department of Communications: Take course equivalencies that will satisfy the College of Arts and Sciences requirements in the sciences (12 semester hours with a minimum of three each in the biological and physical science areas with at least two hours of laboratory work), the social sciences and humanities (21 semester hours with a minimum of six in each area), and English composition (six semester hours). For the latter, English 101 and Speech 100, or alternative general education speech course, are recommended. One year of a foreign language for those who do not have two years of a high school foreign language should be taken at Western. WSU customarily accepts transfer credits in toto, converting them to semester hours. Specific course equivalencies are then determined with conversion to the nearest whole credit. While accepting communications courses at par conversion value, the department reserves the right to require courses without credit where the student's competency may not meet departmental standards. The communications major consists of 30 to 40 semester hours, 15 of which are often completed as an unpaid, off-campus field internship during the regular academic year.

Faculty Adviser: Dr. Paul E. Herbold, Department of Speech

Dental Hygiene

Both associate and baccalaureate degree programs in dental hygiene are available in Washington institutions of higher education. Effective fall quarter, 1975, students wishing to enter the baccalaureate degree program at the University of Washington should complete the following courses at WWSC.

- Chemistry 121, 122, 123
- Chemistry 251³
- Biology 120, 210, 312, 368
- Math 121
- Psychology 201
- Sociology 201
- Speech 100
- Recommended: a high school or college physics course
- Electives to meet the University of Washington distribution requirements for a total of 90 credits including the above required courses

Faculty Adviser: Dr. H. William Wilson, Department of Chemistry

Dentistry

Admission to the professional schools of dentistry is highly competitive. A pre-dental program should therefore be planned with a great deal of care. Not only should the chosen electives be relevant to dentistry, but every effort should be made to maintain high scholarship. Thus the student's individual abilities must enter into all pre-dental planning.

It is wise for the pre-dental student to make personal contacts with a dental school early in his program. Dental schools are willing and able to give valuable advice and information about admission standards and requirements.

- Chemistry 121, 122, 123, 351, 352, 353, 354, 355
- Biology 120, 210, 312, 345, 368
- Biochemistry 371⁴
- Physics 131, 132, 133
- Electives: students should take a minimum of 30 quarter credit hours divided between three or more of the following study areas, including a minimum of 10 quarter credit hours in one area—anthropology, economics, English, history, philosophy, political science, psychology and sociology

Committees on admission highly recommend that pre-dental students also choose electives with the aim of

³Or Chemistry 351, 352, 353, 354

⁴Or Biochem 471.

broadening their intellectual and social backgrounds with courses in the areas of speech, fine arts, languages, literature, business administration and the behavioral sciences.

There is no minimal number of pre-dental credit hours and an undergraduate or graduate degree is not required for admission. Students who are being accepted in the school of dentistry, however, have completed an average of more than 180 quarter credit hours.

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

Faculty Adviser: Dr. H. William Wilson, Department of Chemistry

Engineering

The first year requirements in schools or colleges of engineering at most universities emphasize courses in mathematics, the physical sciences and communications which are the base upon which all engineering curricula are constructed. After the first year the curricula for the various specializations such as electrical, mechanical, chemical, civil, aeronautical engineering, etc., have both diverse general requirements and introductory courses in these specialized fields.

The courses listed below will meet most requirements, but the student who anticipates transferring to a specific institution should compare this listing with that of the institution and consult with the program adviser.

Usually admission to a college or school of engineering requires higher than average academic performance and greater depth in introductory courses than is required for admission to a liberal arts program. In most cases the first year courses are equivalent to Western's requirements for potential science majors in mathematics, physics, chemistry and geology.

Students who plan more than one year of residence at Western before transferring should consult the adviser for assistance in developing a schedule of classes for the second year.

High school students who wish to major in a field of engineering in college should plan their program

accordingly. High school prerequisites are elementary functions or algebra IV, trigonometry, physics, chemistry for first year courses in engineering which follow.

- Math 122⁵, Math 222, 223
- Physics 231, 331, 332
- Chem 121, 122, 23
- Electives⁶

Students with advanced placement in the subjects listed above may supplement their program with advanced courses in these subjects or in linear algebra or computer programming.

Faculty Advisers: chemical engineering—Dr. D. M. King, Department of Chemistry; civil engineering—Dr. Richard Levin, Department of Mathematics; electrical, aeronautical, nuclear engineering—Dr. Louis Barrett, Department of Physics; industrial, mechanical, metallurgical engineering—Dr. Joseph Black, Department of Technology

Fisheries

The College of Fisheries at the University of Washington provides two baccalaureate programs in fishery biology. The student may complete the first two years of the four-year program at Western, concentrating on the following science-related courses and fulfillment of the University's distribution and proficiency requirements. Close consultation with the faculty adviser is essential.

- English 101, 201 or 202
- Chem 121, 122, 123
- Math 121, 122, Biology 340
- Biology 120, 210
- Electives

The second year may be completed with individual advisement.

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

⁵Students not qualified to take Math 122 should consult the program adviser.

⁶Electives chosen from English 101, English 201, Technology 201.

Forestry

Washington State University offers degrees in forest management and in range management. Three quarters of physical education activity should be included among the electives, and Speech 101 taken winter quarter in place of English 201 or 202. The Chemistry 121, 122, 123 series is required.

The University of Washington has seven curricula: forest management, forest engineering, outdoor recreation, pulp and paper technology, wood and fiber science, forest science and wildlife sciences. No physical education activity is required. English 201 or 202 should be taken in place of speech. Four of the curricula will accept Chemistry 115 but for pulp and paper, wood and fiber, and wildlife the 121, 122, 123 series is required.

A recommended curriculum in the first year follows:

- English 101, 201 or 202 or Speech 101
- Economics 201
- Chem 115 or 121, 122, 123
- Biology 120, 210
- Math 121
- Electives

Because of variations among the various curricula in forestry, the student is urged to consult the pre-forestry adviser as soon as possible. For some curricula, specific courses should be included among the electives.

For some of the University of Washington curricula, a student may complete two years at Western before transferring. The program must be carefully planned with the adviser.

Faculty Adviser: Dr. J. Martin, Department of Biology

Home Economics

A baccalaureate degree with a major in home economics may be earned at Western Washington State College. However, one-year transfer programs are offered for undergraduate home economics majors not offered at Western. The student is advised to confer early with the institution to which transfer is being made. Program changes are under way at the University of Washington and at Washington State University. Early advisement is essential. See department adviser for program details.

Clothing and Textiles Fashion Merchandising

- Home Economics 101, 164
- English 101, 201 or 202
- Economics 201
- Psychology 201
- Sociology 202

Additional courses may be added for Washington State University: Home Economics 150, 224; Chemistry 115; Economics 202; and a political science elective.

Foods and Nutrition

Dietetics

Institution Management

- Home Economics 120, 150, 253
- Economics 201
- English 101, 201 or 202
- Chemistry 115, 251
- Psychology 201
- Sociology 202

Additional courses may be added for Washington State University: Home Economics 101, 224; Biology 101; Anthropology 201.

Two quarters of physical education activity for each of two years is required at Washington State University. No physical education is required at the University of Washington.

Faculty Advisers: Dr. Dorothy Ramsland and Mrs. Edith Larrabee, Department of Home Economics

Law

Entrance to most law schools requires, with very rare exception, the completion of the B.A. degree program. It is therefore advisable that a pre-law student plan to complete the B.A. degree requirements prior to his application to a law school. Normally schools of law do not prescribe a rigidly structured undergraduate curriculum for pre-law students. Students, however, should study in areas that will benefit them in the study of law. They should strive to acquire a high level of proficiency in communications and language skills to gain understanding of human, political, economic and social institutions, and to develop in themselves objective and critical thought processes.

Suggested courses: Political Science 250, 311, 313, 410, 411, 413, 414, 415; Business 371; History 419; Philosophy 415; Sociology 454

The Law School Admission Test, given throughout the country on five special days each year by the Educational Testing Service in Princeton, N.J., is required for admission to nearly all law schools. A student should plan to take the test during the academic year preceding the one for which admission to law school is sought, preferably in October or December and not later than February. The test is offered five times annually on this campus.

Faculty Advisers: Dr. Gerard Rutan, Department of Political Science, or Dr. Larry E. Swift, Department of Education

Medical Technology

Medical technology at the University of Washington is a four-year program leading to the Bachelor of Science degree in medical technology. Students may complete 90 quarter credits of study at Western concentrating on the following required courses which parallel the medical technology program, prerequisites, and the University's distribution requirements.

Washington State University also offers a baccalaureate program in medical technology. Students planning to transfer to WSU may also complete two years at Western, following the recommendations listed below and completing additional courses which parallel WSU's general university requirements.

Students must consult with faculty adviser before registration.

- English 101, 201 or 202
- Chem 121, 122, 123
- Biology 101 or 120, 210
- Math 121

Faculty 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 in scholastic discipline. No particular major is given preferential attention in selection.

Before admission each applicant must have completed the minimum requirements listed here and must have demonstrated his academic proficiency in these subjects by obtaining an acceptable grade point average. In addition to the following credits, proficiency in English and basic mathematics is expected of every applicant. A bachelor's degree is encouraged, but it is not required for admission.

- Biology—12 quarter credits
- Chemistry—18 quarter credits
- Physics—12 quarter credits

In recognition of the diverse opportunities afforded the graduate in medicine, the specified requirements are purposely kept to a minimum. In this manner each student has the opportunity to pursue, as his major field of study, any area of special interest to him—the physical sciences, biological sciences, or humanities—and still acquire the intellectual skills necessary to the regular medical curriculum. Throughout the medical program, elective time as well as time for research and thesis affords the student an opportunity to apply the knowledge and concepts acquired in his major field to the appropriate areas of medicine.

Admission to the School of Medicine is extremely competitive. Early consultation with the faculty adviser is strongly recommended. Students should also review the School of Medicine section of the University of Washington General Catalog beginning on page 261 of the 1972-74 edition.

- English 101
- Chem 121, 122, 123, 351, 352, 354
- Physics 131, 132, 133
- Biology 120, 210, 312
- Math 121

Faculty Adviser: Dr. Clyde M. Senger, Department of Biology

Nursing

Students interested in professional nursing may choose from one of three registered nursing training programs: (1) the two-year Associate of Arts degree programs offered by many community colleges, (2) the three-year hospital-based R.N. programs, or (3) the four-year Bachelor of Science in nursing program. In each case, admission is competitive, application must be made early, and pre-major preparation is required.

Western offers a complete program of courses which would prepare students for admission to nursing schools—the most typical of which is the University of Washington. Course recommendations which follow are designed for admission to the university, which is required at the sophomore level.

- English 101 and 201 or 202
- Chemistry 115 and 251
- Math 121 or 151
- Psychology 201
- Sociology 202
- Humanities electives, 20 credits minimum

The University of Washington School of Nursing also requires a minimum of 45 transfer credits, a minimum GPA of 2.75 and completion of all university admissions requirements.

Students transferring to Washington State University may complete two years of work prior to transfer, then complete two more years and earn a Bachelor of Science degree in nursing.

Information on all programs is available in the adviser's office, and early consultation is encouraged.

Faculty Adviser: Dr. Meribeth M. Riffey, Department of Biology

Occupational Therapy

Students wishing to earn a Bachelor of Science degree in occupational therapy at the University of Washington or elsewhere may complete their prerequisite courses at Western. Since graduation requirements vary among institutions, students should obtain specific information concerning these requirements during their freshman year. Initial registration should include humanities,

social science, or natural science courses comparable to those included under the arts and sciences distribution list (pages 76-77 in the 1972-74 University of Washington catalog). Students should be aware that admission to a school of occupational therapy is highly selective.

Faculty Adviser: Dr. Alta Hansen, Department of Physical Education

Oceanography—Biological

Students interested in biological oceanography or marine science should enroll in the regular B.S. or B.A. degree programs for biological science.

- English 101
- Chemistry 121, 122, 123
- Math 122, 222
- Biology 120, 210

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

Oceanography—Chemical, Physical & Geological

Actual courses in oceanography don't begin in most universities until the third or fourth years. Since the major topic is primarily a senior or graduate-level endeavor, the first two or three years of chemical oceanography can be successfully taken at Western. It is important that the prospective student establish a solid scientific background in chemistry, mathematics and physics as a basis for completing a degree in chemical oceanography. The first two years of a chemistry major (B.S.) are an example of that type of background.

- English 101
- Chemistry 121, 122, 123, 127, 128
- Math 121, 122, 222
- Electives (electives in social sciences and humanities are appropriate)

For recommendations regarding work beyond the first year, consult the following departmental advisers: chemical oceanography—Dr. H. William Wilson, Department of Chemistry; geological or physical oceanography—Dr. David Pevear or Dr. Maurice Schwartz, Department of Geology

Optometry

Schools of optometry generally offer baccalaureate, master's and doctoral 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 faculty adviser is recommended.

- English 101, 201 or 202
- Chemistry 121, 122, 123
- Biology 101
- Math 122, 222, 223
- Physics 131, 132, 133 or 231, 331, 332
- Elective

Students are advised to transfer after their first year.

Faculty adviser: Dr. J. J. Veit, Department of Physics

Pharmacy

The pharmacy program at the University of Washington is a five-year course of study that leads to a Bachelor of Science in pharmacy degree. The final three years must be spent in residence in the College of Pharmacy. Western provides a two-year series of courses which prepare the student for more specialized training in pharmacy. More detailed information is provided on page 292 of the 1972-74 University of Washington General Catalog.

Washington State University offers the Bachelor of Pharmacy as well as the Bachelor of Science degree in pharmacy. Students planning to transfer to Washington State University should refer to page 43 of the 1972-73 Washington State University Bulletin.

- English 101, 201 or 202
- Speech 100 (or English 202)
- Chemistry 121, 122 and 123, 351, 352 and 354, 353 and 355
- Math 121, 122 or 220
- Biology 120, 210, 220, 221, 312
- Physics 131, 132, 133
- Electives

The following electives are recommended for pre-pharmacy students: Econ 201; Psych 201; Anth 201,

215, 351; Speech 100; courses in geography, history and philosophy.

For those interested in transferring to Washington State University, Math 121 only, and after Biology 101, take Biology 120, 121 and 345.

Faculty Adviser: Dr. Gary M. Lampman, 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 junior, senior or post-baccalaureate level.

The following courses are prerequisites for admission to most schools, including the curriculum offered by the University of Washington:

- Biology 101, 345
- Chemistry 115, 251
- English 101, 201
- Math 100, 105 or equivalent
- Physics 131, 132
- Psychology 201, plus an additional course--some require 315
- Biology 348, 349

Students must recognize that the above courses are minimum requirements and additional course work is strongly recommended. Supplemental courses should be selected from Education 360, 361, 461, 465; Health Education 477; Physical Education 201, 211, 302, 303, 311, 326, 402.

Students should consult with the pre-physical therapy program adviser during their first quarter at Western.

Faculty Adviser: Dr. Alta Hansen, Department of Physical Education

Social Work

Students preparing for admission to a professional school of social work and students who are interested in securing social work positions that do not require professional education may satisfy their interests by

completing the B.A. in sociology, including the following *elective* courses in their major:

- Sociology 311 (in lieu of 310)
- Sociology 251 and 261
- Sociology 340, 351, 360, 333, 440, 465, and 491

Other courses strongly recommended include Sociology 353, 354, 367 and 467. For further recommendations of specific courses in sociology or cognate areas which may strengthen the student's preparation, consult with the faculty adviser.

Faculty Adviser: Dr. Charles Gossman, Department of Sociology/Anthropology

Veterinary Medicine

The College of Veterinary Medicine at Washington State University requires at least six years of study leading to completion of the Doctor of Veterinary Medicine degree. The first two years of pre-veterinary study may

be completed at Western. These courses must include those required to meet the general university requirements and should include the series of specific courses as recommended below. Admission is extremely competitive and students are strongly encouraged to have early consultation with the faculty adviser and should review the admission requirements as stated on page 48 of the 1972-73 WSU catalog.

English 101
Chemistry 121, 122, 123, 333, 351, 352, 354, 371
Biology 120, 210, 310, 312, 345
Physics 131, 132, 133
Math 121

Faculty Adviser: Dr. Clyde M. Senger, Department of Biology

ACADEMIC REGULATIONS

GENERAL REQUIREMENTS FOR BACHELOR'S DEGREES*

**A student should expect to matriculate and graduate according to the general requirements in the catalog current at the time he enrolls. He should expect to meet the specific requirements of the departments for majors and minors in the catalog current at the time he declares his major and minor to the appropriate department.*

If the student interrupts his work for more than two consecutive quarters (summer quarter not included), he shall meet the demands of the catalog in force at the time he is readmitted.

While the College reserves the right to change the regulations concerning admission and requirements for graduation, it shall be the policy of the College to give adequate notice prior to effecting any significant changes and to make reasonable adjustments in individual cases where hardship may be occasioned.

The following requirements are common to all undergraduate divisions of Western Washington State College. For requirements unique to a given college division, see sections concerning the College of Arts and Sciences, College of Ethnic Studies, Fairhaven College and Huxley College.

- 180 quarter hours of credit
- At least one full year of residence study (45 credit minimum), including the final quarter before issuance of a degree. Study Abroad programs are acceptable as resident credit to a maximum of 45 credits
- At least 60 credits in upper-division study (courses numbered above 300)
- Approved academic major
- General requirements (see appropriate college section)
- Scholarship meeting minimums prescribed by the college divisions and academic departments

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 college divisions of Western Washington State College requires being admitted according to the procedure of the receiving division. Students may be a member of only one division at a time.

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 ceremonies 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 informational mailing is forwarded to all eligible students early in the spring.

CREDITS AND LOAD

The "quarter hour credit" represents one class hour per week through a term (quarter) of eleven or twelve weeks. Laboratory courses normally meet for additional

hours. Courses generally carry credit ranging from one to five units or "hours" according to the number of class meetings per week. Fifteen credits on this basis constitute the work of a quarter, and 45 credits that of the regular academic year of three quarters.

The standard load for undergraduates is 15 credits and during the first quarter of residence loads must not exceed 17 credits. Students should seek the advice of their advisers before registering for more than 15 credits. After the first quarter of residence, the maximum allowable load is 20 credits per quarter. See the Summer Bulletin for load limits during the Summer Sessions.

A student doing extensive outside work is expected to reduce his/her scholastic program accordingly.

Full-time and part-time status are determined by the number of credit hours which a student is taking.

Full-time status for undergraduates required for on-campus employment, eligibility for student offices, and appointment to college committees, is defined as enrollment in 12 or more quarter hours. (Graduate students should consult the Dean of the Graduate School for a definition of "normal progress.") *Full-time* status in terms of fee payment is defined as enrollment for seven or more credits. *Part-time* students in terms of fee payment are those carrying not more than six credits in a given quarter. Part-time students pay a lesser fee but do not share in certain student body privileges, such as participation in recognized activities, drama, forensics, student publications, musical organizations and performing groups.

Auditors are those persons desiring to attend classes without credit. Admission to a class as an auditor requires prior approval of the instructor and the Registrar as well as the payment of a \$10 fee per course. Regularly enrolled full-time students do not pay an additional fee for auditing.

Class attendance is required at the discretion of the instructor. Excuses may also be granted by the Health Service, the Registrar or other authorized college personnel.

COURSE NUMBERING

Courses numbered from 100 to 299 are classified as lower division; those numbered 300-499 as upper division. The first digit generally indicates class level for which the course is intended.

100-199	first-year courses
200-299	second-year courses
300-399	third-year courses
400-499	fourth-year courses
500-599	open only to graduate students
600-699	post-master's degree courses

Credits (quarter hours) are given in parenthesis after each course title.

Students are not permitted to take courses more than one year above their class standing except in unusual circumstances.

In general, the numbers 300, 400, and 500 are used to designate individual study or conference courses or special project work in a given field. Such courses are available only through prior arrangement with the instructor and with the approval of the department chairman.

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

The number 445 is reserved for topics showing "Current Trends," while the number 417 is used for seminars in specialized areas of interest.

Courses listed in this catalog constitute a record of the total academic program of the College. Listing herein does not necessarily indicate that each course will be offered every year. Consult the annual Class Schedule, the Summer Bulletin, and bulletins from the Center for Continuing Studies for the scheduling of courses.

SCHOLARSHIP STANDARDS

The following scholarship standards apply to each college division of Western Washington State College, except Fairhaven College. Students should note that transfer between academic divisions is restricted in cases of low scholarship.

High Scholarship

A student who earns a quarterly grade point average of 3.50 or higher while completing a minimum of 14 credit hours on the A-F grading system is placed on the "President's List" for outstanding academic achievement. This becomes part of the student's permanent record. A student who achieves a cumulative grade point average of 3.50 to 3.74 or 3.75 to 4.00 and has accumulated a minimum of 90 credit hours at this institution is eligible to graduate "cum laude" or "magna cum laude," respectively.

Low Scholarship

The College has set the standards described below to assure that students who are earning poor marks will examine carefully their objectives before continuing enrollment. In some cases, students will be dropped from the College. The standards are designed to assure that this action is taken before a student's record deteriorates to the point that reinstatement or admission to another college 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 State College, except Fairhaven and Huxley colleges. (See appropriate sections for scholarship standards in these divisions of WWSC.) Students dropped from one college division may not transfer to another college division without reinstatement by the appropriate academic committee.

Academic Warning is the College's expression of concern to students whose quarterly grade averages are below 2.00. A warning is issued to (a) a new freshman or transfer student whose first-quarter grade average is below 2.00, (b) any other student whose quarterly grade average is below 2.00 but whose cumulative grade average is 2.00 or higher.

Academic Probation is the status assigned to (a) any student except a first-quarter freshman or transfer student whose *cumulative* grade average falls below 2.00, (b) a transfer student admitted by special action of the Admissions Committee.



Continuing Probation is the status assigned to a student who begins a quarter on probation and, during that quarter, earns a grade average of 2.00 or higher without raising his/her *cumulative* grade average to at least 2.00.

Academic Dismissal will result if a student (a) begins a quarter on probation and earns a quarterly grade average below 2.00, (b) begins a quarter on continuing probation and, regardless of quarterly gpa, fails to raise his/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/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 of students who have been dropped from the College because of low grade averages is the responsibility of the Scholastic Standing Committee in the College of Arts and Sciences and similar committees in the other colleges. Petitions for reinstatement are available in the Registrar's Office or the Office of Student Affairs.

A student who is dropped from one of the colleges and wishes 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 nor appear in any performance before the student body nor at any conference or as a member of any team or organization.

MATHEMATICS PROFICIENCY

Proficiency in mathematics is expected of entering students. It is prerequisite to all college 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 college 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 Studies 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 and students with credit for four years of college preparatory mathematics in high school are considered to have satisfied this requirement.

GRADING AND GRADE REPORTING

The system of grading is as follows:

A	Superior	S	Satisfactory
B	High	P	Passing
C	Average	NP	Not Passing
D	Low Passing	K	Incomplete
F	Failure	U	Unsatisfactory
		W	Withdrawn

Students are advised that excessive use of the "Pass-Fail" grading system or consistent patterns of incomplete ("K") or withdrawal ("W") grades may negatively influence admission to some graduate schools or some employment opportunities. Careful attention must be given to program planning and registration.

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 certificate nor for Fifth Year courses.

The grades of "S" and "U" are used in certain courses which the department and Council on Arts and Sciences Curriculum or Teacher Curricula and Certification Council deem inappropriate for other grading systems. In such instances, all sections of the course will be graded "S/U."

The grades of "P" and "NP" are used in "Pass-Fail" courses (see following). A course in which a student failed must be repeated if credit is desired.

A grade of "F" is assigned if a student fails to carry out the prescribed procedures when withdrawing from a course or from the College.

The grade of "K" (incomplete) may be assigned only upon request of the student, and agreement by the course instructor. Normally it is given only to a student who has been in attendance up until the final two weeks of the quarter and has been doing passing work, but for whom extenuating circumstances beyond his/her control make it impossible to complete course requirements on schedule. (Extenuating circumstances do not include mere lateness in completing work or the desire of a student to do extra work to raise a poor grade, etc.) If circumstances require that a student leave a course prior to the final two weeks, he/she must formally withdraw from the course.

To receive a "K" grade, a student should obtain a contract form from the appropriate departmental office and negotiate a formal agreement with the course instructor specifying the work that has already been done and the work that remains to complete the course and earn a grade. One copy is to be kept by the student, one copy by the faculty member, and one copy is to be filed with the chairperson of the academic department involved. Normally, the student will be expected to remove the "K" grade (complete the work agreed upon) during the next quarter. The instructor, in the contract, may stipulate any period of time up to one calendar year for completion of the work. After one year removal of a "K" is not possible and the student may establish credit only by registering again for the course.

The grade "W" (withdrawal) may result *only* from student initiative and may not be assigned by an

instructor. See "Change in Registration" section for details concerning withdrawal.

Grade reports are mailed to all students at the close of each quarter to the address supplied by the student at the time of registration.

Mid-term deficiency reports, although not recorded, are sent directly to the student in the event of unsatisfactory class work (evaluated at less than "C").

Grade points serve as a means of objectively stating a given level of scholarship. A point value is assigned for each grade: A, 4 points; B, 3; C, 2; D, 1; F, 0. The number of grade points earned in each course is computed by multiplying the number of credits by the grade point value of the letter indicated. Thus, a 3 credit course with a grade of "B" is assigned 9 points. The grade point average is the result of dividing the total number of grade points by the total number of registered hours. A grade average of 2.0 represents a letter standard of "C." Grades of "S," "P," and "NP," and the credit involved in such courses do not enter into the computation of grade point average.

For most purposes, e.g., application of scholastic standards, honors and graduation, the grade average takes into account only work completed at Western Washington State College.

A student may repeat any course previously attempted or completed. In cases of course repeats only the final grade earned shall be computed in the calculation of cumulative grade average (unless the repeat results in a grade of "W," "K," "U," or "NP"). Credit shall be given only once for the course.

If a transfer student, in order to progress in his major or minor, is required to enroll in a course that may be a repeat of work transferred, he will be allowed credit for both courses.

Pass-Fail grading is available on an optional basis to students in elective courses only.

Regulations pertaining to pass-fail courses are as follows:

1. Courses required for the major, minor or supporting courses, undergraduate professional requirements, and General College Requirements may not be taken pass-fail.

2. The student at the time of registration must designate the courses for which he/she wishes to receive a pass-fail grade. He or she 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 will be counted.
5. Courses applying to a major (including supporting courses) or minor normally must be taken on the standard grade system. Should a student change his or her major or minor, the academic departments involved will be the sole judges of the acceptability of any pass-fail courses already completed in the newly chosen concentrations.

FINAL EXAMINATIONS

If given, final examinations must be given during the last week of each quarter. As a matter of College policy, individual students are not permitted to take early examinations. Failure to take the final examination in any course normally results in a grade of "F." When extenuating circumstances make it impossible for a student to appear at a final examination at the scheduled time, he/she may negotiate a contract in advance with the instructor to receive a grade of "K" (incomplete). This privilege is extended only to students whose achievement in the course is satisfactory. Removal of the "K" grade should be achieved early in the following quarter. (See description of the "K" grade under "Grades and Grade Reporting.")

CHANGES IN REGISTRATION

Students may not enter new classes after the first week of instruction.

Formal withdrawal from any course must be made in the Registrar's office. Students leaving a class without formal withdrawal will receive a failing grade. Course withdrawal during the five-day "Drop and Add" period at the beginning of each quarter is considered to be a

change in initial registration and no grade results. From the sixth day through the eighth week of a quarter, course withdrawal results in a grade of "W" on the permanent record. After the eighth week of a quarter, course withdrawal is not permitted.

Formal withdrawal from the College may be made at any time prior to the final two weeks of a quarter. Students who leave the College without official withdrawal will receive failing grades.

Military Withdrawal

A student who has been called to extended active military duty and is required to withdraw from the college may be considered for credit as follows:

1. Withdrawal during the first third of the quarter -no credit; full refund.
2. Withdrawal during the second third of the quarter--one-half credit, to the nearest whole credit, if course work is satisfactory, without letter grade and with course unspecified; one-half refund. Applicability of such credit to meet requirements will be determined by the department concerned.
3. Withdrawal during the last third of the quarter -full credit if course work is satisfactory with or without letter grade at the discretion of the instructor; courses specified.
4. A student required to withdraw during his final quarter before obtaining the baccalaureate degree may be granted the degree if approved by the Dean of his college, his major department, and, if in Teacher Education, the Department of Education.



ACADEMIC COMPLAINTS

It is the policy of the College that a student should be heard when he has what he considers a legitimate complaint about grades, a course, or instructional procedures. Often a frank discussion of his problem can clear up what may be a misunderstanding and improve the learning process in his case. The student normally discusses his complaint with the instructor concerned. Failing satisfaction at this level, he then takes it to the head of the academic unit.

Copies of the academic grievance procedures are available in deans' offices and in the Office of the Registrar.

ADVANCED PLACEMENT AND COURSE CHALLENGE

A regularly enrolled full-fee paying student may apply to challenge any college course (except conferences, special projects, and physical education activities courses) and if achievement commensurate with the expectations of a given course is demonstrated, receive credit for the courses. Such achievement may be demonstrated by:

College Entrance Examination Board Advance Placement Examinations in certain subjects. The department concerned will determine the minimum acceptable score.

One quarter of successful performance in an advanced course in a sequence which is developmental in nature can, upon departmental recommendation, qualify the student for credit for 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 College Examiner by the fourth week of the quarter. A fee of \$2 per credit is charged. The time and procedure to be followed in completing the evaluative process will be announced by the Examiner.

2. The results of the challenge shall be recorded as "Satisfactory" or "Unsatisfactory" on the student's permanent record; the results will not be 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 college;
 - (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 College Examiner, in consultation with the department concerned, the challenge procedure is inappropriate.

PREREQUISITE WAIVER FOR RETURNING TEACHERS/ POST-BACCALAUREATE STUDENTS

All students who have a previously-earned baccalaureate degree may register for any course in the Western *undergraduate* catalog (100-400 levels) without regard to *course* prerequisites. Courses requiring permission of the instructor or of the department, or those requiring previous teaching experience are not included in this category; nor are courses requiring a conference course permit. Post-baccalaureate students should realize that this policy places responsibility on them to determine if they have had the equivalent courses or have acquired experience tantamount to these waived prerequisites. In any case of doubt, it is suggested that such students seek the counsel of the instructor involved.

GENERAL REQUIREMENTS FOR MASTER'S DEGREES

For complete information regarding admission, program and requirements, and graduate assistantships, consult the *Graduate Bulletin*, a copy of which may be obtained upon request from the Dean of the Graduate School.

Master of Education

Western Washington State College has since 1947 granted the Master of Education degree with concentrations in subject areas or in programs in preparation for school services.

Master of Arts and Master of Science

In 1963 the State Legislature authorized the College to grant the Master of Arts and Master of Science degrees. Degree programs serve those who wish to bring advanced subject preparation to their teaching or other professional assignments or who wish to develop a background for doctoral study. Master of Arts programs have been approved in anthropology, economics, English, geography, history, mathematics, music, political science, psychology, sociology and speech. Master of Science programs have been approved in biology, chemistry, geography, geology, mathematics, physics and psychology.

CONTINUING STUDIES PROGRAMS

The Center for Continuing Studies provides a service linking the College, its scholars, research and resources with the people and communities of Western Washington.

Varying in length and format from one-day conferences and short courses to programs leading to degrees, Continuing Studies places prime emphasis on:

- Opportunity for professional advancement
- Liberal education programs contributing to the increase of cultural and intellectual vitality
- Responding to the expressed needs of the community

The Center for Continuing Studies offers a variety of credit and non-credit courses, workshops, conferences, institutes and degree programs for people who wish to continue to learn. Its students include men and women of all ages, occupations and economic levels. Its faculty includes teachers and administrators drawn from the College and the community.

Credit Courses

Students on campus and adults in the community may earn college credit in a wide variety of evening study courses available both on and off campus. A number of courses are also offered for independent home study. Most classes are taught by regular members of the teaching faculty and are open to the general public who may wish to work toward a degree or toward specialized professional development. Most credit courses are open on an auditing basis.

Independent Study

Independent study combines the fundamental characteristics of all good teaching-guidance by a qualified and conscientious instructor--with the advantage of study at the student's own pace and at the time and place most convenient to him. He has the freedom to linger and explore or to move as rapidly as his ability permits.

The instructional staff enjoys the opportunity to work with mature persons with diverse educational backgrounds and a wide range of goals. They are ready to give individual attention and guidance.

As a means of continuing education, independent study helps students gain their immediate objectives and widens their personal horizons. Many students are earning credit to be applied toward a university degree; others are improving occupational or professional skills. Still others are satisfying an intellectual curiosity that motivates them to seek knowledge for its own sake.

Short Courses and Conferences

The Center provides assistance in planning and administrative support and functional assistance in the development and conduct of conference-type continuing education programs. Groups with specific needs for learning experiences contact the Center, and the Center establishes single courses, workshops, conferences and seminars. In addition, the Center initiates a variety of learning experiences for the College and community, including concerts, lectures and workshops. These experiences are offered both on and off campus and

bring together college faculty members, visiting scholars, specialists in various areas, and interested adults from the community and state.

FOREIGN STUDY

WWSC co-sponsors year-around liberal arts Study Abroad programs in London, England, Avignon, France, and Guadalajara, Mexico. Designed to give students a complete foreign study experience in the host country, each program includes numerous excursions to historical and cultural sites as well as a wide range of activities designed to complement formal classroom work. Students register at WWSC before departure and are expected to carry normal course load for the quarter (15 credits). Students may also receive credit for foreign study through (1) accredited programs sponsored by individual departments or other colleges, (2) independent study arranged through departments and cluster colleges by the Foreign Study Office.

REGULATIONS OF CONCERN TO VETERANS

Each veteran enrolling at this College for the first time on the G.I. Bill must make application for education benefits with the Veterans Administration or transfer his/her authorization from the last college attended. This should be done well in advance of the quarter for which the student wishes to attend, to insure that all allowances will be received on time.

All veterans should make certain that the objective they are planning to pursue is the one for which they are specifically 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.

The veteran should be prepared to pay his own expenses for at least two months.

Military Credit

A maximum of 30 undergraduate quarter hours is allowed prior to issuance of the first degree for service schools attended as recommended by the American Council on Education publication—"A Guide to the Evaluation of Educational Experiences in the Armed Services."

STUDENT RECORDS POLICY

College Philosophy

When a student enters the College and submits the required personal data for academic and personal records, there is an implicit and justifiable assumption of trust placed in the College as custodians of these data. The College also believes that a similar relationship should be maintained relative to subsequent data generated during the student's enrollment—academic performance, activities, personal interviews and disciplinary proceedings.

General Principles and Practices Governing Use of Student Records

Recognizing the professional responsibility that must characterize interactions with students, staff, faculty, professional organizations, other colleges and universities, and non-university organizations and agencies, the following principles and practices will be followed in utilizing student records.

Records and communications are confidential. In its relations with students the College intends to preserve the confidential character of communications and records so as to insure that its educational and counseling processes are carried forward in the most effective possible manner.

Information which may ordinarily be released without student authorization: Information will ordinarily be furnished of a "public" or "directory" nature; that is, information which has appeared at one time or another in publications that are available to the general public or

are a matter of public record. However, students may request the Dean of Students not to release this information from official records, e.g., public or directory information defined as:

1. student's full name
2. home address and telephone number
3. campus address and telephone number
4. dates of attendance at the College
5. class
6. full or part-time enrollment status
7. major
8. honor roll
9. degrees awarded
10. current class schedule

All other information contained in student's records will be considered confidential and may *not* be released without a written* student request. Such requests authorizing release of information will be kept on file in the office from which the information was requested.

Requests from prospective employers and government agencies: At the written request of the student concerned, the College will respond to inquiries originating from prospective employers and government agencies. The College respects the right of its students to determine to whom they wish the College to furnish non-public personal information. The College, however, recognizes the responsibility and reserves the right to release information to governmental officials when a clear and imminent danger to life or property exists.

Requests from other educational institutions: The College will release information to other educational institutions only with the consent of the student concerned. Exception: objective data (e.g. grades) will be released without consent for approved research purposes only.

Requests from faculty members, administrators and official College committees: Faculty members, administrators and official College committees may request objective information contained in permanent records when needed in discharge of their official duties.

**For the convenience of students and alumni, transcripts of academic record will be released by telephone upon request of the student.*

Relationships with parents of minor students: The College recognizes the legitimate interest of parents and guardians to consult with the professional staff about the academic and personal well-being of their sons and daughters. This consultation will be carried on consistent with the basic College policy that student records will not be released without the signed release of the student. However, the professional staff reserves the right to counsel with parents and *interpret* records when deemed in the best interest of the minor student.

Student access to records: A student may view the contents of his official records, *kept in the Dean of Student's Office*, with the professional staff. If a student feels the information in his record is inadequate or inaccurate, he may file addendums for inclusion in the records. Exception: addendums do not include academic records. Official guidelines regarding corrections of academic records will be regulated by academic policies and the Registrar.

Information on race, creed, political membership: Political membership or information is not recorded in student records unless the student expressly requests the inclusion of such information. This is released only if the student so requests. Information relative to an individual's race or creed will not be provided unless the student expressly requests such information be provided.

Procedure

When accompanied by a release by the student, the College's response to inquiries will be an interpretation of all *objective** information in the student's record. The student personnel staff shall provide evaluative statements only when considerable personal contact has occurred with the professional staff.

If the College receives a request for information from a law enforcement or other governmental agency that is not accompanied by a signed release from the student involved, the agency will be requested to indicate the type of information desired and the reasons for requesting the information. This document, with the

**Objective information is defined as grades, test scores and official actions taken by official College committees in the performance of their duties.*

recommendation of the staff member, will be forwarded to the Dean of Students for his decision. Information will *not* be released under these circumstances unless evidence of a clear and imminent danger to life or property exists.

The College recognizes the important responsibility for carefully processing, safeguarding and utilizing student records. Only professional staff and faculty are authorized to utilize such records, and every precaution is taken to assure maximum security of the records. The student records may not be shown to inquiring agencies. When a signed release from the student is presented, the student records will be interpreted by a professional staff member. Information of a negative nature will be handled with particular care; isolated and trivial disciplinary incidents are to be overlooked unless they occur with repetition or follow a significant pattern. All disciplinary records will be destroyed five years after graduation or five years after the student terminates enrollment.

When information is requested that is not known or which requires a statement of personal opinion for which the staff has no basis for comments—such as punctuality, attendance and character traits—the response is to be omitted and the reason indicated.

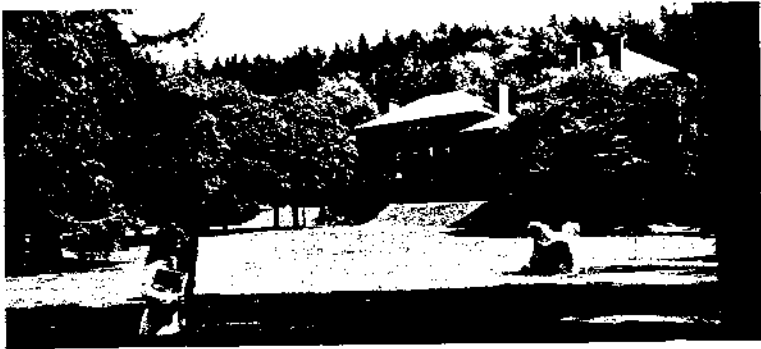
If the records of any office in the student personnel division are subpoenaed, the Dean of Students is to be notified immediately. The serving of the subpoena is to be accepted, but no records are to be presented in court without the express approval of the Dean of Students and the President.

STUDENT RIGHTS AND RESPONSIBILITIES

In the interest of students living on campus and the entire campus community, specific regulations have been established under Washington State Administrative Code regarding vendor solicitation, control of pets and bicycles. For further information contact the Safety and Security Department.

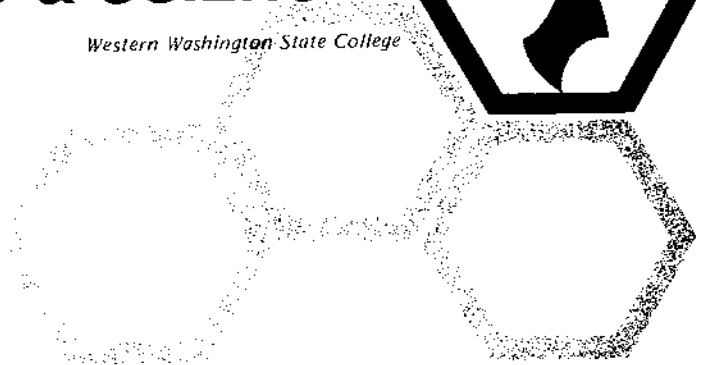
The Guide to Student Rights and Responsibilities applies to *all* students at Western Washington State College, including students from the cluster colleges. Its purposes, as stated in the preamble, are "to protect the rights of the students" and "to inform students of their ethical rights and legal responsibilities to each other and to the College."

For the complete text of the Guide to Student Rights and Responsibilities, see the back of this catalog.



COLLEGE OF ARTS & SCIENCES

Western Washington State College



The College of Arts and Sciences offers courses of study in teacher education and in the arts and sciences at both the undergraduate and graduate levels. The following degrees are offered:

Bachelor of Arts
Bachelor of Science
Bachelor of Arts in Education
Master of Arts
Master of Science
Master of Education

REQUIREMENTS FOR BACHELOR'S DEGREES

(Students enrolled in the Fairhaven College program will meet general degree requirements specified in the Fairhaven College section of this catalog.)

- 180 quarter hours of credit; not less 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 2.0 (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 2.5. Some departments have minimum grade point requirements in the major for graduation. Please check the departmental major requirements for specific information
- General college requirements: approximately 50-70 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

GENERAL COLLEGE REQUIREMENTS

Aims of the General College 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 knowledge.
- (d) To assist the student in developing his powers of aesthetic enjoyment and creativity.
- (e) To stimulate the student in formulating a philosophy of life based upon knowledge and reflection.

General College 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 Academic Regulations section). Some requirements may be satisfied with high school work as indicated below. Approved Associate of Arts degrees from certain community colleges will fulfill all General College Requirements.

Planning General College Requirements

The student should study carefully the requirements of his major and the course descriptions before planning his General College Requirements, as some required courses in the major may also apply on General College Requirements. If questions arise, the student should confer with a credit evaluator in the Registrar's Office.

Twelve (12) credits from one department is the maximum that may be applied toward General College Requirements except from the departments of Foreign Languages (see Humanities section) and General Studies. Although more than 12 credits may be taken from the General Studies Department to apply toward the *total* General College Requirements, the maximums for individual areas must be observed.

Communications

Complete Both A and B

A. ENGLISH 101, Language and Exposition (3) [waived for students demonstrating high English competency on entrance test]

or

ENGLISH 131, 132, 133, Masterpieces of World Literature with Composition (9) [this series satisfies the English 101 requirement and 6 credits in Humanities]

B. *One course from the following:*

ENGLISH 201, Reading and Exposition (3); 202, Reading and Argumentation (3)

JOURNALISM 104, News Writing (3)

PHILOSOPHY 107, Logical Thinking (3)

SPEECH 100, Fundamentals of Speech (3); 204, Small Group Processes (4); 205, Argumentation (4); 301, Speech Communication (3); 302, Speech for the Teacher (3)

Humanities

Course work must be distributed among at least three departments with no more than 10 credits from any one department except Foreign Languages. Foreign language study may be used to satisfy the requirement as follows:

A. 20 credits in a single foreign language numbered above 101 and excepting courses offered in translation (367, 375) will complete the entire requirement. (At least 10 credits in the foreign language must be taken in residence, but up to 10 advanced placement credits are applicable to the fulfillment of this requirement.)

B. Students who do not elect to complete the entire Humanities requirement through foreign language study may present up to 10 credits in foreign language classes such as 367 and 375 (courses in translation), or any foreign literature or civilization course numbered 300 or higher.

Select a minimum of 20 credits from the following:

ART 190, Art Appreciation (2); 110, Interdisciplinary Art (5)

ART HISTORY 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)

ENGLISH 131 & 132 & 133, Masterpieces of World Literature with Composition (3 ea); 216, Survey of American Literature (5); 231, Studies in Popular Literature (3); 238, Society through its Fiction/Drama/Poetry (5); 261, Reading and Writing Fiction/Poetry (3); 262, Film and Drama (3); 263, Cultural Heroes and Anti-Heroes in American Literature (3); 281, Western World Literature, Classical (3); 282, Western World Literature, Romantic (3); 283, Western World Literature, Modern (3)

FOREIGN LANGUAGES 367, Foreign Literature in Translation (3); 375, Main Currents in Modern Foreign Literature [French, German, Spanish, Russian] (5 ea)

GENERAL STUDIES 121, Humanities, Ancient (5); 122, Humanities, Medieval (5); 123, Humanities, Modern (5); 231, Introduction to Study of Religion (3); 232, Myth and Folklore (4); 233, Religion in American Culture (4); 310, Special Topics in the Humanities (3); 311, Great Books Representative of the Humanities (3); 341, Art and Ideology (3)

HISTORY 103, 104, Introduction to American Civilization (5 ea); 105, 106, 107, Introduction to Western Civilization (5 ea); 266, City in History (5); 267, History of Christianity (5); 342, Political Movements in Europe since 1789 (5); 347, European Intellectual History (5); 365, Great Personalities in American History (5); 366, American Society and Thought: Origins 1620-1800 (5); 367, American Society and Thought: Origins 1800-1900 (5); 368, American Society and Thought: Origins 20th Century (5)

HOME ECONOMICS 175, Personal Environmental Design (2)

JOURNALISM 160, Current Events and the Media (3); 390, The News Process [may be taken only once to satisfy General College Requirements] (4)

MUSIC 110, Interdisciplinary Art (5); 140, The Art of Listening to Music (3)

PHILOSOPHY 111, Introduction to Philosophy (3); 215, Introduction to Existentialism (3); 220, Moral Philosophy (3); 250, Problems in the Philosophy of Religion (3); 330, Society, Law, and Morality (3); 405, Philosophy of Art and Criticism (3)

POLITICAL SCIENCE 360, Introduction to Political Theory (5); 460, Political Theory, Ancient and Medieval (3); 461, Political Theory, Renaissance and Modern (3); 462, Political Theory, Contemporary Ideologies (3); 463, American Political Thought (5); 465, Theories of Democracy (3)

SPEECH 110, Interdisciplinary Art (5); 130, Introduction to the Theatre (3); 225, Introduction to Dance (2); 330, Introduction to Child Drama (3); 345, Art of Film (3); 346, Film Genre (3); 424, Modern American Drama (3); 425, Modern European Drama (3); 426, Contemporary Drama (3); 427a,b,c, Major Dramatists (3); 480, The History and Criticism of American Public Address: 1740-1890 (3); 481, The History and Criticism of American Public Address: 1890 to Present (3); 482, History and Criticism of British Public Address (3); 483, History and Criticism of Canadian Public Address (3); 490, Rhetorical Theory and Practice—Greek and Roman (4)

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:

- ECONOMICS/BUSINESS - Bus Adm 271, Law and Business Environment (4); Econ 190, Current Economic Trends (3); 201, Principles of Economics I: Introduction to Macroeconomics (5)
- GENERAL STUDIES 105, Behavioral Science (5); 200, Introduction to Economic and Political Institutions (4)
- GEOGRAPHY 201, Human Geography (5); 207, Economic Geography (5); 210, Geography and World Affairs (2); 310, Pacific Northwest (3); 470, Political Geography (5)
- HEALTH EDUCATION 150, Consumer Health (2); 151, Society and Drugs (2); 152, Society and Sex (2)
- HISTORY 205, U.S. and Europe (5); 263, Supreme Court in American History (5); 336, Comparative Imperialisms (5); 360, American Economic History (5); 371, History of American Technology (5)
- JOURNALISM 340, The Press and Society (3); 350, Law of the Press (3); 440, Press and World Affairs (3)
- PHYSICAL EDUCATION 309, Psychology of Sport (3); 310, Sociology of Sport (3)
- POLITICAL SCIENCE 101, Government and Politics in the Modern World (5); 170, A Citizen's Guide to Foreign Policy (5); 250, American Political System (5); 291, Introduction to Comparative Politics (5); 467, Politics, Transformation and Environmental Constraint (4)
- PSYCHOLOGY 201, Introduction to Psychology (5); 313, Personality (5); 315, Social Psychology (5); 316, Developmental Psychology (5); 317, Human Sexuality (3); 318, Psychology and Culture (3); 319, Personality Theories and Sex Roles (4); 320, Industrial Psychology (4); 342, Thinking and Imagination (3); 347, Humanistic Psychology (3); 353, Adolescent Psychology (4)
- RECREATION 101, Leisure and Society (3)
- SOCIOLOGY/ANTHROPOLOGY Anth 201, Introduction to Cultural Anthropology (5); 210, Introduction to Archeology (3); 253, Human Variation and Evolution (5); 310, Rise of Civilizations (5); 330, Religion and Culture (5); 353, Sex Roles in Culture (4); 481, Childhood and Culture (3). Soc 202, Principles of Sociology (5); 251, Sociology of Social Problems (5); 321, World Demography (5); 330, Introduction to Social Psychology (5); 333, Sociology of Aging (5); 335, Sociology of Medicine, Health and Illness (5); 337, Sociology of Sexual Behavior (5); 351, Sociology of Deviant Behavior (5); 352, Criminology (5); 353, Juvenile Delinquency (5); 360, Sociology of the Family (5); 363, Sociology of Religion (5); 365, Public Opinion (5); 367, Sociology of Work and Occupations (5); 368, Sex Roles and Social Structure (5)

- SPEECH 340, Introduction to Mass Communication Media (3)
- TECHNOLOGY 391, Man and Technology (3)

Comparative Cultural Studies

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

Select a minimum of 8 credits from the following:

- EAST ASIA 301, 302, 303, The Cultures of East Asia: The Early, Middle and Recent Periods (4 each); 310, Mongolia and the Mongols (3)
- ENGLISH 234, Introduction to Black Literature (4)
- GENERAL STUDIES 271, Humanities of India (4); 272, Myth/Religion and Society in China and Japan (4); 273, Artistic Expression and Society in China and Japan (4); 274, Society and Literature in China and Japan (4); 275, Humanities of Japan (4); 276, Humanities of Africa (4); 371, The Process and Problems of Modernization of Non-European World (4); 372, Modernization and the Place of the Individual in Non-European World (4); 373, Strategies and Visions of Modernization in the Non-European World: Conservatives, Reformers, Revolutionaries (4)
- GEOGRAPHY 314, Latin America (5); 315, Asia (5); 319, Africa (5); 321, Indian, Pakistan and Bangladesh (3); 322, Middle East (3)
- HISTORY 271, Introduction to Latin American Civilization (5); 273, Introduction to Latin America (5); 280, Introduction to East Asian Civilization (5); 285, Introduction to African Civilizations (5); 287, Introduction to Islamic Civilization (5); 361, Black History in America (5); 375, Indian in American History (5); 385, Africa to 1885 (5); 386, Africa since 1885 (5); 473, Selected Major Latin American States in the 20th Century (5); 480, China from Antiquity to early T'ang (5); 481, Imperial China from Early T'ang to Mid Ch'ing (5); 482, China from Late Ch'ing to Present (5); 483, Traditional Japan (5); 484, Modern Japan (5); 487a, Early Middle East (5); 487b, Modern Middle East (5); 489, Southern Africa (5)
- POLITICAL SCIENCE 305, International Politics in the Middle East (3); 307, East Asia (5); 308, Sub-Saharan African Political Systems (5); 309, Southeast Asia (5); 346, Poverty, Minorities, and Government (5); 417d, Selected Problems in East Asian Politics (3); 430, Modern Chinese Politics (5); 431, Modern Japanese Politics (5)
- SOCIOLOGY/ANTHROPOLOGY - Anth 361, Indians of North America (5); 362, Peoples of Asia (5); 363, Peoples of Africa (5); 364, Peoples of the Pacific (5); 451, Latin American Ethnology (5); 462, Indians of Northwest Coast (3); 463, Peoples and Institutions of South Asia (3); 464, Peoples and Institutions of East Asia (3)

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 College 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 121 or higher or any one computer science course

or

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

or

Students with two years of high school mathematics may take Mathematics 100, Algebra (5), and then substitute Philosophy 102.

Science

Complete Both A and B

A. One course from three of the four following areas (two of the four areas for students with one year high school—grade 11 or 12—preparation in chemistry, geology, physics or advanced biology):

BIOLOGY 101, General (4); 120, Science of Biology (5); 348, Human Anatomy and Physiology (5)

CHEMISTRY 101, Chemical Concepts (4); 115, General (5); 121, General 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 (4); 132, Principles of Physics (5); 231, General Physics with Calculus (5); 306, Physical Foundations of Music (4). Astronomy 103, Astronomy for Liberal Arts (4); 204, General Astronomy (4)

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

BIOLOGY 201, Mushrooms, Mosses and Molds (3); 202, Flowering Plants, Conifers and Ferns (3); 203, Insects and Other Terrestrial Arthropods (3); 204, Mammals, Birds, Reptiles, etc. (3); 205, Marine Biology (3); 206, Birds of the Northwest (3); 208, Foreign Chemicals and Natural Systems (3); 210, The Science of Biology (5); 305, Natural History of the Northwest (5); 307, Human Populations and Natural Resources (3); 308, Human Population and Sexuality (3); 333, Cells, Scientists and Society (3); 349, Human Anatomy and Physiology (5); 370, Human Genetics (4)

CHEMISTRY 122, General II (5); 208, Industrial Chemistry (3); 251, Organic Chemistry (3); 301, Chemistry and Society (4)

GEOGRAPHY 101, Natural Environment (4); 203, Physical

Geography (5); 330, Geography of Landforms (5); 331, Climatology (5); 422, Geography of Water Resources (5); 423, Geography of Soils (3); 424, Biogeography (3)

GEOLOGY 212, Historical Geology (4); 214, Environmental Geology (3); 310, Geomorphology (5); 311, Common Rocks and Minerals (4); 314, Geomorphology of Western U.S. (3); 340, Geological Oceanography (3); 414, Geology of Washington (3-5)

HOME ECONOMICS 150, Human Nutrition (3)

PHYSICS AND ASTRONOMY Physics 301, Physics and Environmental Problems (3); 331, Waves and Thermodynamics (5). Astronomy 315, Solar System Astronomy (3); 316, Stellar Astronomy (3); 317, Cosmology (3)

MAJORS AND MINORS

In addition to the general college 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.

For more information, see preceding section on Academic and Professional Programs.

Student-Faculty Designed Majors

Students desiring concentrated study in areas not listed as majors by the departments of the College of Arts and Sciences may design a major in conference with faculty members. For details of this procedure, please refer to the Office of Academic Advisement or the chairman of the Department of General Studies.

Cooperative Education, Internship and Field Study Programs

The College recognizes that practical work experience outside the classroom is a valuable supplement to both the student's general education and major area studies. Thus it has arranged quarter-long internship experiences

with a variety of community businesses, organizations, and governmental agencies. Students who want to apply their theoretical classroom learning to actual on-the-job situations can spend a quarter (maximum of 15 credits per student) in one of these positions. Credit will be awarded based on 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 cooperative education office, Viking Union, for additional information.

A number of other internship and field study programs are offered by departments but are not handled through the cooperative education office. For details on these, please refer to the chairman of the department concerned.

Graduate Study Programs

Students interested in programs leading to degrees beyond the baccalaureate should seek advisement at the office of the Dean of Graduate Studies. The individual department listings include courses offered at the graduate level.

Programs Leading to Certificates in Education

Students are referred to the section entitled "Education" for programs relating to certification.

THE HONORS PROGRAM

See the Interdepartmental Programs section of this catalog for detailed information on the Honors Program.

SPECIAL ORIENTATION ACTIVITIES

Immediately prior to the opening of fall quarter new students may participate in a program introducing them to the College. Activities include opportunities to meet and interact with others, to explore one's personal and

academic goals, to become acquainted with the variety of potential learning experiences on campus, and to develop an understanding of the services and facilities available.



Freshman Counseling

The ultimate aim of all counseling at Western Washington State College is to develop in the student the capacity and skills necessary for self-guidance. During the first year each freshman is teamed with a specially trained upper division student academic adviser and a member of the faculty. These advisers assume responsibility for assisting freshmen to meet effectively the initial problems of adjusting to college, to develop a career or area concentration plan, and to select the program of studies most appropriate to that plan.

Academic Advisement

As the student completes the freshman year, usually consisting largely of courses that meet the General College Requirements, he/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). Transfer students who are undecided about a major may seek advisement through the Academic Information Center in Old Main.



ART

College of Arts and Sciences / Western Washington State College



Art

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.

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 and Sciences major, or 5 credits in art for a minor.

ART FACULTY

- THOMAS SCHLOTTERBACK (1965) Chairman.
Professor. BFA, MFA, University of Kansas; PhD, The State University of Iowa.
- IONE A. FOSS (1957) Associate Professor. BS, MAA, Montana State College; MFA, University of Oregon.
- LAWRENCE HANSON (1963) Associate Professor. BA, MFA, University of Minnesota.
- ROBERT A. JENSEN (1966) Associate Professor. BA, 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 Washington.

- 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.

BACHELOR OF ARTS

Studio Major 73-85 credits

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

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 WWSC.

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 Symposium

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 and Secondary 45 credits

- Required of all majors:
 - (a) Art 101 or equivalent
 - (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

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 College. 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 70 credits

- Required of all majors:
 - (a) Art 101 or equivalent, 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 College. Revisions and amendments may be made by each student and the faculty committee upon request.

Art

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 or English 487.

MUSEUM TRAINING

The Art Department and the Whatcom Museum of History and Art provide a museum training program for qualified students from Western Washington State College. 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. That staff is attached to the Art Department as associated faculty: Susan Barrow, Museum Director, B.A., University of Washington; Emil Mierson, Administrative Coordinator, MBA, Northwestern; George Thomas, Museum Curator, MFA, University of California, Santa Barbara; Janice Olson, Registrar, B.A., Art History, Western Washington State College.

GRADUATE STUDY

For a concentration leading to the Master of Education degree, see the *Graduate Bulletin*.

ART SYMPOSIUM

Each art major is required to attend the Art Symposium. Art Symposium meets once a month throughout the school year. Each meeting is a presentation by a visiting artist, critic, historian, or by a faculty member from Western. Each presentation will be concerned with the professional elements of art. Advanced art students will be asked to make at least one presentation to the symposium.

COURSES IN ART

(See also Art History section, which follows.)

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.

110 INTERDISCIPLINARY ART (5)

For students planning interdisciplinary art majors and those wishing to broaden both their artistic knowledge and awareness. The course is team-taught; art, drama, dance and creative writing. Emphasis will be given to the interconnecting aesthetic principles of all art forms. (Also listed as Speech 110, Music 110.)

190 ART APPRECIATION (2)

Introduction to form and expression in the visual arts for the non-major.

202 LIFE DRAWING (3)

Prerequisite: Art 101 or equivalent.

210 PRINTMAKING I (3)

Prerequisite: Art 101 or equivalent. Introduction to intaglio processes.

211 PRINTMAKING II (3)

Prerequisite: Art 101 or equivalent. Introduction to lithographic processes.

220 PAINTING (3)

Prerequisite: Art 101 or equivalent. Introduction to contemporary painting.

230 SCULPTURE I (3)

Prerequisite: Art 101 or equivalent. Introduction to sculpture.

240 CERAMICS (3)

Prerequisite: Art 101 or equivalent. Handbuilt clay construction. Introduction to glaze formulation, kiln loading and firing.

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)

Prerequisite: 9 credits in art. Examination of the profession of art education, teaching skills, teaching as influencing student behavior in art, curriculum content and materials.

300 SPECIAL PROBLEMS IN ART (1-5)

Prerequisite: permission of instructor.

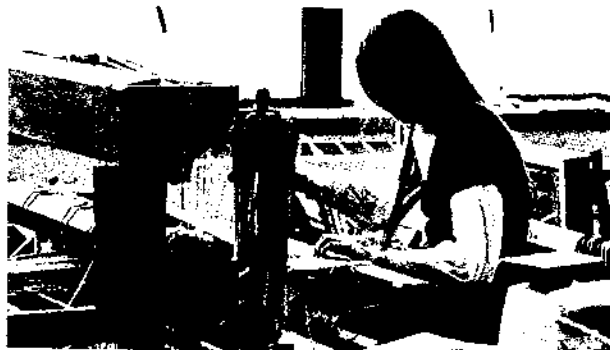
301 CONTEMPORARY PRACTICE (3)

Prerequisites: 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 DRAWING WORKSHOP I (3 or 5)
Prerequisites: Art 202 or equivalent; repeatable to 15 credits. Drawing as a major medium.
- 311 PRINTMAKING — LITHOGRAPHY (3)
Prerequisites: Art 211, 301, or concurrent enrollment. Planographic processes; emphasis on lithography.
- 312 PRINTMAKING — INTAGLIO (3)
Prerequisites: Art 210, 301, or concurrent enrollment. Intaglio processes: etching, engraving, drypoint, aquatint.
- 313 PRINTMAKING WORKSHOP (3 or 5)
Prerequisite: Art 311 or 312; repeatable to 15 credits.
- 321 PAINTING WORKSHOP I (3 or 5)
Prerequisites: Art 220, 301, or Art History 240 or concurrent enrollment; repeatable to 15 credits. Individual search for form and expression within a workshop environment.
- 325 WATER COLOR PAINTING (3 or 5)
Prerequisites: Art 220, 301, or Art History 240 or concurrent enrollment; repeatable to 15 credits. Various water soluble media.
- 328 LIFE PAINTING (3 or 5)
Prerequisites: 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.
- 331 SCULPTURE WORKSHOP (3 or 5)
Prerequisite: Art 230; repeatable to 15 credits. Problems in three-dimensional form and expression employing a variety of media and materials.
- 341 CERAMICS (3 or 5)
Prerequisite: Art 240; repeatable to 15 credits. Introduction to the potter's wheel as a tool. Handbuilding. Glaze formulation and kiln firing.
- 342 CERAMIC WORKSHOP I (3 or 5)
Prerequisite: Art 341; repeatable to 15 credits. Clay as a medium. Pottery and/or ceramic sculpture.
- 350 JEWELRY I (3)
Prerequisites: 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.
- 351 JEWELRY II (3 or 5)
Prerequisites: Art 350, Art History 240; repeatable to 15 credits. Problems in simple and centrifugal casting.
- 360 FABRIC DESIGN I (3)
Prerequisites: Art 101 or equivalent, Art 270, one art history course. Design problems using linoleum block print, tie-dye and stitchery.
- 361 FABRIC DESIGN II (3 or 5)
Prerequisite: Art 360; repeatable to 15 credits. Silkscreen processes, batik, natural dyeing.
- 367 WOVEN AND CONSTRUCTED FABRICS (3 or 5)
Prerequisite: Art 360. Pattern weaving, construction and use of a primitive loom; non-loom construction.
- 370 LETTERING (3)
Prerequisite: Art 101 or equivalent. Anatomy of letter forms, alphabets and calligraphy; problems in pen and brush lettering.
- 371 GRAPHIC DESIGN I (2)
Prerequisites: Art 101 or equivalent, 370. Introduction to visual communication as related to graphic processes.
- 372 GRAPHIC DESIGN II (3 or 5)
Prerequisite: Art 371; repeatable to 15 credits. Advanced problems in design as communication.
- 380 ART IN ELEMENTARY EDUCATION (4)
Prerequisite: 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)
Prerequisite: Art 280. The philosophy, psychology and procedures for art in the elementary and secondary schools.
- 382 ART EDUCATION STUDIO (3)
Prerequisite: Art 381 or concurrent registration. Problems in art and their adaptation to the elementary and secondary school.
- 390 UNDERSTANDING ART (5)
Prerequisite: sophomore standing. Understanding and appreciation of the visual arts with particular emphasis on the art of Mexico. This course is designed for study in Mexico based in Guadalajara.
- 400 SPECIAL PROBLEMS (2-5)
Prerequisites: senior status and permission of instructor. Individual instruction in special projects under supervision.
- 401 SEMINAR IN ART (2)
Prerequisites: senior status or 9 credits in art history; 18 credits in studio courses; repeatable to total of 6 credits. Development of criteria for mature artistic judgment.
- 402 DRAWING WORKSHOP II (3 or 5)
Prerequisites: Art 101 or equivalent; 9 credits of Art 302; repeatable to 15 credits. Continuation of individually established concerns in the area of drawing.
- 411 ADVANCED PRINTMAKING WORKSHOP (3 or 5)
Prerequisite: 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 innovations as they might be applied to editioned art.

Art

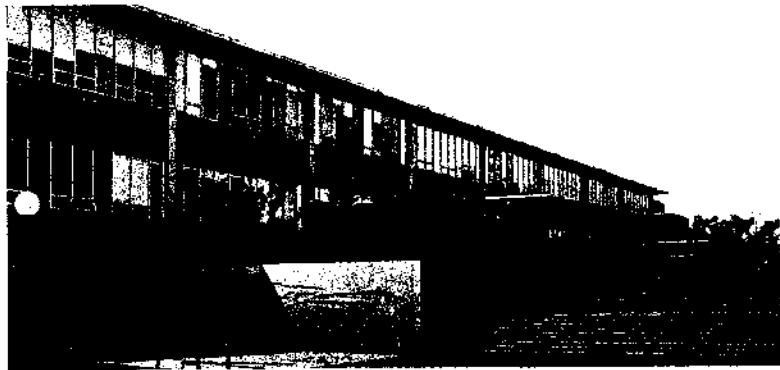
- 421 PAINTING WORKSHOP II (3 or 5)
Prerequisites: Art 101 or equivalent; 9 credits of Art 321, Art 301, and Art History 240; repeatable to 15 credits. Continuation of individually motivated search and research into form and expression with an emphasis on current issues within the field of painting as related to the making of art.
- 425 ADVANCED WATER COLOR PAINTING (3 or 5)
Prerequisite: Art 325; repeatable to total of 15 credits. Painting workshop using aqueous media.
- 431 SCULPTURE WORKSHOP (3 or 5)
Prerequisite: Art 331; repeatable to 15 credits. Advanced problems in three-dimensional form and expression employing a variety of media and materials.
- 432 DIRECT METAL SCULPTURE (3 or 5)
Prerequisite: Art 331; repeatable to total of 15 credits. Direct metal sculpture; emphasis on the welding processes.
- 433 BRONZE CASTING (3 or 5)
Prerequisite: 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.
- 441 CERAMIC WORKSHOP II (3 or 5)
Prerequisite: Art 341; repeatable to 15 credits. Advanced ceramics. Self-directed problems; weekly seminars.
- 450 JEWELRY III (3 or 5)
Prerequisite: Art 350; repeatable to 15 credits. Advanced problems in fabrication.
- 451 JEWELRY IV (3 or 5)
Prerequisite: Art 351; repeatable to 15 credits. Advanced problems in casting.
- 452 ADVANCED JEWELRY WORKSHOP (3 or 5)
Prerequisite: Art 451; repeatable to 15 credits. Advanced problems in jewelry as an art form.
- 461 FABRIC DESIGN III (3 or 5)
Prerequisite: Art 361; repeatable to 15 credits. Advanced study in printed and dyed textile techniques.
- 467 WOVEN AND CONSTRUCTED FABRICS III (3 or 5)
Prerequisite: Art 367; repeatable to 15 credits. Advanced workshop in tapestry, rugmaking and other media.
- 471 GRAPHIC DESIGN III (3 or 5)
Prerequisite: Art 372; repeatable to total of 15 credits. Advanced graphic design.
- 500 SPECIAL PROBLEMS (2-5)
Prerequisite: graduate status or completion of an art major or equivalent. Individual research under supervision.
- 511 GRADUATE DRAWING AND PRINTMAKING (2-4)
Prerequisite: graduate status or completion of an art major or equivalent. Individual problems.
- 521 GRADUATE PAINTING (2-4)
Prerequisite: graduate status or completion of an art major or equivalent. Individual problems in painting.
- 531 GRADUATE SCULPTURE (2-4)
Prerequisite: graduate status or completion of an art major or equivalent. Individual problems.
- 541 GRADUATE CERAMICS (2-4)
Prerequisite: graduate status or completion of an art major or equivalent. Individual problems in ceramics.
- 551 GRADUATE JEWELRY (2-4)
Prerequisite: graduate status or completion of an art major or equivalent. Individual problems in jewelry.
- 561 GRADUATE FABRIC DESIGN (2-4)
Prerequisite: graduate status or completion of an art major or equivalent. Individual problems in fabric design.
- 580 SPECIAL PROBLEMS IN ART EDUCATION (2-4)
Prerequisites: teaching experience and 27 credits in art. Special problems in art education as announced.
- 582 CURRICULUM PLANNING (4)
Prerequisites: teaching experience and 27 credits in art. Planning, development, implementation and evaluation of art as related to the total curriculum.



COURSES IN ART HISTORY

- 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.
- 300 SPECIAL PROBLEMS (2-5)
Individual problems in art historical methodology through special projects under supervision.
- 301 MUSEOLOGY I (2-5)
Prerequisite: 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)
Prerequisites: 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)
Prerequisites: Art History 220 and 230. Art of Ancient Egypt, Mesopotamia, Crete, Mycenae and peripheral areas.
- 330 MEDIEVAL ART (3)
Prerequisite: 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)
Prerequisite: Art History 240. The art of the 19th century Western world.
- 360 AMERICAN ART TO 1913 (3)
Prerequisite: 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.
- 400 SPECIAL PROBLEMS (2-5)
Prerequisites: senior status and permission of instructor. Individual instruction in special projects under supervision.
- 401 ADVANCED MUSEOLOGY (2-5)
Prerequisite: 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)
Prerequisites: 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)
Prerequisites: Art History 320 or 220 and permission of instructor. Art of the Ancient Greek and Roman civilizations.
- 430 RENAISSANCE ART I (3)
Prerequisites: Art History 220 and 230. Art of the Renaissance in Southern Europe.
- 431 RENAISSANCE ART II (3)
Prerequisites: Art History 430 or 220 or 230 and permission of instructor. Art of the Renaissance in Northern Europe.
- 432 BAROQUE ART (3)
Prerequisites: 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)
Prerequisites: Art History 240 and 340. Art of the 20th century Western world.
- 460 AMERICAN ART, 1900 TO THE PRESENT (3)
Prerequisites: 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 Archeological Age to the end of the 18th century.
- 490 SEMINAR IN ART HISTORY (3)
Prerequisites: 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 class.
- 500 SPECIAL PROBLEMS (2-5)
Prerequisite: graduate status or completion of an art major or equivalent. Individual research under supervision.
- 590 DIRECTED STUDIES IN ART HISTORY (1-4)
Prerequisites: 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 / Western Washington State College



Biology

Biology – the study of life – includes a broad spectrum of the natural sciences. Microbiology, ecology, systematic or taxonomic biology, genetics, marine biology, biometry, molecular biology, limnology, science education, anatomy and physiology are some of the specialties to be found in Western's department. Students in biology may prepare for professional careers, may enter teaching in the public schools or in higher education, or may select a liberal arts program not intended to lead to a career in science. The department offers courses and major and minor programs for each.

MAJOR CONCENTRATIONS IN BIOLOGY

Professional career opportunities in biology are diverse, and many of them require education beyond the baccalaureate degree. Graduates of biology programs may continue their education in such fields as forestry, game management, medicine and dentistry, 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 leading to the Bachelor of Science degree. The B.S. (biology) includes supporting courses in the physical sciences and mathematics and a strong core of basic biology. It is intended for those who wish to do post-baccalaureate study in the biological sciences or to teach. Students who wish to apply for admission to medical or dental schools may take this degree, or may find the Bachelor of Arts (see below) better suited to their needs. The programs differ in depth and breadth; therefore students should consult the pre-medical or pre-dental adviser concerning the choice. The B.S. (biology-mathematics) is offered for those students interested in quantitative biology: statistics, biometry, some kinds of ecology and computer modeling of biological systems. The B.S. (biology-chemistry) is designed for students who wish to pursue graduate study in molecular biology or biochemistry.

Many of Western's students are interested in careers in teaching. The education of a teacher of biology requires

at least as much commitment to biology and the related physical sciences as does the preparation of a biologist who will not teach. Therefore, no separate, reduced major leading to an "in education" degree is offered in biology. Students who wish to qualify to teach biology in the high schools should enroll in the Bachelor of Science (biology) program and should add Biology 493 to that major. The professional education courses may be included in the baccalaureate program as electives or may be taken in a post-baccalaureate year, part of which may be applied to the fifth year for standard certification.

There are, however, smaller schools in which science teachers must function in more than one discipline. Combined majors in biology-chemistry and biology-physical science in the B.A. in Education curriculum are offered for those who elect this option.

Students who wish to teach at the elementary or intermediate levels are advised to take the General Science major (see Interdepartmental Studies section) which includes courses in biology.

Students interested in teaching in colleges or community colleges should plan for a graduate degree in biology.

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 and another discipline such as art, psychology, physical education, anthropology, speech or philosophy.

The Biology Department maintains an effective program of advisement; students interested in any of the above are urged to consult the coordinating adviser as early in their college careers as possible.

THE BIOLOGY LABORATORIES AND PROGRAM

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

Biology at Western stresses learning by doing and "open ended" study. 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.

THE BIOLOGY FACULTY

The members of the biology faculty have been chosen to represent as broadly as possible the diverse aspects of the discipline. Students planning to major in the field are urged to plan carefully with departmental advisers early in their college careers to assure the proper sequence of courses selected.

- CLYDE M. SENGER (1963) Chairman.
Professor. BA, Reed College; MS, Purdue University; PhD, Utah State University.
- A. CARTER BROAD (1964) Professor. BA, MA, University of North Carolina; PhD, Duke University.
- HERBERT A. BROWN (1967) Associate Professor. BA, University of California, Los Angeles; PhD, University of California, Riverside.
- MAURICE A. DUBE (1963) Associate Professor. BS, Washington State University; MS, PhD, Oregon State University.
- JOHN E. ERICKSON (1964) Associate Professor. BA, University of Omaha; AM, Indiana University; PhD, University of Oregon.
- CHARLES J. FLORA (1957) Professor. BS, Purdue University; MEd, EdD, University of Florida.
- RICHARD W. FONDA (1968) Associate Professor. BA, Duke University; MS, PhD, University of Illinois.
- HUBERTUS E. KOHN (1966) Associate Professor. PhD, University of Innsbruck, Austria.
- GERALD F. KRAFT (1961) Associate Professor. BA, San Jose State College; MS, Washington State University; PhD, Oregon State University.

- JAMES S. MARTIN (1955) Professor. BS, MS, PhD, University of Washington.
- ALDEN L. NICKELSON (1962) Associate Professor of Education and Biology. BS, MA, PhD, University of Washington.
- JAL S. PARAKH (1966) Professor. BS, Osmania University, India; MS, University of Florida; PhD, Cornell University.
- MERIBETH M. RIFFEY (1957) Associate Professor. BS, MS, Northwestern University; PhD, Washington State University.
- JUNE R. P. ROSS (1967) Professor. BSc, PhD, DSc, University of Sydney, Sydney, Australia.
- DAVID E. SCHNEIDER (1966) Associate Professor. BS, Bates College; PhD, Duke University.
- DONALD J. SCHWEMMIN (1960) Associate Professor. BS, MS, PhD, University of Michigan.
- 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.

BACHELOR OF ARTS

Major 50 credits plus Supporting Courses

For liberal arts and other students.

- Biology 120 (or 101), 210, 321 or 370, 323 or 325
- Electives to total 50 credits in biology selected with approval of major adviser
- Chemistry 115 and 251, or equivalent

Premedical and allied sciences emphasis.

- Biology 120 (or 101), 210, 312, 321 or 370, 323, 485
- Electives to total 50 credits in biology selected from Biology 208, 310, 311, 325, 340, 345, 348, 349, 366, 368, 408, 450, 464, 490
- Chemistry 121, 122, 123, and 351, 352, 353, 354 (or 251)
- Physics 131, 132, 133 (or 231, 331, 332)

Natural history emphasis.

- Biology 120 or 101, 210, 325, 352 or 202, 370 or 321, 424 or 203, 454 or 201, 456 and 461 or 205, 465 or 204, 463 or 206
- Electives to total 50 credits in biology selected from Biology 307, 311, 312, 352, 402, 404, 424, 453, 454, 456, 461, 463, 465

Biology

- Chemistry 115 and 251
- Geography 203 and 310
- Geology 211 or 101, 310 or 314
- Recreation & Park Management 101 or 171, 201, 321, 322
- Recommended elective courses: Geog 251, 331, 421; Geol 311; Sci Ed 430, Hux 436, 482; PE 151, 215, 252; Physics 103 or 204; Soc 352, 422

BACHELOR OF ARTS IN EDUCATION

COMBINED MAJOR – BIOLOGY-CHEMISTRY

Major Concentration 92-96 credits

- Chemistry 121, 122, 123, 251, 333, 411, 412
- Biology 120 or 101, 210, 321 or 370, 325
- 10 credits from Biology 310 or 345, 311, 312
- Biology 485 or General Science 405
- Physical Science 492 and Biology 493
- Chemistry 371 or Biology 323
- Mathematics 220 and Physics 131, 132, 133 (or 231, 331, 332)

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 chemistry or a Bachelor of Arts in biology. 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 requires 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 92-96 credits

- Chemistry 121, 122, 123, 251
- Physics 131, 132, 133 or 231, 331, 332
- Physical Science 492
- Biology 120 or 101, 210
- Biology 310 or 345, 311, 312
- Biology 321 or 370, 325, 493
- Biology 485 or General Science 405
- Chemistry 371 or Biology 323
- 5 credits in geology
- Math 122 or 220

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 physical science or a Bachelor of Arts in biology. Depending upon options chosen, the overall student program may involve more than 180 credits.

BACHELOR OF SCIENCE

Preprofessional program for professional biologists, students pursuing graduate work, secondary teachers and related specialties.

Major Concentration 110 credits

- Biology 120, 210, 310, 311, 312, 321, 323 (or Chem 471, 472 and 473), 325, 340, 485
- Chemistry 121, 122, 123, 251 (or 351, 352 and 353)
- Geology 211
- Math 122 or 220
- Physics 131, 132, 133 (or 231, 331, 332)
- Biology 493 (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

COMBINED MAJOR – BIOLOGY AND CHEMISTRY

Major Concentration 110 credits

- Biology 120, 210, 321, 323, 345, 408, 471
- Chemistry 121, 122, 123, 333, 351, 352, 353, 354, 471, 472, 473, and 411, 412, 413 (or 461, 462, 463)
- One year college physics
- Mathematics 122, 222

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

COMBINED MAJOR BIOLOGY AND MATHEMATICS

Major Concentration 110 credits

- Biology 120, 210, 310, 311, 312, 321, 323, 325
- Mathematics 122, 222, 223, 241, 301, 331, 341, 342; Mathematics/Computer Science 335 (or Physics 332); Computer Science 210, 211, 439
- Chemistry 115, 251
- Physics 231, 331, 332 (or Math/CS 335)

MINOR PROGRAMS

Minor 25 credits

- Biology 120 or 101
- Biology 210

Student advised to consult major department for remainder of credits.

Extended Minor 42-48 credits

Minimum requirements for certification for teaching competence.

- Biology 120 or 101, 210, 310, 311, 312, 321, 323 (or 348 and 349) or 379, 325, 493

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a biology major who wishes to graduate "with honors" will enroll in Biology 396a,b,c and 496a,b,c

upon advisement of the Departmental Honors Adviser with whom he will work out an individual plan of study and Honors thesis.

GRADUATE STUDY

For concentrations leading to the Master of Education or the Master of Science degrees, see the *Graduate Bulletin*.

COURSES IN BIOLOGY

- 101 PRINCIPLES OF GENERAL BIOLOGY (4)
Energy relationships at all organizational levels of life, heredity, evolution, and man's impact on the biosphere.
- 120 THE SCIENCE OF BIOLOGY (5)
Prerequisite: one quarter of college chemistry. Nature of science and biology, biology and society, organizational levels, major unifying and interrelated concepts.
- 201-206 FIELD BIOLOGY OF THE NORTHWEST (3 ea)
Prerequisite: 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 courses.
- 201 Mushrooms, Mosses and Molds
 - 202 Flowering Plants, Conifers and Ferns
 - 203 Insects and Other Terrestrial Arthropods
 - 204 Mammals, Birds, Reptiles, Amphibians and Fish
 - 205 Marine Biology
 - 206 Birds of the Northwest
- 208 FOREIGN CHEMICALS AND NATURAL SYSTEMS (3)
Prerequisites: 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).
- 210 THE SCIENCE OF BIOLOGY (5)
Prerequisite: Biol 120 or, with permission of instructor, 101. Nature of science and biology, organizational levels, major unifying and interrelated concepts, principles of inquiry.
- 237 FOREIGN STUDY (2-5)
(Sec Biology 437.)
- 297a HUMAN REPRODUCTION AND SEXUALITY (3)
Prerequisite: Biol 101. Offered winter, 1975. See Biol 308.
- 305 NATURAL HISTORY OF THE NORTHWEST (5)
Prerequisite: Biol 101. Kinds of plants and animals in the Northwest; their distribution and life histories; field trips to beaches, lakes and ponds, forests, mountains.

Biology

- 307 HUMAN POPULATIONS AND NATURAL RESOURCES (3)
Prerequisite: Biol 101. Growth of human populations; changes in natural resources resulting in growth; prospects and consequences of population increases and resource utilization. Not open to those with credit in Biol 407; not applicable to major or minor.
- 308 HUMAN REPRODUCTION AND SEXUALITY (3)
Prerequisite: 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)
Prerequisite: Biol 121 or 210. 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)
Prerequisite: Biol 121 or 210. Basic physiological principles; evolutionary trends and adaptations in structural development and reproductive systems of higher plants—Bryophytes through Angiosperms.
- 312 ANIMAL BIOLOGY (5)
Prerequisite: Biol 121 or 210. 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.
- 321 HEREDITARY BIOLOGY (5)
Prerequisite: 14 credits in biology. Basic problems, theories and principles of genetics; laboratory experiments with *Drosophila*.
- 323 CELLULAR, MOLECULAR AND DEVELOPMENTAL BIOLOGY (5)
Prerequisites: 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, water relationships, membrane phenomena, energy utilization and production, cellular biosyntheses, control of cellular activities, developmental processes at the cellular level.
- 325 ECOLOGY (5)
Prerequisite: 14 credits in biology; chemistry and physics recommended. Community energetics and organismal-environmental relationships in marine, fresh water and terrestrial habitats.
- 333 CELLS, SCIENTISTS AND SOCIETY (3)
Prerequisite: Biol 101 and junior standing. The structure of cells; energy and information flow within cells; regulation of activities in cells; interactions between cells; social and cultural implications of our knowledge of cells. Not open to students who have credit for 323.
- 337 FOREIGN STUDY (2-5)
(See Biology 437.)
- 340 BIOMETRICS (5)
Prerequisite: Math 121. Digital computer programming as a means by which a student computes statistics, e.g., mean, variance, regression, correlation, for his own data; cluster analysis procedures.
- 345 FUNDAMENTALS OF MICROBIOLOGY (5)
Prerequisites: Chem 121, 122 and 251; 10 credits in biology. Students planning to take both Biol 345 and 323 should take 345 first. Comparative morphology, taxonomy, physiology and relationship of microbes; bacteria, yeasts, molds, and viruses.
348. 349 HUMAN ANATOMY AND PHYSIOLOGY (5 ea)
Prerequisite: Biol 101; Biol 348 prerequisite to 349. Structure and function of the human body; emphasis on physiological principles and homeostatic mechanisms.
- 352 SYSTEMATIC BOTANY (5)
Prerequisite: Biol 311. Taxonomy of higher plants with emphases on the characteristics and phylogeny of flowering plant families; collection and identification of local species.
- 361 BIOLOGY OF COMMERCIALY IMPORTANT MARINE SPECIES (5)
Prerequisites: 15 credits in biology or environmental science. A course that deals with the life histories, ecological relationships, and basic biology of commercially important marine animals and plants. Emphasis on species of the Pacific Northwest.
- 366 COMPARATIVE VERTEBRATE ANATOMY (5)
Prerequisite: Biol 312. Morphology and evolution of organic systems of major vertebrate groups.
- 368 GENERAL VERTEBRATE EMBRYOLOGY (5)
Prerequisite: Biol 312. Development of the vertebrates; laboratory study of embryos of the frog, chick, and pig with application to human development.
- 370 HUMAN GENETICS (4)
Prerequisite: Biol 101. Basic principles of heredity, human genetic problems: radiation and mutation, chromosomal errors, eugenics. Not open to students with credit in Biol 321.
- 379 PLANT PHYSIOLOGY (5)
Prerequisite: Biol 311. 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)
Prerequisite: Biol 101 or 120 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.

- 396a,b,c HONORS TUTORIAL (2-5 ea)
- 397b EVALUATION OF NURSING RESEARCH AND REPORTS (2)
Prerequisite: enrollment limited to registered nurses and licensed practical nurses. Methods of critical examination of research and reports; focus on current nursing research; examples from the clinical field chosen by individual students.
- 399 SEMINAR IN BIOLOGY (1)
Prerequisite: 25 credits in biological sciences and permission of instructor. Outstanding developments, past and present, in the biological sciences. May be repeated for credit.
- 400 SPECIAL PROJECTS IN BIOLOGY (2-5)
Prerequisite: permission of instructor. May be repeated for credit.
- 402 LIMNOLOGY (5)
Prerequisite: Biol 325. Physical and chemical characteristics of fresh water in relation to biotic communities; field trips.
- 403 PHYSIOLOGICAL ECOLOGY OF ANIMALS (5)
Prerequisite: Biol 325 and permission of instructor. Field and laboratory studies of physiological responses of marine animals to environmental factors; methods for design and analysis of experiments.
- 404 PLANT ECOLOGY (5)
Prerequisite: 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)
Prerequisite: Biol 325 and permission of instructor; Biol 352 and 404 recommended. Inter-session field trip to Southwestern U.S.; analysis and investigation of desert plant communities.
- 406 GENERAL OCEANOGRAPHY (5)
Prerequisites: Physics 131, 132; Chem 121, 122. Geological, physical, chemical, and biological aspects of oceanography, reinforced with oceanographic field exercises.
- 408 MOLECULAR ECOLOGY (3)
Prerequisites: 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 organs and organisms; effects upon occurrence and distribution of organisms.
- 423 FIELD ENTOMOLOGY (1-2)
Prerequisite: Biol 312. Insect collecting and field identification; preparation of insect collections; inter-session course of one or two weeks duration.
- 424 ENTOMOLOGY (5)
Prerequisite: Biol 312. Insects: their morphology, physiology, metamorphoses, classification, and economic importance.
- 425 AQUATIC ENTOMOLOGY (3)
Prerequisite: Biol 312; 424 recommended. Classification and ecological relationships of insects in streams and lakes.
- 437, 337, 237 FOREIGN STUDY (2-5)
A study of biological topics particularly appropriate to the location of the course offering. Presently offered only in Guadalajara. These courses are offered only through the WWSC Study Abroad program. Contact Foreign Study Office, Miller Hall 353, for information.
- 445m COMMON LOCAL FLORA AND VERTEBRATES (5)
Natural history of the terrestrial and freshwater environment of the Puget Sound region; taxonomic survey of plants and vertebrates and their interrelationships. Offered only during the summer quarters as a component of the Natural History Institute.
- 445n MARINE NATURAL HISTORY OF THE NORTHWEST (5)
The marine environment of the Puget Sound region; taxonomic survey of plants and animals of the communities and their interrelationships. Offered only during the summer quarters as a component of the Natural History Institute.
- 450 PARASITOLOGY (5)
Prerequisites: Biol 312; two quarters of college chemistry. Representative animal parasites with emphasis on structural and physiological adaptations of parasite and host.
- 453 MONTANE BIOLOGY (3-5)
Prerequisite: Biol 325. Flora and fauna of the Cascade Mountains; their variety, distribution and interactions with the environment. Summer only.
- 453a ALPINE ENVIRONMENT AND VEGETATION (5)
Prerequisites: Biol 325 (ecology) or equivalent; concurrent enrollment in Biol 453b and Geol 497a. Open to Institute participants only. The environment of the Olympic, Cascade and Rocky mountains; the nature of the alpine flora and the plant communities of these mountains; the interactions between environmental regimes and plant species that produce the vegetative pattern of the alpine environment. Offered only during the summer as a component of the Alpine Institute.
- 453b ALPINE FAUNA (5)
Prerequisites: Biol 325 (ecology) or equivalent; concurrent enrollment in Biol 453a and Geol 497a. Open only to Institute participants. The animals of the mountains; niches occupied by resident and transient species; adaptations to alpine conditions. Offered only during the summer as a component of the Alpine Institute.

Biology

- 454 MYCOLOGY (5)
Prerequisite: Biol 310. Taxonomy of the fungi with emphasis on morphology, phylogenetic trends, collection and identification of common species. Several weekend field trips are required.
- 456 ALGAE (5)
Prerequisite: Biol 310. Collection, culture, identification, classification, distribution, and economic importance of marine and fresh water algae.
- 458 ERYOPHYTES (5)
Prerequisite: 10 credits in biology. Collection, identification, distribution, and evolution of mosses and liverworts.
- 460 INVERTEBRATE ZOOLOGY (5)
Prerequisite: Biol 312. Classification, anatomy, physiology, development, and general biology of invertebrate animals.
- 461 MARINE INVERTEBRATE ZOOLOGY (5)
Prerequisite: Biol 325. Laboratory and field study of local marine invertebrates.
- 463 ORNITHOLOGY (5)
Prerequisites: Biol 120, 210 or 101. Evolution of morphological adaptations of birds, classification, distribution; annual cycle including migration, breeding and population dynamics; laboratory study, field trips.
- 464 VERTEBRATE ZOOLOGY (5)
Prerequisite: 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 MAMMALOLOGY (5)
Prerequisite: Biol 312. Structural and physiological adaptations, population dynamics, distribution and classification of mammals with laboratory emphasis on local species.
- 468 INVERTEBRATE EMBRYOLOGY (5)
Prerequisite: 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.
- 471 PHYSIOLOGICAL GENETICS (5)
Prerequisites: Biol 321 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)
Prerequisite: Biol 311. A study of plant organs and their tissues from the standpoint of origin, differentiation, growth, and maturation.
- 478 CELLULAR PHYSIOLOGY (5)
Prerequisite: Biol 323. Structure and function of cells; hormonal regulation of cellular metabolism; exchange of materials across membranes; bioelectricity, excitability, contractility.
- 481 PHYSIOLOGICAL ECOLOGY OF PLANTS (5)
Prerequisite: Biol 325. Field and laboratory study of physiological responses of plants to environmental factors; methods for design and analysis of experiments.
- 485 HISTORICAL AND PHILOSOPHICAL PERSPECTIVES OF BIOLOGY (5)
Prerequisite: 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)
Prerequisite: concurrent enrollment in Biol 485.
- 490 PRINCIPLES OF ORGANIC EVOLUTION (4)
Prerequisites: Biol 210, 321 or 370. Principles, patterns, processes, and mechanisms of evolution in the organic world.
- 493 TEACHING BIOLOGICAL SCIENCE (3)
Prerequisite: 15 credits in biological science. Recent trends in biology and science education; critical study of modern curriculum materials, clinical analysis of teaching and laboratory work. For biology teachers in secondary schools and in higher education.
- 494 ELECTRON MICROSCOPY (2)
Prerequisites: Physics 133, 30 credits in biology. Theory of electron microscopy and its application to biological ultrastructure.
- 495 ELECTRON MICROSCOPY LABORATORY (4)
Prerequisites: Physics 133, 30 credits in biology, and permission of instructor. Concurrent enrollment in Biol 494 is expected. Practice of electron microscopy, techniques, use of electron microscope in basic problems of ultrastructure in biology.
- 496a,b,c HONORS TUTORIAL (2-5 ea)
- 497a SCIENTIFIC WRITING WORKSHOP (3)
Prerequisite: permission of instructor. Practical experience in developing a style of writing that is appropriate to scientific publication; preparation of copy, tables, line drawings and figures for submission to editors; interpretation of reviewer's comments; galley proof correction.

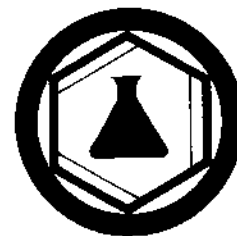
- 497f COASTAL ENVIRONMENTAL ASSESSMENT I (5)
Prerequisites: Biol 101, 311, 312; Chem 121, 122, 123; concurrent enrollment in Hux 497a. An intensive introduction to biological and physical factors needed to evaluate environmental impact based on the study of a natural area that is a potential municipal sewage outfall; basic principles of marine natural history and ecology, oceanography, coastal geology, and environmental physiology; laboratory and field work including sampling and analysis of marine communities, water quality monitoring, physical and geological oceanographic methods and shoreline management techniques.
- 500 SPECIAL PROJECTS IN BIOLOGY (2-5)
Prerequisite: permission of instructor. May be repeated for credit.
- 503 ADVANCED TOPICS IN ECOLOGY (4)
Prerequisites: Biol 325 and permission of instructor. Analysis of current literature on fundamental properties of ecosystems, communities, populations, species, and characteristic environments.
- 514 VEGETATION OF WASHINGTON (4)
Prerequisites: Biol 325 or equivalent 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)
Prerequisites: Biol 325 or equivalent 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.
- 568 TOPICS IN DEVELOPMENTAL AND COMPARATIVE MORPHOLOGY (4)
Prerequisites: one course from Biol 456, 475, 366, 368 as appropriate to topic offered; 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)
Prerequisites: Biol 321 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)
Prerequisites: Biol 323 or Chem 471 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)
Prerequisite: Biol 323 or Chem 471 or permission of instructor. Detailed investigation into the molecular structure and function of such proteins as enzymes, antibodies, histones, muscle proteins and hemoglobins. The use of proteins in establishing evolutionary relationships between organisms.
- 579 ENZYMOLOGY LABORATORY (3)
Prerequisite: Biol 323 or Chem 471 or permission of instructor. Techniques in isolation and characterization of various enzymes; purification techniques and determination of various kinetic parameters.
- 580 RADIATION BIOLOGY (3)
Prerequisites: Biol 323, Physics 131, 132. Forms of ionizing radiation and their biological effects; techniques for safe handling of radiation producing materials; use of radiation detecting instruments; use and biological effects of radiation.
- 583 ADVANCED TOPICS IN BIOSYSTEMATICS (4)
Prerequisite: permission of instructor. Role of morphology, cytology, bio-chemistry, and genetics in taxonomy; systematic study of a specific group of local organisms.
- 595 TEACHING PRACTICUM (1)
Prerequisite: permission of instructor. Intended for the student who wants experience in teaching a biology course of his choice. May be repeated for a maximum of 2 credits. S/U grading only.
- 599 SEMINAR IN BIOLOGY (2)
Prerequisite: 40 credits in biology. Selected problems in biology, with emphasis on current literature. May be repeated for credit.
- 690 THESIS RESEARCH (1-12)
Prerequisite: permission of thesis adviser. Research contributing to a graduate degree program. Graded K until thesis completed. May be repeated for credit.





CHEMISTRY

College of Arts and Sciences / Western Washington State College



Chemistry

The programs of study offered by the Chemistry Department are diverse and challenging, and possess a combination of important features which provide unusual benefits to the student. These include:

- A wide variety of accredited programs designed to meet virtually all career needs and flexible enough to respond to changing and developing needs.
- Provision for transfer students to complete degree programs without loss of time or credit.
- A faculty committed to quality 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 PROGRAM AND CAREER OPPORTUNITIES

The Chemistry Department offers three basic degree programs: Bachelor of Arts in Education, Bachelor of Arts, and Bachelor of Science. Within each of these programs, the student has considerable freedom in selection of courses and options, but all three 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 core provides the basis of a chemist's education and 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 teaching at the secondary level, positions in industry or government, or further study at the graduate level. Detailed descriptions of each of these degree programs and course descriptions are given on the following pages.

Students planning to transfer to Western after completing two years of college study elsewhere should complete as many of the following program require-

ments 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 in Education provides three distinct program emphases including concentrations in chemistry-mathematics and chemistry-physics as well as straight 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. 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, with proper choice of electives, leads to a degree approved by the American Chemical Society.

THE FACULTY

The Chemistry Department faculty of 16 members is young, vigorous and strongly committed to providing the undergraduate student with a quality, 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 are readily available to work with individual students on career plans and academic and personal problems.

- DONALD M. KING (1966) Chairman.
Associate Professor. BS, Washington State University; PhD, California Institute of Technology.
- MARION BESSERMAN (1952) Associate Professor. BS, University of Washington; MS, Purdue University; PhD, University of Washington.
- JOSEPH R. CROOK (1970) Associate Professor. BS, University of Nevada; PhD, Illinois Institute of Technology.

- LOWELL P. EDDY (1957) Associate Professor. BS, MS, Oregon State University; PhD, Purdue University.
- GEORGE A. GERHOLD (1969) Associate Professor. BS, University of Illinois; PhD, University of Washington.
- GEORGE S. KRIZ, JR. (1967) Associate 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) Associate 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) Associate Professor. AB, Reed College; MS, PhD, Yale.
- SALVATORE F. RUSSO (1968) Associate Professor. BA, Wesleyan University; PhD, Northwestern University, Evanston.
- JOHN A. WEYH (1968) Associate Professor. BA, College of Great Falls; MS, PhD, Washington State University.
- JOHN C. WHITMER (1969) Associate Professor. BS, University of Rochester; MS, PhD, University of Michigan.
- MARK L. WICHOLAS (1967) Associate 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.

FACILITIES

The Chemistry Department occupies approximately one-third of the Haggard Hall of Science which was built in 1960. The facility is shared with the departments of biology and geology; the mathematics and physics departments are housed in a building directly adjacent, with the Environmental Studies Center building located nearby.

The laboratory equipment and instrumentation held by the department is modern, complete and readily available to students engaged in the study of chemistry. In addition, special instrumentation held by other departments is accessible to chemistry faculty and students alike.

INFORMATION

Prospective students desiring additional information on Chemistry Department programs, options, or facilities are urged to write directly to Chairman, Department of Chemistry, Western Washington State College, Bellingham, Washington 98225. Application information should be requested from the Director of Admissions of the College.

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. Advice of the department should be sought in the choice of options in the general education science requirements.

BACHELOR OF ARTS IN EDUCATION

Major – Senior High School

45 credits plus Supporting Courses

- Chemistry 121, 122, 123, 333
- Chemistry 351, 352, 353, 354, 461, 462, 463
- Phys Sci 492
- Supporting courses: one year college physics and Math 121, 122, 222

COMBINED MAJOR – CHEMISTRY-BIOLOGY

Major Concentration 92-96 credits

- Chemistry 121, 122, 123, 251, 333, 411, 412
- Biology 120 or 101, 210, 321 or 370, 325
- 10 credits from Biology 310 or 345, 311, 312
- Biology 485 or General Science 405
- Physical Science 492 and Biology 493

Chemistry

- Chemistry 371 or Biology 323
- Mathematics 220 and Physics 131, 132, 133 (or 231, 331, 332)

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

Recommendation for teaching competence with the Chemistry-Biology major concentration normally requires completion of the program with a grade point average of 2.50 or better in the chemistry and in the biology courses.

COMBINED MAJOR ... CHEMISTRY-MATHEMATICS

Major Concentration 78 credits
plus Supporting Courses

This concentration provides depth leading to recommendation for teaching competence in both areas. It satisfies requirements for both a major and a minor.

- Chemistry 121, 122, 123, and 461, 462, 463 or 411, 412, 413
- 9-11 credits in chemistry to include a minimum of 5 credits in organic chemistry under departmental advisement
- Phys Sci 492
- 40 credits in mathematics to include methods courses under departmental advisement
- Supporting courses: one year college physics

COMBINED MAJOR – CHEMISTRY-PHYSICS

Major Concentration 73 credits
plus Supporting Courses in Mathematics

This concentration provides depth leading to recommendation for teaching competence in both areas. It satisfies the requirements for both major and minor.

- Chemistry 121, 122, 123
- Chemistry 461, 462, 463 or 411, 412, 413
- 9-11 credits in chemistry including 5 credits in organic chemistry under departmental advisement
- Physics 225 or 355, 231, 331, 332, 381, 371 or 441
- 8 credits in physics under departmental advisement
- Phys Sci 492
- Supporting courses: Math 121, 122, 222, 223

Minor 25 credits

Same as Bachelor of Arts minor below.

Extended Minor 35-37 credits

- Chemistry 121, 122, 123, 461, 462, 463 (or 411, 412, 413), Phys Sci 492
- 6 to 8 credits under departmental approval from Chemistry 251, 333, 351, 352, 353, 354, 441

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 2.5 or better in the chemistry courses.

BACHELOR OF ARTS DEGREE

Major 56 credits plus Supporting Courses

- Chemistry 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 121, 122, 222

Minor 24 or 25 credits

- Chemistry 121, 122, 123
- A minimum of 9 or 10 credits under approval of the chemistry department from Chemistry 251, 333, 351, 352, 353, 354, 371, 461, 462, 463 (or 411, 412, 413), 482, 483

BACHELOR OF SCIENCE DEGREE

Major Concentration 110 credits

(Satisfies both the major and minor.)

- Chemistry 121, 122, 123, 333
- Chemistry 351, 352, 353, 354, 355
- Chemistry 434, 441, 461, 462, 463, 464, 465
- Supporting courses: Physics 231, 331, 332, Math 121*, 122, 222, 223
- Electives, selected under departmental advisement in chemistry, biology, physics and mathematics to total 110 credits including above required courses

Note: Western Washington State College is approved by the American Chemical Society for certification of students who complete a program which meets the objectives and guidelines for undergraduate programs in chemistry set by the Society. These objectives and guidelines may be met by including in the Bachelor of Science program Math 301 or Math 201 and 202, and at least 9 elective credits in chemistry courses numbered 400 and above or in approved courses in biology, computer science, geology, mathematics and physics. At least two of the 9 units must be in chemistry laboratory courses and at least 6 units in courses other than research. In addition, course work in computer science or statistics is strongly recommended as is a reading knowledge of a foreign language (particularly German).

*5 credits less of required courses if student begins sequence with Math 122.

COMBINED MAJOR – CHEMISTRY-BIOLOGY

Major Concentration 110 credits

- Chemistry 121, 122, 123, 333, 351, 352, 353, 354, 471, 472, 473, and 411, 412, 413 or 461, 462, 463
- Biology 120, 210, 321, 323, 345, 408, 471
- One year college physics
- Mathematics 122, 222

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

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a chemistry major who wishes to graduate "with honors" must complete Honors 361, 461; upper division chemistry courses—30 credits for an Arts and Sciences major, 25 credits for a Teacher Education major; Chemistry 498; at least 4 credits in Chemistry 396 a, b, c or 496 a, b, c.

GRADUATE STUDY

For concentrations leading to the Master of Education or the Master of Science degrees, see *Graduate Bulletin*.

COURSES IN CHEMISTRY

101 CHEMICAL CONCEPTS (4)

Restricted to students without high school chemistry. Fundamental topics of chemistry such as: atoms and molecules, periodic table, organic and biochemistry, radioactivity. Applications to selected topics: household and industrial chemistry, energy sources, food additives and other foreign compounds, the environment. Emphasis of the course will vary; consult the class schedule.

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.

Chemistry

- 121, 122, 123 GENERAL CHEMISTRY I, II, III (5 ea)
Prerequisite: Math 100 (may be taken concurrently with Chem 121) or one and one-half years of high school algebra. Each course prerequisite to the next. Scientific measurements; atoms, molecules, and chemical bonding; mole concept and stoichiometry, chemical nomenclature. States of matter, changes of state, solutions, oxidation-reduction, acid-base concepts, chemical kinetics, chemical equilibrium, equilibrium in aqueous solutions; electrochemistry; selected topics such as coordination, nuclear or thermochemistry. Elementary algebra used to express chemical concepts. Laboratory.
- 208 INDUSTRIAL CHEMISTRY (3)
Prerequisite: Chem 115 or 121. Industrial chemistry and chemical technology in the contemporary world.
- 209 INDUSTRIAL CHEMISTRY LABORATORY (2)
Prerequisite: Chem 208 or concurrent. Small scale experiments of industrial processes; field trips to chemical industries.
- 251 ELEMENTARY ORGANIC CHEMISTRY (5)
Prerequisite: 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 CHEMISTRY AND SOCIETY (4)
Prerequisite: one year high school chemistry or Chem 101 or equivalent. Credit may not be applied toward a major in chemistry. Contemporary chemistry for the non-scientist; topics selected from biochemistry, drugs, chemistry of common household products, food chemistry, agricultural chemicals, air and water pollutants, polymers, paints, and industrial processes.
- 302 CHEMICAL LITERATURE (1)
Prerequisite: Chem 352. Primary, secondary and tertiary sources of published chemical information. Satisfactory/Unsatisfactory grading used in this course.
- 305 GLASS WORKING (1)
Prerequisite: permission of instructor. Basic glass working and construction of simple glass apparatus. Satisfactory/Unsatisfactory grading used in this course.
- 317 THE CHEMISTRY AND PHYSIOLOGY OF FOREIGN COMPOUNDS (4)
Prerequisite: Chem 251 (or 351) and Biol 101. A detailed consideration of chemical and physiological effects of such currently encountered chemicals as pesticides, antibiotics, contraceptives, psychotomimetic compounds, food additives.
- 333 INTRODUCTORY ANALYTICAL CHEMISTRY (5)
Prerequisite: 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.
- 351, 352, 353 ORGANIC CHEMISTRY (4, 4, 3)
Prerequisite: 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)
Prerequisite: Chem 352 or concurrent. Techniques of organic chemistry: reactions, separations and syntheses of organic compounds.
- 355 ORGANIC CHEMISTRY LABORATORY II (2)
Prerequisites: Chem 354 and 353 or concurrent. Techniques of organic chemistry: reactions, separations; syntheses and introduction to practical spectroscopy.
- 371 ELEMENTARY BIOCHEMISTRY (4)
Prerequisite: Chem 251. Outlines of structures and metabolisms of carbohydrates, lipids, proteins, and nucleic acids; biochemical functions of vitamins, hormones, and some coenzymes; basic properties of enzymes. Laboratory portion of course illustrates material presented in lecture.
- 383 RADIOISOTOPES AND INSTRUMENTATION TECHNIQUES (2)
Prerequisites: Chem 122 and Math 121. Basic use of radioisotopes and detection devices without rigorous mathematical treatment; for the student who might need such a tool in his career in science.
- 396a,b,c HONORS TUTORIAL (2-5 ea)
- 399 SEMINAR IN CHEMISTRY (1)
Prerequisites: 25 credits in chemistry. Presentation and discussion of papers in chemistry. Satisfactory/Unsatisfactory grading used in this course.
- 400 PROJECT IN CHEMISTRY (1-3)
Prerequisite or concurrent: Chem 461 and Chem 333. Students with junior status in chemistry must have and maintain an overall 3.0 g.p.a. in chemistry courses. Permission of instructor required. Individual projects under supervision. Presentation and discussion of projects encouraged. Satisfactory/Unsatisfactory grading used in this course.
- 410 SPECIAL TOPICS (1-3)
Prerequisite: permission of instructor. Specialized lectures on a conference basis for a particular area of interest.
- 411, 412, 413 ELEMENTARY PHYSICAL CHEMISTRY I, II, III (4 ea)
Prerequisites: one year of college chemistry, one year of college physics, Math 122 or 220. (1) Classical thermodynamics including first, second, and third laws; thermochemistry. (2) Chemical equilibria, the phase rule, solutions, colligative properties, and kinetics. (3) Concepts of molecular bonding and structure; gases, liquids, solids, electrochemistry. Three hours of lecture material will be supplemented with problem solving, mathematical review sessions, and laboratory experiments related to lecture material.

417 ADVANCED TOPICS IN CHEMISTRY (3)

Prerequisites: Chem 461 (or concurrent) and permission, and any additional prerequisites as listed. A series of courses which are taught on an irregular basis by individual instructors. These courses may be offered subject to enrollment. The student will have to check the class schedule to determine which are being offered in any given quarter. Normally this will be by posted notice in the Chemistry Department.

- 417a Natural Products Chemistry
Prerequisite: Chem 353.
- 417b Organic Reactions
Prerequisite: Chem 353.
- 417c Physical Organic Chemistry
Prerequisite: Chem 353, Chem 463 or concurrent.
- 417d Organic Photochemistry
Prerequisite: Chem 353.
- 417e Stereochemistry
Prerequisite: Chem 353.
- 417f Quantum Chemistry
Prerequisites: Chem 463, Math 222.
- 417g Molecular Spectroscopy
Prerequisites: Chem 463, Math 222.
- 417h Statistical Thermodynamics
Prerequisites: Chem 463, Math 222
- 417j Theoretical Inorganic Chemistry
Prerequisite: Chem 441.
- 417k Advanced Chemical Equilibria
Prerequisite: Chem 333.
- 417m Enzyme Chemistry
Prerequisites: Chem 463 or 413, 471.
- 417n Physical Biochemistry
Prerequisites: Chem 463 or 413, 471.

434 INSTRUMENTAL ANALYSIS (4)

Prerequisites: 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)

Prerequisite 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.

444 TECHNIQUES OF INORGANIC SYNTHESIS (3)

Prerequisites: Chem 333, 355, Chem 441 prerequisite or concurrent. Introduction to modern research techniques in inorganic chemistry using experimental procedures such as vacuum line synthesis, reactions in non-aqueous media, inert atmosphere manipulations and high pressure synthesis.

454 QUALITATIVE ORGANIC ANALYSIS (3)

Prerequisites: Chem 123, 353 and 355. Identification and characterization of organic compounds by chemical and spectroscopic methods.

455 ADVANCED ORGANIC SYNTHESIS (3)

Prerequisites: Chem 353 and 355. A laboratory course involving advanced techniques of organic synthesis.

461, 462, 463 PHYSICAL CHEMISTRY (4, 4, 3)

Prerequisites: one year of college physics, Math 222, 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)

Prerequisites: Chem 333 and 461, 462, 463; Chem 464 and 465 may be taken concurrently with Chem 462 and 463 respectively. Experiments designed to illustrate some concepts and techniques of physical chemistry; also formal report writing.

471, 472 INTRODUCTORY BIOCHEMISTRY (3, 3)

Prerequisites: Chem 123, 353 or concurrent and Biol 101 or 120. Chem 471 prerequisite to Chem 472. Chemistry of carbohydrates, proteins, nucleic acids, and lipids; intermediary metabolism of these substances; reaction mechanisms leading to biosynthesis of various compounds of biological importance.

473 INTRODUCTORY BIOCHEMISTRY LABORATORY (2)

Prerequisites: Chem 123, 354 and Chem 472 or concurrent. Analysis of carbohydrates, amino acids, proteins, lipids, and nucleic acids by means of current techniques: isolation and purification of enzymes and measurement of enzyme kinetics.

482 NUCLEAR CHEMISTRY (3)

Prerequisites: Chem 122 and Physics 332. Theoretical and applied nuclear and radio-chemistry.

483 NUCLEONICS LABORATORY (2)

Prerequisite: Chem 482 or concurrent. Experimental techniques of nuclear chemistry.

496a,b,c HONORS TUTORIAL (2-5 ea)

498 RESEARCH PROJECT IN CHEMISTRY (6; 3 in each of two successive quarters)

Prerequisite: permission of instructor. Investigation of a problem in chemistry under departmental sponsorship and supervision. The project must extend over a minimum of two quarters with credit granted after the presentation of an oral report at a seminar and submission of an acceptable written report. Satisfactory/Unsatisfactory grading used in this course.

510 SPECIAL TOPICS (1-3)

Prerequisite: permission of instructor. Specialized lectures on a conference basis for a particular area of interest.

511 ADVANCED LABORATORY METHODS (1-3)

Prerequisite: Chem 463. Specialized laboratory on a conference basis for a particular area of interest. May be repeated for credit.

Chemistry

- 531 SPECIAL TOPICS IN ANALYTICAL CHEMISTRY (3)
Prerequisites: Chem 434 and 463. Special methods of separation; acid-base relationships in nonaqueous 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)
Prerequisites: Chem 441 and 463 or permission of instructor. Crystal field, ligand field, and molecular orbital approaches to the bonding in inorganic compounds; electronic and vibrational spectra, magnetic behavior, stereochemical ligand arrangement of inorganic complexes.
- 551 PHYSICAL ORGANIC CHEMISTRY (3)
Prerequisites: Chem 353 and 463 or permission. Modern concepts of physical organic chemistry and their use in the elucidation of reaction mechanism, relation of structure to chemical reactivity.
- 552 CHEMISTRY IN NATURAL PRODUCTS (3)
Prerequisite: Chem 353 or permission. Isolation, structure, synthesis, biosynthesis and photochemistry of selected classes of natural products.
- 553 ORGANIC REACTIONS (3)
Prerequisite: Chem 353 or permission. Organic chemical reactions as applied to problems in organic synthesis.
- 561 ADVANCED PHYSICAL CHEMISTRY (3)
Prerequisite: Chem 463 (equivalent or concurrent) and Math 222. Statistical treatment of thermodynamics and principles of chemical kinetics.
- 562 THEORETICAL CHEMISTRY (3)
Prerequisites: Chem 463 and Math 222. Molecular orbital theory and its application in bonding of complex molecules.
- 563 MOLECULAR SPECTROSCOPY (3)
Prerequisites: Chem 463 and Math 222. Principles of modern spectroscopy.
- 571 GENERAL BIOLOGICAL CHEMISTRY (3)
Prerequisites: Biol 101 and Chem 353 and 363 or 463. The structures and functions of cells and tissues, chemical and physico-chemical basis of structures of amino acids, proteins, nucleic acids, carbohydrates and other biologically important compounds; general metabolism of carbohydrates, lipids, and proteins.
- 572 CHEMISTRY OF BIOLOGICAL PROCESSES (3)
Prerequisite: Chem 571. Biosynthesis and chemical pathways of metabolism of amino acids, proteins, nucleic acids, lipids, vitamins, and porphyrins; mechanism of biochemical reactions.
- 573 ENZYME CHEMISTRY (3)
Prerequisites: Chem 413 or 463 and Chem 471 or 571. Preparation and measurement of activities of enzymes; mechanism of enzyme reactions; properties of individual enzymes and coenzymes.
- 574 PHYSICAL BIOCHEMISTRY (3)
Prerequisites: Chem 413 or 463 and 471 or 571, or permission of instructor. Quantitative methods applicable to the study of macromolecules, particularly in systems of biological interest.
- 581 ADVANCED NUCLEONICS (3)
Prerequisites: Chem 482 or Physics 382. Advanced techniques of nuclear chemistry and nuclear physics; nuclear reaction, nuclear fission and involved multi-particle detection and scattering experiments.
- 695 SEMINAR (1)
Presentation of contemporary subjects in chemistry. Satisfactory/Unsatisfactory grading used in this course.
- 696 INTERNSHIP IN CHEMISTRY IN THE COMMUNITY COLLEGE (12)
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 only.
- 698 RESEARCH (3)
Research in chemistry under faculty direction terminating in a master's thesis. Satisfactory/Unsatisfactory grading used in this course.





ECONOMICS / BUSINESS

College of Arts and Sciences | Western Washington State College



Economics & Business

The Department of Economics and Business offers majors in accounting, business administration, economics, and business education at the baccalaureate level. In addition, it offers the master's degree in economics and the Master of Education degree in business education.

ACCOUNTING

Accounting is considered by many as the most important tool of management. A knowledge of accounting is necessary to understand the operation and financial condition of any complex institution--business or government, profit-seeking or non-profit. An understanding of accounting will aid the student in his study of economics and management.

A student majoring in accounting takes the year of introductory accounting required of a business administration major. In this series he studies the fundamental principles of accounting theory and practice as it applies to corporations, partnerships and proprietorships. Subsequently, he will take additional work in intermediate and advanced theory and practice, cost accounting and auditing. The student who wishes to prepare for the Certified Public Accountant (CPA) examination should take additional course work during his junior and senior year, he can take the examination during the last quarter of his senior year.

The accounting major can expect to find employment in one of three areas: private business, public accounting practice, or governmental work. A person entering the accounting department of a private business will typically enter as a staff accountant and may expect to work into such positions as cost accountant, tax accountant, treasurer, auditor, budget officer, business manager or controller. The certified public accountant offers his 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. The government also offers many opportunities for employment as general accountants, cost analysts, auditors, and in particular, as income tax specialists with the Internal Revenue Service.

The prospective accountant is one who likes to analyze business problems through the use of financial and other records. Writing skills are essential. The accountant should also have a knowledge of business law, economics, management, finance, mathematics and statistics.

Accountancy offers opportunity for employment for both men and women. Salaries for capable people are above average, and promotions may be either to better accounting positions or to executive positions.

Western Washington State College offers a complete program of courses in accounting taught by instructors who have the CPA certificate. No specific high school courses are required for entrance into the program other than those required generally for admission to Western. It is recommended that students take four years of English and at least three, preferably four, years of mathematics in high school. Students well grounded in these two subjects usually have little difficulty doing satisfactory college-level work.

BUSINESS ADMINISTRATION

Management is normally the key element in business operation. Management provides a wide range of challenging and rewarding career opportunities in both private and public sectors. The business administration curriculum has been created primarily to assist students who wish to prepare for management careers.

The curriculum for students majoring in business administration reflects standards set forth by the American Assembly of Collegiate Schools of Business. Required coursework provides opportunities for students to develop: (1) their knowledge of the economic and social environments within which business functions; (2) their knowledge of the major functional areas of business; and (3) their perceptual and analytical skills important to management decision making.

Business administration is primarily a junior and senior level curriculum. Students devote most of their freshman and sophomore years to acquiring background in the liberal arts and sciences. Oral and written communication skills deserve special attention. Introductory accounting, business law, introductory economics and

business-oriented mathematics courses are also normally completed during the freshman and sophomore years.

The amount of specified coursework has been limited to allow students time to pursue electives according to individual interests and abilities. A carefully selected group of elective courses which complements degree requirements should increase career opportunities. Advising materials are available and faculty will assist students in designing their programs.

Students majoring in other fields are encouraged to pursue elective coursework or to minor in business administration.

The department sponsors one of the largest and most active student chapters of the Pacific Northwest Personnel Management Association. Members include majors in business administration, accounting, economics, and other related fields. Activities include guest speakers, field trips, internships and community service projects.

ECONOMICS

Economics is one of the crucial and exciting fields among the social sciences. Its most challenging task 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, we can say that economics is the study of one of the fundamental aspects and determining forces of human life. Today, more than ever, the problems agitating our 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 that economists devote most of their analytical skills to are the processes of production, distribution and consumption of commodities 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 important? 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 analysis and tools of the economist convert these issues to more than hot air. The study of economics produces the educated modern citizen as well as the trained professional who can intelligently understand and cope with these problems.

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 business institutions, in labor unions, and in business firms.

The economist's tools consist particularly of an exposure to economic ideas and analysis, of statistical methods, and of computer techniques. While many employment opportunities are available to the college graduate, the person who wishes to pursue a career as a professional economist should plan to do some graduate study.

Economics & Business

The economics program provides two options under the Bachelor of Arts degree. Option I requires a minor and is designed to provide a liberal arts degree with individualized coursework under advisement. Option II is designed to provide the student not only with a theoretical and substantive background in economics, but also includes the appropriate quantitative skills. With the latter option, graduates have found employment at various levels in public and private organizations; government, business, and industry. It also provides excellent preparation for continued study at the graduate level. Students must consult with an adviser prior to the selection of Option I or Option II as their major program.

BUSINESS EDUCATION

The business education program at Western is concerned with the development of programs in several areas.

First, the teacher education program has the responsibility for the preparation of competent teachers in business education for secondary and post-secondary schools. This program leads to the bachelor of arts in education degree.

Second, the office administration program prepares students for office administration and management positions in business, industry and government. The bachelor of science degree is awarded upon successful completion of the program.

Business Teacher Education

There is a demand for persons with highly developed skills in business education. Secondary school teachers in this area are expected to be competent in several teaching areas including: accounting, basic business, office procedures, typewriting, shorthand and transcription. This indicates the necessity for major-field breadth.

Western aims to prepare the "all around" business teacher with a strong background in business administration and economics in addition to the work in business education.

The business education program of studies at Western consists of a major in business education and a minor in economics and business administration. The major

consists of a minimum of 50 hours of course work. Students are encouraged to seek departmental advisement early in their program to avoid later scheduling difficulties. The four professional courses—business education in the secondary school, methods of teaching typewriting, methods of teaching shorthand and transcription, and methods of teaching bookkeeping and basic business subjects—must be completed prior to student teaching.

The 25-hour minor that accompanies the business education major includes two required courses in accounting, one in business law, and electives chosen from an approved selection.

Placement of transfer students in sequential courses will be determined by the amount of work previously completed in that skill area.

Many schools now require vocationally certified teachers for special programs in their districts. Prospective teachers in business education should be aware of the requirements for vocational certification and should begin work toward fulfilling them prior to graduation.

A Master of Education degree program in business education is also available at Western.

Office Administration

The office administration program includes a minimum of 107 hours from the areas of business education, accounting, business administration, economics, and computer science, in addition to the general college requirements. Several options are available to the student in this concentration dependent upon the student's interest. These are to be selected under departmental advisement.

ECONOMICS AND BUSINESS FACULTY

- HOWARD E. MITCHELL (1955) Chairman.
Professor of Economics. BA, Whitworth College; MA, PhD, University of Washington.
- PAUL J. ASLANIAN (1971) Associate Professor of Accounting.
BA, MBA, University of Washington; CPA, State of Washington.
- J. KEVIN DOWNES (1974) Lecturer in Business Administration.
BA, University of Massachusetts; JD, Georgetown Law School.

- J. KAYE FAULKNER (1962) Associate Professor of Economics. BS, PhD, University of Utah.
- BERNARD H. FRERICHS (1970) Assistant Professor of Economics. BA, St. Benedict's College; MA, St. Louis University; MA, PhD, Washington State University.
- BYRON E. HAGLUND (1956) Associate Professor of Accounting. BBA, MA, University of Minnesota; CPA, Washington, D.C., State of Washington.
- K. PETER HARDER (1970) Associate Professor of Economics. BA, University of Puget Sound; MA, PhD, University of Nebraska.
- R. GORDON HARRISON (1973) Lecturer in Business Administration. BD, Garrett Theological Seminary; JD, Harvard Law School.
- RICHARD C. McALLISTER (1961) Assistant Professor of Accounting. BA, MA, University of Washington; CPA, State of Washington.
- ERWIN S. MAYER (1953) Professor of Economics. AB, Hunter College; MA, PhD, University of Washington.
- MICHAEL K. MISCHAIKOW (1964) Professor of Economics. BA, School of Commerce and Finance, Bulgaria; MBA, Hochschule f. Welthandel, Austria; MA, PhD, Indiana University.
- JONATHAN S. MONAT (1972) Assistant Professor of Business Administration. BS, University of California, Los Angeles; MS, San Diego State College; PhD, University of Minnesota.
- JOHN S. MOORE (1970) Associate Professor of Business Administration. BS, University of North Dakota; MS Bus, JD Law, University of Colorado; CPA, State of Colorado.
- EUGENE OWENS (1975) Associate Professor of Business Administration. BA, University of Arizona; MS, Purdue University; MS, George Washington University; PhD, University of California, Los Angeles.
- ROBERT T. PATTON (1970) Associate Professor of Business Administration. BSME, University of Michigan; MBA, University of Minnesota; PhD, University of Washington.
- LOIS E. PETERSEN (1974) Lecturer in Business Education. BA, EdM, Oregon State University.
- FARROKH SAFAVI (1969) Associate Professor of Business Administration. BA in Journalism, BS in Economics, MBA, University of Teheran; MBA, DBA, University of Southern California (Los Angeles).
- WILLIAM M. SAILORS (1974) Assistant Professor of Accounting. MBA, MS Engr, University of Southern California; BSME, University of Illinois; CPA, States of Washington and California.
- JOHN M. SWINT (1975) Assistant Professor of Economics. BA, California State University, Humboldt; MA, Rice University; PhD, Rice University.
- TOMMY R. THOMSON (1969) Lecturer in Accounting. AA, Menlo College; BS, Menlo School of Business Administration; CPA.
- HUBERT N. THORESON (1971) Associate Professor of Business Education. BS, State College (North Dakota); MEd, EdD, University of North Dakota.
- ADA G. WALTER (1961) Assistant Professor of Business Education. BS, Winthrop College; MBA, University of Denver.

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—Accounting 108 credits

- Acctg 251, 252, 350, 351, 352, 353, 354, 356, 455, 461, 462
- BA 301, 302, 311, 330, 375, 495
- BA 271 and 370, or 370 and 371
- Econ 201, 202, 306, 311
- Math 250, 251, 252

Acctg 350 may be waived for accounting majors in exceptional cases by written approval of the department.

Students who plan to make a professional career in public accounting should take additional accounting and business law courses under departmental advisement.

Major--Business Administration 93 credits

- Acctg 251, 252, 350
- BA 271, 301, 302, 303, 308, 311, 322, 330, 375, 495
- Econ 201, 202, 306, 311
- Math 250, 251, 252
- Ten credits in upper-division business administration elective courses under advisement

Students should consider improving their communication skills by enrolling in English 401 (3), business and technical report writing, and Speech 488 (3) business and professional speech.

Major—Economics 85-90 credits

Basic Core

- Econ 201, 202, 301, 302, 403
- Option I or Option II

Economics & Business

Option I

- 43 elective credits in economics must be taken under advisement. Up to 14 credits in such courses as Math 250, 251, or 252 may be included in these elective hours
- A minor in an area to be chosen by the student

This program is intended to serve the needs of those students whose interest in economics is more in keeping with the liberal arts tradition. *It must be accompanied by a minor*, the choice of which is left to the student.

Option II

- Econ 307, 407
- One course from Econ 381 (or Hist 360), Econ 385
- One course from Econ 311, 401
- Math 250, 251, 252
- BA 375
- Geog 207
- Choose one of the following: (a) Acctg 251, 252, or (b) 8 credits from mathematics or computer science (other than Math 100, 121, 122, 151, 250, 251, 252) or (c) 8 credits from philosophy (other than Phil 111)
- 20 elective credits in economics under advisement, not otherwise required

This program is intended to serve the needs of those students who intend to pursue further study in economics or who are seeking professional preparation in economics.

BACHELOR OF SCIENCE

Major--Office Administration 107-109 credits

- Bus Ed 116*, 117 or 215, 120*, 121*, 122, 222 (optional), 223, 224, 241, 243, 301, 310, 412
- Acctg 251, 252
- Bus Adm 301, 303, 308 (or Econ 381), 322, 330
- Econ 201, 202, 311, 325 or 425, 442
- Computer Science 101
- Options (under departmental advisement) include 16 credits from (a) Computer Science 110, 124, 125; (b) Accounting 350, 351, 352, 353; (c) Economics 425
- Electives under departmental advisement

*Courses that may be waived if student demonstrates acceptable proficiency in that area.

Minor--Accounting 25 credits

- Acctg 251, 252, 350, 352, 353
- Additional credits in accounting under departmental advisement

Minor--Business Administration 30 credits

- Acctg 251, 252; BA 301, 303; Econ 201 or 202
- Additional business administration courses under departmental advisement of which at least four credits must be at the upper-division level (BA 271 recommended)

Minor--Business Education 25 credits

- Courses to be selected under departmental advisement

Minor--Economics 25 credits

- Economics 201, 202
- Additional courses selected under departmental advisement, at least 10 credits must be at upper division level

Combined Major- Economics and Mathematics 100 credits

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

- Economics 201, 202, 301, 302, 311
- Acctg 251, 252, 350
- Twelve upper division credits in economics and business administration selected under departmental advisement
- Economics 381 (or History 360)
- Math 121, 122, 201, 202, 222, 223, 241 (Math 301 may be substituted for 201, 202)
- Math 341 and 342; or 441, 442, 443
- Math 201 may be taken concurrently with Math 222; Math 202 may be taken concurrently with 223
- Computer Science 110 or 210
- Eight credits under advisement in 400 level mathematics courses

BACHELOR OF ARTS IN EDUCATION

Major—Business Education Secondary 50-56 credits

- Economics 201, BA 101
- Business Education 116*, 117 or 215, 120*, 121*, 122, 223, 241 or 242, 243, 301, 319, 421, 422, 423, 450
- Electives under departmental advisement

This major must be accompanied by the Economics and Business Administration minor which follows. The professional education sequence is also required.

**Courses may be waived if student demonstrates acceptable proficiency in that area.*

Minor—Economics and Business Administration
25 credits

(To accompany preceding Business Education major.)

- Acctg 251, 252
- BA 271
- Thirteen credits from Economics 202, 311, 325, BA 301, 303, 308, 322, 330; Acctg 350

Minor—Business Education 25 credits

- Business Education 319, 421, 422, 423 (optional)
- 14 credits under departmental advisement

Minor—Economics 23-25 credits

(Alternate minor for other than Business Education majors for teaching competency recommendation.)

- Economics 201, 202
- Acctg 251 or BA 101
- Ten credits in upper division courses selected under prior advisement of the department

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, an economics major who wishes to graduate "with honors" must complete Economics 491h; a

reading knowledge of a foreign language or two years of mathematics; must attain a grade average of 3.5 in upper division economics courses; must pass a comprehensive examination in economics.

GRADUATE STUDY

For concentrations in economics and business education leading to the Master of Arts or the Master of Education degrees, see the *Graduate Bulletin*.

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.

COURSES IN ACCOUNTING

- 251 PRINCIPLES OF ACCOUNTING (4)
Introduction to the theory and practice of accounting, including financial statements.
- 252 PRINCIPLES OF ACCOUNTING (4)
Prerequisite: Acctg 251. Emphasis on partnership and corporation accounting.
- 350 ACCOUNTING ANALYSIS AND CONTROL (5)
Prerequisite: Acctg 252. Theory and use of accounting data in management control and the decision-making process; the flow of funds statement; analysis of accounting statements as a guide to management and investors; survey of cost accounting and budgeting.
- 351 COST ACCOUNTING (5)
Prerequisite: Acctg 350. Historical factory job and process cost systems, distribution cost systems, fixed and flexible budgeting and other controls over business operations available from accounting records.
- 352 INTERMEDIATE ACCOUNTING THEORY AND PRACTICE I (5)
Prerequisite: Acctg 350 or 351. The financial reporting process; income statement; statement of financial position; and statement of retained earnings. Particular attention is focused upon the accountant's measurement of business income, inventory costing techniques, and fixed asset accounting.

Economics & Business

- 353 INTERMEDIATE ACCOUNTING THEORY AND PRACTICE II (5)
Prerequisite: Acctg 352. Continuation of Acctg 352. The primary emphasis of this course is the accounting for corporate equity capital. In addition, the accounting for debt capital notes, and short term liabilities will be analyzed.
- 354 INCOME TAXATION I (4)
Prerequisite: Acctg 251. General income tax requirements; special problems relating to individual tax returns.
- 356 FUND AND GOVERNMENTAL ACCOUNTING (3)
Prerequisite: Acctg 252. Fund and budgetary accounting as applied to municipalities, governmental units, and non-profit organizations.
- 400 SPECIAL PROBLEMS IN ACCOUNTING (1-5)
Prerequisite: 20 credits in accounting and prior consultation with instructor.
- 453 SCHOOL AND FINANCIAL ACCOUNTING CONCEPTS (4)
A non-technical development of concepts that underlie school and financial accounting, an evaluation of inherent limitations, and interpretation of accounting statements. Not open to students with a major in economics or business.
- 454 INCOME TAXATION II (4)
Prerequisites: Acctg 252, 354. Special problems of partnerships, corporations, and trusts; introduction to tax research.
- 455 ADVANCED ACCOUNTING THEORY AND PRACTICE I (3)
Prerequisite: Acctg 353. Major areas emphasized are: accounting for business firms organized as partnerships, and introduction to accounting for business combinations—mergers, acquisitions, and consolidations.
- 456 ADVANCED ACCOUNTING THEORY AND PRACTICE II (3)
Prerequisite: Acctg 455. Major emphasis is special in-depth analysis of consolidated financial statements of corporations and accounting for fiduciaries.
- 459 ADVANCED ACCOUNTING THEORY (3)
Prerequisite: Acctg 353. Theory of accounting related to income measurement, assets, and equities; uses and limitations of general purpose financial statements.
- 461 AUDITING THEORY AND PRINCIPLES (4)
Prerequisite: Acctg 353. Theory and principles of auditing the accounting records. Generally accepted auditing standards for the independent auditor are studied.
- 462 AUDITING PRACTICE (4)
Prerequisite: Acctg 461. Application of auditing theory and principles using case simulations. The auditing of computer-based accounting systems and computer-augmented audit aids will be utilized.
- 463 OPERATIONAL AUDITING (3)
Prerequisite: Acctg 461. The internal auditor's evaluation of the effectiveness of the management information and control systems. This management tool appraises the effectiveness of financial and administrative systems, divisional budgets, marketing effectiveness, personnel policies and managerial performance.
- 464 ADVANCED TOPICS IN TAXATION (3)
Prerequisites: Acctg 353, 354, 454. This course will deal with more 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)
Prerequisites: Acctg 353, 461, BA 370. A review of selected areas of law, auditing, accounting theory, and accounting practice for students preparing to take the CPA examination. Grading will be S/U only.

COURSES IN BUSINESS ADMINISTRATION

- 101 INTRODUCTION TO BUSINESS (4)
Business organization, ownership, management, location, staffing, marketing and financing. An introductory survey. Not required for accounting or business administration majors.
- 271 LAW AND BUSINESS ENVIRONMENT (4)
Historical development of legal institutions, the judicial process, and impact of the law upon individual and business decision making.
- Business Administration majors should have completed Acctg 252, Econ 201, 202, Math 250, 251, 252, or be completing them by concurrent enrollment before enrolling in upper division Business Administration courses, with the exception of Acctg 350.*
- 301 INTRODUCTION TO MANAGEMENT (3)
Analysis of the process of management; planning, organization, leadership, control, communication, and decision making. A study of concepts of power, authority and influence. An examination of the role of philosophy and values in organizations.
- 302 OPERATIONS MANAGEMENT (4)
Prerequisites: Acctg 350, BA 301, 303, 375. Fundamentals of operations management, including tools for analyzing, designing and controlling operating systems.
- 303 HUMAN RELATIONS IN ORGANIZATIONS (3)
Prerequisite: BA 301. Examination of individual and group behavior in organizations. Case problems and experiential learning exercises are utilized.

- 308 BUSINESS HISTORY OF THE UNITED STATES (3)
Prerequisites: Econ 201 and 202, or Gen 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.
- 311 CORPORATE FINANCE (5)
Prerequisite: Acctg 350, BA 301, 375. Structure and operation of financial management; problems of internal financial analysis, forecasting, planning and control, capital supply and budgeting; dividend policy; mergers, acquisitions.
- 322 PERSONNEL ADMINISTRATION (4)
Prerequisite: BA 301. Recruitment, selection, utilization and development of human resources, with emphasis on employee-management relations and relevant behavioral science research.
- 330 PRINCIPLES OF MARKETING (5)
Prerequisite: BA 301. Institutions, functions, problems and policies in the distribution of industrial and consumer goods; pricing, costs, and governmental regulations.
- 331 ADVERTISING (4)
Prerequisite: 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.
- 332 SALES MANAGEMENT (4)
Prerequisite: BA 330. Nature of personal selling and retailing; emphasis on management of sales personnel and the merchandising effort.
- 370 LAW OF COMMERCIAL TRANSACTIONS I (4)
Prerequisite: Acctg 251. Legal principles underlying the law of contracts, personal property and secured transactions.
- 371 LAW OF COMMERCIAL TRANSACTIONS II (4)
Prerequisite: BA 370. Legal principles underlying the law of agency, negotiable instruments, sales, partnerships, and corporations.
- 375 QUANTITATIVE METHODS I (4)
Prerequisites: Econ 202, Math 250, 251, 252. Statistical, linear, and other quantitative methods used in research, analysis and decision making: critical path, optimal path, analysis of variance, queuing, regressions, correlation, forecasting, time series, production, and inventory decisions.
- 376 QUANTITATIVE METHODS II (3)
Prerequisites: Econ 202, Math 250, 251, 252. (Note: BA 375 not required for BA 376.) Statistical, linear, and other quantitative methods used in research, analysis, and decision making: inference-estimation and hypothesis testing, linear programming, dual, non-linear and dynamic programming, index numbers, and Bayesian decision theory.
- 400 SPECIAL PROBLEMS IN BUSINESS ADMINISTRATION (1-5)
Prerequisite: 20 credits in business administration and economics and prior consultation with instructor.
- 401 ORGANIZATIONAL BEHAVIOR (4)
Prerequisite: BA 301, 303. Analysis of individual and group behavior in the organizational setting with special emphasis on assessing and improving organizational effectiveness.
- 402 SEMINAR IN ORGANIZATIONAL THEORY (4)
Prerequisite: BA 301. A seminar devoted to the analysis of current research: measuring organizational effectiveness, planning, leadership, patterns, and current problems.
- 403 MANAGEMENT INFORMATION SYSTEMS (3)
Prerequisites: BA 301, CS 110. Analysis of the decision process and the information requirements of decision-makers. Surveys the application of computers to contemporary business education, and governmental information systems.
- 407 BUSINESS LOGISTICS (4)
Prerequisites: BA 302, 330. Study of the total flow of materials through an organization, from acquisition of raw materials to delivery of a finished product to the ultimate user.
- 408 THE ROLE OF BUSINESS IN AMERICAN SOCIETY (3)
Prerequisite: BA 308. Development of American capitalism and its legal, philosophical, and ethical foundations.
- 411 SMALL BUSINESS FINANCE (4)
Prerequisite: BA 311. 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.
- 412 INVESTMENT (4)
Prerequisite: BA 311. Security investment, analysis and forecasting of security markets; industry studies, portfolio construction, security selection; corporate government and revenue bonds; efficient portfolio management for different classes of institutions and individuals.
- 413 CAPITAL BUDGETING (4)
Prerequisite: BA 311. Techniques of assessing the desirability of capital investment options are presented along with other factors relating to the investment decision. Theory is balanced with case studies to provide the student with practical knowledge.
- 414 FINANCIAL INSTITUTIONS AND MARKETS (4)
Prerequisite: BA 311 or Econ 311. Analysis of the 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.

Economics & Business

- 415 BUSINESS FINANCIAL POLICY (4)
Prerequisite: BA 311. Case study analysis is used to provide an understanding of major financial policy issues such as capital structure determinations, use of surplus earnings and approaches to short term financing.
- 416 RISK AND INSURANCE (3)
Prerequisite: senior standing. Analysis of personal and organizational risk and the means by which such risk may be minimized, transferred or otherwise managed to avoid serious financial loss.
- 417 SPECIAL INTEREST SEMINARS IN BUSINESS ADMINISTRATION
417b Financial Management (4)
Prerequisite: BA 311.
- 421 PROBLEMS IN PERSONNEL ADMINISTRATION (3)
Not open to students who have taken BA 322 or 422. Problems of wage and salary administration, employee rating, and employee selection. Summer only.
- 422 COMPENSATION ADMINISTRATION AND THEORY (4)
Prerequisites: BA 301, 322. Analysis and examination of theories, models, and procedures required to develop compensation and reward systems in organizations. Economic, psychological, and social elements of compensation will be considered. Determination of compensation structures and differentials, forms of compensation and reward, compensation levels will be examined.
- 425 INDUSTRIAL RELATIONS ADMINISTRATION (4)
Prerequisite: BA 322. Cases, lectures, and collective bargaining simulation are used to develop administrative skill in dealing with union-management relations. Subjects covered are: nature of unions, institutional forces conditioning collective bargaining practices, and administrative practices dealing with unions.
- 426 CURRENT ISSUES IN PERSONNEL AND INDUSTRIAL RELATIONS (4)
Prerequisite: BA 322. Seminar dealing with the analysis of current problems in policy and practice used in personnel and industrial relations administration.
- 427 SYSTEMS OF DISPUTE SETTLEMENT (4)
Prerequisite: BA 322 or Econ 325. An investigation into public and private dispute settlement systems, particularly in labor relations, commerce, and public issues. Emphasis will be on quasi-judicial and nonjudicial systems, and on nonjudicial methods including arbitration, fact-finding, and mediation.
- 428 SELECTION AND TRAINING IN BUSINESS AND INDUSTRY (5)
Prerequisite: BA 322. Examines organizational objectives as related to selecting and training human resources in business and industry. Receiving emphasis are selection and training models; selection, training, and assessment methods; criterion problems and evaluation methodologies.
- 430 MARKETING RESEARCH (5)
Prerequisites: BA 330, 375. 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.
- 433 MARKETING MANAGEMENT (4)
Prerequisites: BA 330, 375. Study of the objectives, strategies and organization of marketing departments in large and medium-sized firms. Emphasis upon operating control and evaluation.
- 471 GOVERNMENT REGULATION OF BUSINESS OPERATIONS (3)
Prerequisite: BA 271 or 370. Analysis of the impact of federal, state and local government regulation upon business operation.
- 495 BUSINESS POLICY (4)
Prerequisites: 20 upper division business administration credits, including BA 302, 311, 330. (To be taken in student's final undergraduate year.) 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. The course is intended to integrate and build upon work in the core curriculum.

COURSES IN ECONOMICS

- 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.
- 201 PRINCIPLES OF ECONOMICS I. INTRODUCTION TO MACRO-ECONOMICS (5)
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.
- 202 PRINCIPLES OF ECONOMICS II. INTRODUCTION TO MICRO-ECONOMICS (4)
Analysis of the operation and decision making of economic units in a market economy; various competitive conditions; supply, demand, resource allocation, shortages, controls, social costs, and social benefits.
- 301 NATIONAL INCOME ANALYSIS (4)
Prerequisites: Econ 201 or Gen St 200 and permission of instructor. Determinants of the level of income, employment and output in the economic system.
- 302 INTERMEDIATE ECONOMIC THEORY (4)
Prerequisites: Econ 202; Math 251. The theory of price under conditions of competition and monopolistic competition; relation of prices and costs, and functional distribution of income.

- 306 **MANAGERIAL ECONOMICS (4)**
Prerequisites: Econ 202, Acctg 350, BA 375. 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.
- 307 **ECONOMIC RESEARCH (3)**
Prerequisites: Econ 301, 302. Examines research methods and methodology used in economic and business research with emphasis on those tools needed to develop and complete research projects. S/U grading.
- 311 **MONEY AND BANKING (4)**
Prerequisites: Econ 201 or Gen St 200 and permission of instructor. 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)**
Prerequisites: Econ 201, 202. The economics of the labor market; development and functioning of labor unions and collective bargaining.
- 338 **ECONOMIC ANALYSIS AND INDUSTRIAL MANAGEMENT (5)**
Prerequisite: 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 departmental majors.
- 381 **AMERICAN ECONOMIC HISTORY (5)**
Prerequisites: Econ 201 and 202, or Gen St 200 and permission of instructor. 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)**
Prerequisites: Econ 201, 202. Economic analysis of environmental problems and of potential correctives. Pollution, resource depletion, and urban decay as failures of the economic system. Offered jointly with Huxley College.
- 385 **THE RISE OF CAPITALISM (4)**
Prerequisites: Econ 201 or 202, or Gen St 200 and permission of instructor. Evolution of economic institutions in Europe 800-1800; growth of capitalistic market societies.
- 388 **DISCRIMINATION AND RESOURCE UTILIZATION (4)**
Prerequisites: Econ 201 and 202, or Gen St 200. The effects of racial and other forms of discrimination on resource utilization; departures from market norms; policies to alleviate consequences of discrimination.
- 396a,b,c **HONORS TUTORIAL (2-5 ea)**
- 400 **SPECIAL PROBLEMS IN ECONOMICS (1-5)**
Prerequisites: 20 credits in economics and business administration and prior consultation with instructor.
- 401 **THEORY AND PRACTICE OF ECONOMIC POLICY (4)**
Prerequisite: Econ 301. An examination and evaluation of mechanisms, institutions and indicators of national economic policy, i.e. monetary, fiscal and alternative policies, as well as the theory upon which they are based.
- 402 **WELFARE ECONOMICS (4)**
Prerequisite: Econ 302. Theories of individual and social welfare and criteria of an increase or decrease in social welfare; implications for social welfare of competition, monopoly, the allocation of resources and the distribution of wealth, and the welfare implications of economic growth.
- 403 **THE HISTORY OF ECONOMIC THOUGHT (5)**
Prerequisites: Econ 201 and 202 or Gen St 200. Development of economic thought with emphasis on period following Adam Smith.
- 407 **SENIOR SEMINAR (2)**
Prerequisites: Econ 307, BA 375. Research and presentation of an extended paper on an individually chosen topic with guidance given by instructor.
- 410 **PUBLIC EXPENDITURE AND TAXATION (5)**
Prerequisite: Econ 201. Examines 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)**
Prerequisites: Econ 301 and BA 375. Characteristics and major explanations of the prosperity-depression cycle in business, with major emphasis on forecasting.
- 415 **STATE AND LOCAL PUBLIC FINANCE PROBLEMS (4)**
Prerequisite: Econ 201. Problems and issues in the finance of state and local government services.
- 417 **SPECIAL INTEREST SEMINARS IN ECONOMICS**
- 417b **Comparative Industrialization: 19th Century (4)**
Prerequisite: Gen St 200, or Econ 385. Comparative industrialization in the 19th century. Analysis of the forces, patterns, and repercussions of industrialization in several major Western economies.
- 417c **Current Economic Issues (3)**
Prerequisite: Gen St 200 or Econ 201. Examination of current economic issues such as inflation, wage-price control, shortages, pollution, discrimination, and others. (Offered summer quarter only.)
- 425 **LABOR MOVEMENTS IN THE UNITED STATES (3)**
Prerequisite: Econ 201 or Gen St 200. The development of labor movements in the United States from 1800.
- 442 **GOVERNMENT AND BUSINESS (5)**
Prerequisite: Econ 202. Structure of firms and markets and interfirm and interindustry relations. Maintenance of competition by antitrust. Regulation of utilities, communication and transportation. Protective regulation of trade, investment, labor, natural resources and environmental quality.

Economics & Business

- 445 CURRENT TRENDS IN ECONOMICS
(May be taken for credit only once in two years.)
445a Trends in Economic Education (3)
Prerequisite: teaching experience in social studies.
- 461 INTERNATIONAL ECONOMICS (5)
Prerequisites: Econ 201 and 202 or Gen St 200 and permission of instructor. 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 AND ECONOMICS (4)
Prerequisite: Conference Course Permit. Offered by arrangement. 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)
Prerequisite: BA 375. Simple and multiple regression analysis, methods and problems of single equation and simultaneous equation estimation.
- 480 URBAN ECONOMICS (4)
Prerequisites: Econ 202, Geog 207. Economic analysis of urban problems, especially land use, transportation, municipal finance, poverty, and housing. Offered jointly with Huxley College.
- 482 REGIONAL ECONOMICS (4)
Prerequisites: Econ 201 and Geog 207. Problems, resource endowment, and principal policy issues related to economic growth of a region.
- 483 RESOURCE ECONOMICS (4)
Prerequisite: Econ 202. Choosing among alternatives by comparing costs and benefits. Techniques of evaluation. Special application to water supply, resources, development, nuisance abatement, and recreation. Offered jointly with Huxley College.
- 485 COMPARATIVE ECONOMIC SYSTEMS (4)
Prerequisite: Econ 201 or Gen St 200. A comparative analysis of the major economic systems; a critical appraisal of underlying philosophies, structures, and individual performance.
- 486 ECONOMIC DEVELOPMENT (4)
Prerequisites: Econ 201 and 202. Causes and conditions characterizing the process of economic development. An evaluation of alternative approaches toward development policies.
- 491h HONORS SEMINAR (3)
496a,b,c HONORS TUTORIAL (2-5 ea)
- 500 READINGS IN ECONOMICS (2-4)
Prerequisite: written permission of instructor. To provide an opportunity for independent study in depth of any topic in the field mutually agreeable to the instructor and the student.
- 501 SEMINAR IN MACRO-ECONOMIC THEORY (4)
Prerequisite: written permission of instructor. Advanced macro-economic theory with emphasis on causes of economic instability and long-term changes.
- 502 SEMINAR IN ADVANCED ECONOMIC ANALYSIS (4)
Prerequisite: written permission of instructor. Detailed analysis of the market's role in determining resource allocation, production, prices and incomes; general equilibrium theories and dynamics.
- 503 SEMINAR IN HISTORY OF ECONOMIC THOUGHT (4)
Prerequisite: written permission of instructor. Critical method in the study of economic doctrines; classical political economy; orthodox tradition in the nineteenth century; its principal critics.
- 505 SEMINAR IN ECONOMIC HISTORY (4)
Prerequisite: written permission of instructor. Critical historical study of major economic institutions, their interdependence and contribution to modern society.
- 510 SEMINAR IN PUBLIC ECONOMICS (4)
Prerequisite: 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)
Prerequisite: written permission of instructor. The monetary and financial system; relation of economic theory to monetary policy and economic activity.
- 518 SEMINAR IN THE THEORIES OF BUSINESS BEHAVIOR (4)
Prerequisite: written permission of instructor. Evaluation of economic and other theories of the firm with primary emphasis on decision-making processes and responses of businessmen to changes in the environment.
- 525 SEMINAR IN LABOR ECONOMICS (4)
Prerequisite: written permission of instructor. Selected topics in the economics of labor markets and the process of collective bargaining.
- 553 SEMINAR IN ADMINISTRATIVE CONTROLS (4)
Prerequisite: written permission of instructor. Uses of accounting, statistics, and cybernetics by management in the exercise of planning and controlling functions.
- 561 SEMINAR IN INTERNATIONAL ECONOMICS (4)
Prerequisite: written permission of instructor. Detailed analysis of the pure and monetary theories of international trade and their relevance to the modern world.
- 575 SEMINAR IN QUANTITATIVE ANALYSIS (4)
Prerequisite: written permission of instructor. Nature, meaning, and application of quantitative techniques used in economic and business research.

- 582 SEMINAR IN REGIONAL ECONOMICS (4)
Prerequisite: written permission of instructor. Case studies in regional social accounting, growth and stability, intra- and inter-regional relations; concepts and criteria of regional planning.
- 698 SEMINAR IN RESEARCH AND WRITING (4)
Prerequisite: permission of instructor. The development and demonstration of economic research methods and methodology and the design of overall strategies of research, culminating in a research design in a selected research area.
- 699 THESIS (4-9)
Prerequisite: written permission of instructor.

COURSES IN BUSINESS EDUCATION

- 116 INTERMEDIATE TYPEWRITING (2)
Prerequisite: one year of high school typewriting or equivalent.
- 117 ADVANCED TYPEWRITING (2)
Prerequisite: Bus Ed 116 or equivalent, or advanced high school study in typewriting. Advanced work on rough drafts, tabulation, and business communications.
- 120 BEGINNING SHORTHAND (4)
Fundamentals of Gregg shorthand including development of skill in reading and writing from printed shorthand.
- 121 INTERMEDIATE SHORTHAND (4)
Prerequisite: Bus Ed 120 or equivalent. Continued development of skill in reading and writing more advanced forms of shorthand.
- 122 ADVANCED SHORTHAND I (4)
Prerequisite: Bus Ed 121 or equivalent. Principles of Gregg shorthand with intensive dictation on new matter; dictation and transcription of business correspondence.
- 150 ACCOUNTING FOR SECRETARIES (3)
Theory and practice of bookkeeping and accounting, with emphasis on both cash and accrual systems.
- 197b BEGINNING TYPEWRITING (2)
This course is designed for students with no previous instruction in typewriting. Objectives of this course include emphasis on proper techniques, speed development and accuracy in the preparation of typewritten materials. Typewriting for personal use will be a part of this course. (Offered only through Continuing Studies.)
- 201 BUSINESS CORRESPONDENCE (3)
Prerequisite: English 101 or equivalent. Development of skill in the use of correct English for business purposes.
- 215 BUSINESS TYPEWRITING (2)
Prerequisite: Bus Ed 117 or equivalent. Advanced course for development of proficiency in speed and control; business forms.
- 222 ADVANCED SHORTHAND II (4)
Prerequisite: Bus Ed 122 or equivalent, or two years of high school shorthand. Intensive dictation and transcription practice on business correspondence; development of a comprehensive business vocabulary.
- 223 SHORTHAND TRANSCRIPTION (3)
Prerequisite: Bus Ed 122 or equivalent, or two years of high school shorthand. Development of habits, attitudes, and transcription skills, with emphasis on mailable transcripts.
- 224 OFFICE PROCEDURES (3)
Prerequisite: 1 year of high school typewriting or equivalent. Development of skills and procedures for performing office duties.
- 241 BUSINESS MACHINES I (3)
Prerequisite: one year high school typewriting or equivalent. Operation of electronic, rotary and printing calculators, adding machines, transcribing and recording machines, and electric typewriters.
- 242 BUSINESS MACHINES II (3)
Prerequisite: Bus Ed 241 or equivalent. Advanced training in business application problems using electronic, rotary and printing calculators; further training in the use of transcribing and recording machines; introduction to data processing.
- 243 INTRODUCTION TO DATA PROCESSING (3)
Prerequisites: Bus Ed 117, 241. Introduction to modern business data processing 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)
Prerequisite: Eng 101 or the 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.
- 319 BUSINESS EDUCATION IN THE SECONDARY SCHOOL (3)
Prerequisite: junior standing. Curriculum planning with consideration of philosophy, scope, and objectives.
- 400 DIRECTED STUDY IN BUSINESS EDUCATION (2-3)
Prerequisites: senior standing and permission of instructor. Individual instruction.
- 412 OFFICE ADMINISTRATION AND MANAGEMENT (4)
Prerequisites: Bus Ed 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.

Economics & Business

- 421 METHODS OF TEACHING BOOKKEEPING AND BASIC BUSINESS SUBJECTS (4)
Prerequisites: Acctg 251, 252. Study of objectives, methods, materials and evaluation procedures for teaching in these areas.
- 422 METHODS OF TEACHING TYPEWRITING (4)
Prerequisites: 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)
Prerequisite: completion of advanced shorthand and departmental permission. Preparation for teaching shorthand and transcription with emphasis on methodologies, objectives, materials and equipment. Student teaching demonstrations will be a part of the course.
- 450 COORDINATING TECHNIQUES (3)
Prerequisite: Bus Ed 319 or permission of department. The course deals with objectives, content and techniques applicable to administration of work-experience programs in business education.
- 500 SPECIAL PROJECTS IN BUSINESS EDUCATION (2-3)
Supervised planning and development of practical creative projects in business education.
- 501 SPECIAL PROJECTS IN BUSINESS EDUCATION (2-3)
Supervised planning and development of practical creative projects in business education.
- 502 IMPROVEMENT OF INSTRUCTION IN SHORTHAND AND TRANSCRIPTION (3)
Prerequisite: permission of department. Evaluation of various methods of teaching shorthand and transcription with emphasis on research findings and their application to skill development. Summer only.
- 503 PRINCIPLES AND PRACTICES IN BUSINESS EDUCATION (3)
Prerequisites: graduate standing and teaching experience. Evaluation of philosophies and role of business education at secondary and post-secondary levels in terms of content and curricular considerations for business programs. Current trends will be analyzed. Summer only.
- 504 ORGANIZATION AND ADMINISTRATION OF VOCATIONAL PROGRAMS IN BUSINESS EDUCATION (3)
Prerequisite: undergraduate major in business education, or the equivalent. Principles of effective organization and administration of cooperative and other vocational programs, Philosophies, current practices, and trends. (Summer only.)
- 545 EVALUATION AND MEASUREMENT IN BUSINESS EDUCATION (3)
Prerequisites: graduate status and departmental permission. Principles of evaluation, programs and testing for specialized areas. Test construction for business courses—statistical interpretation of test results.
- 571 METHODS AND RESEARCH IN THE TEACHING OF TYPEWRITING (3)
Prerequisite: undergraduate major in business education. 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)
Prerequisite: completion of an undergraduate degree and/or permission of the department. Approaches to teaching bookkeeping with emphasis on critical evaluation of content materials, methods and media currently available. Current research in the area will be reviewed.
- 573 IMPROVEMENT OF INSTRUCTION IN THE BASIC BUSINESS SUBJECTS (3)
Prerequisite: undergraduate degree. A study of current trends and research in the methodology of teaching the basic business subjects. Consumer education issues will be an integral part of the course.
- 574 IMPROVEMENT OF INSTRUCTION IN THE FUNDAMENTALS OF DATA PROCESSING (3)
Prerequisite: business teaching experience. Data processing instruction in the secondary school curriculum including unit record and electronic data processing systems. The materials, equipment, terminology and methodology of teaching will be the primary course objective.
- 690 THESIS (6)
Prerequisite: approval of the student's graduate committee. Field project or a research study under direction of a faculty committee. The field project or thesis may be done off-campus between periods of residence work.



EDUCATION

Western Washington State College



Education

The College has a distinguished national reputation for the excellence of its teacher preparation programs. During 1972-73, in nationwide competition, it received two successive major awards from the American Association of Colleges for Teacher Education and another comparable honor from the National Education Association's Association of Classroom Teachers. In 1974 the College was honored with a national *Pacesetter Award* by the U.S. Office of Education. These awards were for the College's pioneering undergraduate program which integrates students' professional course work with immediate application of that course work in an off-campus residence center.

Both undergraduate and graduate preparation and research programs in education have received substantial federal grants. These grants in 1975 amount to more than \$425,000, including stipends for students. They have enabled students and faculty to pursue studies in a variety of community settings with children and adults representing diverse social, cultural and economic backgrounds.

EDUCATION FACULTY

- PAUL FORD (1970) Chairman. Professor. AB, Dartmouth College; MEd, EdD, Harvard 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. PhD, 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.
- ANN R. BURNETT (1972) Lecturer. BS, University of New Mexico; MEd, University of Arizona.
- LARRY L. BUSSE (1972) Associate Professor. BA, Washington State University; MEd, Central Washington State College; PhD, University of Washington.
- KATHERINE M. CARROLL (1958) Associate Professor. BS, Salem State College; EdM, EdD, Boston University.
- RICHARD J. L. COVINGTON (1970) Associate Professor of Education and Director of Resident Center. 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.
- HOWARD M. EVANS (1972) Associate Professor. BS, Eastern Oregon College; MA, EdD, University of Illinois.
- FLORA FENNIMORE (1969) Associate 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.
- ARNOLD M. GALLEGOS (1973) Professor of Education and Associate Dean for Teacher Education. BA, University of the Americas (Mexico City Campus); MA, Fresno State College; EdD, University of California, L.A.
- DONN D. GILBERT (1968) Associate Professor. BA, University of Arizona; MA, California State College at Los Angeles; EdD, University of California, Berkeley.
- 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, USC, Santa Barbara; MA, Brigham Young University; MA, PhD, Stanford University.
- HENRY W. JONES (1958) Assistant Professor. BS, North Dakota State University; MS, University of Wisconsin; EdD, University of California, Los Angeles.
- HALLDOR C. KARASON (1949) Associate Professor of Education and Philosophy. BA in Ed, Western Washington State College; MA, PhD, University of Washington.
- SAMUEL P. KELLY (1965) Professor of Education and Director for Center of Higher Education. BA, BA in Ed, MEd, Western Washington State College; PhD, University of Chicago.
- GEORGE S. LAMB (1965) Associate Professor. AB, Macalester College; MA, University of Washington; PhD, University of Minnesota.
- RAYMOND F. LATTA (1970) Professor. BSc, University of British Columbia; MEd, Western Washington State College; PhD, Florida State University.
- ROBERT A. McCracken (1963) Professor. BA, MA, PhD, Syracuse University.
- ARTHUR A. McELROY (1969) Associate Professor. BS, BEd, Washington State University; MEd, EdD, University of Oregon.
- HOWARD F. McGAW (1963) Professor of Library Science. BA, Vanderbilt University; MA, BS in LS, George Peabody College for Teachers; EdD, Teachers College, Columbia University.
- STEPHEN C. MARGARITIS (1963) Associate Professor. BA, University of Athens; MA, PhD, University of Southern California.
- 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.

- ELIZABETH S. MOORE (1970) Lecturer in Library Science. BA, Wichita State University; MLib, University of Washington.
- THEODORE A. MORK (1971) Associate Professor. BA, MEd, Western Washington State College; PhD, Syracuse University.
- ALDEN L. NICKELSON (1962) Associate Professor of Education and Biology. BS, MA, PhD, University of Washington.
- ROBERT H. PINNEY (1971) Associate Professor. BA, University of Washington; EdD, Stanford University.
- RAY S. ROMINE (1966) Associate Professor of Education and Associate Dean of Students. BS, Eastern Montana College; MEd, Colorado State University; PhD, University of Oregon.
- J. ALAN ROSS (1942) Professor of Education and Psychology; Dean of Graduate School. BA in Ed, Western Washington State College; MA, PhD, Yale University.
- LEONARD SAVITCH (1967) Associate Professor. BS, Pennsylvania State; MA, Teachers College, Columbia University; PhD, University of Washington.
- *DOROTHY S. SCHMEDINGHOFF (1971) Associate Professor. BS, Mt. Angel College; MEd, PhD, Washington State 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.
- RICHARD O. STARBIRD (1962) Professor. BA, Heidelberg College; MA, Columbia University; EdD, Teachers College, Columbia University.
- LARRY E. SWIFT (1970) Associate Professor. BA, MAT, Harvard; JD, University of Washington School of Law; CAS, EdD, Harvard.
- JOHN C. TOWNER (1972) Associate 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 of the College. 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.

*On Leave 1975-76

**On Leave Winter 1976

PREPARATION FOR TEACHING

Many departments of the College cooperate in teacher preparation. The departmental sections of this catalog describe academic major and minor concentrations offered throughout the College. Faculty members from various departments concerned with the preparation of school personnel are members of the Professional Education Faculty, chaired by the Associate Dean for Teacher 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 is responsible for developing and offering professional studies and for coordinating the elementary concentrations; details are outlined below.

The Teacher Curricula and Certification Council, established by the constitution of the College Senate, has jurisdiction over teacher education curricula, teacher certification programs and professional preparation programs proposed by certification consortia in which the College participates. The Associate Dean for Teacher Education chairs this council.

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 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 preparation.

Candidates for the provisional certificate must be citizens of the United States. Non-citizens may complete the requirements for the Bachelor of Arts in Education degree without a Washington teaching certificate, or those who are permanent residents intending to become citizens may obtain special permits from the Office of the State Superintendent of Public Instruction.

Education

Certification Patterns and the B.A. in Education

The B.A. in Education program at this College is designed to meet state requirements for the provisional certificate for all levels of the public schools. Teachers who complete these requirements also qualify 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 college 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. These variations are indicated with each program in the outlines which follow. (See also 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, elementary teachers need both academic and professional concentrations to qualify for a teaching certificate.
- (3) Professional Sequence. Requirements in this category vary according to the program chosen and according to the option selected for campus-based or field-centered emphasis. Common to all programs are courses in educational foundations, educational psychology, instructional strategies and supervised teaching in a public school setting. (See program outlines which follow for variations in professional requirements.)

Candidates for Washington certification for general elementary classroom teaching, or for teaching in any secondary social studies field, must also complete History 391, Washington State History and Government.

ADMISSION TO TEACHER EDUCATION

The College shares with the profession as a whole the important responsibility for the selection of potential teachers. Admission to the College does not automatically admit the student to teacher education programs.

Admission Standards

These standards apply generally to all teacher preparation programs. Some variation occurs in their application for students enrolling in the Professional Concentration for Elementary Teachers, as indicated in the summary of that program which follows, and in more detail in bulletins supplied to applicants for the Professional Concentration.

English Competence—A grade of "B" in the general education course in English composition is generally acceptable evidence of competency. Those with less than such grade will be subject to testing to establish competence.

Speech Competence—All candidates for admission to teacher education are expected to demonstrate adequate speaking ability. A grade of "C" or better in Speech 100, 302, or similar performance course is deemed evidence of minimal competence. Those not taking such a course may have their speech competence evaluated in Education 310, 398 or 399.

Scholarship—A grade point average of 2.5 is required. This may be achieved as a cumulative average over all college work or may be judged upon the most recent year's work, at least one quarter of which is taken at Western.

The above standards are to be considered for initial admission to teacher education programs during the student's first professional course and are among the factors of concern in continual evaluation as the student progresses through a program for teacher certification. Those who manifest deficiencies in written or spoken English will be urged to seek diagnostic and remedial assistance as needed at any time during their preservice education.

A student, after being admitted to teacher education, must maintain a minimum 2.5 grade average.

Application

The student will apply for admission to a specific certification program generally during or following his first professional course. Such application is to be made at the advisement office specified for the program selected.

CAMPUS-BASED AND FIELD-CENTERED PROGRAMS

The student has the option of taking most of the professional sequence of teacher preparation on campus, or in field-centered programs.

I. Campus-Based Sequence

Courses common for all programs:

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

To this common core, the student will add option (a) or (b) according to choice of teaching level:

Option a Secondary Teaching

- Education 398 Seminar in Secondary Education
- Education 420 Instruction in Secondary Schools
- Psychology 353 Adolescent Psychology

- Psychology 371 Evaluation in the Secondary School
- Education 495 Supervised Teaching, Secondary

Option b Elementary Teaching

- Education 385 Foundations of Reading Instruction
- Psychology 316 Developmental Psychology
- Psychology 372 Evaluation in the Elementary School
- Education 494 Supervised Teaching, Elementary

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

II. Field-Centered Sequence

The student completes, on campus, Education 310 and either Psychology 316 or 353 (depending on teaching level chosen). Secondary teachers will also take Education 398 on campus. The remainder of the professional sequence is satisfied by Education 491, Laboratory in Preparation of Instructional Programs, and Education 492, Laboratory in Interaction and Evaluation. These are offered in clinical school centers (e.g., Seattle) extending over two, or sometimes three, quarters away from the campus.



Education

Students are urged to explore these alternative routes to professional study and make an early choice of options. Careful advance planning is essential to the completion of teacher preparation within the normal four-year college program of study.

Consult the Office of Student Teaching, Miller Hall 206, for further information regarding the Field-Centered Sequence.

SUPERVISED TEACHING

All teacher preparation programs require supervised teaching. The requirement in supervised teaching for the provisional certificate is generally 16 credits. The following conditions apply to these courses in both campus-based and field-based sequences.

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 education program. (See "Admission to Teacher Education" above.)
- (b) Completion of at least 128 credits.
- (c) Secondary teachers—at least 30 credits in the proposed teaching major with grade average acceptable to the department for teaching recommendation. A methods class in the major area is strongly recommended. Completion of Education 310, 398, 402, Psychology 351, 353, 371.*
- (d) Elementary teachers in Program II—completion of Education 310, 385, Psychology 316, 351, 372.*

**Students in the field-centered programs satisfy many of these requirements through Education 491-492, as indicated in the checklist forms which follow.*

and courses in four areas of the basic core (Elementary Minor); recommendation of readiness for supervised teaching from the Elementary Adviser.

- (e) Elementary teachers in Program III—completion of a sufficient portion of the Professional Concentration to warrant the adviser's recommendation of readiness to undertake supervised teaching.
- (f) A chest x-ray in compliance with state law.

Application for Supervised Teaching

Application for admission to supervised teaching must be filed in January preceeding 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 planning to enroll in clinical programs or 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. Such students will register for Education 490 in addition to their other fall courses.

Time Involvement

Normally all work in field programs and supervised teaching is considered full-time (seven clock hours plus preparation time and seminar).

Placement Locations

Field-based two and/or three quarter programs are now operating in the Auburn, Kent, Seattle, Bellevue, Bellingham and Ferrdale school districts. One-quarter supervised teaching placements are also made in these locations on a space-available basis. In addition, there are other placement opportunities for one-quarter supervised teaching in Whatcom and Skagit counties.

PROFESSIONAL CERTIFICATION PROGRAMS

The following programs lead to the Bachelor of Arts in Education degree and a provisional certificate with recommendation for teaching at a certain level or in a certain 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.

Normally, the student will elect one of these programs and seek admission and advisement before proceeding. Students uncertain of teaching level and/or teaching field should consult advisers in the various programs and/or major fields. Education 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 college requirements for the B.A. degree outlined under "Requirements for Bachelors Degrees, General College Requirements."

PROGRAM I SECONDARY TEACHING

(Grades 7-12)

Admission and Advisement – Miller Hall 306

A. Teaching Major

Select appropriate major from the following and consult advisers in the department offering the major. See also departmental sections of the catalog for specifications. Candidates are advised to take major responsibility for informing themselves of employment opportunities in various fields and to select majors that lead to realistic employment opportunities.

Art	History
Biology-Chemistry (S)	History-Social Studies
Biology-Physical Science	Home Economics
Business Education (S)	Industrial Arts (Technology)
Chemistry-Mathematics	Mathematics

Chemistry-Physics	Music Specialist
Earth Science	Physical Education
Earth Science-Physical Science	Physical Science
English	Physics (S)
English-Speech	Physics-Mathematics
Foreign Language	Political Science-Social Studies
General Science (J)	Speech
Geography	

Majors followed by (S) are applicable to senior high only; those followed by (J) are applicable to junior high or middle school only; others are applicable at any secondary level.

B. Minor

Optional; for those wishing to broaden their teaching preparation.

C. Professional Sequence

Students will elect either the campus-based or field-centered sequence outlined above in "Campus-Based and Field-Centered Programs" section.

PROGRAM II ELEMENTARY TEACHING

(Grades K-8)

(Academic Major – Elementary Minor)

Admission and Advisement – Miller Hall 324

A. Teaching Major

A major in a field or area approved as related to the curriculum of the public school. Select from this list of approved majors and consult appropriate academic department for planning and approval of major. See department sections of the catalog for specifications.

Art	Mathematics
Earth Science	Music
English	Physical Education
Foreign Language	Psychology
General Science	(Child Development)
Geography	Sociology/Anthropology
History	Social Studies
Home Economics	Speech (General)
(Child Development)	Speech Therapy

B. Elementary Teaching Minor

Basic Core (23-24 credits)

- Ed 485 Basic Reading Instruction (4)
- Eng 441a English for the Elementary School (3)

Education

- 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)
- 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 Intermediate School (3)
 - Sci Ed or Geol 384 Earth Science for the Intermediate School (3)
 - Sci Ed or Phys Sci 382 Physical Science for the Elementary School (3)

12 credits in one of the following options:

(a) General Classroom

Under advisement select from:

- Art 380
- Education 360, 421, 426, 431, 439
- English 441b, 370, 446b
- Health Ed 350, 449
- Library Sci 305, 309
- Linguistics 201
- Music 350, 451
- PE 306, 403
- Sci Ed 382, 383 (if not taken in basic core)
- Speech 319, 330, 351, 373
- Technology 350

(b) Early Childhood

- Ed 431 and 432 or 433
- 6-8 credits under advisement from: Art 380; Ed 331, 421; Home Econ 120, 424; Lib Sci 305, 309; PE 306 or 311 and 326; Soc/Anth 481; Speech 331, 351, 354, 430, 484; Tech 350

(c) Special Education

- Ed 360, 361, 445f, 462, 462a

C. Professional Sequence

Students will elect either the campus-based or field-centered sequences outlined above in "Campus-Based and Field-Centered Programs" section.

PROGRAM III PROFESSIONAL CONCENTRATION FOR THE ELEMENTARY TEACHER

Admission and Advisement – 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*.

A. Professional Courses

Plan with adviser for 85 credits of work from the following five blocks within the specified minimum and maximum credits.

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 390, 399*
- Area 2 Human Relations—Select from Ed 391, 399; Speech 407*
- Area 3 Foundations of Education—Select from Ed 310, 399, 411*
- Area 4 Elementary Methods and Analysis—Select from Ed 399, 421, 441*
- Area 5 Child Development and Learning—Select from Ed 399; Home Econ 320; Psych 316, 351, 372*

The normal expectation is that students will be continuously enrolled in Ed 399 each quarter to a maximum of five times. A limit of one credit in Ed 399 may be applied to each area above. Ed 491, 492 (Clinical Program) may be used as an alternative means of meeting requirements in some of the areas in Block A, or may be used in Block D.

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 441a or Ed 424; Lib Sci 305*

**Consult adviser or Coordinator of Elementary Education for additional courses appropriate for application to the 85 credit total.*

- Area 7 Social Studies Education—Select from Hist 391; Soc St Ed 425ab*
- 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*

Block C

minimum of 3 credits in each of two areas from 10-13
maximum, 20 credits

- Area 10 Physical Education—PE 306a,b,c
- Area 11 Art Education—Art 380
- Area 12 Music Education—Music 350
- Area 13 Industrial Arts Education—Tech 450

Block D

minimum of 8 credits; maximum, 32
normally 16 credits

- Area 14 Student Teaching and Field Experience

B. Academic Study in Depth

The candidate will develop an academic concentration of 40 credits by extending one or two related areas from areas 6-13 above, with prior approval of the elementary adviser and consultation with appropriate departments. Broad areas of concentration are more appropriate for the general classroom teacher than narrow specializations. Overlap of courses is possible between those taken to satisfy general college requirements or the 85-credit professional concentration and those taken to satisfy this academic concentration.

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

Admission and Advisement — Miller Hall 318

- A. *Major* for Elementary Special Education
- Education 360, 361, 445f, 462, 462a, 466
 - Elementary Basic Core
 - Education 485 (4)
 - Education 424 or English 441a (3)
 - Education 426 or Soc Studies Ed 425
 - Math 281 or 481 (4)
 - Science Education 380 (3)
 - Electives: 7-11 credits, selected under advisement from the following: Education 261 (1) [may be repeated for a maximum of three (3) credits]; *Mental Retardation*: Ed 465, 562*, 563*; *Emotionally Disturbed*: Ed 463, 564*, 565*; *Elementary Education*: Ed 439, 488, Lib Sci 305, 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 one of the areas listed above in Program II for Elementary Teaching majors. 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 above in Program I for Secondary Teaching
- Minor* (required for teaching recommendation in special education at the secondary level)
- Special Education courses: Ed 360, 361, 445f, 462, 462a, 466
 - Elementary Education courses: Ed 485, plus at least one course from Ed 424, 426, 439; Eng 441a; Lib Sci 305; Math 281, 481; Soc St Ed 425; Sci Ed 380, 381
- C. *Professional Sequence*
- Complete the campus-based or the field-centered sequence outlined above (see "Campus-Based and Field-Based Programs" section) for either the

**Permission required from Graduate School*

Education

elementary or secondary level, depending on level of preparation (A or B above); for endorsement in special education, add Ed 498, Supervised Teaching—Special Education

FIFTH YEAR STUDY FOR PROVISIONAL CERTIFICATION OF DEGREE HOLDERS

Admission and Advisement – Miller Hall 204

Persons holding 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.

Up to 30 hours of this program may be applied toward the traditional fifth year leading to the standard certificate. To meet full requirements for the standard certificate, a minimum of 15 quarter hours of planned study is required after at least one year of teaching and evidence must be presented of two years of teaching experience which, judged as a whole, are successful.

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 certificate is valid for three years from the date of issuance, and may be renewed for a second three-year period upon completion of an approved 12 quarter hours of the fifth year and a year of successful teaching experience. For teaching in Washington after the expiration of the provisional certificate, the teacher must complete an approved fifth year of study leading to the standard certificate.

The Standard Certificate, issued after completion of the fifth year of study and at least two years of successful teaching experience, is valid for teaching at any level in the public schools of Washington on a continuing basis, and for a period of five years thereafter.

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 Fifth Year Advisement, Miller Hall 204.

The plan for each student is developed with the assistance of local school officials and college 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.
- Extension credit limited to 12 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 in *residence* in 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.
- Two years teaching experience which judged as a whole are successful; recent teaching experience is of particular concern.

The College requires that each fifth year student complete at least one quarter of *residence* study on campus.

The College accepts for fifth year study only those courses completed with a grade of "C" or better. Grades of "P" or "S" 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 Office of Fifth Year Advisement.

GRADUATE STUDY

For a number of concentrations in education leading to the Master of Education degree, see the *Graduate Bulletin*.

COURSES IN EDUCATION

KEY TO COURSE NUMBERS: *The first digit follows the College 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
- 6 Special Education and the Disadvantaged
- 7 Statistics and Research
- 8 Reading
- 9 Supervised Teaching or Practicums

(See *Psychology* section for courses in *Educational Psychology*.)

- 109 INTRODUCTION TO EDUCATION (3)
Introduction to the history, sociology, philosophy, and psychology of education; suggested for Fairhaven College students.
- 131 INTRODUCTION TO EARLY CHILDHOOD EDUCATION (3)
Review of the field in terms of history, philosophy, and professional opportunities; observation of young children.
- 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.
- 300 SPECIAL PROJECTS IN EDUCATION (2-5)
- 310 THE TEACHER AND THE SOCIAL ORDER (3)
Prerequisite: sophomore status. The conservative and liberal functions of American education and the consequent responsibilities of the teacher; the function of knowledge in society.
- 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, and other media of expression.
- 340 PARAPROFESSIONAL ADVISEMENT (3)
Prerequisite: 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 issues which confront paraprofessionals; and the development of specific job requirement skills.
- 360 INTRODUCTION TO EXCEPTIONAL CHILDREN (3)
Prerequisite: admission to teacher education or permission of department. Problems and methods of identifying and teaching children who are handicapped or gifted.
- 361 PRACTICUM IN SPECIAL EDUCATION (4)
Prerequisite: permission of department. Program of observations and participation in recreational and academic activities.
- 385 FOUNDATIONS OF READING INSTRUCTION (2)
Prerequisite: admission to teacher education. Study-reading in content areas; speed reading; basic principles of teaching reading; standardized and informal reading testing.
- 390 PROFESSIONAL PRACTICUM AND SEMINAR (3)
Prerequisite: permission of department. Observation, readings, seminars, and such other study as will enable the student to make a responsible decision about his future in teaching. S/U grading.
- 391a,b,c,d HUMAN RELATIONS (1-4)
Prerequisite: none. A study and practicum in interpersonal relationships as they affect teacher-student interaction.
- 398 SEMINAR IN SECONDARY EDUCATION (2)
To be taken concurrently with, immediately before or after Ed 310. Responsibilities and opportunities in the middle school and senior high schools; special academic and professional advisement. S/U grading.
- 399 SEMINAR IN ELEMENTARY EDUCATION (1)
Prerequisite: 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.
- 400 SPECIAL PROJECTS IN EDUCATION (2-5)
Prerequisites: permission of department; prior to admission a one-page description of project or research proposal must be presented. Special supervised individual projects.
- 411 FOUNDATIONS OF EDUCATION (4)
Prerequisite: admission to teacher education. Forces, influences, and aims in American society and education: what they are, how they develop; their effect upon what, how, and why people learn.

Education

- 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; backgrounds, aims, types, and present functions; comparison with the American system.
- 416 PERSISTENT PROBLEMS IN EDUCATION (3)
Seminars in socio-philosophical problems as they relate to education; different seminars deal with different problems and related sociological and philosophical theory.
- 417 SEMINARS IN SPECIALIZED AREAS
417b Education in Developing Countries (3)
417c Computer Techniques for Classroom Problem Solving (3)
Prerequisite: Ed 444 or equivalent.
417d Montessori and Early Childhood Education (3)
Prerequisite: teaching experience or permission of instructor.
- 420 INSTRUCTION IN SECONDARY SCHOOLS (3)
Prerequisites: admission to secondary education, Ed 310, 398; Psych 351, 353. To be taken quarter preceding student teaching. Secondary methods; videotaped teaching opportunities in simulated and/or micro-teaching settings; observation of teaching in secondary schools; readiness for supervised teaching verified.
- 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)
Prerequisite: student teaching, teaching experience, or permission of department. Historical and analytical study of the curriculum of the elementary school.
- 424a,b,x LANGUAGE ARTS IN THE ELEMENTARY CURRICULUM (3)
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
- 425 THE SECONDARY CURRICULUM (3)
Prerequisite: supervised teaching, teaching experience, or permission of instructor. Development, evaluation and change of the secondary curriculum; for those wanting to evaluate and design curriculum in various school districts.
- 426a,b SOCIAL STUDIES IN THE ELEMENTARY CURRICULUM (3)
Prerequisite: 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:
(a) Primary
(b) Intermediate
- 426c,d SOCIAL STUDIES IN THE SECONDARY CURRICULUM (3)
Prerequisite: 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
(d) Senior High
- 427 HISTORICAL FOUNDATIONS OF ADULT EDUCATION (5)
Prerequisite: senior or graduate status, or permission of instructor. Institutions participating in adult education since the 16th century; types of sponsorship, audiences, organization, social problems; current needs and institutional responses.
- 428 WORKSHOP IN INSTRUCTION (2-5)
Prerequisite: teaching experience. Offered in conjunction with a summer conference, emphasizing an aspect of instruction; topics vary from summer to summer.
- 429 SEMINAR IN OUTDOOR AND CONSERVATION EDUCATION (5)
Prerequisite: permission of department. Man's personal use of, effect on and attitude toward natural environments; management of timber, fisheries and game.
- 431 PRINCIPLES AND PROBLEMS OF EARLY CHILDHOOD EDUCATION (3)
Prerequisite: senior status or permission of instructor. Development of curriculum for young children; effect of early environment upon learning; analysis of school practices in the context of modern educational theory and psychology of learning.
- 432 NURSERY EDUCATION (3)
Prerequisite: 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. (Also offered as Home Econ 422.)
- 433 KINDERGARTEN AND PRIMARY EDUCATION (3)
Prerequisites: Ed 431 or teaching experience. 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 (3)
Appropriate sequence of skills in composition for early grade children; techniques implementing creative writing and improving fundamental skills.
- 441 ANALYSIS AND STRATEGIES OF TEACHING (3-5)
Prerequisite: 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)
Prerequisite: teaching experience. Techniques for the orientation of student teachers, major problems which confront student teachers, and evaluation of their achievement.
- 443 THE COMMUNITY COLLEGE (3)
Prerequisite: senior or graduate status. History, objectives, organization, and role of the public community college; special attention to the expanding system in the state of Washington.
- 444 INSTRUCTIONAL MANAGEMENT SYSTEMS (3)
Prerequisite: permission of instructor. Survey of both manual and automated systems including Computer-Managed Instruction Systems (CMI) and Computer-Assisted Instructional Systems (CAI).
- 445 CURRENT TRENDS IN EDUCATION (2-5)
Seminars for the study of one particular current topic in education.
- 445a Negotiations (3)
- 445c Evaluation of Special Education (3)
Prerequisite: teaching experience or permission of instructor.
- 445d Curriculum and Teaching in Early Childhood Education (2-4)
Prerequisite: teaching experience or permission of department.
- 445e Confrontation and Crisis in Secondary Education (3)
- 445f Precision Teaching—A Methodology for the Disfunctional Child (3-5)
- 445h Interpersonal Communication (3)
- 445j Current Trends in School Finance (3)
- 445k Creative English for the Elementary School (4)
Prerequisite: teaching or student teaching experience.
- 445m The Open Classroom (4)
Prerequisite: teaching or student teaching experience recommended. Analysis of and experience in learning in an open classroom setting resulting in development of teaching skills, understandings, and attitudes related to the basic concepts underlying the open classroom.
- 445n Community Education (3)
Role of community education programs in the public school system; administration, organization and programming of community schools.
- 445p Team Teaching (4)
Prerequisite: teaching experience. Survey of team teaching practices, with emphasis upon the objectives, advantages, disadvantages and evaluation of team teaching arrangements. Participants will either develop an operational plan or refine an existing plan for team teaching.
- 450 AUDIOVISUAL COMMUNICATIONS: BASIC (3)
Prerequisite: an introductory professional education course. The role and application of educational media and technology in the teaching-learning process; laboratory.
- 451 AUDIOVISUAL COMMUNICATIONS: ADVANCED (3)
Prerequisite: 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.
- 456 PRINCIPLES AND PRACTICES OF INDIVIDUALIZED INSTRUCTION AND CONTINUOUS PROGRESS EDUCATION (4)
Prerequisite: 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 theories of learning; practice in developing specific behavioral objectives; writing short programs in field of interest.
- 457b PRACTICUM IN DEVELOPING INSTRUCTIONAL PACKAGES (3-5)
Identification of instructional problems in area of interest, task analysis, identification of entry behavior; writing measurable objectives; construction of criterion-referenced tests, designing instructional strategies, constructing comprehensive learning activity packages; informal critique of an instructional package.
- 457c PRACTICUM IN DEVELOPING INSTRUCTIONAL GAMES AND SIMULATIONS (3-5)
Systematic preparation of instructional games and/or simulations. Emphasis is on: planning prior to constructing games and simulation materials; and, informally, critiquing both teacher and commercially developed games and simulation kits.
- 457d PRACTICUM IN FIELD TESTING COMMERCIAL AND TEACHER-PREPARED INSTRUCTIONAL MATERIALS (3)
Introduction to a variety of evaluation procedures used to assess students' cognitive and affective responses to selected instructional materials; utilization of a selected set of evaluation procedures to field-test specific materials with a view to determine how effectively and efficiently they bring about intended outcomes.

Education

- 460 SEMINAR IN SPECIAL EDUCATION (2-5)
Prerequisite: Ed 360 or teaching experience or assignment. Specific problems of exceptional children. Specific methods or curricula for teaching certain exceptional children—course content will vary from time to time.
- 460a Specific Learning Disorders
- 460b Seminar in Special Education: Early Identification of Handicapped Children (4)
Prepare teachers and other school personnel to identify handicapped children and to interpret diagnostic test results and information provided by experts concerning students.
- 460c Seminar in Special Education: Diagnostic Teaching of (Preschool or Primary) Children (4)
Identify learning problems, select instructional strategy(ies), and management procedure(s) for children with different behavior and learning problems. May be repeated with the second age group for a total of 8 credits.
- 460d Seminar in Special Education: Education of Visually Handicapped Children (2)
Information and skills necessary for teachers and other school personnel to work with visually handicapped children in their regular classes.
- 462 CURRICULUM FOR THE EXCEPTIONAL CHILD (4)
Prerequisite: for summer offering, teaching or student teaching experience; for academic year, concurrent enrollment in Ed 462a. Identification and etiology of most prevalent handicaps found in special education classes; curriculum development and adaptation; selected methods and materials basic to teaching these handicapped children.
- 462a CURRICULUM FOR THE EXCEPTIONAL CHILD: PRACTICUM (1-3)
Prerequisite: concurrent enrollment in Ed 462. Practicum in assessment, curriculum organization, instruction and evaluation of pupil progress for exceptional children. S/U grading.
- 463 EDUCATION OF MALADJUSTED CHILDREN (4)
Prerequisite: Ed 360. Review of past and present procedures in the education of emotionally disturbed children, and an in-depth analysis of the application of the major theoretical models to the education of emotionally disturbed children.
- 464 THE DISADVANTAGED: SEMINAR (2-4)
Prerequisite: teaching experience. Psychological, sociological, and educational implications of the problem of disadvantaged youth; analysis of planning efforts for disadvantaged children and youth.
- 465 ACTIVITIES FOR EDUCATION OF THE HANDICAPPED (3)
Prerequisite: Ed 360 or permission of instructor. Experiences designed to provide knowledge of and ability to use equipment and material in teaching arts and crafts to handicapped children. S/U grading.
- 466 GUIDANCE FOR THE HANDICAPPED CHILD (4)
Prerequisite: Ed 360, 361. Application of techniques in guiding and counseling exceptional children and communicating their characteristics to parents and others influential in meeting their needs.
- 467 SEMINAR IN PRECISION TEACHING (4)
Prerequisite: Ed 445f or equivalent. Mastery of precision teaching techniques and: charting conventions, acceleration analysis, curriculum planning; summary analysis, and accountability; individual projects.
- 473 EDUCATIONAL STATISTICS (5)
Prerequisite: 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)
Prerequisite: 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.
- 477 TEACHING HIGHER LEVEL THINKING ABILITIES (3-5)
Prerequisite: Psych 316, 351. Cognitive functions and teaching strategies that promote higher level thinking abilities in students, based primarily on the work of Taba.
- 478 TEACHING PROBLEM SOLVING (2)
Application of research in the development of problem solving and teamwork skills for teachers and administrators.
- 479 INQUIRY DEVELOPMENT (3-5)
Systematic preparation of teachers in strategies related to development of autonomous and productive inquirers; instruction in four main types of action necessary to stimulate and sustain inquiry: searching, processing data, discovering, and verifying.
- 480 CONFERENCE IN READING (1-3)
Prerequisite: teaching experience. Offered from year to year with varying themes.
- 484 THE TEACHING OF READING IN CONTENT FIELDS (3)
Techniques of teaching reading and applying reading to studying in social studies, science, mathematics, English, and other content areas in upper intermediate and secondary grades.
- 485 BASIC READING INSTRUCTION (3-4)
Prerequisite: Ed 385 or teaching experience. Basic reading instruction in grades K-8; methods and materials for teaching reading, reading readiness; work attack skills, word reading skills, comprehension skills; grouping; lesson planning.
- 486 PROBLEMS IN CORRECTIVE READING INSTRUCTION (4)
Prerequisite: permission of department. 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 "Requirement for Supervised Teaching" section for prerequisites, time of application, etc.

- 490 OBSERVATION AND PARTICIPATION (3)
Prerequisite: permission of department. Guided observation of experienced teachers and limited participation in teaching situations. S/U grading.
- 491 LABORATORY IN PREPARATION OF INSTRUCTIONAL PROGRAMS (6)
Prerequisite: admission to a clinical program. Individual study of learning principles and their application in cooperating schools; selecting and justifying objectives and defining them operationally; designing plans, selecting strategies and materials to implement plans, adapting to actual pupils in the schools. Also offered as Psychology 491. S/U grading.
- 492 LABORATORY IN INTERACTION AND EVALUATION (6)
Prerequisite or concurrent: Ed 491. Implementing significant learning objectives through interaction with pupils; evaluation of learning under guidance of cooperating public school teachers and college faculty. Also offered as Psychology 492. S/U grading.
- 493e,f INDIVIDUALIZED INSTRUCTION IN READING — LANGUAGE ARTS IN THE ELEMENTARY SCHOOL (6 ea)
Integration of reading, writing, speaking, listening and use of children's books as functional tools of the communication process; laboratory experience in developing individualized language activities with children in school settings.
- 494 SUPERVISED TEACHING — ELEMENTARY (8-16)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisites: 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.
- 500 SPECIAL PROJECTS IN EDUCATION (2-5)
Prerequisites: permission of department; prior to admission a one-page description of project or research proposal must be presented. Supervised individual projects.
- 501 INTRODUCTION TO EDUCATIONAL RESEARCH (4)
Prerequisite: graduate status. Experimental documentary, case study, survey, and other methods of educational research and investigation; required during the first quarter of the student's program leading to the master's degree.
- 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)
Prerequisites: 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)
Prerequisites: Ed 501. Differing concepts of the nature of the individual and society; psychological and sociological development of these concepts; basic premises and implicit assumptions.
- 515 PHILOSOPHY OF EDUCATION (3)
Prerequisites: Ed 411 or equivalent, and permission of instructor. Critical analysis of theoretical positions in educational philosophy; emphasis on modern and contemporary discussion of educational theory. Also offered as Phil 515.
- 516 SEMINARS IN PHILOSOPHY OF EDUCATION (3 ea)
Prerequisite: Ed 411 or equivalent. Studies of the works of one man, a problem, or a movement; implications for schooling.
- 518 CURRENT ISSUES IN HIGHER EDUCATION (3)
Prerequisite: graduate status or permission of department. Examination and discussion of several current and controversial issues in higher education—e.g., student demands, minority groups, grading.
- 521 SEMINAR IN ELEMENTARY CURRICULUM (4)
Prerequisites: advancement to candidacy and Ed 422 or equivalent. Advanced study of curriculum planning and development, including design, materials, and problems in curriculum change. Independent research will be expected.

Education

- 522 SEMINARS IN SECONDARY CURRICULUM (4)
Prerequisites: teaching experience and Ed 425 or permission of department. Planning and developing curriculum; advanced study of curriculum design and materials; independent 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 (3)
Prerequisites: Ed 422, 431, 432, and 433 or permission of department; to be taken concurrently with Ed 596a. Critical analysis of programs of early childhood education emphasizing interpersonal relations, role of agencies, and instructional procedures and materials.
- 532 TEACHING AND LEARNING OF ELEMENTARY SCHOOL SUBJECTS (4)
Prerequisites: Ed 422, 501, 512 or permission of department. Advanced study of research findings and theoretical developments affecting the teaching of various basic elementary school subjects for which teachers are responsible. Individualized research and study in particular areas of interest will be encouraged.
- 533 SEMINAR: THE ELEMENTARY SCHOOL CHILD (4)
Prerequisites: Ed 422, 501, 512 or permission of department. 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.
- 538 CASE STUDIES IN SCHOOL ADMINISTRATION (2)
Prerequisite: graduate status. Development and use of case studies to assist the student in understanding and resolving problems facing the practicing school administrator.
- 539 EDUCATIONAL LEADERSHIP (4)
Prerequisite: teaching experience. Roles and responsibilities of persons serving as members of the leadership team in the public schools.
- 541a THEORY IN EDUCATIONAL ADMINISTRATION (4)
Prerequisite: graduate status. Major administrative theories and models.
- 541b PUBLIC SCHOOL ORGANIZATION AND ADMINISTRATION (4)
Problems related to administration of school personnel, plant, and program; structure and organization of the school system.
- 541c SCHOOL LAW (4)
Prerequisite: Ed 541a. Legal principles underlying statutes and court decisions related to the schools.
- 541d INTERGOVERNMENTAL RELATIONS IN EDUCATION (3)
Formal and informal mechanisms at state and federal level which influence decision-making and program development at the local level.
- 541e COLLECTIVE BARGAINING IN PUBLIC SCHOOLS (4)
Prerequisite: graduate status. Technical structure and protocol of collective bargaining in general; issues and practices of collective bargaining in education in particular; insights to be derived from simulating formalized collective bargaining.
- 542a,b,c,d FIELD PROJECT IN EDUCATIONAL ADMINISTRATION (4)
Prerequisites: permission of instructor and submission of a one-page outline indicating the scope of the project. Design, implementation and evaluation of a field project in educational administration; may be repeated once for a total of 8 credits.
- 543a SUPERVISION IN THE PUBLIC SCHOOLS (4)
Supervision as educational leadership in the development and periodic revision of plans for continuous evaluation and improvement of school practice.
- 543b SEMINAR IN SCHOOL PERSONNEL ADMINISTRATION (4)
Prerequisite: Ed 541a. Professional relationships among certified employees and other school personnel; development and implementation of policies.
- 544a SYSTEMS APPROACH AND EDUCATIONAL MANAGEMENT (4)
The systems approach as related to educational project planning and management; flow charting, modeling, PERT, simulation and other systems techniques and concepts.
- 544b COMPUTER TECHNOLOGY AND EDUCATION (4)
Prerequisites: Ed 544a and permission of instructor. Utilization of electronic data processing in school management, local school district research, and computer assisted instruction.
- 544c PLANNING FOR INSTRUCTIONAL INNOVATION (4)
Prerequisite: graduate status. Planning and decision-making process as related to successful adoption of educational innovations, processes applied to major instructional systems such as: PLAN, IPI, IGE, IMS and others currently being used for continuous progress learning.
- 545 SEMINAR IN PUBLIC SCHOOL FINANCE (4)
Local-state fiscal arrangements including state subvention formulas; current school budgets; related educational finance procedures.
- 546a SCHOOL PLANT PLANNING (3)
Prerequisite: Ed 541a. Planning school building program through analysis of population trends in the community; relationship of school plant to the educational program; problems in utilization of school facilities.

- 547 READINGS IN SCHOOL ADMINISTRATION (2-5)
Prerequisite: permission of the instructor. Supervised study focusing on one or more selected topics.
- 549 SEMINAR IN SCHOOL ADMINISTRATION (4)
Current and emergent education problems.
- 550 ORGANIZATION AND ADMINISTRATION OF EDUCATIONAL MEDIA PROGRAMS (3)
Prerequisite: Ed 450 or permission of department. Basic problems and principles in establishing and directing an audiovisual center; coordinating, staffing, financing, housing and evaluating the service.
- 551 SEMINAR IN LEARNING RESOURCES (3)
Prerequisite: graduate status and 35 credit hours in the program. Analysis of factors affecting communication utilizing learning resources; relationship between learning resources and learning objectives.
- 555 MIDDLE SCHOOL CURRICULUM DESIGNS AND INSTRUCTIONAL STRATEGIES (6)
Prerequisite: 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.
- 556 INTRODUCTION TO STUDENT PERSONNEL ADMINISTRATION (3)
Prerequisite: admission to the program. 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.
- 557a,b,c SEMINARS: COLLEGE STUDENT PERSONNEL ADMINISTRATION (4 ea)
Prerequisite: admission to college Student Personnel Administration program. Intensive examination of purposes, functions and operation of the various services; major issues in student personnel work; observation and participation in research programs appropriate to the various services; major papers and extensive use of case studies.
- 558 STUDENT DEVELOPMENT COUNSELING FOR STUDENT PERSONNEL ADMINISTRATORS (3)
Prerequisite: admission to Student Personnel Administration program or permission of instructor. Consideration of theories and techniques involved in student development counseling, including interviewing, interpersonal communications, and crisis intervention; emphasis on skill acquisition through microtraining techniques.
- 559 RESEARCH IN COLLEGE STUDENT PERSONNEL ADMINISTRATION (1-3)
Prerequisite: admission to Student Personnel Administration program and Ed 501. An in-depth research project in the area of the student's internship in the program.
- 560 SEMINARS IN SPECIAL EDUCATION (2-5)
Prerequisites: graduate status and permission of department. Specific problems and methods for serving exceptional children. Content will vary from summer to summer; hence, the course may be repeated for credit.
- 561 ADVANCED PROBLEMS IN SPECIAL EDUCATION (3-5)
Prerequisite: permission of department. Intensive study of problems in a selected area of special education.
- 562 ETIOLOGY OF MENTAL RETARDATION (3)
Prerequisite: teaching experience or permission of department. Mental retardation; major clinical types whose principal feature is retardation; causes; on-going research into this problem.
- 563 CURRICULUM AND METHODS OF INSTRUCTION FOR THE MENTALLY RETARDED (3)
Prerequisite: 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)
Prerequisite: teaching experience or permission of department. The emotionally disturbed child in the classroom.
- 565 SEMINAR IN EDUCATION OF MALADJUSTED CHILDREN: ADVANCED THEORY (4)
Prerequisites: Ed 360 or equivalent, 463, 564. Analysis of classical and contemporary research in the intervention of behavior disorders; review of state and national legislative and judicial decisions affecting classroom programs; preparation of a model application for basic or applied research, and preparation of a scholarly manuscript for dissemination.
- 566 COUNSELING AND GUIDANCE FOR THE HANDICAPPED CHILD (4)
Prerequisite: 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)
Prerequisite: graduate status or permission of instructor. The development of skills and understandings necessary to organization, programming, curriculum, financing, administration and staffing of community education programs and schools.
- 571 SEMINAR IN COMMUNITY EDUCATION (4)
Prerequisite: Ed 570 or permission of instructor. Advanced study of community education programs; critical review of current and emergent problems and theories.

Education

- 575 **ASSESSING EDUCATIONAL QUALITY (3)**
Prerequisite: Ed 501 or permission of instructor. Developing criteria and designing procedures for measuring in-put process and product resulting from special or innovative programs, community factors, options in administrative and instructional organizations; for coordinators and research workers in the schools.
- 576 **ADULT EDUCATION ADMINISTRATION (5)**
Prerequisite: BA 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 (5)**
Prerequisites: Psych 351 and permission of instructor. Identifying needs, motivation, testing and teaching strategies; use of conferences, short courses, residential learning, independent study.
- 578 **CURRICULUM PLANNING FOR ADULT EDUCATION PROGRAMS (5)**
Prerequisites: graduate standing and permission of instructor. Programming to meet adult needs; analysis of adult life stages, community needs, changing vocational and professional needs; problems of the aging.
- 583 **READING AND CHILDREN'S LITERATURE (4)**
This course is designed to bring together children's books and teaching basic reading skills through these books; emphasis on the selection and analysis of children's books in order to teach reading from beginning or pre-word recognition levels through junior high school.
- 584 **MEASUREMENT AND DESIGN IN READING RESEARCH (4)**
To be taken prior to or concurrent with Ed 501. Validation of standardized tests; application of research designs.
- 585 **SEMINAR IN READING EDUCATION (3-4)**
Reading education research and its application to classroom practices, to individual problems in the teaching of reading, to supervision and administration of reading programs, and to the remediation of reading problems.
- 587 **IMPROVEMENT OF INSTRUCTION IN READING (4)**
Prerequisite: at least one previous course in the teaching of reading. Teaching developmental reading; methods, materials, theory. Letters indicate grade level of emphasis in various sections of the course: (a) primary, (b) intermediate, (c) junior high, (d) senior high.
- 589 **SEMINAR IN LANGUAGE ACQUISITION AND READING DEVELOPMENT (4)**
Prerequisite: 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)**
Prerequisite: 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)**
Prerequisite: permission of department. For applicants for the Washington State Administrative Credential.
- 592d **FIELD EXPERIENCE IN EARLY CHILDHOOD EDUCATION (2-6)**
Prerequisite: 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)**
Prerequisites: permission of instructor and admission to candidacy. Students will select leadership projects on which they work with teachers and other educators in designing, field testing and evaluating innovative school programs, practices, and materials for the elementary school. Faculty supervision.
- 592f **FIELD EXPERIENCE IN STUDENT PERSONNEL ADMINISTRATION (2-6)**
Prerequisite: admission to Student Personnel Administration program. Supervised field experiences in developing leadership and management skills and competencies in student personnel administration. Students will intern in various offices and programs of college student services. Repeatable to a maximum of 12 credits.
- 592g **FIELD EXPERIENCE IN COMMUNITY EDUCATION LEADERSHIP (2-6)**
Prerequisite: 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.
- 594e,f,g **PRACTICUM IN READING DIAGNOSIS AND REMEDIATION (4 ea)**
Prerequisite or concurrent: Ed 487 or equivalent, and permission of department; e, f, g must be taken in sequence. Reading consultant candidates will have consultant opportunities and internship supervising students or teachers.
594e Standard diagnostic tests in reading; supervised practice in their use.
594f Individual case study; diagnosis of reading problems.
594g Remedial instruction of children with reading problems.

- 596a **ADVANCED PRACTICUM: EARLY CHILDHOOD EDUCATION (2-6)**
Prerequisite: graduate status, 20 quarter hours of appropriate work, teaching experience with young children, or permission of instructor. To be taken concurrently with Ed 531. Individualized practicum in early childhood programs for experienced teachers.
- 596b **ADVANCED PRACTICUM IN TEACHING: ELEMENTARY SCHOOL (2-6)**
Prerequisites: graduate status and 20 quarter hours of approved course work. Supervised experience for the improvement of teaching at the elementary school level. 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)**
Prerequisite: 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.
- 597a **ADMINISTRATIVE PROBLEM ANALYSIS (3)**
An examination of current administrative problems experienced in public education, especially as related to compensatory programs, special school services and adequate fiscal support. Summer, 1974.
- 597b **PROBLEMS AND PRACTICES IN SPECIAL EDUCATION (3)**
An examination of current and emergent practices and programs in special education and their implications for supervisors, directors and administrators of special education activities. Summer, 1974.
- 597c,d,e **IMPROVEMENT OF INSTRUCTION (5 ea)**
Prerequisite: permission of department. Field-based studies by school faculties to resolve persistent and significant local problems of instruction.
- 597c **Needs Assessment**
Systematic analysis of pupils' achievement compared to the aspirations of pupils, community and school faculty. Identification of major problems of instruction.
- 597d **Strategies for Educational Change**
Study of alternatives for meeting local instructional problems. Selection and implementation of new programs.
- 597e **Evaluation of Programs**
Systematic analysis of apparent effects of innovative programs designed to meet specific needs of pupils.
- 597f **CURRENT TRENDS IN MEDIA/LIBRARY CENTERS (3)**
Prerequisite: master's degree program or fifth year program and librarian position. Exploring new concepts in information storage and retrieval. Areas to be studied include: micrographics, multi-media, systems and non-print material.
- 597g **ADMINISTRATION AND THE INTERNATIONAL SCHOOL (4)**
Prerequisite: admission to the Master of Education program. Introduction and overview of administrative organizations, practices and procedures employed in the schools of Germany, France and England. The potential of Europe as an educational resource will be explored.
- 597h **STUDIES IN EUROPEAN EDUCATION ADMINISTRATION: GERMAN (4)**
Prerequisite: admission to the Master of Education degree program. An intensive study of the organization of schools of West Germany with particular attention to the administration and supervision of staff and curriculum.
- 598 **PRACTICUM IN SPECIAL EDUCATION (4)**
Individualized experience in programs for exceptional children for students having had teaching experience with handicapped children.
- 600 **SPECIAL PROJECTS IN EDUCATION (2-5)**
Prerequisites: permission of the department and master's degree. Supervised individual study, research, or project development. Prior to admission a description of project or research proposal must be presented to faculty adviser.
- 632 **ADVANCED SEMINAR IN ELEMENTARY EDUCATION (4)**
Prerequisites: completion of elementary concentration requirements (Ed 422, 512, 513, 521). Advanced study of topics, problems and issues in elementary education through group process procedures. Serves as a capstone seminar in preparation for area examination.
- 633 **SEMINAR: PROBLEMS IN EARLY CHILDHOOD EDUCATION (3)**
Prerequisite: Ed 531, 596a. Specific problems will be drawn from the field and content organized according to student need.
- 642a,b,c,d **FIELD PROJECT IN EDUCATIONAL ADMINISTRATION (4)**
Prerequisites: master's degree, permission of the instructor, and submission of a one-page outline indicating scope of proposed project. Design, implementation and evaluation of a field project in educational administration. Course may be repeated once for a total of eight (8) credits.
- 644a,b,c **SEMINARS IN EDUCATIONAL MANAGEMENT: ADVANCED SYSTEMS THEORY (5 ea)**
644a **Advanced Educational Systems Analysis**
Prerequisite: master's degree and permission of instructor. The identification of high priority needs within a school system and the application of systems theory to problem solution. Management tools such as modeling, Program Evaluation Review Technique (PERT) scheduling, Management By Objectives (MBO), Management Information Systems (MIS), Program Planning Budgeting Systems (PPBS), etc., will be considered as plausible means/tools to assist the educational manager in performing his management functions.

Education

- 644b Educational Change: Theory and Practice
Prerequisite: master's degree and Ed 644a. Analysis of appropriate strategies and tactics for effecting planned change in public schools and/or districts. An emphasis is placed on model building related to systematic change in the management and program structure.
- 644c Management by Objectives: Accountability
Prerequisite: master's degree and Ed 644a. The 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,b,c,d SEMINARS FOR SCHOOL PRINCIPALS (4 ea)

Prerequisite: master's degree, applicant for a Washington State Principal's Credential, and/or permission of instructor. A series of seminars on current problems and issues facing school administrators.

676 INSTRUCTIONAL SYSTEMS THEORY AND COMMUNITY COLLEGE INSTRUCTION (4-6)

Prerequisites: 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.

686 SEMINAR FOR READING SPECIALISTS (4)

Prerequisite: admission to candidacy. A year-long course meeting monthly. Development and execution of a research study in the area of reading. Selected readings of a minimum of eight books concerned with recent trends in reading education.

690 FIELD PROJECT OR THESIS (6)

Prerequisite: 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.

692a,b,c FIELD EXPERIENCE IN ADMINISTRATION FOR THE PRINCIPAL (2-6)

Prerequisite: master's degree and permission of department. For applicants for the Washington State Administrative Credential.

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 305, 306, 307, 309, 401, 402, 403, 404
 - Education 422, 450, 451

Minor—Library Science Secondary

- 24 credits selected under advisement from the following:
- Lib Sci 307, 308, 401, 402, 403, 404
 - Education 425, 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 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 305, 307, 402, 403, 404;
Education 422, 425
Administration: Education 422, 425, 475, 543a,
545a, 546, 550
Graphics: Technology 419, 440, 449, 469, 540, 544

Students interested in the above areas should seek advisement in Miller Hall 177.

COURSES IN LIBRARY SCIENCE

- 125 LIBRARY ORIENTATION (1)
Introduction to books and libraries, and to the Wilson Library in particular, with emphasis on effective use of standard reference tools.
- 305 BOOKS FOR ELEMENTARY SCHOOLS (3)
Examination, reading, and discussion of books most generally useful in work with boys and girls; emphasizing standards for selection of books, book lists, reviews of current books, modern trends in book production, and relation of books to the curriculum and reading interests of children.
- 306 INTRODUCTION OF BOOKS TO CHILDREN (3)
Prerequisite: Library Science 305. More intensive reading and discussion of books appropriate for primary and intermediate grades, with emphasis on preparation of bibliographies, and methods of arousing interest in books.
- 307 BOOKS FOR JUNIOR HIGH SCHOOLS (3)
Examination and discussion of books most generally useful in work with junior high school students emphasizing standards for selection of books, book lists, reviews of current books, modern trends in book production, and relation of books to the curriculum and to reading interests.
- 308 BOOK SELECTION (3)
Young adult and adult books suitable for libraries.
- 309 STORYTELLING (3)
Prerequisite: Library Science 305 or permission of instructor. 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.
- 445a CURRENT TRENDS IN BOOKS FOR CHILDREN (3)





ENGLISH

College of Arts and Sciences | Western Washington State College



English

The Department of English offers majors in English for the liberal arts student and for the teacher education student and in journalism.

Under its new curriculum in English, the department offers students a highly flexible program in which they can construct a major that meets their own educational goals. The core of both the liberal arts and the teacher education majors is the historical and critical study of literature, but the department also has strong offerings in creative writing, linguistic study of English and English education.

A liberal arts English major has been 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 has provided 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

- GOLDEN L. LARSEN (1956) Chairman.
Associate Professor. BS, MS, Utah State University; PhD,
University of Washington.
ELIZABETH BOWMAN (1966) Associate Professor of English
and Linguistics. AM, PhD, University of Chicago.
ROBERT D. BROWN (1965) Professor of English. AB, MA,
PhD, Indiana University.

- MEREDITH B. CARY (1964) Professor. BA, Central Missouri
State College; MA, S, 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.
EUGENE K. GARBER (1968) Professor. BA, Tulane University;
MA, PhD, University of Iowa.
ROBERT E. HUFF (1964) Professor. AB, MA, Wayne State
University.
KENNETH B. INNISS (1966) Associate Professor. AB, AM,
Indiana University; PhD, University of Kansas.
ELLWOOD G. JOHNSON (1963) Associate Professor. BA, MA,
PhD, University of Washington.
WILLIAM C. KEEP (1966) Associate Professor. BA, PhD,
University of Washington.
C. NORMAN LAVERS (1970) Assistant Professor. BA, MS, San
Francisco State College; PhD, University of Iowa.
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.
TOMMY LEE (1972) Assistant Professor. BA, MA, University of
Washington.
MERRILL E. LEWIS (1962) Associate 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.
GERSON F. MILLER (1967) Professor of English and Adviser
to Student Publications. AB, University of California,
Berkeley; MA, Pennsylvania State University.
GEORGE M. MULDROW (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.
MARJORIE RYAN (1961) Professor. AB, MA, University of
Michigan; PhD, University of Minnesota.
JAMES A. SCHWARTZ (1973) Assistant Professor. AB,
University of Cincinnati; MS, University of Wisconsin.
*KNUTE SKINNER (1962) Professor. AB, Colorado State
College; MA, Middlebury College; PhD, University of Iowa.
R. E. STANNARD, JR. (1969) Associate Professor of
Journalism. BA, University of Washington; MA, Cornell
University.
PETER STEFFENS (1972) Associate Professor. BA, MA, Balliol
College, Oxford.
KEN M. SYMES (1967) Associate Professor. BA, MA, Utah
State University; PhD, University of New Mexico.
EVELYN C. WRIGHT (1972) Assistant Professor. BS, Illinois
State University; MA, Northwestern University.

*On Sabbatical Leave 1975-76

BACHELOR OF ARTS

Major 70 credits

- English 301, 302, 303
- Two courses in British literature before 1800 and one course in American literature before 1900 or English 311a, b, and c
- Electives under departmental advisement with up to two courses allowable from the 200-level English Department offerings

Major—Journalism 60 credits

- Journalism 104 or 406
- Journalism 160, 204, 304, 340, 350, 404, 470, 480
- Three journalism staff courses from list (a) and three additional courses from list (a) or (b):
 - (a) Journalism 111, 112, 113, 211, 212, 213, 311, 312, 313, 411, 412, 413
 - (b) Journalism 121, 122, 123, 221, 222, 223, 321, 322, 323, 421, 422, 423
 (May be waived by substitution of equivalent professional experience)
- Journalism 430
- Choice of Journalism 310, 330, 400, 405, 440, 460
- 15 credits in related academic areas selected under advisement of journalism faculty

Minors 24 creditsA. *English*

- English 301 or 302
- English 303
- Elective courses within the department under advisement with one course allowable from the 200-level English Department offerings

B. *Linguistics*

- Linguistics 201, 202, 301, 302, 303
- Electives from linguistics, English 370-379 and English 470-479

C. *Rhetoric*

- Two courses in rhetoric in the English 325 or 425 series
- English 354
- Electives under departmental advisement with one course allowable from the 200-level English Department offerings†

†Especially recommended are English 470, *Transformational Grammar*; Anth 448, *Language and Culture in Society*; Speech 205, *Argumentation*; Speech 490, *Rhetorical Theory and Practice: Greek and Roman*; Linguistics 404, *Linguistics and Literature*.

D. *Creative Writing*

- Two courses from English 301, 302, 303
- Four creative writing courses in at least two genres
- Electives under departmental advisement with one course allowable from the 200-level English Department offerings*

E. *Journalism*

- Journalism 104 or 406
- Journalism 160, 204, 304, 340, 350
- Three staff courses, or equivalent professional experience, from:
 - (a) Journalism 111, 112, 113, 211, 212, 213, 311, 312, 313, 411, 412, 413
 - (b) Journalism 121, 122, 123, 221, 222, 223, 321, 322, 323, 421, 422, 423
 At least two courses of the above are to be selected from list (a)

*No other specific courses are required. However, for purposes of certification, the English Department expects prospective teachers to show some competence in the study of the English language (grammar, history of the language, American English dialects) and in expository or creative writing as well as in the study of literature. Usually competence will be demonstrated through satisfactory completion of at least one course in the English language and one course in writing other than freshman composition.

English

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, an English major who wishes to graduate "with honors" must complete one course in the English 430-439 series and one course in criticism from the English 421-429 series, and an upper division course in philosophy or in literature read in a foreign language.

BACHELOR OF ARTS IN EDUCATION

Major Elementary 45 credits

- English 301, 302, 303
- Three departmental courses in literature prior to the 20th century
- One course from English 440-444
- Electives under departmental advisement with up to two courses allowable from the 200-level English Department offerings*

Major Secondary 55 credits

- English 301, 302, 303
- Two courses in British literature before 1800 and one course in American literature before 1900
- One course from English 445-449
- Electives under departmental advisement with up to two courses allowable from the 200-level English Department offerings*

English secondary majors may elect minors A, B, C, or D below, or a minor in another department.

**No other specific courses are required. However, for purposes of certification, the English Department expects prospective teachers to show some competence in the study of the English language (grammar, history of the language, American English dialects, and in expository or creative writing as well as in the study of literature. Usually, competence will be demonstrated through satisfactory completion of at least one course in the English language and one course in writing other than freshman composition.*

Minors 24 credits

A. *Linguistics Emphasis*

- Linguistics 201, 303
- Electives from Linguistics, English 370-379 and English 470-479

B. *Rhetoric*

- Two courses in rhetoric from the English 325 or 425 series
- English 354
- Electives under departmental advisement with one course allowable from the 200-level English Department offerings†

†Especially recommended are English 470, Transformational Grammar; Anth 448, Language and Culture in Society; Speech 205, Argumentation; Speech 490, Rhetorical Theory and Practice; Greek and Roman; Linguistics 404, Linguistics and Literature.

C. *Creative Writing*

- Two courses from English 301, 302, 303
- Four creative writing courses in at least two genres
- Electives under departmental advisement with one course allowable from the 200-level English Department offerings

D. *Journalism*

- Journalism 104 or 406
- Journalism 160, 204, 304, 340, 350
- Three staff courses (or equivalent professional experience) from:
 - (a) Journalism 111, 112, 113, 211, 212, 213, 311, 312, 313, 411, 412, 413
 - (b) Journalism 121, 122, 123, 221, 222, 223, 321, 322, 323, 421, 422, 423At least two courses are to be selected from list (a)

E. *English (Secondary—not open to English majors)*

- English 301 or 302
- English 303
- One course from the English 446 series
- Electives within the department under advisement with one 200-level English course allowable

F. *English Minor (For Elementary Teachers)*

- English 301 or 302

- English 303
- One course from English 441 series
- Departmental electives under advisement with one course allowable from the 200-level English Department offerings

Interdisciplinary Major Concentration 80 credits

(Satisfies both major and minor for teaching competency in both fields.)

English 40 credits

- English 301 or 302
- English 303
- Two courses in British literature before 1800
- One course in American literature before 1900
- One course from English 445-449
- Electives in English under departmental advisement with up to two courses allowable from the 200-level English Department offerings*

Speech 40 credits

- Speech 130, 202, 204, 205 or 206 for 4 credits, 236, 319, 332, 337
- Speech 340 (or Journ 340 or 406)
- Speech 485, 486
- Electives in speech under departmental advisement

Teaching Competence

Recommendation for teaching competence normally requires completion of the major or minor concentration with a grade of 2.5 or better. An exception is provided through the extended minor listed below. See also the paragraph on certification under English Bachelor of Arts in Education (*).

**No other specific courses are required. However, for purposes of certification, the English Department expects prospective teachers to show some competence in the study of the English language (grammar, history of the language, American English dialects) and in expository or creative writing as well as in the study of literature. Usually, competence will be demonstrated through satisfactory completion of at least one course in the English language and one course in writing other than freshman composition.*

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.

- English 301 or 302
- English 303
- Two courses in British literature before 1800
- One course in American literature before 1900
- Elective courses within the department under advisement with one course allowable from the 200-level English Department offerings

GRADUATE STUDY

For concentrations leading to the Master of Education or Master of Arts degree, see *Graduate Bulletin*.

COURSES IN ENGLISH

Courses in English study language and literature in a variety of ways. The Department of English has grouped its courses according to approach taken in each course as follows:

I. Courses in English General Education offerings: The following courses are primarily intended for general education credit. Two 200-level literature courses may be allowed as credit toward the English major; one such course may be allowed as credit toward certain English minors: 101, 131, 132, 133, 201, 202, 216, 231, 234, 238, 261, 262, 263, 281, 282, 283

II. Courses without English Department prerequisite: (open to majors and non-majors alike, these courses are found throughout the English offerings and do not fall under the general prerequisite of the 301, 302, 303 requirement) 101, 216, 231, 234, 238, 261, 262, 263, 281, 282, 283, 338a, 362, 364, 365, 461b, 461h, 461j

III. Studies in Literary History British: 311a, 311b, 311c, 312a, 312b, 312c, 312d, 312e, 312f, 314a-z, 410, 412a, 412b, 412c, 413a, 413b, 413c, 413d, 414a-z, 415a, 415b, 415c

American: 316, 317a, 317b, 317c, 317d, 318a-z, 319a, 319b, 319c, 319d, 319e, 319f, 416a, 416b, 416c, 416d, 417, 418a-z, 419a, 419b, 419c

Other: 320a, 420a

IV. Studies in Literary Theory and Criticism: 321, 325a, 421a, 421b, 421c, 425a

V. Studies in Literary Genre and Theme-Genre: 332a, 332b, 333a, 334a, 337a, 430a, 431a, 431b, 432a, 432b, 432c, 433a, 434, 437a

English

Theme: 338a, 438a, 439a, 439b, 439c

VI. Studies in English Education: 441a, 441b, 445a, 445b, 445c, 445d, 445e, 445f, 446a, 446b

VII. Studies in Literary Expression: 351, 352, 353, 354, 451a,b,c, 452a,b,c, 453a,b,c, 455

VIII. Studies in Literature—Combined Approaches: 361a,b, 362, 461a, 461b, 461c, 461d, 461e, 461h, 461j, 463

IX. Studies in English Language: 370, 470, 471, 472, 473, 474

101 LANGUAGE AND EXPOSITION (4)

A writing program that emphasizes command of language and standard rhetorical strategies.

131, 132, 133 MASTERPIECES OF WORLD LITERATURE WITH COMPOSITION (3 ea)

Prerequisites: Eng 131 prerequisite to 132; 132 prerequisite to 133. Papers based on readings from classical, medieval, renaissance, neoclassical, romantic, and modern literature.

201 READING AND EXPOSITION (3)

Prerequisite: Eng 101 or equivalent. A course that stresses effective exposition and the use of external evidence in composition (work in precis, paraphrase, and documentation). Readings will be organized around a central theme expressed in fiction and non-fiction:

201a A Sense of Place and Identity

201b Organized Man: The Human Factory

201c A Sense of Play: Carnival and Ritual

202 READING AND ARGUMENTATION (3)

Prerequisite: Eng 101 or equivalent. A second-year writing course which deals exclusively with argument as a reading and writing problem, and allows for a variety of topical material.

204 WRITING ESSAY EXAMS (1)

A pragmatic approach to analyzing essay questions and organizing essay answers. The course goal would be to sophisticate students about the process of presenting their knowledge in the most advantageous form.

216 SURVEY OF AMERICAN LITERATURE (5)

217 SURVEY OF WOMEN'S LITERATURE (5)

Important women writers of America, Great Britain, and Europe will be studied in their literary and historical contexts.

231 STUDIES IN POPULAR LITERATURE (3)

Different types of popular literature will be treated from year to year.

234 INTRODUCTION TO BLACK LITERATURE (3)

Writing of Black writers in America in the 20th century.

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.

261a READING AND WRITING FICTION (3)

Reading and discussion of three to five books of recent fiction. Two or three written exercises will be assigned to give practice in using various writing techniques, these exercises leading to the final work of the quarter, the writing of a short story.

261b READING AND WRITING POETRY (3)

Reading and discussion of three to five contemporary books. Four original poems will be assigned as compositions based on certain styles and approaches to subject matter in the assigned books. Option of submitting three poems and a brief essay on one of the assigned poets as a fourth composition.

262 FILM AND DRAMA (3)

No prerequisite. A study of the relations between mediums. Students will examine the resources of the drama and of film. A nominal lab fee will be charged to cover the cost of films.

263 CULTURAL HEROES AND ANTI-HEROES IN AMERICAN LITERATURE (3)

The study of various heroic types of myth, legend and folklore represented in both serious and popular literature and in folklore.

281, 282, 283 WESTERN WORLD LITERATURE (3 ea)

Reading from classical and medieval, renaissance and neoclassical, romantic and modern literature. For students electing Option II for the general education humanities requirement; not open to students with credit in Gen St 121, 122, 123.

For English majors and minors, all upper division literature courses have English 301, 302, 303 as prerequisites. For transfer English majors, 9 credit hours in literature and concurrent registration in this series will meet the prerequisite. For other students, English 303.

300 DIRECTED INDIVIDUAL STUDY (1-3)

Prerequisite: permission of instructor and department chairman. Individual study of a topic not normally covered in a formal course.

301, 302, 303 INTRODUCTIONS TO NARRATIVE, DRAMATIC AND LYRIC LITERATURE (3 ea)

Prerequisite: English 101 or equivalent. Primary emphasis on attentive, close reading; secondary emphasis on identification of characteristics of fundamental literary types. Composition is an integral part of these courses.

STUDIES IN LITERARY HISTORY—BRITISH. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 310-315 includes literature courses with an historical emphasis. Number series 410-415 includes advanced courses with an historical emphasis characterized by more sharply focused and intense study than on the 300 level.

311 SURVEY OF BRITISH LITERATURE (4 ea)

311a The Beginnings to 1625 [Beowulf through the Metaphysicals]

311b 1625-1837 [Milton through the Romantics]

311c 1837-1940 [Victorians and Moderns]

- 312 PERIODS IN BRITISH LITERATURE (4 ea)
 312a (321) Beowulf through Everyman
 312b (322) Spenser through the Metaphysical Poets
 312c (323) Dryden through Johnson
 312d (324) Blake through Keats
 312e (325) Carlyle through Wilde
 312f (326) Hardy through Thomas
- 314a-z MAJOR BRITISH AUTHORS (3 ea)
 Various single authors or combinations of writers will be studied from quarter to quarter. The course may be elected more than once.

STUDIES IN LITERARY HISTORY—AMERICAN. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 316-319 includes literature courses with an historical emphasis. Number series 416-419 includes advanced courses with an historical emphasis characterized by more sharply focused and intense study than on the 300 level.

- 317 AMERICAN LITERARY HISTORY (3 ea)
 317a American Literature to 1800
 317b American Literature, Early 19th Century
 317c (317b) American Literature, Late 19th Century
 317d (317c) American Literature, Early 20th Century
- 318a-z (359) MAJOR AMERICAN WRITERS (3 ea)
 Various single writers or combinations of writers will be studied from quarter to quarter. The course may be elected more than once.
- 319 DEVELOPMENT OF AMERICAN LITERARY FORMS (3 ea)
 319a American Novel to 1900
 319b American Novel, 1900-1945
 319c American Drama to 1919
 319d American Drama 1920-1950 (also offered as Speech 424)
 319e American Poetry to 1914
 319f American Poetry 1914-1945

STUDIES IN LITERARY HISTORY—GENERAL. General prerequisite: see notice regarding 301, 302, 303 requirement. The series 320a-z includes courses with an historical emphasis dealing with the literature of countries other than Britain and America but written in English. The series 410a-z includes similar courses characterized by more sharply focused and intense study than on the 300 level.

- 320a COMMONWEALTH LITERATURE (3)
 Selected novels from Australia, Canada and South Africa.

STUDIES IN LITERARY THEORY AND CRITICISM. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 321-329 includes courses with a theoretical or critical emphasis. Number series 421-429 includes similar courses characterized by more sharply focused and intense study than on the 300 level.

- 321 (386) THEORY OF LITERATURE (3)
 The nature and judgment of literature as a form of art; principles and problems; writing of critical studies.
- 325a (425a) INTRODUCTION TO RHETORIC (3)
 Rationale of informative and persuasive writing; classical and modern treatments of invention, arrangement, prose style.

STUDIES IN LITERARY GENRE AND LITERARY THEME. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 330-339 includes studies in themes, motifs, and conceptions in literature. Number series 430-439 includes similar studies characterized by more sharply focused and intense study than on the 300 level.

Literary Genre:

- 332 FORMS OF THE NOVEL
 332a Politics in the Novel (3)
 The modifications and mutations of the genre under the pressure of political interest.
 332b (461g) The Picaresque Spirit in 18th and 20th Century Literature (3)
 Traditional and contemporary picaresque literature, emphasizing both continuity and change.
- 333 FORMS OF SHORT PROSE FICTION (3 ea)
 333a Masters of the Short Story
 The major practitioners of the genre.
- 334 FORMS OF PROSE NON-FICTION (3 ea)
 334a Autobiography as a Literary Form
 The development of a theme, methods of characterization, methods of handling chronology and historical events.
- 337 FORMS OF SATIRE (3 ea)
 337a Forms of Satiric Fiction
 Allegory, fable, voyages and utopias, as well as satiric novels and short stories.

Literary Theme

- 338 LITERARY THEMES
 338a (343b) Major Women Authors (3)
 Prerequisite: Eng 101. Studies in major women writers.
 338b (397b) Sex Roles in Contemporary Literature (4)
 Analysis of sex roles represented in contemporary literature.

English

STUDIES IN LITERARY EXPRESSION. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 350-359 includes courses in creative writing, advanced composition, personal essay, and argumentation. Number series 450-459 includes similar courses characterized by more sharply focused and intense study than on the 300 level. All these courses are graded S/U.

- 351 INTRODUCTION TO FICTION WRITING (3)
An introductory course open to students who have not previously taken a college course in fiction writing. (Note: this course is not a prerequisite for 451a,b,c.) S/U grading only.
- 353 INTRODUCTION TO POETRY WRITING (3)
An introductory course in poetry writing. Open to students who have not previously taken a college course in poetry writing. (Note: this course is not a prerequisite for 453a,b,c.) S/U grading only.
- 354 INTRODUCTION TO THE WRITING OF NON-FICTION PROSE (3)
Prerequisite: Eng 201 or 202. Opportunity for writers to develop skills on a mature level. The personal essay, biographical sketch, extended argument, and other forms. Individual projects. S/U grading only.

STUDIES IN LITERATURE, COMBINED APPROACHES. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 360-369 includes courses which combine two or more of the modes of study listed above. Number series 460-469 are advanced courses characterized by a more sharply focused and intense study than on the 300 level.

- 361 (334) BLACK LITERATURE
361a Biographies (3)
361b Poetry, Drama, Fiction (3)
- 362 (341) THE BIBLE AS LITERATURE (3)
Prerequisite: Eng 101. Cultural backgrounds of the Old and New Testaments, together with a literary analysis of selected passages.
- 363 EXTENDED STUDIES IN LITERATURE (8-12)
Courses to be team taught.
363a Classical, Baroque, Neo-Classical
- 364 CONTEMPORARY ISSUES IN LITERATURE: FICTION INTO FILM (3)
Prerequisite: Speech 345 recommended. A nominal lab fee will be charged to cover the cost of films. An examination of the relationship between fiction and film. Students will view films based on works of fiction and discuss the nature of each medium.
- 365 SEX ROLES: TRADITIONS, STEREOTYPES AND LIBERATION (4)
Prerequisite: one course from following: Anth 201, Soc 202, Eng 301, 302, 303. This course will use the tools of anthropology and literary criticism to determine the extent to which we make unconscious assumptions about sex roles. Stereotypes will be examined in the context of their relation to value systems, and their development will be traced through the history of the women's movement in America. (Also listed as Anth 365.) Offered summer only.

STUDIES IN ENGLISH LANGUAGE. English 370 prerequisite to all other courses in this section. Courses in American English, the history of the English language, transformational grammars, dialects, etc., are included in the number series 370-379 and 470-479.

- 370 (390) INTRODUCTION TO THE STUDY OF AMERICAN ENGLISH (4)
Introduction to structural and transformational grammars.
- 397c THE CANADIAN EXPERIENCE IN LITERATURE (4)
Prerequisite: Eng 101 and a 200-level course in any literature. Analysis of selected works, both French and English traditions, which give expression to a Canadian consciousness. The social and historical context of Canadian literature. Exploration of such topics as the two national solitudes, the struggle for cultural survival, the ethnic mosaic, the new nationalism.
- 399a,b,c HONORS TUTORIAL (2-5 ea)
- 400 DIRECTED INDIVIDUAL STUDY (1-3)
Prerequisite: permission of instructor and of the department chairman. Individual study of a topic not normally covered in formal courses.
- 401 TECHNICAL AND BUSINESS REPORT WRITING (3)
Prerequisites: Eng 101 and upper division standing. Theory and practice of writing with objectivity and clarity for business, industry, and government. Students will work with a variety of formats and kinds of papers.
- STUDIES IN LITERARY HISTORY-BRITISH. General prerequisite: see notice regarding 301, 302, 303 requirement; 15 credits in literature. Number series 410-415 includes advanced courses with an historical emphasis characterized by more sharply focused and intense study than on the 300 level.*
- 410 (440) PERIOD STUDIES (2-5)
Different literary periods and movements will be treated from year to year.
- 412 DEVELOPMENT OF BRITISH DRAMA (3 ea)
412a (461) Medieval and Elizabethan-Jacobean
412b (462) British Drama 1660-1900
412c (463) 20th Century British Drama
Historical and critical study of the British drama, with emphasis upon the greater writers (exclusive of Shakespeare). Also offered as Speech 421, 422, 423.
- 413 DEVELOPMENT OF THE BRITISH NOVEL (3 ea)
413a (464) The Eighteenth Century
413b (465) Romantic and Victorian
413c (466) Late 19th and Early 20th Centuries
413d The Contemporary Novel
- 414a-z STUDIES IN MAJOR BRITISH AUTHORS (3 ea)
Various single authors or combinations of authors will be studied from quarter to quarter. The course may be elected more than once.

- 415 STUDIES IN BRITISH AND AMERICAN LITERATURE (3 ea)
 415a (477) The Contemporary Novel
 British and American novels since World War II.
 415b (470) Contemporary Poetry
 Selected representative British and American poets of stature.
 415c (472) Contemporary Drama
 Selected plays from World War II to the present; recent trends in drama; theory of drama.

STUDIES IN LITERARY HISTORY—AMERICAN. General prerequisite: see notice regarding 301, 302, 303 requirement; 15 credits in literature. Number series 416-419 includes advanced courses with an historical emphasis characterized by more sharply focused and intense study than on the 300 level.

- 416 SPECIAL STUDIES IN AMERICAN LITERARY HISTORY (3 ea)
 416a (410h) The Frontier in American Literature
 416b The American Puritan Tradition
 416c Transcendentalism in American Literature
 416d The Imagist Movement in American Poetry
- 417 STUDIES IN MASTERWORKS OF AMERICAN LITERATURE (3 ea)
 Not open to graduate students.
- 418a-z STUDIES IN MAJOR AMERICAN WRITERS (3 ea)
 Various single authors or combinations of authors will be studied from quarter to quarter. The course may be elected more than once.
- 419 STUDIES IN THE DEVELOPMENT OF THE AMERICAN LITERARY FORM (3 ea)
 419a Contemporary Drama
 419b Contemporary Novel
 419c Contemporary Poetry

STUDIES IN LITERARY HISTORY—GENERAL. General prerequisite: see notice regarding 301, 302, 303 requirement; 15 credits in literature. The series includes similar courses to 320a-z characterized by more sharply focused and intense study than on the 300 level.

- 420a (461f) ENGLISH LITERATURE IN THE THIRD WORLD (3)
 The literature in English of Africa, West Indies, India.

STUDIES IN LITERARY THEORY AND CRITICISM. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 421-429 includes similar courses to 321-329 characterized by more sharply focused and intense study than on the 300 level.

- 421 (487) HISTORY OF LITERARY CRITICISM
 Prerequisite: 15 credits in literature. Reading and analysis of major documents of criticism.
 421a Classical, Medieval, Renaissance (3)
 421b Neoclassic and Romantic (3)
 421c Modern and Contemporary (3)
- 425a RHETORICAL ANALYSIS (3)
 Analysis of semantics, style, and tone; emphasis on expository writing.

STUDIES IN LITERARY GENRE AND LITERARY THEME. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 430-439 includes similar studies to 330-339 characterized by more sharply focused and intense study than on the 300 level.

Literary Genre

- 430 STUDIES IN FORMS OF LYRIC POETRY (3 ea)
 430a The Sonnet, 1557 to Present
 An examination of the ways the sonnet has adapted itself to a variety of literary themes, conventions, and styles.
- 431 STUDIES IN FORMS OF NARRATIVE POETRY (3 ea)
 431a (417f) Medieval Epic and Romance
 A study of the development of the forms, emphasis on Arthurian material.
 431b (414a) The Epic of Classical Tradition
 The Greek, Roman, French, and English epic as a genre.
- 432 STUDIES IN FORMS OF THE NOVEL (3 ea)
 Prerequisite: 15 credits in literature.
 432a (451) The Novel of Ideas
 The philosophical novels of Diderot, Dostoevsky, Kafka, Koestler, Sartre, Camus, Kazantzakis, Robbe-Grillet.
 432b (461e) The Naturalistic Novel
 432c The Anti-Novel
 Major examples of the genre from Tristram Shandy to Giles The Goat Boy and The Voyeur.
- 433 STUDIES IN FORMS OF SHORT PROSE FICTION (3)
 Prerequisite: 15 credits in literature.
 433a The Metaphysical Tale (3)
 Tales by such writers as Hawthorne, Dinesen, Kafka, and Borges.
- 437 STUDIES IN FORMS OF SATIRE
 Prerequisite: 15 credits in literature.
 437a Forms of Satiric Poetry (3)
 Satiric poetry from formal verse satire to modern variations of and departures from classical and neo-classical satire.

English

Literary Theme

- 438 STUDIES IN LITERARY THEMES (3 ea)
Prerequisite: 15 credits in literature.
- 439 (410j) MAIN CURRENTS IN MODERN LITERATURE
Prerequisite: 15 credits in literature.
- 439a Romanticism (3)
Goethe, Chateaubriand, Byron, Pushkin, Cooper and others.
- 439b Realism and Naturalism (3)
Flaubert, Zola, Turgenev, Tolstoy, Dostoevsky, Chekhov, Dreiser, Farrell and others.
- 439c Post-Realism (3)
Proust, Mann, Joyce, Kafka, Camus, Malraux, and others.

STUDIES IN ENGLISH EDUCATION. Number series 440-449.

- 441 STUDIES IN ENGLISH EDUCATION—ELEMENTARY
- 441a (495) English for the Elementary School (3)
Teaching reading, writing, speaking, and listening; formal and informal methods; textbooks and materials.
- 441b (380) World Literature for the Elementary Teacher (3)
Critical background in the literary form of myth, legend, folk literature, epic, fairy tales, and realistic fiction; analysis of selected children's literature.
- 445 CURRENT TRENDS IN ENGLISH EDUCATION
- 445a Current Trends in English Education (1-5)
- 445b Experience and Expression Through Language in the Elementary and Middle Schools (2)
A survey of current developments in literature, composition, and linguistics for the elementary and middle school classroom.
- 445c (498) Workshop in the Teaching of English (3-5)
Practical work in the problems of the teaching of English.
- 445d Workshop in the Teaching of English: Tutoring (2-5)
Prerequisite: permission of instructor. Opportunities to help public school students think, read, write more accurately. Credit varies with amount of time spent tutoring.
- 445e Studies in English Education: Workshop in Teaching Literature in Secondary School (3)
An extended laboratory workshop in the teaching of literature. Each class member will conduct ten "micro-teaching" sessions during the course, receiving either written or oral criticism from members of his group after each session. Each student will meet with the instructor for at least three conferences on his teaching.
- 445f Studies in English Education: Workshop in Teaching Varieties of Discourse in the Public School (3)
Small group discussion, classroom drama, and movement from discussion and drama to other forms of discourse.

- 446 STUDIES IN ENGLISH EDUCATION—SECONDARY
- 446a (496) English for the Secondary School (3)
Prerequisite: Eng 370. Teaching composition, language, and literature in the junior and senior high school; programs, procedures, and materials.
- 446b (406) Composition for Teachers (3)
Practice and instruction to improve the writing of students; emphasis on the nature of composition and skill in analyzing non-professional expository writing.

STUDIES IN LITERARY EXPRESSION. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 450-459 includes courses similar to 350-359 characterized by more sharply focused and intense study than the 300 level. All these courses are graded S/U.

- 451a,b,c (402a,b,c) CREATIVE WRITING WORKSHOP: FICTION (3 ea)
Opportunity for disciplined expression in writing fiction. May be repeated as a,b,c, with a limit of one course per quarter. S/U grading only.
- 452a,b,c (403a,b,c) CREATIVE WRITING WORKSHOP: DRAMA (3 ea)
Opportunity for disciplined expression in writing drama for stage, film, television, or other media. May be repeated as a,b,c with a limit of one course per quarter. S/U grading only.
- 453a,b,c (404a,b,c) CREATIVE WRITING WORKSHOP: POETRY (3 ea)
Opportunity for disciplined expression in writing poetry. May be repeated as a,b,c, with a limit of one course per quarter. S/U grading only.
- 455 CREATIVE WRITING SEMINAR (3)
Prerequisite: 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. S/U grading only.

STUDIES IN LITERATURE, COMBINED APPROACHES. General prerequisite: see notice regarding 301, 302, 303 requirement. Number series 460-469 are advanced courses characterized by a more sharply focused and intense study than on the 300 level.

- 461a (461c) MODERN LITERATURE IN TRANSLATION (3)
Prerequisite: 15 credits in literature.
- 461b (343d) MYTH AND MODERN MAN (3)
Prerequisite: Eng 101.
- 461c EXAMINING AND COMPOSING POETIC FORMS (4)
This course combines the approaches of genre study and literary expression.

- 461d CURRENT AMERICAN LYRIC POETRY (3)
Prerequisite: 15 credits in literature.
- 461h MAN AND THE SUPERSTATE—FICTION OF PROTEST AND RESISTANCE (3)
Prerequisite: Eng 101. Modern fiction that examines the relationship of the individual to the state.
- 461j CONTEMPORARY ISSUES IN LITERATURE: THE NEGRO'S NEGRO IN NEGRO LITERATURE (3)
Prerequisite: Eng 101. The evolution of the Negro character in Post-Bellum fiction to account for the presence of the Black character in contemporary Black American fiction.
- 463 (483) SOCIAL CHANGE AND THE MORAL ORDER IN RECENT LITERATURE (4)
Also offered as Phil 483 and Anth 483. Study of recent works of fiction and non-fiction.
- STUDIES IN ENGLISH LANGUAGE. English 370 prerequisite to all other courses in this section. Courses in American English, the history of the English language, transformational grammars, dialects, etc., are included in the number series 370-379 and 470-479.*
- 470 (490) TRANSFORMATIONAL GRAMMAR (3)
Introduction to phrase structure generation, sentence transformations, lexical and phonological features.
- 471 (491) HISTORY OF THE ENGLISH LANGUAGE (3)
The historical development of the English language: phonology, morphology, syntax, semantics.
- 472 (492) AMERICAN ENGLISH DIALECTS (3)
A study of the regional dialects of American English and their historical development.
- 473 VARIETIES OF NON-STANDARD ENGLISH (3)
Survey of the characteristics of the non-standard English of White, Black, and Spanish-American speakers. Designed primarily for teacher candidates.
- 474 ENGLISH USAGE (3)
Survey of standard American English usage. Designed primarily for teacher candidates.
- 497m CONFERENCE ON CHILDREN'S LITERATURE (1-3)
Prerequisite: junior status or experience as teachers, librarians, or writers. A conference consisting of lectures, demonstrations, and small-group meetings. (Offered summer, 1975, only.)
- 499a,b,c HONORS TUTORIAL (2-5 ea)
- Registration in the 500-level courses requires graduate status and departmental approval. An adequate background (normally an undergraduate major or minor in English), and the ability to do independent work are prerequisites. Attention will usually be given to a limited topic: one writer or a small group of writers, selected works, a single form.*
- 500 DIRECTED INDIVIDUAL STUDY (1-3)
Research on a topic not included in formal courses. This course may be taken only once, unless permission is granted by the Graduate Studies Committee.
- 501 INTRODUCTION TO GRADUATE STUDY IN ENGLISH (5)
Required of all candidates for the Master of Arts. No M.A. student is admitted to candidacy until he has completed 501.
Six hours of creative writing courses are required of all M.A. students submitting a creative writing thesis. Registration for thesis credit may be scheduled during any quarter.
- 502a FICTION WRITING SEMINAR (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 FICTION WRITING SEMINAR (5)
Prerequisite: English 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 POETRY WRITING SEMINAR (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 POETRY WRITING SEMINAR (5)
Prerequisite: English 504a or permission of instructor. Individual projects in the development of an original idiom.
- 510 SEMINAR IN RHETORIC (5)
Rhetorical theory and criticism. The classical tradition and modern developments. Applications for the study and teaching of language and literature.
- 513 SEMINAR IN TEACHING COLLEGE COMPOSITION (2)
Prerequisite: appointment as a teaching assistant or permission of the instructor. Elective. Grades: S and U. Offered once a year in the fall.
- In the following literature and linguistics seminars (with the exception of 541, 543 and 545), the subject matter covered will vary from year to year depending on the instructor and on student interest.*
- 520 SEMINAR IN ANGLO-SAXON LITERATURE (5)
- 521 SEMINAR IN MEDIEVAL LITERATURE (5)
- 522 SEMINAR IN SIXTEENTH—SEVENTEENTH CENTURY LITERATURE (5)
- 523 SEMINAR IN EIGHTEENTH CENTURY LITERATURE (5)

English

- 524 SEMINAR IN ROMANTIC LITERATURE (5)
- 525 SEMINAR IN VICTORIAN LITERATURE (5)
- 526 SEMINAR IN MODERN LITERATURE (5)
- 531 SEMINAR IN AMERICAN LITERATURE: BEGINNINGS TO 1860 (5)
- 532 SEMINAR IN AMERICAN LITERATURE: 1860 TO PRESENT (5)
- 541 SEMINAR IN CHAUCER (5)
- 543 SEMINAR IN SHAKESPEARE (5)
- 545 SEMINAR IN MILTON (5)
- 560 SEMINAR IN LITERARY FORM (5)
- 587 SEMINAR IN LITERARY CRITICISM (5)
- 590 LINGUISTICS (5)
- 591 HISTORICAL LINGUISTICS (5)
- 594 PRACTICUM IN COLLEGE TEACHING (2)
Prerequisite: graduate status. Cannot be taken by student who has already taken Eng 596. Supervised classroom experience beyond that offered by Eng 513. S/U grading only.
- 595 SEMINAR IN ENGLISH IN THE TWO-YEAR COLLEGE (4)
Prerequisite: admission to departmental M.A. program.
- 596 INTERNSHIP IN ENGLISH IN THE TWO-YEAR COLLEGE (10)
Prerequisite: English 595.
- 598 RESEARCH IN THE TEACHING OF ENGLISH (1-3)
Prerequisite: teaching experience. For Master of Education candidates only.
- 600 DIRECTED INDEPENDENT RESEARCH (2-4)
Prerequisite: advancement to candidacy. May be taken twice and for a total of 6 hours.
- 690 WRITING REQUIREMENT (5)
With the approval of the department, a student may fulfill the writing requirement in one of three ways. He may submit a scholarly thesis (7), a creative writing thesis (7), or two scholarly papers (3 each). Approval for the way in which a student meets English 690 is generally given at the time of his admission to candidacy.

JOURNALISM

The journalism program 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 in the print and

broadcast media or other professional situations.

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, and 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 government and industry wherever communications skills, with general knowledge, are vital.

COURSES IN JOURNALISM

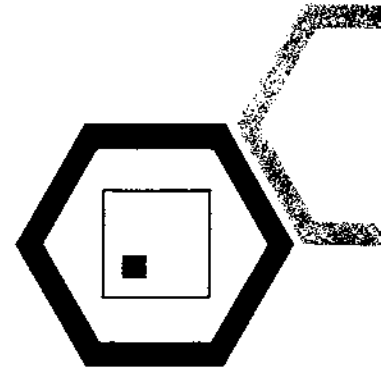
- 104 NEWSWRITING (3)
Prerequisite: ability to type 25 or more words per minute. Writing for newspapers; news elements and values, gathering news, structure and style of news stories; covering speeches and meetings, interviewing.
- 111, 112, 113 NEWSPAPER STAFF (2 ea)
Prerequisites: freshman standing; Journ 104. Participation on the staff of the college newspaper; critiques in news reporting, writing, editing and make-up.
- 121, 122, 123 PERIODICAL STAFF (2 ea)
Prerequisites: 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 college periodical.
- 160 CURRENT EVENTS AND THE MEDIA (3)
Discussions and interpretation of news in context of interaction with media; for potential journalists and others interested in current events.
- 204 COPY EDITING (3)
Prerequisite: Journ 104. Newspaper copy desk operations: editing, headline writing; dummied; page make-up; editorial writing.
- 211, 212, 213 NEWSPAPER STAFF (2 ea)
Prerequisites: sophomore standing; Journ 104. Participation on the staff of the college newspaper; critiques in news reporting, writing, editing and make-up.
- 221, 222, 223 PERIODICAL STAFF (2 ea)
Prerequisites: 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 college periodical.

- 304 **REPORTING (3)**
Prerequisite: Journ 104. Interviewing, news coverage, including campus sources, and standard community news sources, with emphasis on social agencies; writing for newspapers.
- 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 **NEWSPAPER STAFF (2 ea)**
Prerequisites: junior standing; Journ 104. Participation on the staff of the college newspaper; critiques in news reporting, writing, editing and make-up.
- 321, 322, 323 **PERIODICAL STAFF (2 ea)**
Prerequisites: 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 college periodical.
- 330 **PHOTOJOURNALISM (3)**
Prerequisite: 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.
- 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 (3)**
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. May be taken only once in fulfillment of General College Requirements.
- 400 **SPECIAL PROBLEMS IN JOURNALISM (1-3)**
Prerequisite: permission of instructor. Individual studies and projects exploring specialized aspects of journalism.
- 404 **FEATURE WRITING (3)**
Prerequisite: 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)**
Prerequisite: Journ 104 or English 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)**
Methods and techniques in teaching public school journalism; news elements, values and writing for newspapers. Not open to students who have taken Journ 104.
- 411, 412, 413 **NEWSPAPER STAFF (2 ea)**
Prerequisites: senior standing; Journ 104. Participation on the staff of the college newspaper; critiques in news reporting, writing, editing and make-up.
- 421, 422, 423 **PERIODICAL STAFF (2 ea)**
Prerequisites: 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 college periodical.
- 430 **FIELD INTERNSHIPS (1-6)**
Supervised field work on newspapers, magazines, radio and TV stations, public relations and advertising agencies; for journalism majors between junior and senior years; usually during summer session. S/U grading.
- 431, 432, 433 **TELEVISION NEWS STAFF (2 ea)**
Prerequisites: Journ 304, Speech 240. Workshop course in gathering and preparing news for television; training in planning, organizing and carrying out news coverage; weighing visual and non-visual news values; writing news scripts which integrate words, sound and pictures; critiques on the completed work; participation on the staff of the college television news program. Concurrent enrollment in Speech 442 recommended.
- 440 **PRESS AND WORLD AFFAIRS (3)**
The international role and operations of the press; factors affecting the free flow of news; major world news systems.
- 460 **LITERATURE OF JOURNALISM (3)**
Prerequisite: 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)**
Prerequisite: 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)**
Prerequisite: 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.



COLLEGE OF ETHNIC STUDIES

A Cluster College of Western Washington State College



Ethnic Studies

The College of Ethnic Studies (CES), established by the Board of Trustees of Western Washington State College on October 9, 1969, offers programs in two distinct areas: Ethnic Studies and Human Services. As one of three cluster colleges of Western Washington State College, the College of Ethnic Studies provides specific programs for students from an ethnic minority background as well as for all students interested in the ethnic pluralism of this country. Since it is a smaller unit, it offers an opportunity for more direct contact between students and faculty and an educational program which is more interdisciplinary in nature and in structure. Through its Human Services Program, the College of Ethnic Studies provides students with clearly defined work-related experiences which lead to a degree.

ETHNIC STUDIES

The original program in ethnic studies was based on the socio-cultural experiences of Chicanos, American Indians, Asian Americans and Blacks. However, the importance of examining the relationship of ethnicity to the American society has extended the boundaries of the program into more general courses on ethnicity not limited to the study of only a few ethnic groups.

The program stresses the American experience as the basic context for the study of ethnicity and ethnic groups, but, increasingly, historical and cultural forces which are neither American nor Western are traced and explored for their cultural influences in an attempt to understand the conflicts between majority and minority groups and their possible resolutions.

As a means of providing information and ideas about ethnicity, the College of Ethnic Studies publishes *The Journal of Ethnic Studies*, a quarterly treating such topics as religion and ethnicity, bi-racial politics, and the effort of self-definition by specific ethnic minority groups.

HUMAN SERVICES

The Human Services Program is a two-year external degree program of an interdisciplinary nature devoted to those areas of knowledge needed for work in the Human Services. Human Services denotes those activities and

efforts which aid individuals and groups in fulfilling their needs for growth and development, specifically in the areas of physical and mental health, education, employment, nutrition, shelter and recreation.

As a larger number of individuals work in the area of Human Services, it is clear that they must depend upon a broad base of interdisciplinary knowledge, such as value clarification and social philosophy, problem analysis, child development, poverty, the ethnic minorities, law and justice, in fact, interdisciplinary knowledge which provides the context for Human Services. It is also clear that the laboratory for study in Human Services includes the agencies which provide these services.

ADMISSION

A student seeking admission to the College of Ethnic Studies must first be admitted to Western Washington State College. When applying for admission to Western, the candidate should mark his application indicating that he desires to apply for admission to the College of Ethnic Studies. Once accepted by Western, the candidate will complete a brief application form for formal admission to the College of Ethnic Studies.

ETHNIC STUDIES FACULTY

- JESSE HIRAOKA (1972) Dean of the College of Ethnic Studies and Professor of General Studies. BA, Roosevelt University; MA, University of Chicago; PhD, Northwestern University.
- GEORGE H. ABRAMS (1972) Assistant Professor. BA, MA, State University of New York.
- RAUL ARELLANO (1972) Associate Professor. BA, MA, Boston University; MA, University of Washington.
- REGINALD D. BUTLER (1968) Assistant Professor. BA, Western Washington State College.
- WILLIAM A. HARRIS (1971) Assistant Professor. BA, University of California, Santa Barbara; MA, Yale University.
- HYUNG-CHAN KIM (1971) Associate Professor. BA, Hankuk University for Foreign Studies; BA, MA, EdD, George Peabody College.
- PAMELA J. SMITH (1972) Assistant Professor. BA, Seattle Pacific College; MA, Western Washington State College.
- JEFFREY D. WILNER (1971) Assistant Professor. BA, Roosevelt University; MA, University of Washington.

THE PROGRAM IN ETHNIC STUDIES

The instructional program is interdisciplinary; the traditional disciplines within the humanities and the social sciences are utilized in order to interpret and understand the ethnic experience. Students should develop a program of studies with the help of an adviser.

Four programs are offered: 1) the ethnic studies major; 2) the minor which complements some other area of study at Western; 3) the Honors Program designed for those students who are interested in teaching ethnic studies; who are strongly committed to the pursuit of ethnic studies; 4) the student designed major.

BACHELOR OF ARTS

Honors Program Total of 90 credits

Required:

- Introductory courses (15 credits)
- Comparative ethnic courses (15 credits)
- 60 credits as selected in an area of specialty by the student

The student will be evaluated in terms of the learning objectives of his own program. This evaluation would be based upon written and/or oral examinations, papers, or other evidence of progress.

Ethnic Studies Major Total of 55 credits

Required:

- Introductory courses (15 credits)
- Comparative ethnic courses (10 credits)
- 30 credits selected by student in Black, Chicano, Native American Indian, Asian American, or comparative ethnic courses

Student-Designed Major

The student may design an individual program of study, in consultation with his adviser, which may be adopted subject to the approval of the faculty of the College of

Ethnic Studies. The student would be evaluated in terms of the learning objectives of his own program. This evaluation (yearly) will be based upon written and/or oral examinations, papers, or other evidence of progress.

Ethnic Studies Minor Total of 30 credits

Required:

- Introductory courses (5 credits) or ES 300 for non-majors
- 25 credits selected by student in Black, Chicano, Native American Indian, Asian American, or comparative ethnic courses

BACHELOR OF ARTS IN EDUCATION

*Major-Minor Concentration –
Ethnic Studies/Social Studies*

This program is designed for students who expect to teach in junior and senior high schools which have a significant number of students from ethnic minorities. It will also provide future teachers with a knowledge of the diverse cultural heritage of this country.

This program should prove beneficial to the preparation of teachers in general. The problem of identity has become significant in recent years. The emphasis upon the traditional heritage provides too limited a focus for future teachers. If, indeed, human relationships can be improved, it must in part be done by training teachers who are aware of cultural diversity.

Required Areas:

Ethnic Studies 55 credit hours

- Basic ethnic studies (15 credits)
- Comparative cultural studies (10 credits)
- Ethnic studies electives under advisement to total 55 credit hours

Social Sciences 48 credit hours

- Political science or geography (10 credits)
- History (23 credits)
(History 391 required; history electives to total 20 credit hours)

Ethnic Studies

- Social science (15 credits)
(from two social science areas not otherwise developed in the program)
- Courses in this area to be selected under advisement of ethnic studies and the director of social studies education

General Studies 25 credit hours

- Math (3 credits)
- Natural science (16 credits)
- Communication (6 credits)

Professional Education 39 credit hours

- See "Professional Education Sequence" section in the Education Department listing of this catalog

quarter. A fee of \$2 per credit is charged. The time and procedure to be followed in completing the evaluation process will be announced by the Examiner.

2. The results of the challenge shall be recorded as "Satisfactory" or "Unsatisfactory" on the student's permanent record; the results will not be used in computing grade point averages.
3. The challenge application will normally be denied:
 - (a) if the student has credit for a similar course at this or another college; or
 - (b) if the challenge procedure is inappropriate.

GENERAL EDUCATION REQUIREMENTS

General education requirements in the areas of humanities, social sciences and comparative cultures will be met by courses within the College of Ethnic Studies program. Students, however, must meet the general college requirements of the College of Arts and Sciences in the physical sciences, mathematics, and communication.

RESIDENCE REQUIREMENT FOR DEGREE

Students are required to complete successfully a minimum of forty-five credits in courses offered in the program of the College of Ethnic Studies.

COSTS AND FINANCIAL ASSISTANCE

Tuition, fees and other costs are the same for all divisions of Western Washington State College. Consult the appropriate sections of this Catalog for details.

CHALLENGING OF COURSES

Any course in the College of Ethnic Studies may be challenged by the procedure outlined below:

1. Students desiring to challenge a course should apply to the College Examiner by the fourth week of the

OFF-CAMPUS LEARNING PROGRAM

Positions may become available in various government programs and in industry (internships). In order for such work to qualify for credit, an independent study project must be worked out with one or more faculty members. For further information, consult the College of Ethnic Studies registrar.

COURSE OFFERINGS

Except for the introductory courses, ethnic studies courses may vary from year to year. The following list suggests the kinds of courses which have been offered.

INTRODUCTORY COURSES:

201 INTRODUCTION TO BLACK STUDIES (5)

Orientation to nature and scope of Black Studies. This course will cover the history of Black People in the United States of America, the unique nature of the experience, the structural problems and potential of the Black community and an introduction to the contributions and thought of Black leaders.



202 INTRODUCTION TO INDIAN STUDIES (5)

The biological concept of race and culture. Cultural variations. The Indian cultures of North America, the ways in which these cultures vary and their relationship to other ethnic groups. Cultures before European contact, the historical interactions with other groups after contact and the present situation of native peoples in North America today.

203 INTRODUCTION TO CHICANO HISTORY AND CULTURE (5)

The history and culture of Mexicans in the United States beginning with the early settlement of the Southwest by Mexico. An emphasis on the historic conflict that developed after 1848 between the Chicano peoples of the Borderlands (S.W.) and the Southwestern United States on the level of political, economic, educational and social institutions. Study of the emergent Chicano culture and the New Consciousness.

205 INTRODUCTION TO ASIAN AMERICAN STUDIES (5)

A general survey of the history of Asians in the United States; the problems encountered by Chinese, Filipino, and Japanese and Korean communities in America, past and present.

300 COMPARATIVE MINORITY STUDIES (5)

The foundations of history, culture and the development of the culturally different groups in the United States: the Blacks, Chicanos, Indians and Asian Americans principally. Emphasis upon comparative minority relations.

NATIVE AMERICAN STUDIES (courses offer from 3 to 5 credits):

312 INDIAN - WHITE RELATIONS (also 212)

327 AMERICAN INDIAN HISTORY: 19th CENTURY

329 AMERICAN INDIAN HISTORY: 20th CENTURY

341 AMERICAN INDIAN HISTORY: CONTACT TO 1800

342 INDIAN HISTORY OF THE PACIFIC NORTHWEST

359 CONTEMPORARY AMERICAN INDIANS

371 COMPARATIVE AMERICAN INDIAN CULTURES

BLACK STUDIES (courses offer from 3 to 5 credits):

351 SOCIOLOGY OF THE BLACK COMMUNITY

363 OLD GHANA, MELLE AND SONGHAY: A HISTORY OF THE LOST EMPIRES OF WEST AFRICA

372 HISTORY OF BLACK CULTURE

376 HISTORY OF THE SOUTH: FROM COLONIAL SETTLEMENT TO THE CIVIL WAR

378 BLACK CURRICULUM

CHICANO STUDIES (courses offer from 3 to 5 credits):

324 CONTEMPORARY MEXICAN AMERICAN LITERATURE

343 MEXICAN AMERICAN THOUGHT IN CONTEMPORARY LITERATURE

362 PREHISTORY AND CULTURE IN MEXICO

374 SEMINAR IN THE CHICANO COMMUNITY

377 SEMINAR IN CHICANO EXPRESSIVE CULTURE

ASIAN AND ASIAN AMERICAN STUDIES (courses offer from 3 to 5 credits):

340 JAPANESE LITERATURE IN TRANSLATION

Ethnic Studies

- 352 RADICAL PERSPECTIVES IN THIRD WORLD THOUGHT
403 CONCENTRATION CAMPS: THEIR SOCIAL AND POLITICAL IMPLICATION

COMPARATIVE CULTURE STUDIES (each course generally offers 5 credits):

- 320 CIVILIZATION IN THE NEW WORLD
338 WOMEN: TRADITIONAL ROLES AND MODERN MOVEMENTS
339 COMPARATIVE CULTURE RESEARCH METHODS
368 CULTURES AND POVERTY
373 A COMPARATIVE HISTORY OF SLAVERY IN WESTERN CULTURE
401 SOCIAL PHILOSOPHY AND EDUCATIONAL POLICY FOR AMERICAN MINORITIES
404 THIRD WORLD AND WORLD POLITICS
414 PSYCHOHISTORY

MINORITY EDUCATION (each course generally offers 5 credits):

- 319 INDIAN STUDENT IN AMERICAN EDUCATION
357 EDUCATION IN THE BLACK COMMUNITY
401 SOCIAL PHILOSOPHY AND EDUCATIONAL POLICY FOR AMERICAN MINORITIES

INDEPENDENT STUDY PROJECTS (to be arranged; credits vary):

- 291 TOPICS IN BLACK STUDIES
391 TOPICS IN BLACK STUDIES
392 TOPICS IN NATIVE AMERICAN INDIAN STUDIES
393 TOPICS IN CHICANO STUDIES
394 TOPICS IN ASIAN AMERICAN STUDIES
395 TOPICS IN COMPARATIVE CULTURE STUDIES
400 SPECIAL PROJECTS

SEMINARS (credits vary):

- 430 SEMINAR IN BLACK STUDIES
431 SEMINAR IN CHICANO STUDIES
432 SEMINAR IN NATIVE AMERICAN INDIAN STUDIES

- 433 SEMINAR IN ASIAN AMERICAN STUDIES
434 SEMINAR IN COMPARATIVE CULTURE STUDIES
435 SEMINAR IN MINORITY EDUCATION

THE PROGRAM IN HUMAN SERVICES

Introduction

The academic program is problem-centered, using field experiences as a laboratory. All students either must be employed in a social service agency or have a volunteer placement in an agency. The intent of the academic program is to enable students to master the diverse bodies of knowledge required for thorough analysis of a specific community problem area or agency service deficiency, followed by development and implementation of an experimental project to address the problem or remedy the service deficiency. Program faculty provide the following inputs for students' learning:

1. Concepts from social science disciplines for defining and refining the problem statements.
2. Data for the understanding of the context (psychological, sociological, political, economic, etc.) in which the problem exists.
3. Prior experiments, explanatory theory, and specific methods from the various disciplines in order to analyze and select appropriate strategies for responding to the problem.
4. Systems theory and principles of project management sufficient to carry out an experimental project.
5. Appropriate skills in writing, interpersonal communications, and group dynamics to enable students to function effectively in an organizational setting and become more effective learners.

Format

The basic format will be teaching generic knowledges common to all students through ongoing "core groups" of 15 to 20 students organized on the basis of

geographic proximity and congruence of field work. "Problem specific" study will be organized as seminars open to students from all core groups, or as independent study.

1. *The Core Group:* The core group will be conducted as an integrating seminar using field experience as a laboratory and accounting for basic learning in the following subject areas:
 - (a) Value clarification and social philosophy.
 - (b) Analysis of the problem area, including the community, agency, and interpersonal contexts.
 - (c) Project development and design.
 - (d) Project management, including written and interpersonal communications, group leadership, monitoring and evaluation, and report writing.
2. *Required Problem Specific Seminars:* These seminars will focus on subject areas common to large clusters of students, and account both for further knowledge and skill from appropriate social science disciplines (such as human development, community organization, or advanced social science research skills) as well as study of a specific problem area (such as 'the law and justice system' or 'education for preschool children').
3. *Problem Specific Independent Study:* Either through independent study contracts or small seminars, students will focus on knowledges and skills specifically required by one individual or a small group (such as 'recreation and play therapy' for Headstart placements, or 'alternative models for community mental health programs' for students developing a halfway house for a community mental health program).

HUMAN SERVICES FACULTY

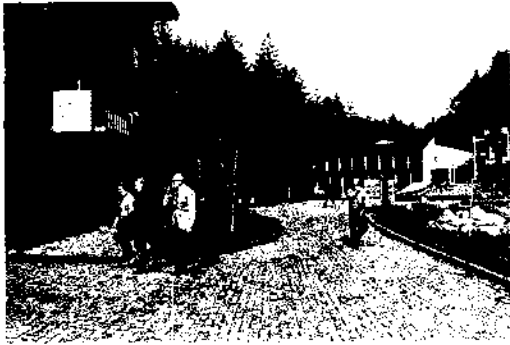
DAVID M. MILLER, associate director
 SHARON BARNETT, lecturer in Human Services
 TIMOTHY C. EARLE, lecturer in Human Services
 DANIEL EDWARDS, Lecturer in Human Services
 DEAN C. ELIAS, lecturer in Human Services
 BRUCE HARRIS, lecturer in Human Services
 EDWARD JACOBS, lecturer in Human Services

PAMELA ROOT, lecturer in Human Services
 LANGSTON TABOR, lecturer in Human Services

Special faculty is added on a contractual basis whenever specific knowledge is required.

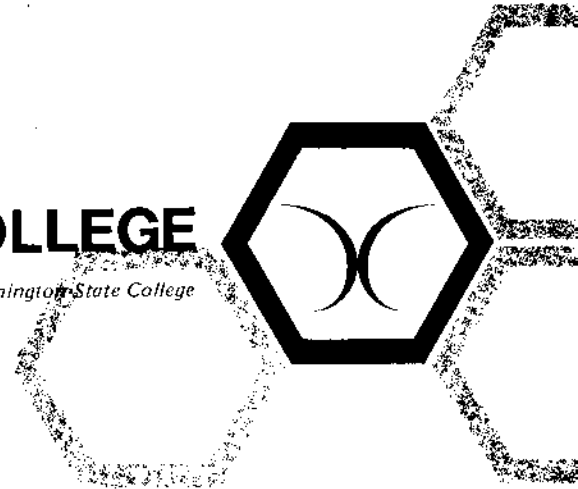
COURSE OFFERINGS

- 300 ETHICS OF HUMAN SERVICE (5)
 Analysis of alternative assumptions about the nature of man, human community, and the implications for human services. Students will clarify their personal assumptions and values as a framework for evaluating human service programs.
- 310 GROUP PROCESSES IN FORMAL ORGANIZATIONS (5)
 Analysis of behavior in formal and natural groups in human service agency settings, with emphasis on assessing and improving group effectiveness in achieving organizational goals.
- 311 COMMUNICATION PROCESSES IN FORMAL ORGANIZATIONS (5)
 Theory and skill practice with interpersonal communications in human service agency settings, with emphasis on identifying communication barriers and improving verbal and non-verbal communications skills.
- 320 FIELD RESEARCH: PROBLEM ANALYSIS AND PROJECT DESIGN (5)
 Analysis of community needs in light of organizational goals, program and structure, and the use of specific field research methods in designing a human service project.
- 322 PROJECT MANAGEMENT: PROGRAM EVALUATION (5)
 Theory and practice of program evaluation applied to the students' field research project. Consideration of value conflicts, the impact of organizational behavior and community pressures, as well as evaluation of effectiveness in terms of goal attainment.
- 400 VALUE IMPLICATIONS FOR FIELD PROGRAMS (5)
 Based on the students' field research experience and literature relevant to the students' area of exploration, development of (1) a program model consistent with the students' personal values and (2) a proposal for implementation.
- 420 FIELD RESEARCH: EXPERIMENTAL PROJECT DESIGN (5)
 Based on analysis of community needs, agency values and gaps in agency services, students will design and develop an experimental project to improve the quality of human services in a specific agency setting.
- 422 FIELD RESEARCH: EVALUATION (5)
 Collection, organization and analysis of information to assess progress in accomplishing project goals, to test the organizing hypothesis, and to identify forces producing deviations from expected results.



FAIRHAVEN COLLEGE

A Cluster College of Western Washington State College



Fairhaven College

Fairhaven College began in 1967 as an alternative to large-size, mass education. From the beginning there was an openness to new strategies of learning and a tolerance for envisioning new purposes for the process of education. Fairhaven is no longer a new college, but the openness remains. Community members, both students and faculty, continue to enjoy the freedom to build an educational experience which is personally meaningful.

The goals of the college are not fixed. The community has resisted every effort to say with any precision what the college is about. Certain themes do emerge and these themes give some indication of direction—if not a definite shape—to the college. Non-competition is a high value and people here search for ways to combine non-competition with a sense of quality and excellence.

The importance of community is also a key value. The original model for community was an extended family; this has changed, and the current model is more like that of a small village. Fairhaven resists the notion that students are disembodied "minds" ready to absorb facts and insights; the value is rather that learning has to do with the person—*all* of the person. Individual responsibility receives high marks in the college, and there is the conviction that people do not learn how to use their energies responsibly by being told what to do. The individual student is the focus of much of the college's life, and the presumed first task is for the individual to center her or his energies and directions. Once this is done, learning becomes relatively simple. There are, of course, many other values found in the college. The accompanying admissions section gives additional hints to the way of life prized by the school.

These values work themselves out in the organization of the college. For example, the importance of non-competition leads to a policy of no grades. The stress on community is directly seen in the government of the college. Governance is open to all members of the community. Traditional "top-down" forms of administration are avoided and care is taken to center responsibility for the corporate life in the community and not in an individual or set of individuals. The values of community are also reflected in the residential program. The college would work best if most of the students lived in the residential halls. The effort is to build a program sufficiently attractive that the student will choose this alternative. Students are normally

expected to live on campus their first year; thereafter they are free to remain on campus or to live elsewhere.

The fit between Fairhaven's ideals and its realities is far from complete. The hope is that each new generation of students will enter with renewed energy to move the forms of the college toward its ideals. A further hope is that new students will bring their own dreams about the ends and means of education and help offset the tendency to become settled.

The college has its own campus, a cluster of small residence halls and an academic-commons building. It is located in a ring of trees called Hidden Valley, which is about a quarter of a mile from the main campus. The enrollment is limited to 600 students.

Fairhaven is a cluster college of Western Washington State College and its students are members of both Fairhaven and WWSC; therefore they are eligible to take part in all activities of both. Students receive instruction from the Fairhaven faculty as well as from other faculties at Western. Further, students have access to the library, the laboratories and the recreational facilities of the main campus.

FAIRHAVEN FACULTY

- KATHRYN L. ANDERSON (1972) Assistant Professor. BA, MA, University of Iowa.
- MICHAEL J. BURNETT (1969) Assistant Professor. BA, University of Illinois; MA, PhD, Claremont Graduate School.
- WILLIAM GARY CLEVIDENCE (1969) Associate Professor. BA, Antioch College; MA, University of Michigan.
- RYAN W. DRUM (1970) Assistant Professor. BS, PhD, Iowa State University.
- CONSTANCE P. FAULKNER (1968) Associate Professor. BS, PhD, The University of Utah.
- KENNETH 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.

**On Sabbatical Leave 1975-76*

WILLIAM H. HEID (1968) Assistant Professor. BA, Denison University; MS, PhD, University of Washington.
ANNIS J. HOVDE (1948) Professor. BA, MA, University of Washington.
**RAND F. JACK (1971) Assistant Professor. AB, Princeton University; LLB, Yale University Law School.
ROBERT H. KELLER (1968) Associate Professor. AB, University of Puget Sound; BD, MA, PhD, University of Chicago.
CHARLES D. LUMMIS (January 1973) Assistant Professor. BA, MA, PhD, University of California, Berkeley.
JOHN C. McCLENDON (1971) Assistant Professor. BA, MA, San Francisco State College.
DONALD B. McLEOD (1963) Professor. BA, Whitman College; MA, University of Montana.
DAVID T. MASON (1966) Associate Professor. AB, Reed College; MA, PhD, University of California, Davis.
JEROME RICHARD (1969) Associate Professor. BA, University of Pennsylvania; MA, New School for Social Research; MA, San Francisco State College.
TOM M. SHERWOOD (1970) Assistant Professor. BA, Wm. Jewell College; MA, University of Chicago.
BEVERLEY M. WARNER (1968) Associate Professor. AB, Augustana College; AM, University of Denver; PhD, Ohio University.

ADMISSIONS

General Considerations

Fairhaven is not the usual type of college. The prospective student must usually meet the admissions standards of Western. These standards, however, are based on achievement in high school and are an incomplete guide for either the college or the student in deciding if Fairhaven is an appropriate college. Furthermore, admission to Fairhaven is largely a process of self-selection on the part of prospective students. As an aid in this process, the following list of traits, abilities, and qualities has been compiled. The list is an idealized statement of aspirations and reflects a direction rather than an attained state. Fairhaven seeks those who are moving in this direction and strives to be a place

**On Leave 1975-76

where this movement can be enhanced. Should a person feel comfortable with the general direction of the list, then he or she may feel comfortable in using Fairhaven as an environment in which to continue an education.

Fairhaven seeks community members who:

- can responsibly and constructively use their freedom;
- have enthusiasm, creativity and imagination;
- have a sense of humor, even self-irony;
- have a high tolerance for ambiguity and are open to a wide variety of experiences;
- can constructively handle dissatisfactions;
- are intellectually honest and self-critical;
- have respect, faith and caring interest in people;
- can look critically at society and the world;
- have intellectual diligence and self-discipline;
- have a desire to explore the world of knowledge and to apply the findings to their own lives;
- are willing to take responsibility for the shape and direction of their own education;
- are involved with process-values of education while testing possibilities . . .

Procedure

Candidates for admission to Fairhaven College should submit a regular freshman or transfer application form to the Admissions Office of Western Washington State College. The words *Fairhaven College* clearly written on this form will avoid delay in receiving further materials which are needed to complete the application to Fairhaven.

After admission to Western Washington State College, the applicant is sent the Fairhaven admission form which seeks more subjective information and also requests the names of two references whom the Fairhaven Admissions Office can contact if necessary. Letters of recommendation are not required, but may be submitted if the applicant feels that they will appreciably add to the application. The applicant may also include materials which give insight into creative abilities or special talents.

Fairhaven College

Delayed Enrollment

Fairhaven College recognizes the value of broadening life-experiences outside the college community. Experience with students, who upon admission after high school graduation have elected to delay enrollment one or more quarters, has been such that Fairhaven endorses a period of work, travel, etc., before beginning college. Thus, any student who is admitted to Fairhaven can, upon written request, delay enrollment for periods of up to one year and still be assured of admission to Fairhaven College.

Candidates for admission to Fairhaven should send all admissions material directly to the Office of Admissions, Western Washington State College. Fairhaven College maintains communications with that office.

ACADEMIC PROGRAM

Faculty-Student Contact

A basic assumption of Fairhaven College is that faculty and students can construct courses, seminars, field trips and other educational experiences that hold more relevance and interest to both than do conventional courses.

A second assumption is that maximum flexibility must be allowed in the planning and execution of such activities. Only with such flexibility can the talents, skills and capacities of students and teachers be most effectively utilized. Motivated students can learn more effectively; interested teachers teach more effectively. Learning is not confined to lecture halls, laboratories and 50-minute periods.

The student's close contact with his faculty tutor or adviser allows the latter to work with the student in planning activities of the Fairhaven program, including area courses, seminars, independent study, travel and work study, and the major or Fairhaven concentration. Discussions regarding the elective program and independent study may include special lecture and cultural events, involvement in creative activity, travel, work, participation in political activities, student government and individual research projects. The tutor or adviser is

responsible both for the evaluation of the student's activities in these areas and the amount of work and time involved in them.

The quarter-hour credit system, described elsewhere in the catalog, is appropriate for courses the student takes at all the other undergraduate colleges of Western. Fairhaven does not "grade" its students. Rather, immediately following the completion and evaluation of courses and contracted study, it is the student's responsibility to report credits earned to the Fairhaven Registrar. Except in the case of student withdrawals, the quarter by quarter reporting system remains informal until June, at which time all Fairhaven credits are forwarded to the Western Registrar for official transcript entry.

The policy: "Except for courses designated in advance (i.e., in course schedule) as non-evaluated, students must write a self-evaluation and instructors must respond with an evaluation of the student and his or her work in the context of the study activity. Credit is not given until this process is finished."

The Curriculum

Liberal education is that education which is truly relevant to an understanding of the human condition. It is designed to liberate the individual from the restrictions imposed upon him by ignorance, prejudice and provincialism. It helps the individual to understand himself, the people around him, the world around him and to see it all in historical perspective. Liberal education is not directly concerned with making a living or with adjusting the individual to the world as it is—it is preparation for living in a changing world.

General education requirements at Fairhaven stem from a commitment to the development of integrative, interdisciplinary thinking and creating. At Fairhaven knowledge is considered to consist not so much of the accrual of data, as the ability to see the context in which isolated events, facts and persons find their meaning.

Because Fairhaven feels that the most valuable and lasting educational experiences are those directly relevant to the individual's own interests and needs, it is asked that each student develop an individually

meaningful series of interrelated experiences to satisfy Fairhaven's general requirements. It is not assumed that all incoming students already possess the ability to develop such self-directed coordinated experiences. Indeed, the development of such ability is one of the major goals of education at Fairhaven.

Topics of interest, as well as skills for such self-directed learning, are developed with the help of special programs for incoming students, individual and small interest-group work with faculty, as well as through classes.

Students may wish to finish their general education requirements in the first two years; others may wish to coordinate them with studies leading to their major or to the Fairhaven Interdisciplinary Concentration.

Fulfillment of General Education Requirements

- A. In consultation with appropriate Fairhaven faculty persons, each student (or group of students who may wish to work together) will develop a series of related experiences within each of three general areas of knowledge: science-mathematics, social sciences and the humanities, and in one area of their choice. The faculty actively encourages students to develop projects which cross from one of these areas to another. Generally, however, such an endeavor or topic of investigation will tend to fall more in one area, and it is primarily the faculty in that area with whom the student will work.

The nature of the undertaking or series of experiences will vary greatly from person to person. All, however, will involve putting into meaningful form, a variety of ideas and experiences drawn from:

1. Formal learning experiences such as classes and seminars
 2. Independent study or research
 3. Participation in field service programs
 4. Travel or foreign studies
- B. When the undertaking is brought to completion, student and faculty will meet together to prepare a written evaluation of the whole process. The criteria for the evaluation will be developed by the student and faculty persons, usually during the initial stages of consultation.

Program of Independent Study – Travel Study – Field Placements

Independent study projects are an important part of the academic program at Fairhaven. A student may take an unlimited amount of work at Fairhaven on this basis. The program centers in a working contract between the student and faculty sponsor.

Students have used the independent study program to become engaged with concerns of mankind and his environment—field work in environmental problems, race relations and education—and with research and reading on special topics. Students have carried out such programs of study in England, Greece, Japan, Mexico and in South America. A number of students are engaged in an in-depth study of their major field of interest, both on and away from campus.

Other off-campus experiences are coordinated through a program of Vocations for Social Change. That office makes available various field placements and volunteer internships which are relevant to academic programs and are often matched with specific course work.

Special Programs

Winter Quarter: For several years, Fairhaven College has chosen to alter the format and calendar of its winter quarter. The quarter has been variously divided into short intensive classes and seminars which were intended to be taken consecutively rather than concurrently. This afforded many new off-campus possibilities as well as new approaches to the usual classroom learning experiences.

Recent winter quarters were organized around central themes, "America, State of the Nation" and "What is Culture?" The quarters began with two weeks of general meetings and study groups and involved guest speakers and a commonly shared reading list.

The themes also served as a focal point, or in some cases as a point of departure, for the classes and seminars which began during the third week of the quarter. During the final two weeks, presentations to the Fairhaven community were given. These and other comings-together were generated by courses, study groups and cultural activities of the quarter.

Fairhaven College

Total credits for the quarter were based on involvement in the three phases of the quarter, and flexibility was such that students whose other academic commitments required enrollment in one or more classes at Western's College of Arts and Sciences were able to do so and still participate in some Fairhaven studies.

Freshman Program: The transition from a structured high school to the freedom of Fairhaven is difficult for many students. All too frequently the student, given freedom, will re-create an environment much like the high school and continue to take classes in the ordinary way. To help this transition Fairhaven, in the fall quarter, offers a series of freshman seminars. The new student who opts into this program does not take any other course. Each seminar is limited to 12 to 15 students and the focus is upon developing the skills of an independent learner.

Bridge Project: Fairhaven College seeks in a variety of ways to make the learning environment rich and diverse. Central to this purpose is the Bridge Project. This program brings to the campus people of all ages and thus makes available on the campus, human resources far in excess of those usually found in colleges.

First of the three-part project is the day-care facility located in two of the residential buildings and serving approximately 50 children. The second part is residence for senior citizens. Thirty to 40 older adults live in the remodeled dorms and enjoy the facilities of the campus. The older adults may participate in classes and are full members of the Fairhaven community.

The third part is a recruitment effort aimed at middle-aged adults. Students in their middle-years are sought either as regular degree candidates or as temporary students for short periods of time for reasons of personal growth and enrichment. The informal, flexible, self-planned educational possibilities at Fairhaven make this diversity possible.

The Upside-Down B.A. Degree: The usual route to a B.A. calls for the general education experience to take place during the first two years of college and for the specialization in a major area to be completed in the junior and senior years.

Under Fairhaven's special program, students who have a strong professional associate of arts or technology degree and a desire to continue their education may be able to transfer their technical specialization as a major and complete two years of general studies at Fairhaven to fulfill requirements for a bachelor's degree.

Applicants use the regular transfer application for Western Washington State College. The words "upside-down degree" should be written at the top. In addition to this application to Western, Fairhaven's application form is sent, either on request or after the initial application to Western has been processed. Fairhaven seeks more subjective information about its applicants and also, for this program, asks for at least two letters of recommendation from persons who are in a position to comment on the quality of the applicant's academic work.



Area of Concentration

In addition to the Fairhaven studies, the student's undergraduate degree program includes studies in depth in a subject or theme area. In many instances, this will be comprised of a major taken in the College of Arts and Sciences. Alternatively, the Fairhaven student with the advisement of his tutor may design an interdisciplinary concentration composed of selected groups of courses offered either in the College of Arts and Sciences or at other accredited colleges. The full range of majors and minors is available for the bachelor of arts, the bachelor of arts in education, or the bachelor of science degrees.

Three-Year Bachelor's Degree Program

The Fairhaven student should consider the advantages of taking his bachelor's degree in three rather than four years. The flexibility of the Fairhaven program makes such a plan feasible for most areas of concentration. The possibility of a work-study quarter off campus will allow a student to use one summer for credited travel and work away from the campus. With an additional one or two summers spent on campus, the degree requirements can be fulfilled. A student contemplating a three-year program should seek consultation soon after being admitted.

Professional Education

Fairhaven, being primarily a liberal arts—general education institution, relies on the Department of Education of the College of Arts and Sciences to teach and administer the program which has been developed jointly by Fairhaven and other Western faculty and students.

It is possible to fulfill the professional education courses in a variety of ways. Several options are now in existence and others are being developed. Those students who are interested in working out an individualized program which would better meet their needs are encouraged to do so. The Fairhaven Education Committee exists to help advise students, provide a channel of communication between the Department of Education and Fairhaven in education matters, and to develop courses and experiences aimed at improving the education program.

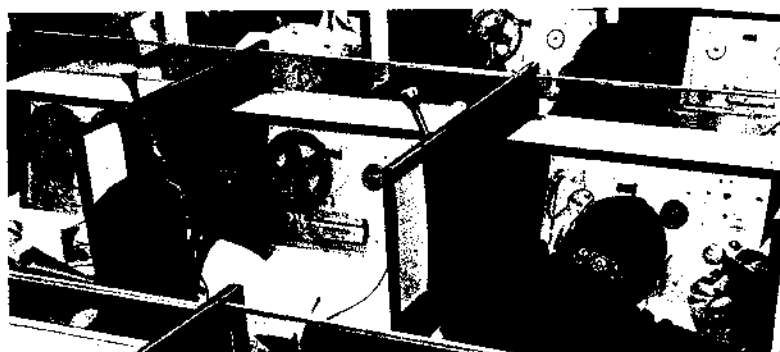
Visitors' Program

The goal of the Visitors' Program is to expose students to many more diverse viewpoints and personalities than exist on the campus and to do this in a way which is personal and direct. These guests meet with classes, join students for informal discussions and meals, live in the dormitories and offer courses. Fairhaven visitors seldom lecture from a podium; instead they spend much time conversing, listening and answering questions.

Fairhaven students are eligible to participate in all activities of the total college, including plays, concerts, athletics, clubs, organizations and a variety of recreational activities.

More

Interested? Need more information? Write to Hannah Wegner, Fairhaven College, Bellingham, Washington 98225, for Fairhaven's brochure.



FOREIGN LANGUAGES & LITERATURES

College of Arts and Sciences | Western Washington State College



Foreign Languages & Literatures

YOUR CAREER

In these days of closer relationships among the countries of the world, foreign language training is becoming 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. Given the increased mobility of today's youth and the low transportation rates, it is not at all unlikely that sooner or later you will find yourself in some foreign land.

There are various vocational opportunities for people trained in foreign languages, often in combination with other fields, since the schedules for a foreign language major provide for 35 to 45 per cent elective work. Traditionally, Western's foreign language department has placed a great deal of emphasis on the preparation of foreign language teachers. In addition to our continuing concern in the area of teacher preparation, 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 own particular vocational objectives. Because of the policy of awarding credit for proficiency, it is often possible for advanced language students to complete more than one major without having to spend additional time in college.

DEGREE PROGRAMS

The Department of Foreign Languages and Literatures offers a rich, well-balanced curriculum of language, literature and civilization courses on both the undergraduate and graduate level. A student in the department may earn a Bachelor of Arts degree in French, German, Greek, Latin, Russian and Spanish. Elementary courses

in Portuguese, Italian and Korean are also offered. Elementary and intermediate courses in Chinese and Japanese have recently been added to the department's offerings. Other languages are available on a programmed, self-instructional basis. In our courses 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. Western's modern electronic language laboratories and other audio-visual facilities are available to students for individual use as well as for class use. Special audio-visual conversation courses on an elementary level are also offered in French and German for those whose main interest lies in speaking a foreign language.

SPECIAL PROJECTS UNDER WAY IN THE DEPARTMENT

To keep pace with student needs and interests, the Department of Foreign Languages and Literatures offers innovative courses which complement our traditional program. Several of these are interdisciplinary, team-taught courses such as the one entitled "In-depth Study of Literature" or the avant-garde class called "Structuralism," which teaches a new analytical approach applicable to many disciplines. There are also courses offered in two new fields of study: French-Canadian literature and Black French literature.

ADVANCED PLACEMENT

If you have begun your study of a foreign language in high school, you will probably be in a position to profit from our department's liberal advanced placement credit policy whereby you may be granted extra college credit upon completion of your first language courses at WWSC. Students are encouraged to increase their language proficiency through foreign travel, residency and study and are also eligible for credit, upon validation, through completion of courses or examination, for such experience. Every effort is made to assist students in arranging study-abroad programs as a part of their academic majors.

LIVING IN THE FOREIGN LANGUAGE HOUSE

Language students are encouraged to live in the Foreign Language House, a modern residence hall reserved for students interested in a living atmosphere for language learning and enjoyment, free from classroom pressures and requirements. Activities include informal conversation groups, field trips, foreign films and folk dancing. Resources include native speakers, tapes, records, books and magazines. Roommates are assigned by language. While it is hoped that they will speak the foreign language constantly, this is a matter of personal motivation rather than a question of enforcement of rules.

GRADUATE DEGREES

Students who wish to pursue their language studies on the graduate level may, upon satisfactory completion of 48 credit hours, earn a Master 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 State College a particularly attractive place for scholarly endeavor and the maximum development of individual potential and interests. For further details concerning our graduate program, please refer to WWSC's *Graduate Bulletin*.

FOREIGN LANGUAGES AND LITERATURES FACULTY

WALTER L. ROBINSON (1960) Chairman.
Professor of German. BA, MA, PhD, University of Texas.
*DARREL W. AMUNDSEN (1969) Associate Professor of Classics. BA, Western Washington State College; MA, University of Washington.

HERBERT LE ROY 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.
**GUADALUPE GARCIA BARRAGAN (1965) Associate Professor of Spanish. BA, Colegio Aquiles Serdan; BEd, Instituto America; MA, Normal Superior Nueva Galicia; PhD, Universite de Paris III.
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.
***PETER A. EDDY (1970) Associate Professor of French. BA, Haverford College; MA, Middlebury College; PhD, Ohio State University.
WILLIAM E. ELMENDORF (1958) Assistant Professor of Russian. BS, University of Puget Sound; MA, University of Washington.
EUNICE D. FABER (1959) Associate Professor of Spanish. AB, Howard University; MA, PhD, Catholic University.

HELEN H. GOLDSMITH (1968) Associate Professor of French. BA, MA, University of Minnesota; PhD, University of California, Berkeley.
ARTHUR S. KIMMEL (1969) Associate Professor of French. AB, MA, University of Miami; PhD, University of California, Berkeley.
VLADIMIR MILICIC (1962) Assistant 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.
RUDOLF WEISS (1970) Associate Professor of German. BA, BA in Ed, Western Washington State College; MA, PhD, University of Colorado.

*On Sabbatical Leave 1975-76

**On Sabbatical Leave Spring 1976

***On Leave 1975-76

Foreign Languages & Literatures

Students majoring in one foreign language may elect a minor in a second language. At least nine upper division credits in any concentration must be taken in residence.

BACHELOR OF ARTS IN EDUCATION

Teaching Competence

Recommendation for teaching competence normally requires completion of the major with a grade of 2.5 or better. Students who have not completed an entire concentration but who have achieved a level of proficiency beyond the minimal requirements for a minor may be granted a qualified statement of competency to teach a foreign language on a beginning level pending additional work in the language during the fifth year. Statements of teaching competence are not normally issued, however, to persons who have completed a minor.

Major—Modern Language

(French, German, Russian, Spanish)

Secondary 45-50 credits in courses above 200 in one language

- Courses numbered 201, 202, 203, 340
- For French, 205 or 314
- For French, German, Spanish, four courses from 301, 302, 314, 401, 402
- For Russian, three courses from 301, 302, 415, 416
- Foreign Language Education 420
- Foreign Language Linguistics 310 or French 410
- Three additional courses numbered in the 300's and two courses in the 400's selected under advisement

Elementary 45 credits in one language

- Courses numbered 201, 202, 203, 301, 302, 401, 402
- For French majors, French 314 or 205, 340
- For German majors, German 331 or 332
- Foreign Language Education 420
- Foreign Language Linguistics 310 or French 410
- Electives under departmental advisement (French majors include one course from 341-358 and one 400 level course)

Major—Latin Secondary

- 45 credits selected under advisement

Minor—A Modern Language

- 19 to 25 credits in courses numbered 201 and above in one modern foreign language, including 6 credits in courses numbered 300 or above; elementary education minors expecting competency include 301, 302 and 314

Minor—Greek or Latin

- 12 credits beyond the first year in college Latin or Greek

Minor—Classical Studies

- Classics 350
- 15 credits from Classics 411, 421, 422, 431, 441
- 6 credits from History 411, 412, 413, 414; Phil 304

Minor—Linguistics

- Linguistics 201, 202, 301, 302, 303
- 6 credits selected under departmental advisement in a foreign language

BACHELOR OF ARTS

Major—Greek or Latin

- 45 credits in courses selected under advisement

Major—A Modern Foreign Language 66 credits

- 45 credits in courses numbered 201 and above in one modern language, plus supporting courses
- Course 340 in the selected language
- Three courses from 301, 302, 314, 401, 402; to include one 400-level course
- Three courses from 341, 342, 343, 344, 345, 346, 351, 354, 357, 358

- German 331 or 332 for German majors
- Two courses from 440, 441, 442, 443, 445, 450, 455, 456, 457 (except in the case of Russian)
- Electives under departmental advisement

Supporting courses: a program of 21 credits for either of the above majors in other languages, history, geography, philosophy, English, linguistics, or speech, and in other areas under departmental advisement.

Minor—A Modern Foreign Language

- 19-25 credits in courses numbered 201 and above in one of the modern languages, including 6 credits in courses numbered 300 and above

Minor—Greek or Latin

- 12 credits beyond the first year in Latin or Greek

Minor—Classical Studies

- Classics 350
- 15 credits from Classics 411, 421, 422, 431, 441
- 6 credits from History 411, 412, 413, 414; Phil 304

Minor—Linguistics

- Linguistics 201, 202, 301, 302, 303
- 6 credits selected under departmental advisement in a foreign language

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a foreign language major who wishes to graduate "with honors" must complete 20 credits in upper division honors work in one foreign language for the Arts and Sciences major or 17 credits in upper division honors work in one foreign language for the Teacher Education major.

GRADUATE STUDY

For a concentration in French, German, or Spanish leading to the Master of Education degree, see *Graduate Bulletin*.

COURSES IN FOREIGN LANGUAGES

Entering freshman students enrolling for the first time in any language at this college must take a placement test if they have previous knowledge of the language, however acquired. In some cases, they may be granted advanced placement credit.

The same regulation applies to new transfers unless the previous knowledge was attained in college level courses for which they have been granted credit. In the latter case, they may enroll in the next course in the sequence.

KEY TO REVISED NUMBERING SYSTEM

- 00 Conference Courses
- 01-09 Language (Grammar, Conversation, Composition, Exposition)
- 10-19 Linguistics (Phonetics, Phonology, Morphology, Syntax, History of the Language)
- 20-29 Methodology
- 30-39 Civilization
- 40-59 Literature; Seminars in Literature; Studies in Literature
- 60-69 Literature in Translation; Miscellaneous
- 80-89 Language for a Reading Knowledge
- 90-99 Experimental Courses; Honors Tutorials

COURSE NUMBER CONVERSION GUIDE*

**Previous course numbers listed in parenthesis.*

General Courses -310 (370), 420 (432)

Chinese—101 (197a), 102 (197b), 103 (197c), 201 (297a), 202 (297b), 203 (297c)

French—205 (211), 301 (310), 302 (311), 314 (210), 330 (432), 340 (290), 341 (301), 342 (302), 343 (303), 344 (304), 345 (305), 346 (306), 401 (410), 402 (411), 410 (470), 418 (420), 455 (401), 456 (402), 457 (403)

German—301 (310), 302 (311), 314 (320), 340 (290), 341 (301), 342 (302), 343 (303), 351 (341), 354 (342), 357 (343), 358 (344), 401 (410), 402 (411), 440 (401), 441 (402), 442 (403)

Greek—340 (301), 341 (302), 342 (303)

Japanese—101 (197a), 102 (197b), 103 (197c), 201 (297a), 202 (297b), 203 (297c)

Latin—340 (301), 341 (302), 342 (303), 343 (305), 344 (306)

Russian—301 (310), 302 (311), 340 (290), 341 (301), 342 (302), 343 (303), 415 (410), 416 (411)

Spanish—301 (310), 302 (311), 315 (320), 340 (290), 341 (301), 342 (302), 343 (303), 344 (304), 345 (305), 346 (306), 347 (340), 348 (341), 349 (342), 401 (410), 402 (411), 440 (401), 441 (402), 442 (403), 443 (404), 445 (405), 455 (406)

Foreign Languages & Literatures

GENERAL COURSES

- 237 FOREIGN STUDY (2-5)
(See 437.)
- 309 DIRECTED INSTRUCTION IN MODERN FOREIGN LANGUAGES (3)
Prerequisite: intermediate level experience in a formal college course in one or more modern foreign languages required. A maximum of 9 credits may be earned in this sequence. Fundamentals of the language; pronunciation, aural comprehension, reading, and grammar. Only those languages for which established curricula materials are available will be offered. Available during 1974-75: Beginning Italian. Other languages subject to arrangement.
- 310 INTRODUCTION TO APPLIED LINGUISTICS FOR FOREIGN LANGUAGE MAJORS (3)
Prerequisite: 25 credits or the equivalent in the language to be taught. Comparison of structures (phonological, morphological and syntactic) of English and other languages.
- 337 FOREIGN STUDY (2-5)
(See 437.)
- 367 FOREIGN LITERATURE IN TRANSLATION (3)
In-depth study of foreign literature in translation. Topics vary (i.e., poetry, short story, etc.).
- 379 STRUCTURALISM (3)
Study in various aspects of structuralism as it relates to analysis of literature (and language). Reading and discussing of actual examples of applied method. Actual application to result in writing of one or more papers.
- 420 METHODS AND MATERIALS FOR TEACHING MODERN FOREIGN LANGUAGES (4)
Prerequisite: 6 credits in one modern foreign language beyond the second year. Must be taken prior to student teaching in a foreign language. An introduction to topics of concern to the secondary or elementary teacher of foreign language and the literature of foreign language education. Opportunity for practicing various teaching activities: tape preparation, lesson organization, text adaptation, and presentations in a micro-teaching framework. Observation of language instruction in local schools.
- 437, 337, 237 FOREIGN STUDY (2-5 ea)
These courses are offered only through the WWSC/NICSA Study Abroad program. Contact Foreign Study office, Miller Hall 353, for information.
- 460 PRONUNCIATION FOR MUSIC STUDENTS (3)
Prerequisite: major or minor in music. A course to teach pronunciation in the major languages to music students, principally French, German, and Italian, but other languages may be included if the students request it on an individual basis.

For courses taught in translation, see *Classical Studies* (list below); *Foreign Lang* 367; *French* 367, 375; *German* 367, 375; *Russian* 367, 375; and *Spanish* 367, 375.

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. Use is made of a combination of formal instruction, small tutorials led by native speakers of Chinese, and self-instruction using cassette recorders and other material.
- 201, 202, 203 INTERMEDIATE CHINESE (5 ea)
Prerequisite: Chinese 103 or equivalent. 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.
- 397a CHINESE LITERATURE IN TRANSLATION (5)
Selected readings from the classics, traditional Chinese novels, and 20th century literature.

CLASSICAL STUDIES

(The following courses require no knowledge of Latin or Greek as prerequisites.)

- 101 LATIN AND GREEK IN CURRENT USE (2)
A workbook class 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)
Prerequisite: Gen St 121 or Eng 281 or Classical Studies 350. Origins, development, nature of classical epic; readings from Homer, Apollonius of Rhodes, Vergil, Lucan.
- 421 GREEK AND ROMAN TRAGEDY (3)
Prerequisite: Gen 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)
Prerequisite: Gen St 121 or Eng 281 or Classical Studies 350. Nature of classical comedy; readings from Aristophanes, Menander, Plautus, Terence.

Foreign Languages & Literatures

- 431 THE CLASSICAL NOVEL (3)
Prerequisite: Gen 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)
Prerequisite: Gen 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 *Foreign Lang 367*; *French 367, 375*; *German 367, 375*; *Russian 367, 375*; *Spanish 367, 375*.

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. Courses may be divided further into the following:
101a, 102a, 103a Elementary French (2 ea)
A first course in French which emphasizes development of listening and reading comprehension. Based upon a series of French-made films. Class meets twice a week. May not be applied to the General Education requirement.
- 101b, 102b, 103b Elementary French (4 ea)
A first course in French which includes work done in the French 101a, 102a, 103a section plus development of writing and speaking competence. Class meets four hours a week.
- 101c, 102c, 103c Elementary French (5 ea)
A first course in French, including work done in the a and b sections plus an additional hour per week devoted to study of French grammar.
- 104 REFRESHER COURSE IN ELEMENTARY FRENCH (5)
Recommended for students with two years of high school French, or more if they do not qualify for French 201. A rapid review of basic skills needed for Intermediate French.
- 180 FRENCH FOR A READING KNOWLEDGE I (3)
Not open to students with more than one year of college French. For students needing a reading knowledge of the language; not applicable to a major or minor. See also French 280.
- 201, 202, 203 INTERMEDIATE FRENCH (5 ea)
Prerequisite: French 103 or two years of high school French or equivalent score on placement examination; 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)
Prerequisite: French 103. Conversational practice involving situations of daily life.
- 237 FOREIGN STUDY (2-5)
See French 437.
- 280 FRENCH FOR A READING KNOWLEDGE II (3)
Prerequisite: French 180 or one year of college French or equivalent. To meet reading requirements for a master's degree.
- 301 ORAL EXPOSITION (3)
Prerequisite: French 203 or equivalent; may be taken concurrently with French 314. The advanced student practices expressing himself orally in French. Students give expository talks and discuss articles taken from current French periodicals. Vocabulary building.
- 302 WRITTEN EXPOSITION (3)
Prerequisite: French 203 or equivalent; may be taken concurrently with French 314. A course designed to give the advanced student practice in French written expression. Regular written assignments; study of grammar as needed. Vocabulary building.
- 314 PHONETICS (3)
Prerequisite: French 203 or equivalent; may be taken concurrently with French 301 or 302. A course designed to improve the student's pronunciation of French sounds and to make him aware of the differences between the French and American English sound systems. Phonetic transcription of French; study of relation between French sound system and written representation.
- 330 FRENCH CIVILIZATION (3)
Prerequisites: French 201, 202, 203 or equivalent. Topics in contemporary French life.
- 337 FOREIGN STUDY (2-5)
See French 437.
- 340 INTRODUCTION TO FRENCH LITERATURE (3)
Prerequisite: 10 credits of intermediate French or equivalent. An introduction to literary analysis. *Explication de texte* involving poetry, prose, and drama from the works of major authors.
- 341 THE MIDDLE AGES (3)
Prerequisite: French 340. French literature and civilization from 1100 to 1500.

Foreign Languages & Literatures

- 342 THE RENAISSANCE (3)
Prerequisite: French 340. French literature and civilization from 1500 to 1630.
- 343 BAROQUE AND CLASSICISM (3)
Prerequisite: French 340. French literature and civilization from 1630 to 1715.
- 344 THE ENLIGHTENMENT (3)
Prerequisite: French 340. French literature and civilization from 1715 to 1802.
- 345 ROMANTICISM, REALISM, AND NATURALISM (3)
Prerequisite: French 340. French literature and civilization from 1802 to 1880.
- 346 SYMBOLISM, SURREALISM AND EXISTENTIALISM (3)
Prerequisite: French 340. French literature and civilization from 1880 to the present.
- 367 FRENCH LITERATURE IN TRANSLATION (3)
Selected major works in French literature read and discussed in English; not applicable to a major or minor in French. When topics vary, the course may be repeated.
- 375 MAIN CURRENTS IN MODERN FOREIGN LITERATURE — FRENCH (5)
A survey of French literature and civilization—readings and discussions in English. Intellectual, philosophical, and social ideas as reflected in the literature of France as part of our Western heritage.
- 396a,b,c HONORS TUTORIAL (2-5 ea)
- 401, 402 ADVANCED COMPOSITION AND GRAMMAR (3 ea)
Prerequisite: French 302 or equivalent; French 401 prerequisite to 402. Advanced written and oral expression, identification and correction of phonological and grammatical problems.
- 410 APPLIED FRENCH LINGUISTICS (3)
Prerequisite: permission of department. Comparison of structures (phonological, morphological, syntactic) of French and English.
- 418 HISTORY OF THE FRENCH LANGUAGE (3)
Prerequisite: permission of department. Development of phonology, morphology and syntax from Latin to modern French.
- 425 TEACHING - LEARNING PROCESSES IN ELEMENTARY FRENCH (2)
Prerequisites: 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 only.
- 437, 337, 237 FOREIGN STUDY (2-5)
Prerequisites: for French 237, French 103 or equivalent; for French 337, French 202 or equivalent; for French 437, nine credits in upper division French. These courses are offered only through the WWSC/NICSA Study Abroad program. Contact Foreign Study office, Miller Hall 353, for information.
- 450 SEMINAR IN FRENCH LITERATURE (3)
Prerequisites: 9 credits in upper division French and permission of department. Major authors and movements. Since topics vary, the course may be repeated.
- 455 STUDIES IN THE FRENCH NOVEL (3)
Prerequisite: 9 credits in 341-346 series. Theory of novel and its development.
- 456 STUDIES IN FRENCH DRAMA (3)
Prerequisite: 9 credits in 341-346 series. Theory of drama and its development.
- 457 STUDIES IN FRENCH POETRY (3)
Prerequisite: 9 credits in 341-346 series. Theory of poetry and its development.
- 496a,b,c HONORS TUTORIAL (2-5 ea)
- 501, 502 FRENCH PHONOLOGY, MORPHOLOGY AND SYNTAX (4 ea)
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)
The development of phonology, morphology and syntax from Latin to Modern French.
- 505 APPLIED FRENCH LINGUISTICS (4)
Prerequisites: FL Ed 310, French 410 or equivalent. An advanced course in linguistics designed for the teacher of French.
- 510 STUDIES IN THE FRENCH NOVEL (4)
A detailed investigation of the development of the French novel.
- 511 STUDIES IN DRAMA (4)
Historical and critical study of the French theatre, with emphasis on the major genres.
- 512 STUDIES IN FRENCH POETRY (4)
- 513 CIVILIZATION AND CULTURE OF THE FRENCH-SPEAKING WORLD (4)
- 532 THE TEACHING OF FRENCH (4)
Prerequisites: FL Ed 420 and teaching experience, or permission of department. Emphasis on audio-visual methodology, language laboratory operation and management. Materials and methods of teaching French for those with teaching experience.

Foreign Languages & Literatures

550 GRADUATE SEMINAR (4 ea)
Prerequisite: eight credits in French 510-513. Students should have some background in literature studied on the graduate 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)
Prerequisites: FL Ed 420 or 532, and teaching experience, 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

598 DIRECTED INDIVIDUAL STUDY (1-4)
Prerequisites: French 505, 532, 555. Research on literary or methodological topics not included in formal courses. Students may take this course under advisement.

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.

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)
Prerequisite: German 103 or two years high school German or equivalent; German 201 prerequisite to 202; German 202 prerequisite to German 203. Review of the fundamentals, reading, and conversation.

237 FOREIGN STUDY (2-5)
See German 437.

280 GERMAN FOR A READING KNOWLEDGE II (3)
Prerequisite: German 180 or one year of college German or equivalent. For fulfillment of master's degree reading requirement.

301, 302 THIRD YEAR COMPOSITION (3 ea)
Prerequisite: German 203 or equivalent; German 301 prerequisite to 302. Written and oral composition and grammar, and vocabulary building.

314 PHONETICS (3)
Prerequisite: 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.

331 CIVILIZATION OF GERMANY THROUGH THE NINETEENTH CENTURY (3)
Prerequisites: German 201, 202, 203 or equivalent. Significant elements of German civilization presented through German texts.

332 GERMAN CIVILIZATION TODAY (3)
Prerequisites: German 201, 202, 203 or equivalent. Significant elements of German civilization.

337 FOREIGN STUDY (2-5)
See German 437.

340 INTRODUCTION TO GERMAN LITERATURE (3)
Prerequisite: 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 I (3)
Prerequisite: German 340. Emphasis on the Romantic Movement.

342 NINETEENTH CENTURY GERMAN LITERATURE II (3)
Prerequisite: German 340. Emphasis on realism.

343 EIGHTEENTH CENTURY GERMAN LITERATURE (3)
Prerequisite: German 340. Classical period of German literature as reflected in a major work of Lessing, Goethe, and Schiller.

351 THE GERMAN DRAMA (3)
Prerequisite: German 340. Interpretation, discussion of selected readings.

354 GERMAN POETRY (3)
Prerequisite: German 340. Interpretation and discussion of selected readings.

357 THE GERMAN NOVELLE OF THE NINETEENTH CENTURY (3)
Prerequisite: German 340. Interpretation and discussion of selected readings.

358 THE GERMAN NOVELLE OF THE TWENTIETH CENTURY (3)
Prerequisite: German 340. Interpretation and discussion of selected readings.

367 GERMAN LITERATURE IN TRANSLATION (3)
Selections from eminent German authors read and discussed in English; not applicable to a major or minor. 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 discussions in English. Intellectual, philosophical and social ideas as reflected in the literature of Germany as part of our Western heritage.

Foreign Languages & Literatures

- 380, 381 GERMAN FOR READING KNOWLEDGE AND RESEARCH (3, 5)
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)
Prerequisite: German 201; may be repeated for credit. German culture through film, talks and song. General discussions of Germany and its culture, especially in contrast to our own. S/U grading only.
- 396a,b,c HONORS TUTORIAL (2-5 ea)
- 397a GERMAN CONVERSATION (3)
Prerequisite: German 301. Conversation practice involving situations of daily life; topics of contemporary Germany. Vocabulary building.
- 401, 402 ADVANCED COMPOSITION AND GRAMMAR (3 ea)
Prerequisite: German 302.
- 425 TEACHING - LEARNING PROCESS IN ELEMENTARY GERMAN (2)
Prerequisites: 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 only.
- 437, 337, 237 FOREIGN STUDY (2-5 ea)
Prerequisites: for 237, German 103 or equivalent; for 337, German 202 or equivalent; for 437, nine credits in upper division German. These courses are offered only through the WWSC/NICSA Study Abroad program. Contact Foreign Study office, Miller Hall 353, for information.
- 440 EARLY GERMAN LITERATURE (3)
Prerequisite: 9 credits in upper division German. Monuments of literature from pagan times through the development of New High German.
- 441 SEVENTEENTH CENTURY THROUGH THE ENLIGHTENMENT (3)
Prerequisite: 9 credits in upper division German. Selections reflecting the development of German literature and thought from the Baroque through the Enlightenment.
- 442 GERMAN LITERATURE IN THE TWENTIETH CENTURY (3)
Prerequisite: 9 credits in upper division German. Selections reflecting development of recent German literature.
- 450 STUDIES IN GERMAN LITERATURE (3)
Prerequisite: 9 credits in upper division German or equivalent, and permission of department. Major authors and movements. Since topics vary, the course may be repeated.
- 496a,b,c HONORS TUTORIAL (2-5 ea)
- 501 CONVERSATION AND COMPOSITION (4)
Prerequisite: German 401 or equivalent. Syntax, written and oral composition, conversation, based on topics reflecting history of German civilization from pagan times through the Reformation.
- 502 CONVERSATION AND COMPOSITION (4)
Prerequisite: German 401 or equivalent. Syntax, written and oral composition, conversation, based on topics reflecting history of German civilization from Luther through Bismark.
- 503 CONVERSATION AND COMPOSITION (4)
Prerequisite: German 401 or equivalent. Written and oral composition, conversation, based on topics reflecting contemporary German civilization.
- 504 APPLIED GERMAN LINGUISTICS (4)
Principles of German phonetics, phonology, morphology and syntax.
- 505 HISTORY OF THE GERMAN LANGUAGE (4)
- 510 SEMINAR IN LITERATURE (4 ea)
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, *Hoerspiele* and *Einakter*
510c Poetry, Folksong, Ballad and Modern Lyric
- 532 THE TEACHING OF GERMAN (4)
Methods and materials for teaching German in the community college, secondary and elementary schools.
- 598 DIRECTED INDIVIDUAL STUDY (1-4)
Prerequisite: admission to graduate standing.

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.

Foreign Languages & Literatures

201, 202, 203 INTERMEDIATE GREEK (3 ea)

Prerequisite: Greek 103 or equivalent; to be taken in sequence. Review of fundamentals; readings from Plato's dialogues, the orators, the *Iliad* or *Odyssey*, Introduction to Greek civilization.

297a,b,c COMPOSITION (1 ea)

Greek prose composition exercises to enhance syntactical proficiency necessary for intermediate reading.

340 GREEK LYRIC POETRY (3)

Prerequisite: Greek 203 or equivalent. Historical survey of origins and development of the Greek lyric with readings from major writers.

341 GREEK TRAGEDY (3)

Prerequisite: Greek 203 or equivalent. Selected plays by Aeschylus, Sophocles and Euripides; history of Greek theatre and state production.

342 GREEK HISTORIANS (3)

Prerequisite: Greek 203 or equivalent. Selections from Herodotus and Thucydides; development of historical writing in Greece.

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)

Prerequisite: 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.

KOREAN

101, 102, 103 ELEMENTARY KOREAN (5 ea)

Each course prerequisite to the next. Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking.

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)

Prerequisite: 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.

297d,e,f COMPOSITION (1 ea)

Latin prose composition exercises to enhance syntactical proficiency necessary for intermediate reading.

304 POST-CLASSICAL LATIN (3)

Prerequisite: Latin 203 or equivalent. Selected prose and poetry from the post-classical period.

340 LATIN LYRIC POETRY (3)

Prerequisite: Latin 203 or equivalent. Historical survey of origins and development of the Latin lyric, with special attention to the poems of Horace, Catullus and Ovid.

341 ROMAN DRAMA (3)

Selected plays of Plautus, Terence and Seneca; history and techniques of the Roman theatre.

342 ROMAN PHILOSOPHY (3)

Prerequisite: Latin 203 or equivalent. Selected readings with emphasis on the Stoics and Epicureans.

343 SILVER LATIN LITERATURE (3)

Prerequisite: Latin 203 or equivalent. Studies in literary traditions of the Early Roman Empire, including selections from Seneca, Pliny, and Martial.

344 ROMAN HISTORY AND ORATORY (3)

Prerequisite: Latin 203 or equivalent. Readings from Sallust, Livy, Tacitus, and Cicero's orations.

396a,b,c HONORS TUTORIAL (2-5 ea)

PORTUGUESE

101, 102, 103 ELEMENTARY PORTUGUESE (5 ea)

To be taken in sequence. Fundamentals of speaking, reading, writing, and understanding.

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 INTERMEDIATE RUSSIAN (5 ea)

Prerequisite: Russian 103 or two years high school Russian or equivalent; Russian 201 prerequisite to 202.

203 INTERMEDIATE RUSSIAN (5)

Prerequisite: Russian 202. Review of the fundamentals, reading, aural comprehension, and speaking.

280 RUSSIAN FOR READING KNOWLEDGE AND RESEARCH (3)

A one-quarter course intended primarily to give the student of science and/or mathematics a reading knowledge of scientific Russian. Can be adapted to serve liberal arts students as well. Not applicable to a major or a minor except as a supporting course.

Foreign Languages & Literatures

- 301, 302 THIRD YEAR COMPOSITION (3 ea)
Prerequisite: Russian 203 or equivalent; Russian 301 prerequisite to 302. Written and oral composition and grammar, and vocabulary building.
- 330 CIVILIZATION OF RUSSIA (3)
Prerequisites: Russian 201, 202, 203 or equivalent. Significant elements of Russian civilization presented through Russian texts.
- 340 INTRODUCTION TO RUSSIAN LITERATURE (3)
Prerequisite: 9 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 I (3)
Prerequisite: Russian 340. Introduction to Pushkin, Lermontov, Gogol, and Turgenev.
- 342 NINETEENTH CENTURY LITERATURE II (3)
Prerequisite: Russian 340. Introduction to Dostoevsky, Tolstoy, Chekhov.
- 343 TWENTIETH CENTURY LITERATURE (3)
Prerequisite: Russian 340. The Symbolists, Acmeists, and Futurists; Russian formalism; Soviet Russian literature; versification.
- 367 INTRODUCTION TO RUSSIAN LITERATURE IN ENGLISH (3)
Survey of history of Russian literature. May be applied to a B.A. major in Russian only as a supporting course.
- 375 MAIN CURRENTS IN MODERN FOREIGN LITERATURE — RUSSIAN (5)
A survey of Russian literature and civilization—readings and discussions in English. Intellectual, philosophical and social ideas as reflected in the literature of Russia as part of our Western heritage.
- 396a,b,c HONORS TUTORIAL (2-5 ea)
- 415 STRUCTURE OF RUSSIAN I (3)
Prerequisite: three years of college Russian. Principles of phonology and their application; phonetics as the basis of phonology.
- 416 STRUCTURE OF RUSSIAN II (3)
Prerequisite: Russian 415. Morphology of the verb and noun.
- 496a,b,c HONORS TUTORIAL (2-5 ea)
- 201, 202, 203 INTERMEDIATE SPANISH (5 ea)
Prerequisite: Spanish 103 or equivalent; to be taken in sequence. Review of fundamentals; speaking, reading, writing, and understanding.
- 237 FOREIGN STUDY (2-5 cr)
See Spanish 437.
- 301, 302 COMPOSITION AND CONVERSATION (3 ea)
Prerequisite: Spanish 203 or equivalent; to be taken in sequence. Written and oral composition, grammar, and vocabulary building.
- 314 INTRODUCTION TO SPANISH PHONOLOGY (3)
Prerequisite: Spanish 301 or equivalent. Intensive study of the Spanish sound system.
- 331 MEXICAN CULTURE AND CIVILIZATION (3)
Prerequisites: Spanish 201, 202, 203 or equivalent. Panoramic view of Mexican civilization and culture from pre-Columbian times to the present.
- 337 FOREIGN STUDY (2-5 cr)
See Spanish 437.
- 340 INTRODUCTION TO HISPANIC LITERATURE (3)
Prerequisite: Spanish 203 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)
Prerequisite: Spanish 340. Literary development from beginnings to death of Garcilaso.
- 342 SIGLO DE ORO (3)
Prerequisite: Spanish 341. Literary development in various genres during the Golden Age; special study of major works and writers.
- 343 MODERN SPANISH LITERATURE (3)
Prerequisite: Spanish 342. Selected authors and works from 1680 to present.
- 344 SPANISH—AMERICAN LITERATURE: COLONIAL PERIOD TO END OF NINETEENTH CENTURY (3)
Prerequisite: Spanish 340. Selected authors and works.
- 345 MODERN SPANISH—AMERICAN LITERATURE (3)
Prerequisite: Spanish 344. Modernism and other literary trends.
- 346 CONTEMPORARY SPANISH—AMERICAN LITERATURE (3)
Prerequisite: Spanish 345. Major authors and trends after modernism.
- 347 READINGS IN MODERN SPANISH DRAMA (3)
Prerequisite: Spanish 343. Interpretation and discussion of selected readings.

SPANISH

- 101, 102, 103 ELEMENTARY SPANISH (5 ea)
To be taken in sequence. Fundamentals of speaking, reading, writing, and understanding.

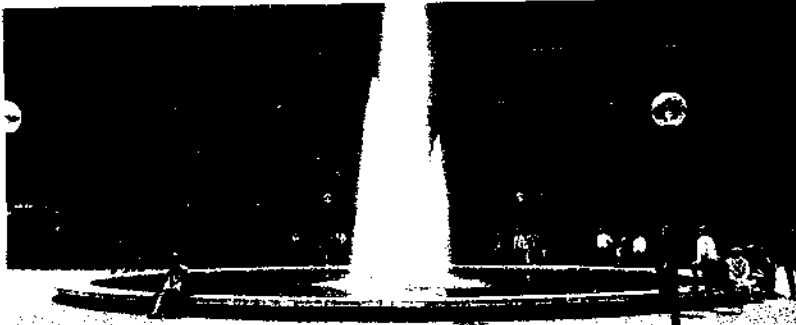
Foreign Languages & Literatures



- 348 **TWENTIETH CENTURY SPANISH-AMERICAN NOVEL (3)**
Prerequisite: Spanish 346. Interpretation and discussion of selected readings.
- 349 **GENERATION OF 1898 (3)**
Prerequisite: Spanish 343. Selected works of Unamuno and other principal authors of the movement.
- 353 **CONTEMPORARY MEXICAN LITERATURE (3)**
Reading and discussion of selected major documents from the twentieth century Mexican literary canon.
- 367 **SPANISH AND SPANISH-AMERICAN LITERATURE IN TRANSLATION (3)**
Major works, with reference to their cultural and historical setting, literary merit, and subsequent influence; read and discussed in English; not applicable to a major or minor. When topics vary, the course may be repeated.
- 375 **MAIN CURRENTS IN MODERN FOREIGN LITERATURE - HISPANIC (5)**
A survey of Hispanic literature and civilization-readings and discussions in English. Intellectual, philosophical and social ideas as reflected in the literature of Spain and Latin America as part of our Western heritage.
- 385a,b,c **HISPANIC CULTURE AND CONVERSATION (1 ea)**
Prerequisite: 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.
- 396a,b,c **HONORS TUTORIAL (2-5 ea)**
- 401, 402 **ADVANCED COMPOSITION AND GRAMMAR (3 ea)**
Prerequisite: Spanish 302; Spanish 401 prerequisite to 402.
- 425 **TEACHING - LEARNING PROCESSES IN ELEMENTARY SPANISH (2)**
Prerequisites: 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 only.
- 437, 337, 237 **FOREIGN STUDY (2-5 ea)**
Prerequisites: for Spanish 237, Spanish 103 or equivalent; for Spanish 337, Spanish 202 or equivalent; for Spanish 437, nine credits in upper division Spanish. These courses are offered only through the WWSC/NICSA Study Abroad program. Contact Foreign Study office, Miller Hall 353, for information.
- 440 **MEDIEVAL SPANISH LITERATURE (3)**
Prerequisite: 9 credits in upper division literature including Spanish 341. Masterpieces of the Middle Ages.
- 441 **THEATRE OF THE SIGLO DE ORO (3)**
Prerequisite: 9 credits of upper division literature including Spanish 342. Lope de Vega, Calderon and their contemporaries.
- 442 **SPANISH-AMERICAN POETRY SINCE MODERNISM (3)**
Prerequisite: 9 credits of upper division literature including Spanish 346. Careful analysis of major works.
- 443 **SPANISH-AMERICAN SHORT STORY (3)**
Prerequisite: 9 credits of upper division literature including Spanish 346. Representative works from nineteenth century to present.
- 445 **SPANISH LYRIC POETRY (3)**
Prerequisite: 9 credits of upper division literature. Analysis of major works from the beginnings to the present.
- 450 **STUDIES IN SPANISH LITERATURE (3)**
Prerequisites: 9 credits in upper division Spanish and permission of department. Major authors and movements. Since topics vary, the course may be repeated.
- 455 **CERVANTES SEMINAR: DON QUIXOTE (3)**
Prerequisite: 9 credits of upper division literature including Spanish 342.
- 501 **CONVERSATION AND COMPOSITION (4)**
Prerequisite: 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)**
Prerequisite: 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 nineteenth century.

Foreign Languages & Literatures

- 503 CONVERSATION AND COMPOSITION (4)
Prerequisite: Spanish 401 or equivalent. Syntax, written and oral composition, conversation, based on topics reflecting contemporary Hispanic civilization.
- 504 APPLIED LINGUISTICS (4)
Studies of problems of Spanish structure as related to the classroom situation.
- 505 HISTORY OF THE SPANISH LANGUAGE (4)
The development of the Spanish language from Latin to the present day; study of phonology, morphology and syntax.
- 510 SEMINAR IN LITERATURE (4 ea)
Three seminars required. Emphasis on teaching literature in the community college, high school and elementary school. Topics to be announced in advance from the following:
510a Comprehensive Study of the Short Story
510b Comprehensive Study of the Drama
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)
Methods and materials for teaching Spanish in the community college, secondary and elementary schools.
- 598 DIRECTED INDIVIDUAL STUDY (1-4)
Prerequisite: admission to graduate standing.



GENERAL STUDIES

College of Arts and Sciences / Western Washington State College



General Studies

The General Studies Department serves the Western Washington State College community in two ways:

1. The General Studies Department offers interdisciplinary courses that partially fulfill the WWSC general college requirements. (See the Arts and Sciences section of this catalog for the complete general college requirements and the various options for their fulfillment.)
2. The General Studies Department also offers a Liberal Studies major. This major is a program that crosses traditional departmental lines and permits work in areas where there is no existing departmental program. Completion of this major results in a Bachelor of Arts degree in Liberal Studies. Model Programs are available for majors in Religious Studies, Medieval Studies, Classical Studies, and area studies in the General Studies office.

BACHELOR OF ARTS IN LIBERAL STUDIES

Arts and Sciences Major 60 credits

Rationale

This major is designed to meet the needs of those students who can profit most from an interdisciplinary approach to study. It is meant to provide a disciplined approach to integrated study. For each student choosing this major, the subject matter would be organized in consultation with his departmental adviser and approved by a committee of the department, rather than being stipulated by a departmental curriculum. The student and his adviser will construct a program that involves work in more than one discipline. The proposed program must receive the support of two other faculty members who will then, with his major adviser, comprise the student's committee.

Bachelor of Arts in Liberal Studies

- General Studies 201
- General Studies 301
- General Studies 490
- General Studies 499
- Electives approved by Departmental Major Committee.

Electives approved by Departmental Major Committee. No program may substantially duplicate an existing major; normally not more than 30 of the 60 units may be taken from any one department, other than General Studies. Not more than 20 units taken prior to enrollment in General Studies 300 may be applied to the major. Forty of the units of the major must be 300 level or above. Credits used to satisfy general education or minor requirements may not be applied to the major.

Competence in a foreign language is recommended for all Liberal Studies majors and may, where appropriate, be required as supporting courses for some. A more detailed description of the major is available in the General Studies office.

GENERAL STUDIES FACULTY

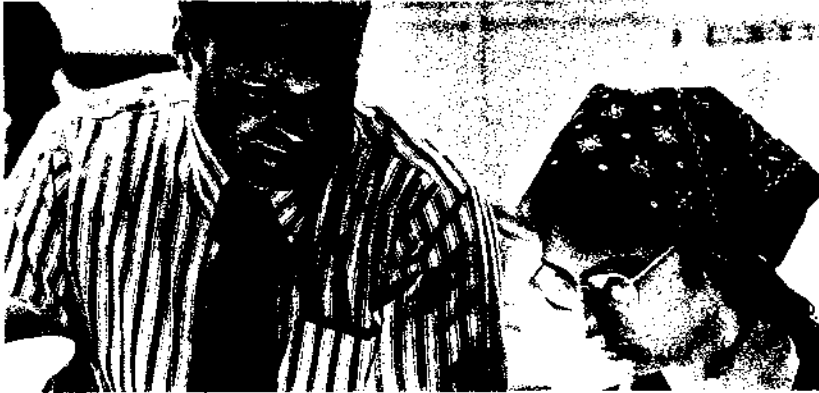
- ROSCOE L. BUCKLAND (1970) Chairman. Professor. BA, MA, University of Idaho; PhD, State University of Iowa.
- ELBERT M. BEAMER (1970) Assistant Professor. BA, University of Puget Sound; BD, Berkeley Baptist Divinity School; MA, University of Washington; MA, PhD, Syracuse University.
- NITA CLOTHIER (1964) Assistant Professor. BA, MEd, Western Washington State College.
- BRIAN P. COPENHAVER (1971) Associate Professor. AB, Loyola College; MA, Creighton University; PhD, University of Kansas.
- JANET M. GRAVES (1970) Assistant Professor. BA, MA, University of Washington.
- ROGER N. HAMMILL (1970) Assistant Professor. BA, Columbia Union College; MA, Andrews University.
- MILTON H. KRIEGER (1970) Associate Professor. BA, Reed College; PhD, University of Toronto.
- WAYNE N. LOBUE (1970) Assistant Professor. AB, Loyola University; MA, DePaul University, Chicago; PhD, The University of Kansas.
- ULRICH MAMMITSCH (1971) Associate Professor. BA, University of Hamburg, Germany; MA, Southern Illinois University; PhD, University of Hawaii.
- RODNEY J. PAYTON (1970) Assistant Professor. BA, MA, Washington State University; PhD, University of Chicago.
- WILLIAM K. B. STOEVER (1970) Assistant Professor. BA, Pomona College; BD, Yale Divinity School; PhD, Yale University.
- WILLIAM L. WALLACE (1970) Assistant Professor. BS, Appalachian State University (North Carolina); MA, PhD, Ohio University.

GENERAL STUDIES COURSES

- 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.) Ideals and their expression in the Western Tradition. Interdisciplinary introduction to significant cultural themes from art, music, history, philosophy, literature; readings, discussions, lectures, arts programs.
- 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.
- 200 INTRODUCTION TO ECONOMIC AND POLITICAL INSTITUTIONS (4)
Investigation of economic, legal, and political institutions in the context of private property from the pre-constitution period to the present.
- 201 INTRODUCTION TO INTERDISCIPLINARY STUDIES (4)
Methods and principles of interdisciplinary studies through investigation of an interdisciplinary problem.
- 231 INTRODUCTION TO THE STUDY OF RELIGION (3)
Examination of religious phenomena from several scholarly perspectives. Topics include mysticism, corporate religion, symbolism and ritual, contemporary developments. Readings, presentations, discussion.
- 232 MYTH AND FOLKLORE (4)
An introduction to the study of myth and folklore and its cultural impact. Lectures, readings, discussion.
- 233 RELIGION IN AMERICAN CULTURE (4)
Examination of the place of religious values, traditions, and institutions in American culture, from historical, sociological, and religious-phenomenological perspectives. Directed toward fuller understanding of contemporary issues and events. Readings, lectures, discussion.
- 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 the traditional 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, both courtly and popular, secular and religious, followed by consideration of the impact of foreign ideas and of the recent role of art in the 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, emphasizing the forms of literary expression and literature as a guide to social attitudes and value systems.
- 275 HUMANITIES OF JAPAN (4)
An 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.
- 301 SPECIAL PROBLEMS (2-5)
Prerequisite: General Studies 201. Development of student plan of study, preparation of bibliography, completion of a program of reading, planning for a final project.
- 310 SPECIAL TOPICS IN THE HUMANITIES (3)
Prerequisite: junior status. Ideas and issues in Western and non-Western culture. Subject, instructor and syllabus announced prior to registration.
- 311 GREAT BOOKS REPRESENTATIVE OF THE HUMANITIES (3)
Prerequisite: junior status. Reading list, instructor and syllabus announced prior to registration.
- 331 MAGIC, ASTROLOGY, WITCHCRAFT, DEMONOLOGY: THE ACADEMIC STUDY OF OCCULTISM (4)
Prerequisite: junior status. The academic analysis of various occultist beliefs and practices (magic, astrology, witchcraft, demonology, Cabala, numerology, divination, alchemy, magical medicine) in the Western tradition from historical, social-scientific, and philosophical points of view. Lectures, discussions, and readings in primary and secondary sources.
- 341 ART AND IDEOLOGY: THE EFFECTS OF IDEOLOGY UPON THE FINE ARTS IN MODERN AND EARLY MODERN EUROPE (3)
Prerequisite: junior status or one course in art history or music history. An examination of the relationships that exist between the fine arts of a society and its major ideologies.

General Studies

- 342 THE FOUNDATIONS OF SCIENTIFIC INQUIRY: AN INTRODUCTION TO SOME PROBLEMS IN THE HISTORY AND PHILOSOPHY OF SCIENCE (4)
Prerequisite: junior status. A study of selected issues in the philosophy of science through selected cases from the history of science. Emphasis on problems of explanation, verification, induction, reductionism, and scientific method and on materials from the history of physics, biology, and chemistry.
- 371 THE PROCESS AND PROBLEMS OF MODERNIZATION IN THE NON-EUROPEAN WORLD (4)
Prerequisite: junior status. Examination of human and cultural effects of modernization, through case studies and theoretical models; primarily Asia and Africa in the 20th century.
- 372 MODERNIZATION AND THE PLACE OF THE INDIVIDUAL IN THE NON-EUROPEAN WORLD (4)
Prerequisite: junior status. The effects of rapid change on individuals and the resulting reflections about the place of individuals in society, as shown in novels, autobiography, poetry, and other literary expressions from contemporary Asia and Africa.
- 373 STRATEGIES AND VISIONS OF MODERNIZATION IN THE NON-EUROPEAN WORLD: CONSERVATIVES, REFORMERS, REVOLUTIONARIES (4)
Prerequisite: junior status. Studies based on the 20th century non-European literature on modernization, emphasizing the total range of ideology about the values of tradition and modernity and their incorporation in contemporary societies.
- 397a MOVIES: ART, ENTERTAINMENT, PROFIT, PUBLICITY (3)
- 397n BLACK MAGIC: CROSS-CULTURAL STUDIES IN WITCHCRAFT AND SORCERY (3)
Introduction to the historical and social-scientific study of witchcraft; examination of specific cases from the African Azande, the Navajo, Tudor-Stuart Essex and colonial Salem.
- 441 THE DEVELOPMENT OF EROTIC AND ROMANTIC LOVE IN WESTERN CULTURE (3)
Prerequisite: Gen St 105 or Anth 201. Primitive, classical, and European attitudes toward "love" and sex, courtly romantic love and its incorporation into the institution of marriage will provide background for an examination of erotic love in our own culture. Readings from the Old Testament, a Greek play, writings of courtly love, modern novels, and popular anthropologists and sociologists.
- 465 CULTURE ON THE AMERICAN FRONTIER (3)
A study of the motives and modes of cultural activity in the frontier community.
- 480 STUDIES IN HUMANISTIC EDUCATION: THE HUMANITIES APPROACH (3)
Prerequisite: permission of department. Foundations in humanistic education. Consideration of the manner in which humanities materials are presented. Demonstration and discussion of presentation and integration of material, of course design; individual projects. Offered as part of the Colloquium in Humanistic Education during summer quarter. Open to all interested students.
- 490 SENIOR SEMINAR (4)
Seminar designed to meet interests of current senior students. Subject to be announced prior to quarter offered.
- 497a RELIGION AND THE LAMP: SEMINAR IN THE STUDY OF RELIGION (3)
A seminar treating issues which arise when religion becomes an object of academic study. Consideration, through reading, and discussion, of such questions as: What is religion? Can non-participants study it? How is it related to other forms of culture? How does "religious" language work? etc.
- 499 SPECIAL PROBLEMS (3)
Project designed to demonstrate the student's interdisciplinary focus.



GEOGRAPHY & REGIONAL PLANNING

College of Arts and Sciences | Western Washington State College



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 and patterns of landforms, climate, soils and vegetation.

THE DEPARTMENT

Faculty

The members of the department are scholars whose special interests and training span most of the sub-fields of the discipline. 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 college programs as the Center for Pacific Northwest Studies, the Canadian and Canadian/American Studies Program, and the Urban and Regional Planning 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, such as the Middle East, Africa or the United States and Canada; (2) those treating major sub-fields of the discipline, such as biogeography, transportation or the conservation of natural resources; and (3) those which provide opportunities to develop specific skills in techniques of geographic research, such as cartography, air-photo interpretation and quantitative methods.

Facilities

A major facility of the department is its well-stocked map library, which contains more than 120,000 sheet maps of many sorts, together with aids to cartographic and photogrammetric research. The library is an official

depository for maps issued by such agencies as the United States Geological Survey, the United States Defense Mapping Agency, and the Canadian Department of Energy, Mines and Resources. 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.

CAREERS IN GEOGRAPHY

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.

GEOGRAPHY FACULTY

JAMES W. SCOTT (1965) Chairman.

Associate Professor. BA, MA, Cambridge University; PhD, Indiana University.

HOWARD J. CRITCHFIELD (1951) Professor. BA, MA, PhD, University of Washington.

JANE H. EHEMANN (1973) Assistant Professor. BA, College of Wooster; MA, University of Pittsburgh; EdD, University of Georgia.

ROBERT L. MONAHAN (1955) Professor of Geography. BA, University of Washington; MA, University of Michigan; PhD, McGill University.

DEBNATH MOOKHERJEE (1961) Professor. BS, MSc, University of Calcutta; PhD, University of Florida.

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) Assistant 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.

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. Departmental advisers should be consulted at an early date for assistance in program planning.

Some courses will be offered only on an alternate year schedule. Students should note this in planning their programs and should consult their departmental adviser.

Major—Geography

70 credits plus Supporting Courses

- Geography 201, 203, 207, 301, 351, 453 or 454, and 486
- Two courses from Geography 310, 311, 312, 314, 315, 316, 318, 319, 320, 321, 322, 485
- One course from Geography 330, 331, 422, 423, 424, 426
- Two courses from Geography 341, 352, 353, 407, 408, 409, 421, 430, 435, 440, 442, 444, 451, 452, 470
- Supporting course: Mathematics 240
- Electives under departmental advisement

Minor—Geography 25 credits

- Geography 201
- Electives under departmental advisement

Extended Minor—Cartography 35 credits

- Geography 351, 352, 353, 451, 452
- Computer Science 110 or 210, 211

- One course from Huxley 313, Technology 240
- Electives from Geography 251, Art 371, 372, Mathematics 240, Technology 440

Major—Urban and Regional Planning

See Urban and Regional Planning section directly following the geography course listings.

BACHELOR OF ARTS IN EDUCATION

Some courses will be offered only on an alternate year schedule. Students should note this in planning their schedules and should consult their departmental adviser. For interdisciplinary combinations and certification requirements for secondary teaching in geography and the social sciences, see Interdepartmental Programs section.

Major Elementary 45 credits

- Geography 201, 203, 251, 310, 421, 460
- Five credits from Geography 311, 312, 314, 315, 316, 318, 319, 320, 321, 322, 485
- One course from Geography 330, 331, 351, 353, 422, 423, 424, 426, 453
- One course from Geography 207, 301, 341, 430, 435, 440, 442, 470, 486
- Electives
- All selections are to be made under departmental advisement

Major Secondary 45 credits

- Geography 201, 203, 207, 251, 460
- Five credits from Geography 310, 311, 312, 314, 315, 316, 318, 319, 320, 321, 322, 485
- One course from Geography 330, 331, 422, 423, 424, 426
- One course from Geography 341, 407, 408, 409, 421, 430, 435, 440, 442, 470, 486
- One course from Geography 301, 351, 353, 453, 454
- Electives
- All selections are to be made under departmental advisement

Geography & Regional Planning

Minor 25 credits

- Geography 201
- Geography 203 or 207
- 15 credits in upper division courses under departmental advisement

Extended Minor 35 credits

(Alternate minor for teaching competency recommendation.)

- Geography 201, 203 or 207, 251, 460
- 6 credits from Geography 310, 311, 312, 314, 315, 316, 318, 319, 320, 321, 322, 485
- 6 credits from Geography 330, 331, 407, 408, 409, 421, 422, 423, 424, 426, 435, 440, 442, 453, 470, 486
- Electives under departmental advisement

Teaching Competence

Recommendation for teaching competence requires completion of the major or the extended minor outlined above with a grade average of 2.5 or better.

GRADUATE STUDY

For concentrations in geography leading to Master of Education, Master of Arts, or Master of Science degrees, see *Graduate Bulletin*.

COURSES IN GEOGRAPHY

- 101 THE NATURAL ENVIRONMENT (4)
Elements, processes, and interrelationships in the natural environment of man. (Geography majors may not take 101 in lieu of 203.)
- 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; landforms, 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.
- 215 INTRODUCTION TO PLANNING (5)
Basic elements of urban, regional and resource planning; planning tools and techniques; careers in professional planning.
- 251 MAP READING AND ANALYSIS (2)
Interpretation of map symbols and content at different scales; analysis of different types of maps and charts.
- 301 GEOGRAPHIC THOUGHT AND WRITING (5)
Prerequisites: Geog 201, 203, 207. Source materials and techniques of geographic writing; emphasis on the nature and development of geography.
- 310 THE PACIFIC NORTHWEST (3)
Prerequisite: Geog 201 or 203 or 207. Environments, settlement, resources, and economic development of the Pacific Northwest.
- 311 THE UNITED STATES AND CANADA (5)
Prerequisite: Geog 201. Environments, resources, settlement and economies of Canada and the United States.
- 312 ARCTIC ENVIRONMENT (3)
Prerequisite: Geog 201. Topical examination of physical environment, modern settlement and the development of resources in northern Canada and Alaska.
- 314 LATIN AMERICA (5)
Prerequisite: Geog 201. Peoples, resources, regions and economic and political development of South and Central America.
- 315 ASIA (5)
Prerequisite: Geog 201. Asia's settlement, population, economic resources and activities, and associated problems.
- 316 EUROPE (5)
Prerequisite: Geog 201. Peoples, resources, regions; the economic, social and political development of Europe.
- 318 THE PACIFIC (3)
Prerequisite: Geog 201. Environments, resources, and settlement of the Pacific Islands, Australia, and New Zealand.
- 319 AFRICA (5)
Prerequisite: Geog 201. Resources, peoples, regions; economic, social, and political development of Africa.

Geography & Regional Planning

- 320 THE U.S.S.R. (3)
Prerequisite: Geog 201. Environments, resources, industries, population, and settlement of the Soviet Union with emphasis on its role in world affairs.
- 321 INDIA, PAKISTAN AND BANGLADESH (3)
Prerequisite: Geog 201. Environments of India, Pakistan and Bangladesh; their resources, population and economic activities; emphasis on contemporary problems.
- 322 THE MIDDLE EAST (3)
Prerequisite: Geog 201. Environment, resources, culture and problems of Southwest Asia and North Africa.
- 330 GEOGRAPHY OF LANDFORMS (5)
Prerequisite: 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)
Prerequisite: Geog 101 or 203 or Physics 101. Elements of climate, climatic regions, and climate as an environmental factor.
- 341 URBAN GEOGRAPHY (5)
Prerequisite: Geog 201. Geographic relations of the modern city with emphasis upon the development, functions, and problems of American cities.
- 351 CARTOGRAPHY (5)
Map and chart design, construction, and reproduction; computer mapping.
- 352 COMPUTER MAPPING (3)
Prerequisite: 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)
Prerequisite: 4 credits in geography. Geographic interpretation of aerial photographs and maps; remote sensing techniques and analyses.
- 372 RECREATION RESOURCE PLANNING (4)
Concepts, methods and application of outdoor recreation planning.
- 400 SPECIAL PROBLEMS IN GEOGRAPHY (2-5)
Individual projects under supervision.
- 407 AGRICULTURAL GEOGRAPHY (3)
Prerequisite: Geog 201 or 207. Agricultural types, production, and commodities, land use and land tenure.
- 408 GEOGRAPHY OF MANUFACTURING (3)
Prerequisite: Geog 207. Manufacturing types, industrial land use, production, locational factors.
- 409 TRANSPORTATION GEOGRAPHY (3)
Prerequisite: Geog 201 or 207. Transportation systems and analysis of their spatial impact.
- 421 CONSERVATION OF NATURAL RESOURCES (5)
Prerequisite: 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.
- 422 GEOGRAPHY OF WATER RESOURCES (5)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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.
- 426 THE URBAN ENVIRONMENT (3)
Prerequisite: Geog 203. Urban influences on the natural environment; applied physical geography of cities; environmental factors in urban planning.
- 430 URBAN AND REGIONAL PLANNING (5)
Prerequisite: Geog 341 or concurrent. Synthesis and application of the principles, problems and techniques of urban, suburban and rural land use planning.
- 435 HISTORICAL GEOGRAPHY OF THE UNITED STATES AND CANADA (5)
Prerequisite: Geog 311 or American history. Techniques of historical geographical analysis, including sequent occupance and the reconstruction of past geographies of the United States and Canada.
- 440 GEOGRAPHY OF POPULATION (3)
Prerequisite: 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 GEOGRAPHY OF SETTLEMENT (3)
Prerequisite: Geog 201. Geographical analysis of rural and urban settlement; origins, diffusion, and patterns in selected regions.
- 444 THE DEVELOPING WORLD: SPATIAL PROBLEMS, STRATEGIES AND SOLUTIONS (3)
Prerequisite: 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.

Geography & Regional Planning

- 451 MAP REPRODUCTION AND GRAPHICS (3)
Prerequisite: Geog 351. Fundamentals of map reproduction and graphics through photographic and non-photographic processes.
- 452 ADVANCED CARTOGRAPHY (3-5)
Prerequisites: Geog 351 and permission of instructor. 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)
Prerequisite: Geog 351. Recording, mapping, and analysis of physical and cultural features.
- 454 ANALYSIS OF AREAL DATA (4)
Prerequisite: Math 240. Statistical and cartographic techniques in solving geographic problems.
- 455 GEOGRAPHY FIELD CAMP (3)
Prerequisite: permission of instructor. Methods of geographical field investigation. Field sketching and use of field instruments. Investigation of an individual problem in the field.
- 460 THE TEACHING OF GEOGRAPHY (3)
Prerequisite: 20 credits in geography. Source materials and methods of geographic instruction.
- 470 POLITICAL GEOGRAPHY (5)
Prerequisite: Geog 201. Spatial analysis of political phenomena; problems of territorial organization, boundaries, resource management; current problem regions.
- 485 SEMINAR IN REGIONAL GEOGRAPHY (5)
Prerequisite: permission of instructor. Spatial analysis of a selected world region. May be repeated for credit.
- 486 SEMINAR IN SYSTEMATIC GEOGRAPHY (5)
Prerequisite: permission of instructor. Selected topics in cultural, economic or physical geography. May be repeated for credit.
- 497h WHATCOM COUNTY 2001: EXPLORING THE GEOGRAPHY OF THE FUTURE (2)
Regional and resource planning in a rapidly developing region. Analysis of existing and projected future geographical relationships and concomitant spatial problems in Whatcom County and its environs.
- 500 SPECIAL PROBLEMS IN GEOGRAPHY (2-5)
Prerequisites: graduate standing and permission of instructor. Advanced individual projects under supervision.
- 501 SEMINAR IN HISTORY AND PHILOSOPHY OF GEOGRAPHY (4)
The evolution of geographic concepts and methodology with emphasis on contemporary geographic philosophy and current literature in the field.
- 510 TECHNIQUES IN GEOGRAPHIC RESEARCH (5)
Application of bibliographic, cartographic, statistical, and field techniques in geographic investigation.
- 511 SPATIAL ANALYSIS (5)
Quantitative techniques in spatial analysis with emphasis on problems in urban and regional planning.
- 520 SEMINAR IN REGIONAL GEOGRAPHY (5)
Methods of regional analysis applied in the detailed study of a world region.
- 521 SEMINAR IN PHYSICAL GEOGRAPHY (5)
Advanced topics in physical geography; may be repeated for credit.
521a General Physical
521b Biogeography
521c Climatology
521d Landforms
521e Soils
521f Water
- 522 SEMINAR IN HUMAN GEOGRAPHY (5)
Advanced topics in human geography; may be repeated for credit.
522a General
522b Economic
522c Historical
522d Political
522e Social
522f Urban
- 560 PROBLEMS IN SYSTEMATIC GEOGRAPHY (5)
Prerequisites: Geog 510 and 521 or 522. Directed research on a selected topic in physical or cultural geography.
- 573 ENVIRONMENTAL PROBLEMS IN URBAN AND REGIONAL DEVELOPMENT (5)
Cities and regions as complex systems of interdependent natural and human elements; key problems and approaches to their solution through planning.
- 600 SPECIAL PROBLEMS IN GEOGRAPHY (2-5)
Prerequisites: advancement to candidacy and permission of instructor. Advanced individual projects under supervision.
- 601 GRADUATE COLLOQUIUM (2)
Current trends in geographic research.
- 690 THESIS (5-9)
Prerequisite: advancement to candidacy for the master's degree and appointment of thesis adviser.

URBAN AND REGIONAL PLANNING

As the American experience increasingly reflects urbanization and growing pressures on space, resources and environmental quality, we face corresponding challenges in understanding the forces that determine

urban patterns and in charting the course of society. Our ability to meet new threats to human welfare will determine our success in achieving current goals, but we must also anticipate changing goals for future generations. Urban and regional planners have unique opportunities to participate actively in this fundamental exercise of mankind's ingenuity.

*Urban and Regional Planning
at Western Washington State College*

The core of the present urban and regional planning curriculum existed in the form of separate departmental courses at Western for several years prior to organization of a systematic program in 1964. Since then enrollment in the program has increased rapidly, indicating a growing awareness of and concern over our environmental problems.

An interdisciplinary approach, based on the strengths of 10 departments in the College of Arts and Sciences and Huxley College of Environmental Studies characterizes the program. The Department of Geography administers the program with support from other departments, particularly economics, political science and sociology. This multidisciplinary character of the program, drawing upon specialized resources of the various departments, offers unique opportunities for the 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.

In addition to the requirements for the major concentration, candidates for the Bachelor of Arts degree in urban and regional planning must complete the general education requirements of the College of Arts and Sciences. These are listed in the College of Arts and Sciences section of this catalog.

Employment Opportunities

Planning is primarily a function of government; consequently, employment opportunities in the field of urban and regional planning 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. Inquiries should be made to the Career Planning and Placement Center of the College regarding employment opportunities.

Graduate Study

Although holders of the bachelor's degree 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 the undergraduate urban and regional planning program are urged to consider the possibility of graduate training no later than the beginning of their senior year.

Admission to the Program

Admission policies of the urban and regional planning program are governed by the standards of the College of Arts and Sciences. Normally graduates of accredited high schools in Washington and other states are admitted if their high school records indicate promise of success. Prospective students are advised to contact the WWSC admissions office for guidance.

The admissions office also approves applications for transfer of students from community colleges and four-year colleges. Students who are in good standing in their last institution normally are admitted with a minimum of difficulty.

Transfer of Credit from Other Institutions

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

Geography & Regional Planning

end of their sophomore year or later may encounter difficulties in completing all requirements within a normal four-year total period.

Ordinarily a portion of the lower division requirements may be completed at other institutions and transferred to Western. The acceptability of such courses is subject to determination by the admissions office. Their relevance to the planning program will be ascertained by a faculty adviser.

For Additional Information

Questions concerning general college requirements should be directed to the admissions office and/or the registrar. Specific questions about the urban and regional planning program may be addressed to: Director of Urban and Regional Planning Program, Department of Geography, WWSC, Bellingham, Washington 98225. Telephone (206) 676-3277.

BACHELOR OF ARTS

Major Concentration 105 credits

This undergraduate major in the arts and sciences curriculum is intended to prepare students for pre-professional service in planning agencies as well as to provide a foundation for graduate study in this field. It meets the requirements for both the major and minor concentrations. Early consultation with Dr. Debnath Mookherjee, Director of the Urban and Regional Planning Program, is essential.

Specified Requirements—Planning Core Areas

- Economics 202, 482
- Geography 201, 341, 351, 430, 454
- Huxley 436, 480
- Mathematics 240 or equivalent
- Political Science 250, 353, 421 or 455
- Sociology 202, 340
- Computer Science 110

*Electives**—From the alternate requirements above or from the following to complete 105 credits

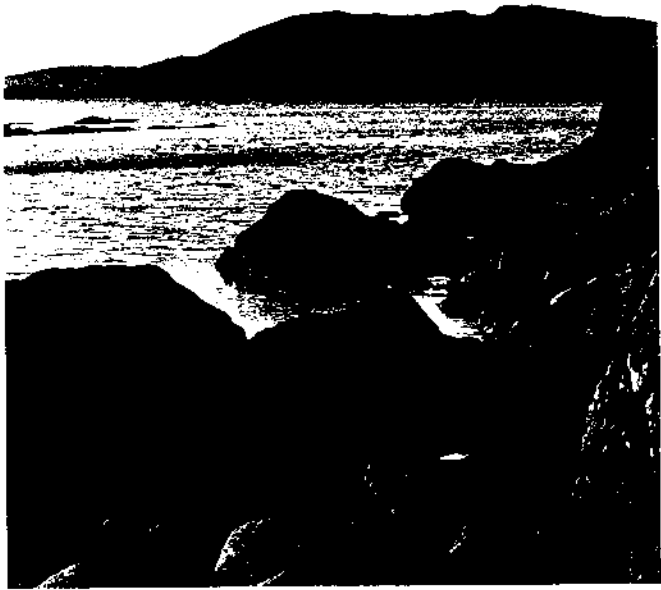
- Business Administration 408
- Economics 410, 415
- English 354
- Geography 207, 215, 310, 311, 331, 353, 372, 407, 408, 409, 421, 422, 426, 440, 442, 452, 453
- Health Education 447
- History 466
- Home Economics 175, 370
- Huxley 411, 412, 413, 482
- Mathematics 220
- Political Science 320, 450
- Recreation & Park Management 321, 322, 372, 451
- Sociology 310, 321, 365, 415
- Anthropology 431
- Technology 210, 240, 313

It is recommended that the student concentrate his electives in either economics, geography, political science or sociology, anthropology.

For environmental planning programs see Huxley College.



**Students who have satisfactorily completed two-thirds of the major requirements and who can satisfy the advisory committee that they are capable of benefiting from the experience, may receive up to 12 hours of electives by taking an employment or offering a volunteer position in any established public planning agency.*



GEOLOGY

College of Arts and Sciences / Western Washington State College



Geology

The natural setting of Western Washington State College adjacent to the Cascade Mountains and Puget Sound provides an ideal situation for study of a wide variety of geologic problems.

FACULTY

At the present time the department consists of 12 faculty members who have a broad range of backgrounds covering the entire field of geology. There are about 120 geology undergraduate majors and approximately 25 graduate students in the department.

FACILITIES AND EQUIPMENT

Geology is a science which embraces investigation of the natural environment both in the field and in the laboratory. The Department of Geology occupies modern laboratories, classrooms and offices in Haggard Hall, constructed in 1960, and the Northwest Environmental Studies Center, constructed in 1973. Geology laboratory facilities and equipment are available for x-ray diffraction, x-ray fluorescence, radiocarbon dating, atomic absorption, sedimentation, air photo interpretation, flume and wave tank studies, paleomagnetic analysis, geochemistry, petrography, seismology and electron microscopy. The Shannon Point Marine Center in 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 geologists and also preparation of earth science teachers at the primary and secondary levels. A wide variety of geologic phenomena are to be found in the adjacent Cascade Range and the marine environment of Puget Sound, providing a broad spectrum of geologic features available for study.

A number of concentrations are offered within the geology program. These include general geology, environmental geology, geochemistry, geophysics, math-geology and earth science education.

Some of the courses in these concentrations are:

Mineralogy, Petrology, Geochemistry: Crystallography, mineralogy, optical mineralogy, petrology and petrography, igneous petrography and petrology, sedimentary petrography and petrology, metamorphic petrography and petrology, geochemistry, geochemistry of solids, and clay mineralogy.

Geomorphology: Environmental geology, principles of geomorphology of Western U.S., map and air photo interpretation, glacial geology, fluvial geomorphology and coastal geology.

Stratigraphy, Paleontology, Sedimentation: Paleontology, stratigraphy and sedimentation, micro-paleontology, paleoecology, biostratigraphy and geology of clays.

Geophysics: Introduction to geophysics, geotectonics, applied geophysics and paleomagnetism.

SOME EXAMPLES OF STUDENT INVOLVEMENT IN RESEARCH

Grand Canyon Project

This project is funded by a \$33,000 National Science Foundation grant under the direction of Dr. E. H. Brown and Dr. R. S. Babcock and involves a study of the age and origin of Precambrian rocks in the inner gorge of the Grand Canyon.

North Pacific National Park Project

A grant for a two-year study of the geology of natural regions in the Pacific Northwest has been awarded by the National Park Service to Dr. Don J. Easterbrook, chairman of the Geology Department. The \$33,900 research grant will finance geological investigation of areas which might be suitable for inclusion in the National Park planning system and Registry of Natural Landmarks. Five students are participating in the project.

GEOLOGY FACULTY

- DON J. EASTERBROOK (1959) Chairman.
Professor. BS, MS, PhD, University of Washington.
- 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) Associate 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.
- ROSS C. ELLIS (1962) Professor. BA, Occidental College; PhD, University of Washington.
- **HARRIET J. MANLEY (1970) Assistant Professor. BA, University of Colorado; MEd, University of Texas; MA, University of Colorado.
- DAVID R. PEVEAR (1967) Associate Professor. BS, Allegheny College; PhD, University of Montana.
- DAVID A. RAHM (1968) Professor. BS, Pennsylvania State University; PhD, Harvard University.
- CHARLES A. ROSS (1964) Professor. BA, University of Colorado; MS, PhD, Yale University.
- MAURICE L. SCHWARTZ (1968) Professor of Geology and Education. BS, MA, PhD, Columbia University.
- ADA SWINEFORD (1966) Professor. SB, SM, University of Chicago; PhD, Pennsylvania State University.

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

- Geology 211, 212, 310, 311 (or 304, 306, and 407)
- Geography 203, 331; Physics 204, 131
- Electives under departmental advisement from Geology 214, 314, 316, 317, 319, 340, 352, 390, 399, 400, 410, 412, 414, 416, 430, 440; Geography 353; one from Geog 421, 422 or 423; Physics 315, 316, 317, 321; Biology 406

*On Leave Fall 1975 and Winter 1976

**On Leave 1975-76

Major—Earth Science Secondary 45 credits

- Geology 211, 212, 304 or 305, 306, 310, 390, 407
- Geography 331; Physics 204, 131
- Electives from Geology 214, 314, 316, 317, 319, 340, 352, 399, 400, 410, 412, 414, 416, 418, 420, 426, 430, 440, 460; Geography 203, 353, one from 421, 422 or 423; Physics 315, 316, 317, 321

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

- Geology 211, 212, 304 or 305, 306, 310, 390, 407
- Geography 331
- Chemistry 121, 122, 123
- Physics 131, 132, 133 or 231 or 331 or 332, and 204
- Phys Sci 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.

- Geology 211, 212, 305, 306, 310, 316, 317, 352, 399, 410, 416, 418, 420
- 6 credits under advisement from Geology 214, 300, 314, 319, 340, 360, 400, 414, 423, 424, 425, 426, 430, 436, 440, 444, 446, 453, 454, 455, 460, 461

Geology

- Supporting courses: Chem 121, 122, 123; Physics 231, 331, 332 (or 131, 132, 133); Math 121, 122, 222 (or 121, 220, 240; and Computer Science 110 or 210)
- 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)

- Geology 211, 212, 214, 304 or 305, 306, 407 or 418 and 420, 310, 316, 317, 352, 410, 400
- Chemistry 121, 122, 123
- Physics 131, 132, 133; or 231, 331, 332
- Math 121, 220, and one of the following: Computer Science 110, 210, Math 240; or Math 121, 122, 222
- Huxley 301
- Credits under advisement from the following Environmental Emphases courses to total 110; care should be taken to avoid duplication of courses among different disciplines

Environmental Emphases

- (a) Physical Environment– Surface Processes
Geology 314, 340, 416, 430, 440, 454
Biology 325, 326, 402, 406
Chemistry 208, 251, 383
Physics 301, 321
Huxley 311, 312, 360, 411, 413, 462, 463, 465
Geography 203, 331
- (b) Natural Resources
Geology 319, 360, 418, 420, 454
Biology 307
Chemistry 208
Geography 207, 408, 421, 422
Huxley 369, 422, 465, 483
- (c) Analytical
Geology 418, 420, 423, 424, 425, 444, 446, 460, 461
Chemistry 208, 209, 251, 333, 371, 383

Biology 208, 340, 445b
Physics 155, 201, 301
Huxley 313, 333, 340, 341, 366, 367, 368, 369, 423, 435, 465, 467

- (d) Marine and Fresh Water Resources
Geology 340, 416, 418, 420, 424, 426, 436, 444, 446
Biology 205, 325, 326, 402, 406, 461
Physics 301
Huxley 321, 322, 421, 422, 423

Geophysics Major Concentration 110 credits

- Geology 211, 212, 304 or 305, 306, 317, 407, 410, 352
- Two courses from Geol 453, 454, 455
- Math 121, 122, 222, 223, 301, 331, 332; Computer Science 110 or 210
- Physics 231, 331, 332, 381, 382
- Chemistry 121, 122, 123
- Additional credits under advisement from geology, physics and mathematics to total 110

For advisement in this concentration, consult the department of geology or physics.

Physical Geochemistry

Major Concentration 110 credits

- Geology 211, 212, 305, 306, 317, 410, 418, 420, 444, 460, 461; one of 423, 424, 425
- Chemistry 121, 122, 123, 333, 411, 412, 413
- Math 121, 122, 222
- Physics 231, 331, 332
- Additional credits under advisement from geology, chemistry, physics, mathematics and computer science to total 110

COMBINED MAJOR – GEOLOGY AND MATHEMATICS

Major Concentration 110 credits

- Geology 211, 212, 304 or 305, 306, 317, 352, 407, 410
- Math 121, 122, 201, 202, 222, 223, 331, 335, 341, 342, 375, 435; Computer Science 110 or 210

- Chemistry 121
- Physics 231, 331, 332
- Additional credits under advisement from geology and mathematics to total 110

BACHELOR OF ARTS DEGREE

Major 50 credits plus Supporting Courses

An accompanying minor in one of the sciences or in mathematics is recommended.

- Geology 211, 212, 304 or 305, 306, 310, 316, 317, 407
- Electives under advisement from Geology 214, 300, 314, 319, 340, 352, 360, 400, 410, 412, 414, 416, 423, 424, 425, 426, 430, 436, 440, 444, 446, 453, 454, 455, 460, 461
- Supporting courses: Chemistry 121, 122; Physics 131 or 231; Mathematics 121; 16 additional credits under advisement in physics, biology, chemistry or mathematics

Minor 25 credits

- Geology 211, 212
- Electives under departmental advisement

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 Bulletin*.

COURSES IN GEOLOGY

- 101 GENERAL GEOLOGY (4)
Principles of physical and historical geology for the non-science major, with emphasis on the structure of the earth and origin of landforms. Geology majors and those having had geology in high school should take Geology 211.
- 211 PHYSICAL GEOLOGY (5)
Prerequisite: 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)
Prerequisite: Geol 211. History of the earth as interpreted from the rocks and the story of the development of its inhabitants; geologic history of North America and the Pacific Northwest.
- 214 ENVIRONMENTAL GEOLOGY (3)
Prerequisite: 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.
- 300 SPECIAL PROJECTS IN GEOLOGY (2-5)
Prerequisites: 10 credits in geology and permission of department. Special projects under supervision.
- 304 CRYSTALLOGRAPHY (1)
Prerequisites: 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)
Prerequisites: Geol 211 and Chem 121 or equivalent. Introduction to crystallography, crystal chemistry and chemical principles fundamental to study of minerals.
- 306 MINERALOGY (5)
Prerequisite: Geol 304 or 305. Origin, occurrence, and classification of common minerals; physical and chemical properties of minerals used in identification.
- 310 GEOMORPHOLOGY (5)
Prerequisite: 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.
- 311 COMMON ROCKS AND MINERALS (4)
Prerequisites: Geol 101 or 211, and high school or college chemistry. More detailed work with rocks and minerals than is afforded in Geol 101 or 211; the origin, occurrence, and identification of minerals and rocks.
- 314 GEOMORPHOLOGY OF WESTERN UNITED STATES (3)
Prerequisite: 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.

Geology

- 316 PRINCIPLES OF PALEONTOLOGY (5)
Prerequisite: Geol 212. Life on the earth as revealed by its inhabitants, past and present.
- 317 STRUCTURAL GEOLOGY (4)
Prerequisites: 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.
- 319 ECONOMIC GEOLOGY — METALLIC MINERALS (4)
Prerequisite: Geol 306 or 311. Metallic minerals and ore deposits, their economics, genesis and occurrence. To be offered on alternate years with Geol 320.
- 320 ECONOMIC GEOLOGY NONMETALLIC DEPOSITS (3)
Prerequisite: Geol 306 or 311. Nonmetallic minerals and ore deposits, their economics, genesis and occurrence. To be offered on alternate years with Geol 319.
- 340 GEOLOGICAL OCEANOGRAPHY (3)
Prerequisites: 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)
Prerequisites: Geol 211; Physics 231 or 131 and Math 122 or 220. Basic elements of geomagnetism, seismology, gravity, and heat flow with reference to the internal structure of the earth.
- 360 GEOLOGY OF FOSSIL FUELS (3)
Prerequisite: Geol 212. Origin and accumulation of fossil fuels; methods of locating fossil fuels resources.
- 384 EARTH SCIENCE FOR THE INTERMEDIATE SCHOOL (3)
Prerequisites: Geol 101, Sci Ed 380. Concepts, experiences, and materials from the earth sciences adaptable to the elementary school with emphasis on intermediate grades. (Also listed as Sci Ed 384.)
- 390 EARTH SCIENCE FOR THE SECONDARY SCHOOL (3)
Prerequisites: Geol 211, 212, 306 or 311. Development of methods and materials for teaching earth science, including use of ESCP materials, adaptable to the secondary school.
- 396a,b,c HONORS TUTORIAL (2-5)
- 399 SEMINAR IN GEOLOGICAL LITERATURE (1)
Prerequisite: 14 credits in geology. Geological reports, papers, and discussion.
- 400 SPECIAL PROJECTS IN GEOLOGY (2-5)
Prerequisite: permission of department. Special projects under supervision.
- 407 PETROLOGY (4)
Prerequisite: 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.
- 410 FIELD GEOLOGY (3-5)
Prerequisites: 13 credits in geology and permission of department, Geol 317 or concurrent enrollment. Methods of geological field investigations; use of field instruments, and making of geologic maps; supervised geologic investigation of a local area.
- 412 FIELD GEOLOGY FOR TEACHERS (2-5)
Prerequisite: Geol 211. The geology of Northwest Washington as observed in the field. Summer only.
- 414 GEOLOGY OF WASHINGTON (3-5)
Prerequisite: Geol 101 or 211. The significant geologic features of Washington State; field studies.
- 416 STRATIGRAPHY AND SEDIMENTATION (4)
Prerequisite: Geol 316. 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)
Prerequisite: 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)
Prerequisites: 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)
Prerequisite: 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)
Prerequisite: Geol 420. Origin, occurrence, and classification of sedimentary rocks and minerals, and use of thin sections in identifying sedimentary minerals.
- 425 METAMORPHIC PETROGRAPHY AND PETROLOGY (5)
Prerequisite: Geol 420. Origin, occurrence, and classification of metamorphic rocks and minerals, and use of thin sections in identifying metamorphic minerals.
- 426 MICROPALEONTOLOGY (4)
Prerequisite: Geol 316. Structure, phylogeny, and geological distribution of micro-fossils with emphasis on evolution, paleoecological significance, and stratigraphic application. To be offered on alternate years with Geol 436.

- 430 MAP AND AERIAL PHOTOGRAPH INTERPRETATION (3)
Prerequisite: Geol 310. Identification, interpretation of geologic features using topographic maps and aerial photos.
- 436 PALEOECOLOGY (4)
Prerequisite: Geol 316. Interpretation of fossil organisms from skeletal morphology and associated features; reconstruction of marine ecosystem relations from the study of assemblages of fossils. To be offered on alternate years with Geol 426.
- 440 GLACIAL GEOLOGY (4)
Prerequisite: Geol 310. Processes and phenomena of modern and ancient glaciers; effects of Pleistocene glaciations.
- 444 X-RAY DIFFRACTION (2)
Prerequisites: Geol 306, Chem 122, and permission of department. Basic analytical techniques with x-ray equipment.
- 446 CLAY MINERALOGY (4)
Prerequisite: Geol 444. Classification, identification, structure, and genesis of clay minerals.
- 453 GEOTECTONICS (4)
Prerequisite: Geol 352. Crust-mantle interactions, isostasy, continental drift, sea floor spreading, theories of mountain building.
- 454 APPLIED GEOPHYSICS (4)
Prerequisite: Geol 352. Field and laboratory exercises in seismic refraction and reflection, electrical resistivity, gravity and magnetics.
- 455 PALEOMAGNETISM AND ROCK MAGNETISM (5)
Prerequisite: Geol 352. Origin and interpretation of natural magnetism of rocks; origin of geomagnetic field; application to problems in petrology, structural geology and geodynamics.
- 460 GEOCHEMISTRY (3)
Prerequisites: Math 122 or 220, Chem 122, 123, Geol 306. Application of principles of physical chemistry to the study of origin of rocks and minerals.
- 461 ANALYTICAL GEOCHEMISTRY (2)
Prerequisites: Geol 306, Chem 122, 123. Techniques of chemical analysis of geological materials. Use of atomic absorption, x-ray fluorescence, and radiocarbon equipment.
- 496a,b,c HONORS TUTORIAL (2-5 ea)
- 497a GEOLOGY OF ALPINE AREAS (5)
Prerequisite: must be taken concurrently with Biol 453a and 453b as part of Institute. The geology of alpine areas in the Pacific Northwest.
- 500 SPECIAL PROJECTS IN GEOLOGY (2-5)
Prerequisite: permission of instructor. Special projects under supervision.
- 507 COASTAL GEOLOGY (4)
Prerequisite: Geol 310 or 340. Coastal processes and morphology; waves, tides, and currents; sea level changes, coastal sedimentation; research methods.
- 510 FIELD PROBLEM (2-5)
Field mapping problem and report in geology.
- 511 ADVANCED STUDIES IN PHYSICAL GEOLOGY (3)
Prerequisite: Geol 420 or permission of department. Independent or class study of recent advances in physical geology.
- 512 ADVANCED STUDIES IN HISTORICAL GEOLOGY (3)
Prerequisite: Geol 316 or permission of department. Independent or class study of recent advances in historical geology.
- 513 GEOCHEMISTRY OF SOLIDS (3)
Prerequisite: Geol 306. Internal structure of crystals.
- 514 FLUVIAL GEOMORPHOLOGY (3)
Prerequisite: Geol 310. Stream processes, origin and evolution of fluvial features.
- 516 PROBLEMS IN BIOSTRATIGRAPHY (3)
Prerequisite: Geol 316. Advanced work in the biostratigraphy of invertebrates, vertebrates, microfossils or plant fossils.
- 519 GENESIS OF ORE DEPOSITS (5)
Investigation of the composition, origin, transportation, and deposition of ore deposits; field and laboratory problems.
- 523 IGNEOUS AND METAMORPHIC PETROLOGY AND GEOCHEMISTRY (5)
Prerequisite: Geol 423 or 425. Petrogenesis of igneous and metamorphic rocks and minerals.
- 524 SEDIMENTARY PETROLOGY AND GEOCHEMISTRY (3)
Prerequisite: Geol 420. Application of chemical principles to the study and interpretation of sedimentary rocks. Petrogenesis of sedimentary rocks.
- 531 SPECIAL TOPICS IN GEOLOGY (2-5)
Prerequisite: permission of instructor.
- 546 GEOLOGY OF CLAYS (3)
Prerequisite: Geol 444. Occurrence, distribution and genesis of clays; including weathering and soils, diagenesis and hydrothermal alteration.
- 552a,b ADVANCED STUDIES IN GEOPHYSICS (4)
Prerequisite: Geol 453 or 454, or permission of instructor.
- 690 THESIS (May be registered for in units of 3)
Independent research.



HISTORY

College of Arts and Sciences | Western Washington State College



History

Without a knowledge of the past, we are, as one writer has phrased it, "like victims of collective amnesia groping in the dark for our identity." History as a discipline is rooted in that fundamental human urge, curiosity. It confronts and weighs the relative significance of chance, inevitability and choice in the passage of time. History is humanistic in its emphasis on the influence of ideas and values, its capacity to both instruct and entertain, and as interpretive literature.

In its investigation of social processes, groups and institutions, and the examination of human motivation, it is a social science. It acts as a bridge among disciplines, borrowing from all and contributing a sense of context and sequence to the perception of actions and individuals. The American historian, Carl Becker, wrote: "The value of history is, indeed, not scientific but moral: by liberalizing the mind, by deepening the sympathies, by fortifying the will, it enables us to control, not society, but ourselves—a much more important thing; it prepares us to live more humanely in the present and to meet rather than to foretell the future."

HISTORY FACULTY

- ROLAND L. DE LORME (1966) Chairman. Associate Professor. AB, University of Puget Sound; MA, University of Pennsylvania; 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.
- LEROY JOSEPH DRESBECK (1969) Associate Professor. BS, Loyola University, Los Angeles; PhD, University of California, Los Angeles.
- DONALD D. EKLUND (1968) Associate Professor. BA, University of New Mexico; MA, Colorado State College; PhD, University of Colorado.
- LEONARD M. HELFGOTT (1970) Assistant Professor. BA, MA, PhD, University of Maryland.
- HARLEY E. HILLER (1957) Professor. BA, Westmar College; MA, PhD, University of Minnesota.
- JAMES H. HITCHMAN (1966) Professor. BA, Willamette University; MA, PhD, University of California, Berkeley.
- THOMAS C. R. HORN (1964) Assistant Professor. BA, University of Pittsburgh; MA, PhD, University of California, Berkeley.
- HARRY D. JACKSON (1967) Associate Professor. BEd, Wisconsin State University, Whitewater; MA, PhD, The University of Iowa.
- EDWARD H. KAPLAN (1968) Associate Professor. BS, Georgetown University; MA, PhD, The University of Iowa.

- GEORGE ERIC MARIZ (1970) Assistant Professor. BA, MA, PhD, University of Missouri.
- KEITH A. MURRAY (1946) Professor. BA, Whitworth College; MA, PhD, University of Washington.
- 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.
- ALFRED L. ROE (1962) Associate Professor. BA, St. Olaf College; MA, PhD, University of Minnesota.
- 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. Pacific Lutheran University; MA, PhD, Northwestern University.

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 College Requirements program, up to 12 credits of which may be applied toward a major or minor in history. (See General College 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.

**On Leave 1974-75*

History

Major Junior and Senior High School 60 credits

History credits should be distributed under advisement as follows:

- United States History 3 courses
- European History 2 courses
- East and South Asia 2 courses
- Africa and Middle East
- Western Hemisphere (outside U.S.)
- History 301, 391, 401 4 courses
- Social Studies Education 426
- Electives under advisement

Teaching competence will be certified in history.

History - Social Studies Concentration

See Interdepartmental Programs for description of the history - social studies concentration as an alternative teacher preparation major.

Major Elementary 45 credits

- History 103, 104
- Two courses from History 425 through History 448
- One course from History 410 through History 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, including one upper division course, under advisement

Area Studies Minor

Minor programs are available in the following fields:

- Canadian and Canadian-American Studies
- East Asian Studies
- Latin American Studies

Courses taken for credit in these programs may not be counted toward the major. See Interdepartmental Programs for details.

Extended Minor 35 credits

(Alternate minor for teaching competence recommendation)

Credits should be distributed under advisement as follows:

- United States History 3 courses
- European History 2 courses
- History 391
- Electives under advisement

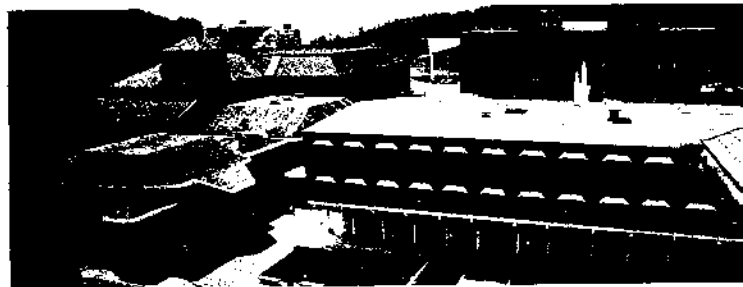
A minimum grade point average in history of 2.5 is required for graduation and certification of teaching competence.

Extended Minor 33-35 credits

For English majors desiring a combined recommendation appropriate for junior high or middle school.

- History 103, 104
- One Modern European course from History 425 through History 448
- One course from History 270, 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.



History

BACHELOR OF ARTS

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, including History 301, in one of the above fields
- Three courses in a second field
- Two courses in a third field
- History 401 (3 credits)
- Electives under advisement

The department recommends that majors take the maximum permissible number of history courses in the General College Requirements program. Up to 12 credits of these may be applied toward a major or minor in history. (See General College 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.

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 (377, 386, 440, 441); Germany (430, 431); Latin America (271, 273, 473); Russia (432, 433, 434)
- Electives under advisement

Area Studies Minor

Minor programs are available in the following fields:

- Canadian and Canadian-American Studies
- East Asian Studies
- Latin American Studies

Courses taken for credit in these programs may not be counted toward the major. See Interdepartmental Programs for details.

DEPARTMENTAL HONORS

A history major who wishes to graduate "with honors" must meet the general requirements for all honors students. He should consult the departmental honors adviser regarding additional requirements.

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 Bulletin*.

COURSES IN HISTORY

- 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.
- 105, 106, 107 INTRODUCTION TO WESTERN CIVILIZATION (5 ea)
- Not open to those who have completed or intend to take General Studies 121, 122, 123. Need not be taken in sequence. Human development in the Western world from earliest times to the present; emphasis upon ideas, institutions, forces and movements shaping contemporary life.
- 105 Prehistory to 1000 AD. The political, social and cultural history of occidental man from prehistory to the early Middle Ages.
- 106 1000 to 1715. The course of Western Civilization from the Middle Ages to the death of Louis XIV.
- 107 1715 to Present. Western Civilization from the Enlightenment to the global age.
- 199 INTRODUCTION TO THE STUDY OF HISTORY (3)
- A survey of some of the basic problems of historical writing, research and interpretation; an investigation of the relationship of history to the humanities and social sciences. Designed for students with a general interest in history as well as history majors.
- 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.
- 267 THE HISTORY OF CHRISTIANITY (5)
- The development of Christian belief and institutions from their inception until the twentieth century.
- 271 INTRODUCTION TO LATIN AMERICAN CIVILIZATION (5)
- A survey of various themes such as Hispanidad, Indianismo, the Church, the peasant, urbanism, the army, which together make up the Latin American experience.
- 273 LATIN AMERICA (5)
- From the period of early Spanish and Portuguese colonization to the present.
- 280 INTRODUCTION TO EAST ASIAN CIVILIZATION (5)
- The origins and evolution of civilization in 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.
- 287 INTRODUCTION TO ISLAMIC CIVILIZATION (5)
- This course will aim at introducing the student to the religious and cultural aspects of Middle Eastern society, and will also aim at introducing some of the major conceptual problems in dealing with a non-western society. The course will survey the development of Islam as a body of religious thought and practice and will also examine the major cultural movements in the Middle East. The course will be thematic in approach and will only be chronological when necessary.
- 301 HISTORY COLLOQUIUM (3)
- Prerequisite: Appropriate background courses in topic of colloquium. Introduction to historical methods and concentrated study on topics of special interest in small discussion groups culminating in a bibliographical essay. Since it is expected that History 301 will serve as the starting point for the 401 research paper, the student will normally have the same instructor for both courses.
- 336 COMPARATIVE IMPERIALISMS: SELECT CASE STUDIES (5)
- An examination of several imperial powers, their controls and methods, their attitudes to race questions, their influence on the colonial peoples and economies.
- 337 BRITISH IMPERIALISM: FROM TUDOR TIMES TO INDIAN INDEPENDENCE (5)
- 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)
- 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)
- Development of the European mind from the seventeenth century to the present.
- 360 AMERICAN ECONOMIC HISTORY (5)
- American economic development from colonial times to the present, with particular emphasis upon later periods.
- 361 BLACK HISTORY IN AMERICA (5)
- The culture and achievement of black Americans.

History

- 365 GREAT PERSONALITIES IN AMERICAN HISTORY (5)
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)
Social and intellectual development during the colonial and early national periods.
- 367 AMERICAN SOCIETY AND THOUGHT: 1800-1900 (5)
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)
Intellectual developments in twentieth century America.
- 371 HISTORY OF AMERICAN TECHNOLOGY (5)
Major technological and scientific developments in America; influence upon rise of the United States as a world power.
- 375 THE INDIAN IN AMERICAN HISTORY (5)
Events and persons critical to history of North American Indians; review of interpretations of Indian cultures and history.
- 377 CANADA (5)
Prerequisite: History 107 or equivalent. Canadian history from the period of French colonization to the present.
- 385 AFRICA TO 1885 (5)
Development of African societies and states up to the European partition.
- 386 AFRICA SINCE 1885 (5)
History of Africa during and after colonial rule. Emphasis is on African reactions to European rule, nationalist movements and the problems of independence.
- 390 TOPICS IN HISTORY (3-5)
Prerequisite: junior standing. Specialized topics dealing with history as a social science discipline. The subject of each individual class and its prerequisite will be announced in the class schedule. Repeatable to 10 credits.
- 391 HISTORY AND GOVERNMENT OF WASHINGTON (3)
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.
- 398a INTRODUCTION TO HISTORICAL METHODS IN GOVERNMENT AND BUSINESS ARCHIVES AND RECORDS (3)
Prerequisite: 10 credits in history. A survey of historical techniques utilized in government and business archives and records centers, and of the development of concepts of archival administration.
- 398b HISTORICAL METHODS IN BUSINESS ARCHIVES AND RECORDS MANAGEMENT: FIELD WORK (3)
Prerequisite: 10 credits in history. Supervised field work in government and business archives, with emphasis upon the application of methods of historical organization, preservation, and analysis of records.
- 400 SPECIAL PROBLEMS (1-5)
Prerequisite: permission of department.
- 401 HISTORICAL RESEARCH (1-3)
Prerequisite: History 301. The research and writing of a formal paper on a topic developed in History 301. The student will normally have the same instructor for both courses.
- 405 PROBLEMS IN MODERN EUROPEAN HISTORY, 1815 TO THE PRESENT (5)
Prerequisite: senior standing. Designed to give seniors a coherent overview of the course of European history since 1815 through an examination of a number of key problems.
- 407 HISTORY OF THE FIRST WORLD WAR (3)
Prerequisite: upper division standing. Analysis of the First World War with emphasis on the strategic and tactical considerations that governed its course.
- 408 HISTORY OF THE SECOND WORLD WAR (3)
Analysis of the Second World War with emphasis on the strategic and tactical considerations that governed its course.
- 410 ANCIENT NEAR EAST (5)
Prerequisite: History 105 or Gen 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. (3)
Prerequisite: History 105 or Gen 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)
Prerequisite: History 105 or Gen 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 (3)
Prerequisite: History 105 or Gen 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)
Prerequisite: History 105 or Gen 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)
Prerequisite: History 105 or Gen St 121; open to sophomores with permission of instructor. From the dedication of Constantinople to its fall (330-1453).
- 416a,b,c EUROPE IN THE MIDDLE AGES (5 ea)
Political, social, religious, and intellectual changes in medieval civilization.
416a The Patristic Age, 284-768
Impact of Christianity and the barbarian invasions upon European society.
416b Central Middle Ages, 768-1200
Change from the feudal world to the nation-state.
416c Transformation of Europe, 1200-1450
Elements of the High Middle Ages and discussion of its collapse.
- 418 MEDIEVAL ENGLAND (5)
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)
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)
Prerequisite: History 106 or Gen 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)
Development of the modern state system and the conflict between monarchs and the growing middle class.
- 426 MODERN EUROPE, 1789-1850 (5)
Political, economic, social, and diplomatic developments between the French Revolution and mid-19th century.
- 427 MODERN EUROPE, 1850-1914 (5)
From the age of "Realpolitik" to First World War.
- 428 MODERN EUROPE, 1914-1945 (5)
Results of World War I, attempts at world organization, the Succession States of Central Europe, World War II.
- 429 EUROPE SINCE 1945 (5)
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)
German development from the late Middle Ages to the Napoleonic era.
- 431 GERMANY SINCE 1815 (5)
Since the Congress of Vienna; national unification, the German state system; role in international affairs.
- 432 RUSSIA, ORIGINS AND DEVELOPMENT TO 1917 (5)
An introduction to the history of Russia from its beginnings until the fall of the Russian monarchy in 1917 with the major emphasis upon social and intellectual trends and upon the revolutionary movement in the 19th century. Not open to students who have already taken History 433.
- 433 ROOTS OF REVOLUTION: RUSSIA, 1801-1917 (3)
A history of Russia in the 19th century with particular emphasis upon social and intellectual trends and upon the rise of the revolutionary movement. Not open to students who have taken History 432.
- 434 THE RUSSIAN REVOLUTIONS AND THE SOVIET REGIME (5)
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.
- 436 ENGLAND, 1485-1688 (5)
Political, social, economic, and constitutional history of England from the end of the Wars of the Roses to the Glorious Revolution.
- 437 ENGLAND, 1688 to 1832 (5)
Political, social, economic, and diplomatic history of England from the Glorious Revolution to the Reform Bill of 1832; constitutional developments of the period.
- 438 ENGLAND, 1832 TO THE PRESENT (5)
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.
- 440 FRANCE, 1643-1815 (5)
Political, social, and economic development from Louis XIV through Napoleon.
- 441 FRANCE SINCE 1815 (5)
Political, social, and economic development of France since Napoleon.
- 445a CURRENT TRENDS IN THE TEACHING OF HISTORY (3)
Strategies and materials for teaching senior and junior high school history. The course emphasizes "new" strategies and support materials designed to maximize learning and student involvement in the teaching-learning processes.
- 448 EAST CENTRAL EUROPE TO 1945 (5)
The political, social and intellectual history of Poland, the Danube Basin, and the Balkan Peninsula to the Second World War. Emphasis on the period since 1800 and the rise of nationalism.

History

- 450 AMERICAN COLONIAL HISTORY (5)
The founding of the English colonies in North America, and the development of their forms of provincial and local government, economic life, and religious and social institutions to the middle of the eighteenth century; problems of imperial administration; and internal partisan conflicts over political, economic, and religious issues.
- 451 THE AMERICAN REVOLUTION AND CONFEDERATION PERIOD (5)
Colonial reaction to British imperial policies (1763-1776) in the context of internal partisan controversies over political, economic, sectional, and religious issues; the military and diplomatic aspects of the Revolutionary War; the political and economic problems during the Articles of Confederation period that led to the demand for constitutional reform in the Convention of 1787.
- 452 THE EARLY NATIONAL PERIOD: FEDERALISTS AND JEFFERSONIANS (5)
The problems of the Confederation period, the major debates and compromises in the Constitutional Convention of 1787, and the partisan political conflicts over constitutional interpretations, economic issues, and foreign policy leading to the origin of the first party system, from the establishment of the federal government to the War of 1812.
- 453 THE AGE OF JACKSON (5)
The struggle between republican and democratic forces in a milieu of social, technological, economic, international and religious flux, 1812-1848.
- 454 THE CIVIL WAR AND RECONSTRUCTION (5)
Development of rival nationalisms; problems of war in North and South; efforts toward reunion; new problem in 1877.
- 455 THE UNITED STATES, 1877-1900 (5)
Social, economic, and political development of the American nation after Reconstruction.
- 457 AMERICA ENTERS THE TWENTIETH CENTURY (5)
American political, socio-economic, and intellectual currents, 1900-1920.
- 458 THE UNITED STATES: 1920-1941 (5)
Political, social, and economic trends during the interwar years.
- 459 THE UNITED STATES SINCE 1941 (5)
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)
Relationship of the United States to world politics from colonial times to 1945.
- 462 DIPLOMATIC HISTORY OF THE U.S. SINCE 1945 (3)
A historical analysis of the United States in its relations to other powers in the post World War II world.
- 463 AMERICAN CONSTITUTIONAL HISTORY (5)
Prerequisite: History 103 or equivalent. The constitutional development of the United States from the colonial period to the present, with emphasis upon the major debates and compromises in the Constitutional Convention of 1787, and the historical role of the Supreme Court in shaping social policies via the power of judicial review in the context of partisan political controversy over crucial social issues.
- 465 THE AMERICAN WEST (5)
Westward movement from the Allegheny Mountains to the Pacific Ocean, with special emphasis upon the Far West.
- 466 THE RISE OF THE AMERICAN CITY (5)
The impact of urbanization on American political, social, and economic history from the late 19th century to the present.
- 467 REFORM AND RADICALISM IN TWENTIETH CENTURY AMERICA (5)
Origin, leadership, objectives, and impact of major reform and radical movements of the period.
- 468 U.S. REGIONAL AND MARITIME HISTORY (3)
Naval and maritime development of the nation and Pacific Northwest.
- 473 SELECTED MAJOR LATIN AMERICAN STATES IN THE 20TH CENTURY (5)
A contemporary history of major states of current interest.
- 477 MODERN CANADA SINCE 1867 (3)
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 CHINA FROM ANTIQUITY TO EARLY T'ANG (5)
Chinese civilization's foundations and the early stages of the imperial system's evolution.
- 481 IMPERIAL CHINA FROM EARLY T'ANG 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 TRADITIONAL JAPAN (5)
Development of Japanese civilization to the Meiji Restoration of 1868.
- 484 MODERN JAPAN (5)
Japan from the Meiji Restoration to the present.

- 487a,b THE MIDDLE EAST (5 ea)
 487a The Traditional Middle East
 From the 6th Century to 1800
 487b Middle East 1800 to the Present
- 488 EAST AFRICA (3)
 A regional history of East Africa, the former British territories and the Horn. Major concentration on political, economic and social change since 1850.
- 489 SOUTHERN AFRICA (5)
 Political and social developments south of the Zambezi River in recent centuries: pre-colonial states, European settlements, conflicts of the 20th century.
- 491 SURVEY OF COMMUNITY HISTORY (2)
 Prerequisite: History 391 or equivalent. A survey of local history, with emphasis upon the interrelated local, regional, and national factors involved in the development of selected communities of the Pacific Northwest.
- 494 HISTORY OF AMERICAN HISTORIOGRAPHY (4)
 Prerequisite: open only to undergraduates of senior standing or fifth year students who are majors or minors in history, with permission of the instructor. Not applicable for graduate credit towards master's programs in history.
- 495 PHILOSOPHICAL PROBLEMS OF HISTORY (5)
 Problems in the critical and speculative aspects of the philosophy of history: explanation, objectivity and causality in historical inquiry; speculative approaches to "meaning" in history; relationship of history to the social and the physical sciences; open to graduate and undergraduate students in history and other departments with permission of instructor.
- 497d THE WOMAN IN AMERICAN HISTORY (5)
 Prerequisites: History 103, 104, or equivalent. Topics in the history of women's changing social, economic, and political roles in America from inherited European institutional and legal theories and practices to the current debate over the roles and rights of modern American women.
- 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.
- Admission to graduate status and to graduate courses requires completion of an undergraduate major in history or the permission of the department.*
- 500 CONFERENCE (1-5)
 Special problems in history.
- 501 HISTORIOGRAPHY I (4)
 Selected historiographical studies—Western Europe.
- 502 HISTORIOGRAPHY II (4)
 Selected historiographical studies—United States.
- 511-588 GRADUATE SEMINARS (4 ea)
 Prerequisite for each of these seminars: completion of undergraduate major in history or permission of department; History 511, 512, 515, 533, 536, 537, 540, 550, 558, 563, 571, 573, 582, 583, 584 require an appropriate upper division course as prerequisite. (See Graduate Bulletin.)
 511 Ancient Greece
 512 Roman History
 515 Medieval History
 520 Renaissance and Reformation
 533 Russian History
 536 English History
 537 British Empire and Commonwealth
 540 Modern European History
 550 Colonial American History
 554 Civil War and Reconstruction
 558 Twentieth Century American History
 560 American Economic and Business History
 561 American Diplomatic History
 563 American Constitutional History
 566 American Society and Thought
 571 Canada
 573 Latin America
 581 Imperial China
 582 Republican and Communist China
 583 Traditional Japan
 584 Modern Japan
 588 Africa
- 591a,b SEMINAR IN THE PACIFIC NORTHWEST (4)
- 594 SEMINAR ON THE TEACHING OF HISTORY (2)
 Develops alternative teaching strategies for application at the community college and college levels.
- 595a,b,c PRACTICUM IN COLLEGE TEACHING (2)
- 596a,b,c PRACTICUM IN COLLEGE TEACHING (4)
- 598a,b,c GRADUATE INTERNSHIP IN MUSEUM AND ARCHIVAL TECHNIQUES (5-10)
 Prerequisite: approval of the department and instructor. A work/study program conducted by the History Department and the Seattle Federal Records Center, National Archives and Records Service, providing step-by-step training in the handling, storage, preservation and archival usage of documentary and filmed materials.
- 690 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 bibliographic aides. A knowledge of foreign languages or the use of statistics or computer programming may be required depending upon the topic of research.
- 691 RESEARCH AND WRITING SEMINAR: THESIS (4)
 Prerequisite: History 690. Continuation of research begun in History 690.
- 692 RESEARCH AND WRITING SEMINAR: THESIS (4)
 Prerequisite: History 691. Emphasis upon the writing of research materials.





HOME ECONOMICS

College of Arts and Sciences | Western Washington State College



Home Economics

BACHELOR OF ARTS IN EDUCATION

Teacher Education Major

As part of an exciting teaching career in home economics, there is the opportunity to work in a variety of subject areas including consumer education, family living, child development, nutrition, home management, housing and home furnishings, clothing construction and meal management. The home economics teacher is prepared to work with learners at the middle school, secondary and adult levels and can select to teach at the level she enjoys the most. She also assumes a dynamic role in planning field experiences, visiting homes, guiding extended home learnings, sponsoring youth groups, and working with individuals and groups in the community.

The WWSC teacher education program in home economics is "action-oriented" from beginning to end. Early in the program, the prospective teacher becomes involved in field experiences to observe learners and participates in micro-teaching in actual classrooms as part of her college program. All of the subject-matter areas in home economics include mini-experiences for the student which relate to the teaching experience. In the senior year, teacher education courses include experiences in planning and presenting demonstrations, video presentations, exploring current home economics multi-media teaching aids, planning units for a home economics curriculum. As part of the learning process, the student experiences work with learning packages, individualized learning contracts and other means of individualized instruction. The concepts and experiences are current and relevant. The teacher education preparation is culminated by a student-teaching experience with responsibility for planning and teaching in a secondary home economics program.

Home economics teaching opportunities are at all levels—middle school, high school, adult and vocational education programs, and community colleges. In addition, preparation for home economics teaching opens the door to a variety of other job opportunities such as extension service, home economist in business, and community and governmental services.

Major Concentration:

*Child Development and Family Relationships
in combination with elementary teaching minor*

The major emphasis of this program is learning to know the whole child as he interacts with his total environment (family, school, community agencies, etc.). The program involves students with children, 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 (day care centers, Head Start, nursery schools, etc.). Student teaching experience is done at the elementary level.

This major combines home economics courses with the major emphasis of child development/family relationships, elective home economics classes, and a variety of courses with the elementary education minor or major. This major offers flexibility in the selection of elective or alternative choices to meet particular needs of the student.

Opportunities for employment in the field of child development are many and they continue to expand as social and economic changes create new demands for people with this training. 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. With the educational background of this curriculum experience and additional study, students are prepared for administrative positions in child development in college teaching and research.

BACHELOR OF ARTS

Major Concentration:

Family and Community Services

The family and community service major is the newest major in the Department of Home Economics. This major has been created to meet changing societal needs

for trained personnel. The program 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. The student learns about individuals and families as they develop and change throughout the life span through the processes of social change and through interpersonal interactions. A knowledge of the structure and function of community agencies is an important concept for the student. The student will work with an advisory faculty committee in planning a program and selecting classes. Choices are available in all the areas of home economics.

At present, graduates may find employment in such occupations as family-community consultant and program developer; family counseling associate; family life educator; day care specialist; youth program specialist; welfare and rehabilitation counselor; mental health team member; school-community consultant and program developer; volunteer aid supervisor; inter-agency coordinator. Many of the employment opportunities for students with a family and community services background are not currently defined as occupations for home economists but social and economic changes are creating increasing demands for persons with such training.

*Major Concentration:
Housing, Equipment and Furnishings*

This emphasis is designed for the student desiring a broadly-based education in home economics which has its focus on bettering the living environment (both physical and aesthetic) for the family. A student selecting this area is concerned with housing for different life stages and economic levels, equipment and home furnishings for the household, the arrangement of space and furniture, storage areas, lighting for comfortable and efficient living and all the aspects of the design.

Spatial, visual and functional problem-solving is encouraged through simulated and actual problems in interior design and housing. Students work with displays, home furnishings problems, meet professionals in the field, take field trips to homes and families as laboratory experiences and case studies, plus field trips

to retail and wholesale home furnishings businesses. The current market in housing, single-family and multi-dwelling, and the home furnishings field are integral facets of study.

Opportunities for campus/community service are available through the Western Design Center. The student has the opportunity to apply design concepts to problem-solving situations that exist with the community or college. Students have worked with the selection and planning of a Forestry Service Information Center, planning storage units for a home economics laboratory, design of logos and brochures, etc. Work experience in local design studios and retail home furnishings stores are an elective part of the program. Supporting courses outside home economics may be individually planned to meet the student's career objectives.

Some interesting careers available to the student in this program are home lighting consultant, home planning specialist, kitchen planning specialist, interior designer, public housing consultant, architectural assistant, newspaper writer, utility company home economist, consumer consultant, extension specialist, and home furnishing positions in retailing and merchandising.

*Major Concentration:
General Home Economics*

The student seeking a Bachelor of Arts degree in general home economics has the greatest flexibility in program planning. A student designs her own program with advisement by a faculty committee. A minimum of courses is required in each of the following five areas of home economics: (1) child development and family relations; (2) home management and family economics; (3) housing, equipment and furnishings; (4) foods and nutrition; and (5) clothing and textiles. Individuals have a choice of concentrating electives in one or two areas to meet a specific goal or selecting courses which develop a general background for a flexible career objective.

In addition to the wide scope of courses in home economics, a student selects supporting courses from other disciplines. These supporting courses may concentrate in one or two areas or be chosen from a broad spectrum of areas. This major promotes a

Home Economics

liberated point of view which reinforces Western's emphasis on liberal education. It is the "generalist" who will be prepared to adjust to a rapidly-changing world. This broad scope of home economics education will allow a student to be prepared for new career opportunities.

Job opportunities for graduates with a degree in general home economics are found in government, business and industry. Positions in consumer relations, mass media, and social, health and family services find a general background desirable. Homemaking is a choice of many general home economics majors and this program can be designed to meet a student's own needs.

HOME ECONOMICS FACULTY

- DOROTHY E. A. RAMSLAND (1949) Chairman.
Professor. BS, University of Wisconsin; MS, PhD, Michigan State University.
- LUCILLE E. BARRON (1945) Assistant Professor. BA, Washington State University; MA, University of Washington.
- EVELYN C. KEST (1969) Assistant Professor. BS, MS, Brigham Young University.
- EDITH B. LARRABEE (1957) Assistant Professor. BA, East Texas State University; MA, Colorado State College.
- JANICE R. PEACH (1964) Instructor. BS, South Dakota State University; MS, Oklahoma State University.
- JANE E. ROBERTS (1966) Associate Professor. BS, MS, PhD, University of Wisconsin.

BACHELOR OF ARTS IN EDUCATION

Major Concentration 70 credits

(Satisfies both major and minor)

- Home Econ 100, 101, 120, 150, 164, 166, 175
- Home Econ 210, 224, 230, 250, 253, 260, 272, 361
- Home Econ 310, 320, 321, 334, 338, 353, 370, 375
- Home Econ 410, 420, 424, 432, 441
- Home Econ electives: 4 credits
- Supporting course: Economics 201

Major: Child Development and Family Relationships 45 credits

Core Requirements 27-30 credits

- Home Econ 101 or 175; 120; 150 or 350
- Home Econ 224
- Home Econ 320; 321; 461 or 362
- Home Econ 420; 422; 423; 424

Home Economics Elective Requirements chosen from the following: 15-18 credits

- Home Econ 100, 164, 166, 175, 210, 230, 327, 334, 338, 350, 362, 370, 417b, 417d, 421, 425, 426, 427, 428, 450, 451, 470

(This major to be combined with Elementary Teaching minor. See Education Department listing for details.)

Minor 25 credits

- Courses selected under departmental advisement. Preliminary consultation is essential before undertaking a minor.

Minor: Child Development and Family Relationships 25 credits

(To be combined with Special Education major or Early Childhood Education specialization)

Core Requirements: 22 credits

- Home Econ 120, 150
- Home Econ 224
- Home Econ 320
- Home Econ 420, 422, 423, 424

Elective Requirements chosen from the following: 3 credits

- Home Econ 100, 154, 166, 175, 210, 230, 327, 334, 338, 350, 362, 370, 417b, 417d, 421, 425, 426, 427, 428, 450, 451, 470

Teaching Competence

Recommendation for teaching competence in home economics normally requires completion of the major with a grade average of 2.5 or better.

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.

All students being certified for vocational certification in home economics must comply with Washington State Administrative Code No. 390-28-010(6) which states: "By September 1, 1973, the preparation for vocational teaching for all persons shall include instruction in safety and industrial hygiene practices."

BACHELOR OF ARTS

Major Concentrations 110 credits
(70 credits in Home Economics plus Supporting Courses)

(These concentrations satisfy both a major and a minor.)

General Home Economics Emphasis

- Required common core courses for this emphasis: Home Econ 100, 210, 310, 410 (4 credits)
- Selected credits from each area listed below with committee advisement (9 credits each): child development and family relationships; foods and nutrition; home management and family economics; housing, furnishings, equipment, design; textiles and clothing
- Home economics electives: 21 credits
- Supporting courses: Econ 201 plus 35 credits under advisement from art, sociology, psychology, economics, chemistry, biology, technology or philosophy

Common core: Home Econ 100, 101, 120, 150, 166 or 461, 175, 210, 224, 230, 310, 334, 370, 410 (25-26 credits)

Family and Community Services Emphasis

- Common core requirements as shown above (25-26 credits)
- Emphasis requirements: 44-45 credits in home economics classes to be planned with departmental

advisory committee to meet student's proposed career objectives

- Supporting courses: Econ 201, Psych 201 and 351, Soc 202 and Soc 340, plus 17 credits taken under advisement

Housing, Equipment and Furnishings Emphasis

- Common core requirements as shown above (25-26 credits)
- Emphasis requirements: Home Econ 164, 272, 273, 364, 367, 371, 372, 375, 376, 470, 475, 478 (35 credits)
- Home economics electives: 8-11 credits
- Supporting courses: 40 credits under advisement from technology, art, physics, economics, speech, sociology, anthropology, or geography

Minor 25 credits

- Courses selected under departmental advisement; prior consultation is essential before undertaking a minor

A one or two year program is planned for students who may wish to transfer or who have special needs for less than a degree program. Consult department for details.

COURSES IN HOME ECONOMICS

- 100 INTRODUCTION TO HOME ECONOMICS (1)**
Orientation in the five areas of home economics and a review of the field in terms of history, philosophy, professional opportunities.
- 101 DESIGN ORIENTATION (3)**
Not open to students with credit in Art 270. Fundamental art principles and design concepts, emphasizing color, pattern, texture, and space.
- 120 THE PRE-SCHOOL CHILD IN THE FAMILY (2)**
Intellectual, physical, social, and emotional development of the child from conception through age four, with emphasis upon the relationship of the child to the family.
- 150 HUMAN NUTRITION (3)**
Prerequisite: general education chemistry requirement and Biol 101 or equivalent. Basic nutrition principles and nutritive needs of people, food habits, nutrition education.
- 164 TEXTILES FOR THE CONSUMER (3)**
Comparative properties of textile fibers and fabrics for clothing and home furnishings.

Home Economics

- 166 CLOTHING DESIGN AND SELECTION (2)
Prerequisites: Home Econ 101 or Art 270 and Home Econ 164 recommended; not open to home economics majors with credit in 260. Selection of clothing from aesthetic and consumer aspects.
- 175 PERSONAL ENVIRONMENTAL DESIGN (2)
Prerequisite: Home Econ 101 for home economics majors. Introduction to furniture, decorative arts, architecture and landscaping for the home.
- 210 CONCEPTS IN HOME ECONOMICS (1)
Prerequisite: Home Econ 100. Concepts common to the five areas of home economics.
- 224 MARRIAGE AND FAMILY LIVING (2)
Prerequisite: Gen St 105 or equivalent. Interpersonal relationships in pre-marital and marital interaction.
- 230 DECISION-MAKING IN THE FAMILY (2)
Basic concepts of management and decision-making viewed within the framework of the family as an ecosystem.
- 250 HUMAN NUTRITION LABORATORY (2)
Prerequisites: Home Econ 150; general education chemistry requirement and Biol 101 or equivalent. Evaluation of nutritional status in case study situations, dietary methodologies, relationship of nutrition, food, and health; laboratory.
- 253 FOODS (3)
Prerequisites: Home Econ 150; Home Econ 272 recommended. Basic principles of food preparation and selection; laboratory experience and demonstration.
- 260 CLOTHING CONSTRUCTION (3)
Prerequisites: Home Econ 164, 166, Home Econ 101 or Art 270, and permission of department. Basic construction techniques; emphasis on management of resources.
- 272 HOUSEHOLD EQUIPMENT I (3)
Evaluation of household equipment; application to the family's management.
- 273 HOUSEHOLD EQUIPMENT II (2)
Prerequisite: Home Econ 272. Analysis of electrical and non-electrical equipment; energy conservation; laboratory experience, demonstration.
- 300 SPECIAL PROBLEMS IN HOME ECONOMICS (1-5)
(See Home Econ 400.)
- 310 HOME ECONOMICS RESEARCH METHODS (1)
Prerequisite: Home Econ 210. Analysis of research purposes and methods in the five areas of home economics.
- 320 CHILD DEVELOPMENT (3)
Prerequisites: Home Econ 120, Gen St 105 or equivalents. Development of the school age child (5-12) from a developmental point of view, with emphasis on the relationships of the child in the family.
- 321 ADOLESCENT DEVELOPMENT (2)
Prerequisite: Gen St 105 or equivalent. Development of the adolescent; implications for guidance in the family and group situations.
- 327 FIELD EXPERIENCES IN HOME ECONOMICS (2-5)
Prerequisite: permission of department. Opportunity to work with community, business, and government organizations and agencies utilizing home economics skills. (S/U grading only.)
- 334 CONSUMER ECONOMICS (2)
Current consumer issues in the economic world; responsibilities and protections.
- 338 FAMILY FINANCE (3)
Prerequisites: Gen St 105, Econ 201 or Gen St 200. Management of family income and expenditures in the changing family cycle.
- 350 NUTRITION: ASPECTS OF HUMAN GROWTH (2)
Prerequisite: Home Econ 150; Home Econ 250 recommended. Nutritional needs during pregnancy, lactation, growth, and old age; indices of nutritional status.
- 353 FAMILY MEAL MANAGEMENT (3)
Prerequisites: Home Econ 150, 253, and permission of department. Concepts of management applied to meal service for the family.
- 361 CLOTHING ANALYSIS (2)
Prerequisite: Home Econ 260 or equivalent. Limited to home economics education majors. New techniques applied to methods of teaching clothing; special fabrics; principles of fitting.
- 362 FAMILY CLOTHING (2)
Prerequisite: Home Econ 164 or 166 recommended. Selection of family clothing to meet changing life cycle needs.
- 364 TEXTILES FOR HOME FURNISHINGS (3)
Prerequisites: Home Econ 164 and 175 or 375. Historical and contemporary design of decorative and functional textiles for home furnishing.
- 365 ADVANCED TEXTILES (3)
Prerequisite: Home Econ 164 or equivalent. Emphasis on special fabrics and finishes, fiber modifications and textile legislation.
- 367 WEAVING DESIGN (3)
Prerequisites: Home Econ 101 and 164. Weaving taught through the use of a variety of looms and materials.

- 370 HOUSING I (3)
Prerequisites: Home Econ 101 or Art 270; Home Econ 175; permission of department. Housing for the family; historical, aesthetic and cultural implications.
- 371 HOUSING II (3)
Prerequisites: Home Econ 370; Home Econ 372 recommended. Multiple housing for the family; its planning and design.
- 372 HOUSEHOLD SYSTEMS (3)
Prerequisites: Home Econ 272, 370; Tech 313 recommended. Factors affecting lighting, indoor climate control and waste systems in the home environment.
- 375 HOME FURNISHINGS (3)
Prerequisites: Home Econ 101 or Art 270; Home Econ 175 and permission of department; Home Econ 164 recommended. Laboratory experiences with selection, arrangement, design of home furnishings.
- 376 HISTORY OF FURNITURE AND DECORATIVE ARTS (3)
Prerequisites: Home Econ 375. Development of furniture and decorative arts from ancient to contemporary times.
- 377 PROFESSIONAL WORKROOM EXPERIENCE IN INTERIOR DESIGN (3)
Prerequisites: Home Econ 364 and 375. Supervised experience in professional interior design workrooms for drapery, curtains and shade construction, upholstering and related areas. S/U grading only.
- 400 SPECIAL PROBLEMS IN HOME ECONOMICS (1-5)
Prerequisite: permission of department chairman. Advanced students with a creditable record in home economics may work on a special problem by conference arrangement.
- 410 SEMINAR IN HOME ECONOMICS (1)
Prerequisite: Home Econ 310. Current issues.
- 417a INDIVIDUALIZING HOME ECONOMICS (3)
For home economics teachers who wish to add any or all of the following components into their learning systems: (1) personalized or individualized program, (2) self instructional, (3) non-graded, (4) ungraded, (5) student directed and/or managed. Students will design a system under which their students operate in any or all of the above components. The system will be designed for their particular program and facility.
- 417b HOME ECONOMICS FOR ELEMENTARY SCHOOLS (3)
Prerequisites: student teaching or teaching experience. The development of home economics concepts and skills for the elementary school curriculum.
- 417c IN-SERVICE HOME ECONOMICS SUPERVISORY TRAINING FOR SUPERVISION OF STUDENT TEACHERS (3)
Prerequisite: vocational certification in home economics under State of Washington certification regulations; master teacher with a minimum of two or more years of teaching experience in the State of Washington who has worked as a cooperating teacher with student teachers prior to taking this course. In-service training of master, vocationally certified home economics teachers to prepare them for assuming certain supervisory tasks (in lieu of college supervision) when working with student teachers in home economics.
- 417d CONTEMPORARY ISSUES IN FAMILY RELATIONSHIPS (3)
Prerequisite: Home Econ 424 or equivalent. Exploration of contemporary issues in family relationships.
- 417e CONSUMER EDUCATION FOR HOME ECONOMICS TEACHERS (1-3)
Prerequisite: 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.
- 418 DESIGN CENTER RESEARCH PROJECT (1-3)
Prerequisite: Tech 214 or Home Econ 101. Directed research in design under the auspices of the Western Design Center. (Also listed as Tech 418.)
- 420 LABORATORY EXPERIENCE WITH THE PRE-SCHOOL CHILD (3)
Prerequisites: Home Econ 120 and Gen St 105; permission of department; a tuberculosis test required in compliance with state law. Observation and participation in nursery school laboratory. S/U grading only.
- 421 DEVELOPMENTAL ASPECTS OF ADULTHOOD AND AGING (3)
Prerequisite: Gen St 105 or equivalent; permission of department. Physical, economic, psychological and social changes in the middle and later years. Emphasis on changes in family relationships, finances, living environment and employment. Personal, social and community resources explored.
- 422 NURSERY EDUCATION (3)
Prerequisite: Educ 431. Development of curriculum for nursery school age children emphasizing experiences which develop language perceptual, motor, creative and interpersonal competencies. (Also offered as Ed 432.)
- 423 SEMINAR IN ADVANCED CHILD DEVELOPMENT (3)
Prerequisites: 5 credits in upper division child development courses and permission of department. Critical analysis of aspects of child development, recent development of theories; supervised individual projects.
- 424 FAMILY RELATIONSHIPS (3)
Prerequisite: Home Econ 224 or equivalent. Concepts of the family; current issues, family life education.
- 425 FAMILY COUNSELING (3)
Prerequisites: Home Econ 424 or equivalent; permission of department. Analytical consideration of causes and development of family problems; survey of counseling techniques.

Home Economics

- 426 PARENT - CHILD INTERACTION (3)
Prerequisites: Home Econ 320 and 424 or equivalent. Emphasizes child-rearing practices, parent effectiveness and training.
- 427 FIELD EXPERIENCES IN HOME ECONOMICS (2-5)
Prerequisite: permission of department. Opportunity to work with community, business, and government organizations and agencies utilizing home economics skills. (S/U grading only.)
- 428 FAMILY DYNAMICS (2)
Prerequisite: permission of department. Case analysis of marriage and family interaction as it relates to conflict; implication for counseling by paraprofessionals, parents, and teachers.
- 430 HOME MANAGEMENT (2)
Prerequisites: Home Econ 230, senior standing and permission of department. Philosophy and theory of management and decision making in the family from an interdisciplinary viewpoint.
- 432 HOME MANAGEMENT LABORATORY (3)
Prerequisites: Gen St 105, Home Econ 353, 230, and permission of department. Application of concepts and principles of home management to group and home living.
- 441 HOME ECONOMICS VOCATIONAL EDUCATION (5)
Prerequisites: Psych 371, senior status, 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)
Prerequisite: student teaching and/or teaching experience. Functional home economics programs for middle school, senior high and adults. Analysis and synthesis of current concepts emphasizing the planning of courses of study and scope and sequence of programs.
- 443 ADULT EDUCATION IN HOME ECONOMICS (3)
Prerequisite: permission of department. Principles of education for adult learners, development of home economics programs for adult education; philosophies, issues and objectives.
- 445a RESOURCES FOR TEACHING CONSUMER EDUCATION (2)
Current resources for the teaching of consumer education, focusing on new materials in family life education, child development, consumer economics, family finance, with implications for use in the home economics programs for middle, junior and senior high schools.
- 445b CURRENT ISSUES AND RESOURCES (2-3)
Prerequisite: home economics teaching experience or student teaching experience. Current select concepts in home economics subject areas appropriate for secondary teaching and current techniques, media, and teaching approaches to implement these concepts in the secondary classroom.
- 448 EVALUATION IN HOME ECONOMICS (2)
Prerequisite: supervised teaching recommended. Application of current concepts in evaluation to home economics.
- 450 CHILD NUTRITION (3)
Prerequisites: Home Econ 150 and 320, or Psych 352, or equivalent. Application of nutrition principles to care and feeding of children; relationship to growth and development; indices of nutritional status.
- 451 FIELD STUDIES IN CHILD NUTRITION (2-5)
Prerequisites: Home Econ 250, 350, 450, and permission of department. Survey and application of research studies with children; supervised field work. S/U grading only.
- 453 SOCIAL AND CULTURAL ASPECTS OF FOOD (3)
Prerequisites: Home Econ 353; Anth 201. Social and cultural development of people as related to the acceptance and use of food.
- 455 RESEARCH PROBLEMS IN FOODS AND NUTRITION (2-5)
Prerequisites: Home Econ 250, 350, 353 and 310; permission of department. Significant current research in human nutrition and foods; research techniques and application to selected problems. S/U grading only.
- 461 CLOTHING AND HUMAN BEHAVIOR (3)
Implications and significance of clothing in Western society, with special emphasis on clothing symbolism, social stratification, development of self-concept and fashion.
- 470 HOUSING AND SOCIETY (3)
Prerequisite: Soc 340. The personal environment and its relation to the community.
- 475 ADVANCED HOME FURNISHINGS (3)
Prerequisites: Home Econ 164, 175, 375, and permission of department. Traditional and contemporary design in home furnishings; advanced planning problems.
- 476 CONTEMPORARY DESIGN IN HOME FURNISHINGS (2)
Prerequisite: Home Econ 175. American and international influences on contemporary design.
- 477 FIELD EXPERIENCE IN INTERIOR DESIGN (3)
Prerequisite: Home Econ 478. Supervised experience in a professional interior design studio or retail interiors business. S/U grading only.
- 478 INTERIOR DESIGN PLANNING (3)
Prerequisites: Home Econ 475 and Tech 311 and 313 or equivalent; permission of department. Seniors only. S/U grading only. Planning course for interior designers or related design fields. Variety of projects—residential and institutional, presentations and critiques. Field trips to professional designers.

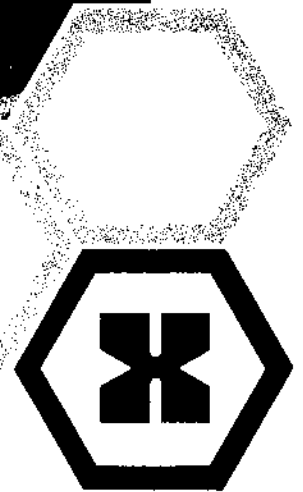
Home Economics

- 497m CONSUMER EDUCATION INTERDISCIPLINARY WORKSHOP (3)
Prerequisite: current teaching in secondary schools. Development of background content in consumer education; selecting, adapting, and developing an interdisciplinary curriculum for effective teaching of consumer education at the secondary level. (Offered summer, 1975.)
- 497n NUTRITION AND FOODS IN THE ELEMENTARY SCHOOL CURRICULUM (2)
The development and application of nutrition and food concepts in the elementary school curriculum. (Offered summer, 1975.)
- 497p METRICS FOR THE CONSUMER (2)
Consumerism in relationship to effective use of metric units; practical application of metric concepts; development of projects to simplify understanding of the Systeme International d'Unites. (Offered summer, 1975.)
- 497q SEXUAL STEREOTYPES AND HUMAN RELATIONSHIPS (2)
An examination of the ways sexual prejudices and stereotypes pervade our relationships, influencing roles and self-esteem; exploring challenging concepts of family life education throughout the family life cycle and in varied settings. (Offered summer, 1975.)
- 497r INTERNATIONAL FOODS (2)
Lecture/demonstration of food preparation techniques in relationship to cultural/social aspects of food; dining out at selected restaurants in the Bellingham area. (Offered summer, 1975.)
- 497t EXPERIMENTAL CLOTHING AND TEXTILES (MEN'S WEAR) (2)
Prerequisites: home economics teaching experience and permission of department. A workshop designed especially for home economics teachers for updating knowledge of textiles and experimenting with clothing construction techniques for menswear. (Offered summer, 1975.)
- 497u ADMINISTRATION OF PRE-SCHOOL PROGRAMS (2)
Prerequisites: Home Econ 420 and 422 or equivalent. Management and administration techniques, teacher performance and evaluation, staff training, and conferencing skills necessary in directing early childhood programs. (Offered summer, 1975.)
- 498 SCANDINAVIAN TOUR OF DESIGN AND ART (5)
Prerequisite: permission of department. Summer tour of Norway, Sweden, Finland, and Denmark; study of art, design, architecture, home furnishings, industrial design, arts and crafts.
- 500 SPECIAL PROBLEMS IN HOME ECONOMICS (1-5)
(See Home Econ 400.)



HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES

A Cluster College of ~~Western~~ Washington State College



Huxley College

Huxley College is primarily an upper division program that focuses on problem-oriented study concerning man and his environment. It is an interdisciplinary college concerned with the physical, biological and social dimensions of environmental problems.

HUXLEY PHILOSOPHY

The college was named for Thomas Henry Huxley, the father of the eminent British family of scientists and writers. The following quotation from his grandson 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*

STATEMENT OF PURPOSE

The purpose of Huxley College is to discover, assemble, integrate and disseminate knowledge toward the resolution of environmental problems for the enhancement of human life. An "environmental problem" is considered to be any environmental condition which is perceived by man as being less good than it ought to be. Examples of environmental problems Huxley is concerned with include environmental degradation, resource exploitation, destructive land use, congestion, and ecosystem disruption and destruction. Other areas of investigation are energy and the utilization of energy, population size and effects, physical and mental health, aesthetic form, wildlife conservation, open space utilization and the productive use of leisure time (recreation). Toward this purpose, Huxley engages in the following academic activities:

1. The discovery of new knowledge or new ways of organizing existing knowledge. Faculty members and students are engaged in research dealing with such topics as the effects of fluorides upon ecosystems; the ecological effects of terrestrial and

marine oil spills; water quality in nearby Puget Sound; and the development of environmental attitudes and value changes.

2. The integration and assemblage of existing knowledge into more comprehensive systems, through activities such as courses, lectures and media presentations, and through publications.
3. The dissemination of information not only to students and faculty of Huxley, but to the entire Western Washington campus, the community, other environmental professionals and to society in general.
4. The application of knowledge and skills to environmental problems to facilitate their resolution.

COLLEGE STRUCTURE

Huxley College is one of the three cluster colleges of Western Washington State College. The concept of cluster colleges grew out of the pressures that accompany the rapid growth which has occurred at the state-supported colleges and universities in Washington and from the concern that the intimacy in student-faculty relationships possible in a smaller institution would be lost in the effort to provide educational opportunities for increasing numbers of students. Western Washington State College is determined that students and faculty may work together as a community of scholars and that the advantages of a smaller institution be preserved.

As a cluster college, Huxley operates under the jurisdiction of the Board of Trustees and the President of Western Washington State College. For legal purposes it is a division of WWSC. Huxley students participate in the academic, administrative and social activities of Huxley College; they receive their degrees from Huxley College, a division of WWSC. They are also members of the Western student body, may take part in all student activities, and have access to all library, computer, academic, athletic and recreational facilities of Western.

Huxley occupies the Northwest Environmental Studies Center, completed in 1973. Besides housing Huxley College, this building has classrooms and laboratories

designed for environmental studies in air, water and land systems.

ASSOCIATED FACILITIES

Aquatic Studies Program

The Aquatic Studies Program serves the WWSC community by maintaining special water-related research and instructional facilities which can be used to augment regular curricular studies. Specifically, its operations include offices, research laboratories, technical assistance, analytical and monitoring capacities located in the Environmental Studies Center (the former Institute for Freshwater Studies) and the Shannon Point Marine Center, which it administers for a consortium of state-supported colleges. The latter is located on Fidalgo Island, 40 miles from the WWSC campus; it operates year-round, and is especially geared to resident, undergraduate offerings in a variety of marine subjects. Huxley students frequently utilize these facilities in their problem series projects; those students in the marine resources concentration are advised to schedule some of their course work at Shannon Point.

Huxley College Center for Environmental Education

The Huxley College Center for Environmental Education is an adjunct to Huxley College, designed to facilitate the growth and development of environmental education in Northwest Washington communities. Huxley students in environmental education work with Center personnel to strengthen community and public school environmental education programs. The center is supported by grant funds from various sources.

GOALS OF THE UNDERGRADUATE PROGRAM

Because Huxley College was formed to focus on man's interactions with his environment—physical and biological entities, social structure and the cultural heritages

that mold his responses—it offers multidisciplinary study encompassing all dimensions of environmental problems. In addition to traditional coursework, the College is concerned with helping students develop professional skills and self-confidence. Problem-oriented study is therefore stressed at Huxley.

Most of the current activity at the College is devoted to undergraduate teaching. A successful program of education must be flexible and dynamic to meet student needs as well as social needs. The Huxley undergraduate program has been planned to help a student develop the following qualities by the time of graduation so he or she can function to actualize his or her greatest potential.

1. A synthetic, holistic understanding of environmental studies, as well as adequate technical information for making responsible career decisions.
2. Problem-resolving competence; i.e., competence in problem perception, definition, analysis and synthesis.
3. A sense of appreciation for quality in one's environmental surroundings.
4. An awareness of individual and social ethics, including some foundation of a personal ethic.
5. An awareness of the cultural characteristics of this and other cultures, as those characteristics affect the environment.



Huxley College

HUXLEY FACULTY

- RUTH F. WEINER (1974) Professor and Dean of Huxley College.
BS, MS, University of Illinois; PhD, The Johns Hopkins University.
- JAMES R. ALBERS (1971) Professor of Huxley College and Vice Provost for Instruction and Research, WWSC. BS, Washington State University; MS, George Washington University; PhD, University of Washington.
- RICHARD H. BERG (1970) Associate Professor of Environmental Systems and Simulations. BS, MS, University of Washington; PhD, Oregon State University.
- DAVID E. CLARKE (1966) Associate Professor of Political Science and Huxley College. BA, MA, Trinity (Cambridge); PhD, Stanford University.
- JACK M. EVERITT (1972) Assistant Professor of Environmental Education. BA, Emory University; MA, Georgia State University; EdD, University of Georgia.
- *ERNST L. GAYDEN (1971) Associate Professor of Environmental Planning. PhD, University of Chicago; MS, Illinois Institute of Technology.
- JOHN C. MILES (1968) Assistant Professor of Environmental Education. BA, Dartmouth College; MA, University of Oregon.
- JAMES R. NEWMAN (1970) Associate Professor of Ecosystems Analysis. BS, BA, University of Santa Clara; PhD, University of California, Davis.
- GILBERT A. PETERSON (1972) Assistant Professor of Environmental Planning. BS, Youngstown State University; MUP, University of Washington.
- LYNN A. ROBBINS (1971) Assistant Professor of Human Ecology. BA, University of Utah; MA, PhD, University of Oregon.
- WILLIAM C. SUMMERS (1971) Associate Professor of Marine Resources and Director of Shannon Point Marine Center. BME, PhD, University of Minnesota.
- HERBERT H. WEBBER (1970) Associate Professor of Marine Resources. BSc, PhD, University of British Columbia.
- MING-HO YU (1970) Associate Professor of Environmental Health. BS, National Taiwan University; MS, PhD, Utah State University.

Associated Faculty

Robert Aegerter
College Architect
Environmental Planning
BArch, Iowa State University.

*On Leave 1975-76

ADMISSIONS

Pre-Huxley

Freshmen and sophomores are accepted provisionally to receive advisement, participate in seminars and receive assistance in completing a general education program in preparation for a concentration area. Provisional students are automatically admitted to regular status when the normal requirements are met.

Regular

Regular admission normally requires completion of General Education Option I and appropriate concentration preparation. Upper-division students (with 90 or more credit hours) may also be accepted and may complete the normal graduation requirements quickly.

Students transferring to Huxley from other institutions must first be accepted by Western Washington State College. Applications should be directed to WWSC and should designate "Huxley College" on the application form. After notification of admission to Western is received, the Huxley application form should be submitted directly to Huxley College.

Students already attending Western should apply to the Huxley office for application materials.

ACADEMIC REGULATIONS

Students may take any Huxley course for a grade (A, B, or C) or for pass (P); a D grade may be awarded for credit in the core course, seminars, and problem series. At the time of registration students must indicate the grade or pass option for each course. (Seminars--Huxley 399 and 499--may be an exception; instructors may require that the seminar be taken only for P.) Students may withdraw from any Huxley class without penalty at any time during the quarter. If a student's work is not satisfactory, the instructor may withdraw the student from the class at any time during the quarter. There is no record on the transcript of courses from which a student has withdrawn.

An incomplete grade (K) may be given for incomplete work in a course. It is the student's responsibility to complete the work and ensure that a grade is issued

within one year after receiving the K. If work is not satisfactory, or not completed, the K will remain on the student's transcript.

Grade Records

Instructors will not know which of their students are taking a course for P, and will prepare a grade for all students (except in the case of Huxley 399, 499). Grades will be given to the Dean of Huxley who will in turn indicate to the Registrar those grades that should be indicated by P. Grade records will be maintained by the Dean of Huxley. If at some time after completing his academic program a student requires a grade for those courses indicated on his transcript by P, he may petition the Dean of Huxley to send the grade to the source requiring it.

Probation

Full-time students are expected to successfully complete at least 12 credit hours per quarter, or 75 per cent of courses attempted. Part-time students are expected to complete 75 per cent of courses attempted. If a student does not meet these levels he or she will be placed on probation for the following quarter. Both student and tutor will be notified of the action by letter. If academic performance does not improve satisfactorily during the quarter of probation, the student's tutor may ask the Admissions Committee to consider withdrawal of the student from Huxley College.

Grievances

Student grievances should be submitted to the Community Affairs Committee. If a student feels his grievance is not fairly considered, he should then petition the Dean of Huxley College for review.

ACADEMIC PROGRAM

Graduate Degrees

Huxley College offers work toward an M.S., an M.A., or an M.Ed. degree through selected departments of the

College of Arts and Sciences. Joint programs include specializations in Environmental Planning through the Department of Geography and Applied Biology through the Department of Biology. A cooperative M.S. program in Applied Systems Analysis through the departments of Mathematics and Economics is also under consideration, as are programs in Environmental Administration with the Department of Economics and Business and Environmental Education with the Education Department. Students interested in these programs should contact the Dean of Graduate Studies of WWSC, the Dean of Huxley College and the chairman of the particular department involved.

Undergraduate Degrees

Huxley College offers a Bachelor of Science, Bachelor of Arts, minor in Environmental Studies, and a minor in Environmental Education.

Requirements for Bachelor of Science Degree with Major in Environmental Studies

- 180 quarter hours of credit, minimum
- General education program
- Huxley core (core courses, problem series, seminars) and a concentration

A second major may be taken in any unit of WWSC.

Requirements for Bachelor of Arts Degree

- 180 quarter hours of credit, minimum
- General education program
- Huxley core courses, seminars, generalist requirement, structured electives

Requirements for a Minor in Environmental Studies

- Huxley 301
- Five other Huxley courses (not 399, 499)

Requirement for a Minor in Environmental Education

- Huxley 301
- Huxley 370, and three courses from the following Huxley courses: 311, 335, 350, 377, 383, 417, 430, 436

General Education Requirement

Huxley recognizes three options for completion of a general education program. Option I is recommended to students planning pre-Huxley programs. Students entering with Options II or III may have to make up deficiencies in their background.

Huxley College

Option I – Huxley General Education Program

Mathematics and Natural Sciences

- Biology 120 and 210 (equivalent to two quarters in biology)
- Chemistry 115 or 121 (equivalent to one quarter of chemistry above the 101 level, or to one quarter of a sequence in chemistry)
- Earth Science (Geography 203, or Geology 211, or Geology 101 and 214; i.e., physical geography or geology above the 101 level)
- Physics 101 or 131-133 or 231-233 (one year of high school physics, or a course at the 100 or 200 level)
- Mathematics (a course other than Mathematics 100 or 151; equivalent to a course in precalculus (e.g., Math 121), calculus, statistics, or computer programming)

Humanities and Communication

- At least four courses, including:
- History (any course in history at any college level)
- Three other courses (English 201 or 202 is recommended)

Social and Behavioral Sciences

- At least four courses, including:
- Economics (Economics 202 is recommended)
- Three other courses

Option II – Other General Education Program

The completion of a recognized general education program from the other colleges at WWSC—College of Arts and Sciences, College of Ethnic Studies or Fairhaven College—and a course in each of the four natural science tool areas.

Option III – AA Degree

The completion of an AA degree program at a community college with which WWSC has a recognition agreement, and a course in each of the four natural science tool areas.

Core Courses (14 credit hours required)

These courses are designed to give all students a common background in environmental concepts essential for comprehension of man, his natural and social environment, and his reliance and influence on the environment.

Courses in biology and chemistry are recommended as prerequisites to these core courses.

- Huxley 304 Man, Society and Environment I (5)
- Huxley 305 Man, Society and Environment II (5)
- Senior Participation as required (4)

Problem Series

Problem series is recommended for all students but is a requirement for those in a B.S. academic program.

Students at Huxley are expected to carry out independent study pertaining to their educational objectives. The objective of problem series is to give the Huxley student the opportunity to focus his energy, experience and training upon a problem of the environment, primarily to learn (a) how to identify a problem; (b) what constitutes an “environmental” problem; (c) how his experience and knowledge has prepared (or failed to prepare) him to perceive and work on environmental problems; and (d) methods and strategies of problem identification, definition and solution.

The problem series is undertaken together with one or more tutors from the Huxley faculty and may be several individual problem investigations or a series of steps in a major investigation. It may take the form of a library, laboratory, community or internship experience. All problem series must be concluded with a recorded statement (written, taped, filmed or graphically portrayed) describing the process and the outcomes of the investigation or internship. These reports will be reviewed for publication and dissemination within the environmental studies community. A symposium featuring student work carried out in problem series will be held each year.

Problem series consists of Huxley 398 (4) plus at least eight credits of Huxley 498.

Seminars (6 credit hours required spread over at least four quarters)

The seminars serve as meeting grounds for faculty and students. Students are encouraged to initiate and conduct seminars. Seminars allow detailed study of particular topics and serve to increase rapport between students and faculty of different disciplines.

Generalist Requirement

(63 credit hours; for B.A. degree)

The Bachelor of Arts degree requires breadth in environmental studies. The courses of the generalist requirement stress this breadth as well as the importance of an interdisciplinary approach to environmental studies. Courses required are Huxley 311, 330a, 350a, 351, 370, 383, 436 and 470 (31 credit hours). Structured electives, i.e., courses selected under advisement from the student's tutor, account for 32 credit hours and may include problem series credit and/or College of Arts and Sciences courses. Huxley courses may be chosen from one or a number of concentrations.

Concentrations (for B.S. degree)

Concentrations focus on recognized areas of environmental concern. Student programs in the concentrations may draw upon a number of different disciplines for analysis. Concentrations are designed to prepare students for career opportunities. They cluster into three major areas of emphasis:

- I Applied Ecology and Environmental Science
 - Ecosystems Analysis
 - Environmental Health
 - Systems and Simulations
 - Marine Resources
- II Education and Human Ecology
 - Environmental Education
 - Environmental Journalism
 - Human Ecology
- III Planning and Administration
 - Environmental Planning
 - Environmental Administration

I Applied Ecology & Environmental Science

Students electing concentrations in this group will focus primarily upon the scientific and technological dimensions of environmental studies.

Ecosystems Analysis (64 credit hours)

Man today is faced with many social, physical and biological problems. These problems are complex,

touching on many environments and ecosystems. Solutions have generally been proposed from a singular point of view resulting at best in partial success which often causes other unseen difficulties; e.g., control of insect pests with DDT.

Viable solutions to these problems lie in the holistic understanding of the impact of man on the functional units of our biosphere, ecosystems. The concentration will focus on impacted ecosystems by comparative analyses of natural and man-influenced ecosystems. Field investigations, environmental impact analysis and modeling will be emphasized in the concentration. Consideration will be given to strategies for managing ecological systems.

Vocational opportunities are possible with various environmental protection agencies and agencies involved in the environmental impact assessment process. The concentration will also prepare students for graduate work in applied and interdisciplinary ecology programs.

Program adviser: James Newman.

Recommended preparation: One year of biology, courses in statistics and organic chemistry; or biology, statistics and one year of geography, sociology, economics or mathematics.

Concentration Requirements (40 credit hours)

- Hux 330a, 330b Applied Ecology (5)
- Hux 331a, 331b Population Dynamics I (5)
- Hux 350a,b Introduction to Environmental Pollution (5)
- Hux 365 Energy and Energy Resources (4) or Hux 450 Environmental Biochemistry (5)
- Hux 422 Pollution and Marine Ecology (5)
- Hux 435 Ecological Systems Analysis (4)
- Hux 436 Environmental Impact Studies (4)
- Hux 465 Systems Analysis (4)
- Hux 485 Resource Management (4)

Electives (24 credit hours, under advisement)

- Hux 311 Introduction to Environmental Planning (4)
- Hux 321a Oceanography and Marine Resources (4)
- Hux 322 Marine Resources (4)
- Hux 352 Nutrition I (4)
- Hux 361 Water Pollution (4)
- Hux 362 Air Pollution (4)

Huxley College

- Hux 423 Techniques of Marine Analysis (4)
- Hux 431 Population Dynamics II (4)
- Hux 451 Pollutants and Health (3)
- Hux 452 Nutrition II (4)
- Hux 466 Modeling and Natural Systems (4)
- Hux 485 Resource Management (4)
- Or a sequence of upper division courses in biology, mathematics, geography, geology or other departmental offerings.

Environmental Health

The environmental health concentration is concerned with the understanding of those substances, forces and conditions in the surrounding environment that may influence man's health and well being. Such problems as air and water pollution, nutrition, food contamination, overpopulation, pesticides and radiation exposure are considered. The concentration not only stresses creation of an environment which is healthful and contributes to high-quality living, but also seeks the tools and methodology to be used for analyzing environmental health related problems.

The environmental health program also provides sufficient flexibility so that the student interested in continuing with graduate education can plan his course work to meet graduate school admissions requirements.

There has been and will continue to be a great need for adequately-trained people to monitor the environment and to plan and manage environmental health programs. Such persons are prepared to work in a variety of programs such as food quality control, water supply, sewage disposal, air pollution, water pollution, institutional health and general sanitation.

Program advisers: Ruth Weiner, Ming-Ho Yu.

Recommended preparation: One year each of biology and chemistry; Home Economics 150.

Concentration Requirements:

- General Environmental Health Program (64 credit hours)
 - Hux 311 Introduction to Environmental Planning (4)
 - Hux 350a, 350b Introduction to Environmental Pollution (5)
 - Hux 351 Food, Hunger and Malnutrition (3)

- Hux 361 Water Pollution (4)
- Hux 362 Air Pollution (4)
- Hux 365 Energy and Energy Resources (4)
- Hux 430 Environment and Politics I (4)
- Hux 450 Environmental Biochemistry (5)
- Hux 451 Pollutants and Health (3)
- Biol 345 Fundamentals of Microbiology (5)
- Biol 398-9 Human Anatomy and Physiology (10)
- Chem 351-4 Organic Chemistry (10-11)
- Health Ed 447 Community Health (3)
- Nutrition Program (56 credit hours)
 - Hux 335 Human Ecology (4)
 - Hux 350a, 350b Introduction to Environmental Pollution (5)
 - Hux 351 Food, Hunger and Malnutrition (3)
 - Hux 352 Nutrition I (4)
 - Hux 370 Environmental Psychology (4)
 - Hux 400 Independent Studies on Nutrition (2-5)
 - Hux 450 Environmental Biochemistry (5)
 - Hux 452 Nutrition II (4)
 - Biol 345 Fundamentals of Microbiology (5)
 - Biol 348-9 Human Anatomy and Physiology (10)
 - Chem 251 Elementary Organic Chemistry (5)
 - Health Ed 447 Community Health (3)
 - Home Econ 250 Human Nutrition Laboratory (2)

Concentration Electives (7-10 credit hours)

- Electives appropriate to student's background and goals, under advisement

Environmental Systems and Simulations(56 credit hours)

Environmental systems and simulations is an undergraduate program designed to give the student a comprehensive view of environmental issues. Environmental complexity is studied through modeling (including computer models) and simulation of natural and man-made systems. Typical topics are air and water systems, biological harvesting models, growth models, energy use and policy models, and the problem of social variables in physical models. Data gathering and measurement techniques are also considered. Use of the Huxley computer facility is encouraged.

Students in this concentration would usually expect to go on to graduate schools in environmental science,

systems analysis or environmental systems engineering.

Students would also be capable of employment at the technician level in local, state and federal programs in the areas of air and water analysis. Students who are interested in this concentration are urged to contact either of the program advisers for freshman advising.

Program adviser: Richard Berg.

Required preparation: Two quarters each of chemistry and calculus, and one quarter of biology are required. Students without these prerequisites will be considered, but the required preparation will have to be made up.

Concentration Requirements

- Hux 311 Introduction to Environmental Planning (4)
- Hux 335 Human Ecology (4)
- Hux 350a, 350b Introduction to Environmental Pollution (5)
- Hux 361 Water Pollution (4)
- Hux 362 Air Pollution (4)
- Hux 365 Energy and Energy Resources (4)
- Hux 383 Environmental Economics (4)
- Hux 435 Ecosystems Analysis and Modeling (4)
- Hux 465 Systems Analysis (4)
- Hux 466 Natural Systems Simulation (4)

Concentration Electives

- Choose any three from:
 - Hux 321 Oceanography and Marine Resources (4)
 - Hux 330a, 330b Applied Ecology (5)
 - Hux 483 Resource Economics (4)
 - Math 335 Introduction to Mathematical Programming (4)
 - Math 375 Numerical Methods (4)

Marine Resources (70 credit hours)

Although the oceans are not an infinitely large source of food for man's increasing population, they do provide an important protein source that is presently being inefficiently utilized. World demand necessitates a more effective use of this food resource. Marine organisms are also important in yielding products used as resources for medicine and industry. These biotic resources are jeopardized by over-harvesting, by use of the ocean as a waste disposal medium and by the development of off-shore oil production. The living resources, although

not the only resource man uses from the sea, are the most important to man's present and probable future needs. To protect the potential of the oceans to produce biotic resources, it is essential to understand the ocean's physical environment, the oceanic biota and the ecological interrelations of marine organisms. A use of the biotic potential of the sea that is consistent with an understanding of the dimensions of the marine ecosystem is the theme of this concentration of study.

Marine resources graduates will be qualified for some environmental positions in state and federal agencies such as the Department of Ecology and the U.S. Bureau of Sports Fisheries and Wildlife. Private engineering consulting firms and industries are also seeking people with an environmental biology background.

Graduate programs in a number of disciplines are open to marine resources graduates who wish to continue their education. Students may enter programs in biology, oceanography, ecology, marine biology or fisheries.

Program advisers: William Summers, Bert Webber.

Recommended preparation: One year of biology (equivalent to Biol 120, 121 and 312), one year of chemistry in addition to the general education requirement.

Concentration Requirements (62 credit hours)

- Hux 311 Introduction to Environmental Planning (4)
- Hux 321a Oceanography and Marine Resources (3)
- Hux 321b Marine Resources Laboratory (2)
- Hux 322 Marine Bioresources (4)
- Hux 330a, 330b Applied Ecology (5)
- Hux 350a, 350b Introduction to Environmental Pollution (5)
- Hux 361 Water Pollution (4)
- Hux 422 Marine Bioresources (5)
- Hux 423 Techniques of Marine Analysis (4)
- Hux 436 Environmental Impact Studies (4)
- Chem 351-3 Organic Chemistry (9)
- Geol 340 Geological Oceanography (3)
- Biol 361 Biology of Commercially Important Species (5)
- Biol 461 Marine Invertebrate Zoology (5)

Concentration Electives (8 credit hours)

- Selected under advisement

Huxley College

II Education and Human Ecology

The emphasis in these concentrations is upon social and humanistic dimensions of environmental problems. Problems of culture and society, learning and lifestyle are examined by students focusing their studies in this area.

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. A number of options have been developed within the program which will allow students with varied interests opportunities toward diverse career goals.

The program consists of several distinct parts. First, all students 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 the process. Third, students learn the content and techniques essential to function in the professional role which they wish to play. Courses may be taken in journalism, elementary education, disciplinary areas essential for secondary school teaching, recreation, media technology or other areas. Fourth, students participate in internships, a field practicum, or research.

Program advisers: John Miles, Jack Everitt.

The options within the present program include the following:

Teacher Education: 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 program in the normal four-year college program only if advisement begins in the freshman year. A program in cooperation with the elementary education program or the respective disciplinary department must be worked out individually for each student.

Environmental Education in a Recreation Setting: The goal of this option is to assist in the training of recreation professionals whose specialization within the broad field of recreation will be environmental and outdoor education.

Mass Communications and Environmental Education: This option allows a student to combine his interests in education, environmental studies, mass communications and/or media technology, utilizing extensively the offerings of departments which specialize in various aspects of communications.

Concentration Requirements

- Environmental Education Courses (select four)
 - Hux 370 Environmental Psychology (4)
 - Hux 371 Education as an Environmental Process (4)
 - Hux 377 Alternative Futures (4)
 - Hux 417 The Community Process (4)
 - Hux 470 Environmental Ethics (4)
 - Hux 472 Environmental Education Curriculum (4)

Electives in Specialization

- To vary with option

Option A (87 credits)

1. Four of the following:
 - Hux 370 Environmental Psychology (4)
 - Hux 371 Education as an Environmental Process (4)
 - Hux 377 Alternative Futures (4)
 - Hux 470 Environmental Ethics (4)
 - Hux 472 Environmental Education Curriculum (4)
2. Secondary subject concentration (35-45 credit hours) or elementary teaching minor (35 credit hours)
3. Ed 310, Psych 352 or 353 (8 credit hours)
Ed/Psych 491-492 (12 credit hours)
Ed 494 or 495 (16 credit hours)
Field-based education sequence recommended

Option B (76 credit hours minimum)

1. As in Option A (16 credit hours)
2. Coursework under advisement in the recreation program and in Huxley College (45 credit hours)
3. Hux 398-498, Problem Series or Internship (15 credit hours)

Option C (76 credit hours minimum)

1. As in A and B above (16 credit hours)
2. Coursework under advisement in education and/or communications, journalism and/or media technology (45 credit hours)
3. Hux 398-498, Problem Series or Internship (15 credit hours)

Environmental Journalism

A program of 100 credit hours involving a double Huxley-Journalism major may be elected. The student electing this program will have an adviser both in Huxley and in Journalism. The Huxley portion of the program will provide the student with a basic background in environmental studies and with the option to further broaden this background or to examine a subsection of environmental studies in some depth. The journalism portion of the program will of course provide the tools of the journalistic profession.

Program adviser: John Miles.

Concentration Requirements

1. General Education as required by Huxley
2. Journalism major: 45 credit hours, 15 credit hours in environmental studies to be applied to the major requirement
3. Huxley concentration (54 credit hours)
 - Concentration requirements (35)
 - Hux 304/305 Man, Society and Environment I and II (10)
 - Hux 311 Introduction to Planning (4)
 - Hux 330a Applied Ecology (3)
 - Hux 350a, 350b Introduction to Environmental Pollution (5)
 - Hux 383 Environmental Economics (4)
 - Hux 430 Environment and Politics I (4)
 - Hux 399/499 Seminars (6)
 - Concentration electives (20 credit hours, under advisement)
 - Hux 335 Human Ecology (4)
 - Hux 351 Food, Hunger and Malnutrition (3)
 - Hux 370 Environmental Psychology (4)
 - Hux 436 Environmental Impact Studies (4)
 - Hux 470 Environmental Ethics (4)
 - Or 20 hours under advisement for the student wishing to acquire depth in a particular area of environmental studies.

Human Ecology (52 credit hours)

The human ecology concentration is a very general one designed to expose the student to a wide area of inquiry. It touches on cultural ecology, the dynamics of human population, environmental psychology, social interactions, environmental education and political action. To pursue the generalist goals of the concentration, a student systematically explores numerous fields of study for his intellectual and spiritual development. Perhaps foremost, he gains an understanding of the enormous complexity of human problems in modern society.

Enterprising and well-organized human ecology students have had little difficulty finding employment in federal agencies and local service organizations. The wide background of these students serves them well in addressing themselves to the variety of challenges they face in their chosen careers.

Graduate study is a second option open to human ecology students. Many excellent graduate programs in the U.S. provide a continuation of in-depth study in human ecology; or the student may enter graduate programs in fields such as anthropology, sociology, geography or political science.

Huxley graduates in human ecology have generally been able to enter graduate programs of their choice.

The concentration allows many opportunities for self-enrichment independent of career goals *per se*.

Program adviser: Lynn A. Robbins.

Recommended preparation: Courses in biology, anthropology, sociology and history.

Concentration Requirements (40 credit hours)

- Hux 311 Introduction to Environmental Planning (4)
- Hux 331a, 331b Population Dynamics I (5)
- Hux 335 Human Ecology (4)
- Hux 370 Environmental Psychology (4)
- Hux 377 Alternative Futures (4)
- Hux 383 Environmental Economics (4)
- Hux 431 Population Dynamics II (4)
- Hux 432 Cultural Ecology (4)
- Biol 370 Human Genetics (4)
- Math 240 Introduction to Statistics (3)

Huxley College

Concentration Electives (12 credit hours, selected under advisement)

- Hux 301 Challenge of Survival (4)
- Hux 330a, 330b Applied Ecology (5)
- Hux 350a Introduction to Environmental Pollution (3)
- Hux 351 Food, Hunger and Malnutrition (3)
- Geog 341 Urban Geography (5)
- Anth 310 Rise of Civilizations (5)
- Hist 346 Technology and Society in Early European History (5)
- Tech 391 Man and Technology (3)
- Biol 348, 349 Human Anatomy and Physiology (5 each)
- Hux 430 Environment and Politics I (4)

III Planning and Administration

These concentrations prepare graduates to apply the social, natural and physical sciences to land use planning and other administrative and control matters in environmental quality.

Environmental Planning (69 credit hours)

Bringing the natural scientist's understanding of environmental systems to bear on problems of human organization is the role of the ecology-based planner. He must understand the processes of both natural and social systems and how they are integrated in time and space. He must also understand the ways in which decisions are made and implemented by both groups and individuals. He must understand the tools and techniques of gathering, analyzing and presenting information, and equally important, he must possess an aesthetic sense leading to harmony and unity in his surroundings.

Students graduating from the environmental planning concentration will be fully prepared for introductory level positions in city, county and regional planning agencies and private consulting firms.

The student's academic training will provide skills and insight for conducting basic technical studies for land use planning (classification) and regulation (zoning, standards, etc.). Students will also have a basic knowledge of design principles, the legal basis for planning, and current federal and state funding programs. Above all, they will understand the dynamic

interrelationships between the man-made systems and the natural systems.

In addition to the generalist background described above, students will have gained some in-depth knowledge of environmental impact statement review and analysis procedures and basin-wide pollution abatement planning requirements.

Students graduating from the environmental planning concentration are well-prepared for graduate work in planning. Huxley environmental planning graduates are presently enrolled in major graduate planning programs throughout the nation.

Program advisers: Ernst L. Gayden, Gil Peterson.

Recommended preparation: Courses in social science, including one course each in economics, geography, political science and sociology. Courses in natural science, including geology. Courses in humanities, including literature. A course in basic drawing, design or cartography is recommended; in addition, courses in statistical reasoning, calculus and computer programming may prove useful.

Concentration Courses (20 credits)

- Hux 311 Introduction to Environmental Planning (4)
- Hux 312 The Planning Process (4)
- Hux 411 Regional Environmental Planning (4)
- Hux 412 Urban Environmental Planning (4)
- Hux 413 Environmental Site Planning (4)

Related Environmental Problem Areas (7 credits)

- Hux 350a Introduction to Environmental Pollution (3)
- Hux 470 Environmental Ethics (4)

Concentration Support Areas (37 credits at 300/400 level)

- Environmental Structure:
 - Hux 330a, 330b Applied Ecology (5)
 - Geog 423 Geography of Soils [or elective] (5)
 - Elective from natural or earth sciences (3)
- Social Structure:
 - Hux 335 Human Ecology (4)
 - Hux 431 Population Dynamics II (4)
 - Elective from social sciences: sociology/anthropology (4)

- Decision Processes:
 - Hux 436 Environmental Impact Studies (4)
 - Hux 480 Urban Economics (4)
 - Elective from social sciences: economics or political science (4)

Environmental Administration (70 credit hours)

This concentration combines broad study of environmental problems with an examination of planning and administration techniques to deal with them. The concentration includes a block of coursework concerned with fundamentals of administration: organization, economic and non-economic analysis for decision making and integrated experience with practical cases. Another block deals with dimensions of environmental problems and extends the Huxley core program with natural and social considerations. Electives provide greater depth for potential employment or advanced study. Graduates would fit usefully into planning administration work or into agencies dealing with health or development planning. They could work in industry or local government in the supervisory aspects of pollution compliance and control, especially analysis and evaluation, or even just as ecologically aware managers.

The concentration requirements satisfy all or most of the minors in economics and business administration, and introduce environmental or land-use planning. With proper electives, students would qualify for advanced study in those fields, law, or public administration.

Program adviser: Howard Teasley.

Recommended preparation: Accounting (Acctg 251, 252, 350); Mathematics (Math 250-52); introductory social sciences (Econ 201, 202; Geog 207; and Pol Sci 250 or Anth 201); Eng 201 or 202; Geog 251 or 353.

Concentration Requirements (56-61 credit hours)

- Fundamentals of Environmental Administration
 - Hux 311 Introduction to Environmental Planning (4)
 - Hux 312 The Planning Process (4)
 - Hux 436 Environmental Impact Statements (4)
 - Hux 483 Resource Economics (4)
 - Hux 485 Resources Management (4)
 - BA 375 Quantitative Methods I (4)
 - Econ 302 Intermediate Economic Theory (4)
 - Econ 482 Regional Economics (4)

- BA 301, and 322 or 324 (4, 4 or 3); or Pol Sci 320, and 422 or 424 (5, 5 or 3)
- Dimensions of Environmental Problems
 - Hux 330a, 330b Applied Ecology (5), or Hux 335 Human Ecology (4)
 - Hux 350a, 350b Introduction to Environmental Pollution (5)
 - Hux 370 Environmental Psychology (4), or Hux 470 Environmental Ethics (4)
 - Hux 383 Environmental Economics (4)
 - Fairhaven 399 Cases in Environmental Law (5)

Concentration Electives (9-14 credit hours)

- Electives appropriate to student's background and goals, under advisement

For urban and regional planning program, see Geography and Regional Planning listings.

COURSE DESCRIPTIONS

- 300 INDEPENDENT STUDY, FWS (1-6)
Conference course permit required. May be repeated for credit. Prerequisite: permission of instructor.
- 301 CHALLENGE OF SURVIVAL, FWS (4)
An overview of the environmental macroproblem with emphasis on specific cases which reveal the complexity of environmental problems. The course deals with social, political, economic, humanistic, and scientific issues in their environmental context, and is designed as a basic introduction to environmental studies.
- 304 MAN, SOCIETY AND ENVIRONMENT I, F (5)
Hux 304 and 305 make up the core course sequence which is required of all Huxley students. The core courses are designed to give all students a common background in environmental studies. The emphasis is to integrate a wide variety of information into a unified description of the present state of the environment. In particular, the problems of population, food supply, industrialization, resource use, pollution and social and political factors will be examined. Prerequisite: Huxley general education requirements or permission of instructor.
- 305 MAN, SOCIETY AND ENVIRONMENT II, W (5)
Hux 305 is the second core course for Huxley students and is a continuation of Hux 304. The course is in two parts: the first continues from the last section of 304 and deals with specific environmental problems and their solutions. The second part is a discussion of alternative futures. Prerequisite: Hux 304 or permission of instructor.

Huxley College

- 311 INTRODUCTION TO ENVIRONMENTAL PLANNING, F (4)
An overview of the nature of the natural and man-made environments; interaction of the two environments, especially the problems associated with densely settled human environments; the ways in which society attempts to solve such problems; and the impact of rapidly changing technologies on both the problems and the solutions.
- 312 THE PLANNING PROCESS, W (4)
Survey of the four basic steps of the planning process, with emphasis on enabling requirements and implementation. Other topics include state and federal planning, policy, citizen participation, and agency organization. Prerequisite: Hux 311 or permission of instructor.
- 313 GRAPHIC ANALYSIS AND PRESENTATION, F (2)
Graphic techniques for analysis of planning problems; graphics as an alternative to verbal and tabular presentations of information. Tools, materials, and methods in graphics design, execution, and reproduction, especially for papers and reports. Prerequisite: Hux 312.
- 321a OCEANOGRAPHY AND MARINE RESOURCES, F (3)
Principles of oceanography. Physical and biological resources from the oceans. Technological uses of the oceans. Prerequisite: introductory biology and chemistry or permission of instructor.
- 321b MARINE RESOURCES LABORATORY (2)
Course will survey major marine resource environments and industries in Whatcom County. Concurrent enrollment in Hux 321a recommended.
- 322 MARINE BIORESOURCES, W (4)
Analysis of the potential for harvest and culture of biotic resources in the oceans. Methods of exploitation and regulation problems. Prerequisite: Hux 321 or permission of instructor.
- 330a, 330b APPLIED ECOLOGY: APPLIED ECOLOGY LABORATORY, F (3, 2)
Application of concepts and methods of ecological theory to environmental problems. Prerequisite: Biol 120, 210, or permission of instructor.
- 331a, 331b POPULATION DYNAMICS I; POPULATION DYNAMICS LABORATORY, S (3, 2)
Application of the theories and techniques of population ecology to the study of man-animal relationships; e.g., pest control, wildlife management. Prerequisite: Biol 325 or Hux 330 or equivalent, or permission of instructor.
- 335 HUMAN ECOLOGY, S (4)
A survey of the historical development of writings and concepts in human ecology. This course provides an overview of man's views of himself as a creature interacting with the natural environment. Basic human ecology concepts are strongly emphasized.
- 350a, 350b INTRODUCTION TO ENVIRONMENTAL POLLUTION; ENVIRONMENTAL POLLUTION LABORATORY (4, 1)
An introduction to the problems of major types of environmental pollution. This course provides information on the current status of the science and technology of environmental quality, and stresses the effects of various types of pollution on man and on the environment. Laboratory experiments deal with basic techniques involved in air and water analyses.
- 351 FOOD, HUNGER AND MALNUTRITION, W (3)
Overview of world food problems; the nature and effects of hunger and malnutrition. Prerequisite: Biol 120, Chem 115, or permission of instructor.
- 352 NUTRITION I, F (4)
Introductory survey to the disciplines of food and nutrition. Basic techniques involved in food analysis. Prerequisite: Biol 120, Chem 115, or permission of instructor.
- 361 WATER POLLUTION, W (4)
Wastewater characteristics are identified. Aquatic response to waste discharge is discussed. Methods of waste treatment to reduce environmental impact are presented. Prerequisite: Hux 350.
- 362 AIR POLLUTION, S (4)
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. Prerequisite: Hux 350 or permission of instructor.
- 363 QUANTITATIVE METHODS FOR ENVIRONMENTAL PROBLEMS (4)
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, and statistical inference.
- 365 ENERGY AND ENERGY RESOURCES, W (4)
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. Prerequisite: permission of instructor.
- 370 ENVIRONMENTAL PSYCHOLOGY, F (4)
This course examines the relationship between the physical environment and human behavior. It covers such areas as perception, cognitive mapping, and environmental stress, both in theory and in practice. Local case studies examine such ideas as the effect of architectural design on human behavior, variation in perception of a physical entity, and recreational behavior in wild settings.

- 371 **EDUCATION AS AN ENVIRONMENTAL PROCESS, F (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. The course provides an introduction to environmental education and a review of current thinking in this dimension of education.
- 377 **ALTERNATIVE FUTURES, W (4)**
 Predictions, projections, and extrapolations of alternative futures are examined. The course provides an introduction to the growing field of future studies. People learning about the world of today will have to live in a potentially different world tomorrow. What preparation for the future can be made? What efforts today might insure a positive alternative future? The literature of future studies is reviewed.
- 383 **ENVIRONMENTAL ECONOMICS, F (4)**
 Economic analysis of environmental problems and of potential correctives. Pollution, resource depletion, and urban decay as failures of the economic system. Prerequisite: Econ 201, 202, or permission of instructor.
- 398 **RESEARCH METHODS, W (4)**
 Introductions to the problem series. 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.
- 399a **SEMINAR, FWS (1)**
 Student-faculty interaction on topics of general interest. May be repeated for credit.
- 399b **SEMINAR, FWS (2)**
 Student-faculty interaction on topics of general interest. May be repeated for credit.
- 400 **INDEPENDENT STUDY, FWS (1-6)**
 Conference course permit required. May be repeated for credit. Prerequisite: permission of instructor.
- 411 **REGIONAL ENVIRONMENTAL PLANNING, F (4)**
 Examination of the functional processes of the natural systems in large-scale areas, particularly regional river basins. Identification of natural systems variables as determinants for land use classifications. Prerequisite: Hux 312 or permission of instructor.
- 412 **URBAN ENVIRONMENTAL PLANNING, W (4)**
 Principles underlying the functional relationship of major components of the urban environment. Application of principles of functional design to the problems and needs of contemporary societies, particularly for new towns, villages, and cities. Prerequisite: Hux 411 and permission of the instructor.
- 413 **ENVIRONMENTAL SITE PLANNING, S (4)**
 Principles of design that promote ecologically sound and aesthetically satisfying environment at the scale that most humans perceive: the dwelling, the neighborhood, the street, the park, etc. Solutions of the problems will be graphic and non-graphic, and may include such considerations as weather and climate, insulation and orientation, topography and surficial geology, plant cover and landscaping. Prerequisite: Ilux 412.
- 414 **OPEN SPACE PLANNING, S, odd-numbered years (4)**
 Examination of open space as a basic framework for community and regional development. State and federal planning requirements; management planning practices as conducted by selected public agencies; open space as a comprehensive plan element. Prerequisite: Hux 312, Rec 402, or permission of instructor.
- 417 **THE COMMUNITY PROCESS, F (4)**
 This course is designed to provide an action component to the problem orientation of Huxley College. Students will identify community problems, examine the problem from the perspective of the sociologist, environmentalist, and community organizer. Course requirements include appropriate readings by contemporary community scholars; student involvement in a specific community problem; and the development of an annotated bibliography to assist the student in understanding the problem. Case studies of national, regional and local community problems are presented via guest speakers and media presentations.
- 422 **POLLUTION AND MARINE ECOLOGY, W (5)**
 Major pollution problems in the oceans; U.S. agencies responsible for water quality; techniques of pollution analysis. Prerequisite: Hux 321 and organic chemistry, or permission of instructor.
- 423 **TECHNIQUES OF MARINE ANALYSIS, S (4)**
 A field course dealing with all forms of aquatic, biological sampling and harvesting, with special emphasis on marine fauna. Survey designs and sampling strategies will be covered and the subject coverage will include meiofauna, plankton, benthic forms, nekton and neuston. Prerequisite: Hux 321 or permission of instructor.
- 430 **ENVIRONMENT AND POLITICS I, F (4)**
 History of the environmental problem and the political responses to it. Conservation and wilderness movements, 1800-1965; survival anxiety movements since 1965 and associated environmental legislation; political and economic causes of environmental problems; the nature and extent of needed changes.
- 431 **POPULATION DYNAMICS II, F (4)**
 The social, cultural and anthropological aspects of human population dynamics. Prerequisite: courses in social science recommended.
- 432 **CULTURAL ECOLOGY, S (4)**
 An exploration of selected human societies and their interaction with natural environments; the effect of modern technology on societies; and environmental ideologies of human societies.

Huxley College

- 433 ENVIRONMENT AND POLITICS II, S (4)
An attempt to determine the social, economic and political changes needed to remove environmental problems; an examination of current events in the light of this determination; a study of techniques for modifying public policy.
- 434 AMERICAN INDIAN ENVIRONMENTAL CONCEPTS, S (4)
American Indian views of the natural world, one's place in society, and the spiritual development of the individual. Indian concepts are shown to relate to modern psychotherapy and the mythologies of various non-Indian cultures.
- 435 ECOSYSTEMS ANALYSIS AND MODELING, S (4)
A workshop study of the dynamic interactions within and between natural and manipulated ecosystems, using computer techniques and simulation. Prerequisite: Hux 330a, 330b or equivalent, and computer programming or permission of instructor.
- 436 ENVIRONMENTAL IMPACT STATEMENTS, W (6)
A course designed to provide a survey of the environmental impact statement process, including requirements of state and federal environmental policy acts. An understanding of both EIS preparation and review responsibilities will be sought. Various legal aspects, citizen involvement and environmental assessment methodologies will be reviewed. Prerequisite: upper division standing or permission of instructor.
- 450 ENVIRONMENTAL BIOCHEMISTRY, W (5)
Transformation of carbon, nitrogen, phosphorus, sulfur, and certain trace elements in soil, water, atmosphere and biological systems; biochemical effect of environmental pollutants. Experimental techniques in the analysis of pollutants in tissues. Prerequisite: Hux 350a, 350b and Chem 251.
- 451 POLLUTANTS AND HEALTH, S (3)
Physiological and toxicological effects of common pollutants found in man's environment. Mechanism of action of individual pollutants, including cellular damage at molecular level. Prerequisite: Hux 450 or permission of instructor.
- 452 NUTRITION II, S (4)
Chemistry and function of essential nutrients: their digestion, absorption and metabolism; analysis of micro-nutrients and enzyme assays. Prerequisite: Hux 352; Chem 251 or permission of instructor.
- 465 SYSTEMS ANALYSIS, W (4)
Computer modeling of complex systems; introduction to analytical methods of systems analysis: maximization and minimization, decision theory, linear programming and stability of differential equations. Prerequisite: Hux 365, 435; or permission of instructor.
- 466 NATURAL SYSTEMS SIMULATION, S (4)
The basic principles of modeling theory are applied to aquatic, air, and socio-economic problems. The application of basic principles of science and systems engineering are used to solve practical problems in the analysis, planning, and management of natural systems. The world model concept is introduced. Prerequisite: Hux 465.
- 467 POLITICS, TRANSFORMATION AND ENVIRONMENTAL CONSTRAINT, W (5)
Incompatibility between the growth-oriented goals of contemporary political cultures and environmentally derived "steady-state" imperatives; alienation and environmental degradation as the dual result of the "conquest of nature" ideology; the politics of transformation and value-change. Prerequisite: Hux 304, 305; or permission of instructor. (Also offered as Pol Sci 467.)
- 470 ENVIRONMENTAL ETHICS, S (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.
- 472 THE ENVIRONMENTAL EDUCATION CURRICULUM, S (4)
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. Prerequisite: Hux 371.
- 480 URBAN ECONOMICS, S (4)
Economic analysis of urban problems, especially land use, transportation, municipal finance, poverty, and housing. Prerequisite: Econ 201 or 202; or Geog 207; or permission of instructor. (Offered also as Econ 480.)
- 483 RESOURCE ECONOMICS, W (4)
Choosing among alternatives by comparing costs and benefits. Techniques of evaluation. Special application to water supply, resources, development, nuisance abatement, and recreation. Prerequisite: Econ 201, 202, or permission of instructor. (Offered also as Econ 483.)
- 485 RESOURCE MANAGEMENT, FWS (4)
Cases and policy in managing natural resources. Prerequisite: permission of instructor.
- 497 COASTAL ENVIRONMENTAL ASSESSMENT (12)
An intensive program designed to introduce biological and physical factors necessary for environmental impact evaluation. The focal point will be the study of a relatively natural area that has potential for development (e.g., site location for a municipal sewage outfall). The culmination of the program will be a public document assessing the study area in a form that may be useful for environmental impact statements. Prerequisite: upper-division standing, completion of lower-division science major background including introductory courses in zoology, botany and chemistry, and permission of instructor. Offered summer, 1975.

- 498 PROBLEM SERIES, FWS (2-15)
Problem solving experience in environmental problems and internships in positions appropriate to the student's program. Conference course permit required. May be repeated for credit.
- 499a SEMINAR, FWS (1)
Student-faculty interaction on topics of general interest. May be repeated for credit.
- 499b SEMINAR, FWS (2)
Student-faculty interaction. May be repeated for credit.
- 500 DIRECTED RESEARCH, FWS (2-5)
Individual research on topical problems relating to environmental studies.

- 501 GRADUATE SEMINAR IN ENVIRONMENTAL STUDIES, FWS (3)
This course offers an opportunity for graduate students in all areas of environmental studies to come together with several faculty to study, explore, and discuss the interrelated nature of environmental problems and their solutions.
- 513 ENVIRONMENTAL ANALYSIS FOR LAND USE PLANNING, F (6)
This course is designed to give the student practical experience in the application of analytical environmental methodologies for identifying land use determinants. The student will examine the parameters of the functional processes of the natural systems and utilize natural systems data in constructing models for environmental land use planning.

This description of Huxley curriculum represents current planning. Changes may be made before fall, 1975.





INTERDEPARTMENTAL PROGRAMS

College of Arts and Sciences | Western Washington State College



Interdepartmental Programs

AMERICAN STUDIES

The American Studies Program is a major-minor concentration intended to serve those students and faculty who have discovered that important aspects of American civilization cannot be studied by fulfilling the requirements for the major within a single department. It also has special interest for students who are intellectually stimulated by interdisciplinary studies—the application of the methods of inquiry of one academic discipline to subject matter of related but independent disciplines, and the application of new methods of inquiry to various aspects of American culture.

The basic course requirements (see below) provide introduction to at least four distinctive approaches to the study and evaluation of aspects of American culture. General Studies 201, 301, and 499 (or equivalent) are intended to introduce the student to interdisciplinary study (Gen St 201), acquaint him with existing scholarship (Gen St 301), and give him the opportunity to plan and undertake an independent interdisciplinary study or field project (Gen St 499 or equivalent).

The American Studies Program is a liberal arts program. It is of interest to students seeking education in breadth as well as depth. It 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 the liberal arts.

Further information about the program, including descriptions of the individualized courses of study, is available from members of the American Studies Executive Committee: M. Lewis (English), E. Allen (Soc/Anth), R. Buckland (Gen St), R. DeLorme (History), K. Faulkner (Economics), W. Lobue (Gen St), J. Martin (Pol Sci), K. Murray (History) or W. Stoeber, program director (Gen St).

BACHELOR OF ARTS

Major 90-95 credits

General Requirements (38 credits)

- Hist 103, 104, or equivalent (10 credits)
- Eng 216, or equivalent (5 credits)
- A basic course in the social sciences, selected under advisement from Anth 201 or Soc 202; Pol Sci 101 or 250; Econ 201 or Hist 360; Geog 201 (5 credits)
- Art History 360 (and prerequisite: one course from Art History 220, 230, 240) (6 credits)
- Gen St 201—Introduction to Interdisciplinary Studies (4 credits)
- Gen St 301—Special Problems (5 credits)
- Gen St 499—Special Problems (3 credits)

Individualized Program of Study 51-56 credits

A program formulated by the student and a faculty advisory committee and approved by the American Studies faculty. No program may substantially duplicate an existing department program; normally no more than 40 credits are to be taken in any single department.

Myth and Folklore in American Culture—the study of the literary, anthropological and historical formulations of myth. Selected courses in the Bible as literature, classical mythology, and language and culture as well as the study of the central myths of American culture as expressed in history, literature, thought, and political and economic institutions. Students are urged to study comparative mythology and folklore and utilize the offerings of the College of Ethnic Studies.

Northwest Studies—the emphasis here is presently on the geographical and sociological and historical approaches to the study of regional culture. Through individual conference courses students may also study regional economics and literature. Possibilities for field work and utilization of materials in the Center for Pacific Northwest Studies.

Religion in America—examination of the place of religious values, traditions and institutions in American culture and society. Selected courses in history, sociology, anthropology, philosophy, literature, and the study of religion; individual conferences; student project.

Science and Technology in America—the effect of science and technology on American values and institutions. Selected courses in Western civilization, the history of science and the philosophy of science; American economic and intellectual history with electives from technology, psychology, anthropology and Huxley.

Other areas of study are available but the specific content of all must be approved by the director and the American Studies Executive Committee.

CANADIAN-AMERICAN STUDIES PROGRAM

Western Washington State College is uniquely situated in respect to Canada. The international border is just a few miles to the north, and Vancouver, British Columbia, the third largest metropolis in Canada, is only an hour away. Interested students may wish to further their education through courses which focus upon Canada, its geography, history, polity, economy, educational systems, etc.

In order to assure proper organization of the program and commensurate recognition for students who engage in it, a minor in Canadian and Canadian-American Studies has been established. The courses are offered by participating departments. Some are regional in nature, some are national in their concern, and some are comparative. In addition, various departments offer courses in independent study with approved topics under direction of participating faculty members.

Minor 30 credits

The minor is applicable to either the bachelor of arts or bachelor of arts in education degree. For descriptions of the individual courses, see course listings in this catalog under individual departmental listings.

- Geography 311; History 377; Political Science 406
- Remaining credits to be selected from: Education 414; Geography 312, 435; History 477, 490d; Political Science 301, 406, 417h, 480; Speech 483; Canadian-American Studies 497a; and approved independent study courses in selected departments. Independent study credit will constitute no more than five (5) out of the total thirty (30) credits required.

The following courses, while not applicable to the minor, should prove of interest to the student and are recommended: Geography 310; Education 445a; Anthropology 462; and recommended courses in the French language.

For advisement, consult the director, Dr. Gerard F. Rutan, Political Science Department.

COURSES IN CANADIAN-AMERICAN STUDIES

497a MAN AND THE SEA: PUGET SOUND AND THE STRAIT OF GEORGIA (2)

Analysis of current problems of settlement, resource use and land development in Puget Sound and the Strait of Georgia: causes, conditions and proposed solutions. (Summer only.)

EAST ASIAN STUDIES

In recognition of the increasing importance of East Asia in human affairs, Western Washington State College established the Program in East Asian Studies in September of 1970. The Program 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 program offers a minor in East Asian Studies. Students interested in majoring in this area should consult with the Department of General Studies to set up a student-faculty designed interdisciplinary major.

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, History 280, Pol Sci 307

Interdepartmental Programs

- Remaining credits to be selected from:
 - Anth 464
 - Chinese 367
 - East Asian 310
 - Gen St 271, 272, 273, 274
 - History 480, 481, 482, 484, 490g
 - Pol Sci 417d, 430, 431, 432, 476

COURSES IN EAST ASIAN STUDIES

- 301, 302, 303 THE CULTURES OF EAST ASIA: THE EARLY, MIDDLE AND RECENT PERIODS (4 ea)
Prerequisites: the chronologically appropriate courses from either History 105, 106, 107 or Gen 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 AD. The founding of high civilization in China and the early stages of its transmission to Japan, Korea and Mongolia.
- 302 c. 1000 to 1800 AD. 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)
Prerequisite: East Asian 301, 302, 303. An introductory survey of the art, architecture, history, languages, literature, music, peoples and religions of Mongolia.
- 400 DIRECTED INDIVIDUAL STUDY (1-5)
Prerequisite: permission of instructor. Individual study of topics not normally covered in formal courses.
- 401 SURVEY OF EAST ASIA (6)
A team-taught lecture course; examines the history, religions, philosophies, and societies of the region. Taught as part of a summer institute.
- 402 ART AND LITERATURE OF EAST ASIA (4)
A team-taught lecture course; examines the substance of East Asian art and literature, their roles in different societies of the region, and the crossflow of influences between East Asia and other parts of the world. Taught as part of a summer institute.
- 403 LANGUAGES OF EAST ASIA (2)
Salient features of Chinese, Japanese and Korean and their historical, social, and political roles. Taught as part of a summer institute.

404 RESOURCES AND TECHNIQUES FOR CLASSROOM PRESENTATION (2)

Prerequisite: concurrent enrollment in 401, 402, 403. Discussion of resources and materials and suggested techniques of presentation suitable for classroom use. Taught as part of a summer institute.

The Program in East Asian Studies also offers tutorials in Advanced Chinese, Advanced Japanese, and Advanced Korean.

Related courses are: Arth 362, 464; Art 370, 470, 471; Chinese 101, 102, 103, 201, 202, 203, 367; Ethnic Studies 205, 340, 352; General Studies 271, 272, 273, 274; Geography 315; History 280, 480, 481, 482, 483, 484, 490g; Japanese 101, 102, 103, 201, 202, 203; Korean 101, 102, 103; Political Science 307, 417d, 430, 431, 432, 476.

For further information and advisement, consult Dr. Henry G. Schwarz (Humanities Building 217), Director of the Program in East Asian Studies.

GENERAL SCIENCE

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; 105 and/or Geog 331
- Chem 115 or 121; Geol 211, 212
- Biology 120
- Electives under advisement*

Major Concentration 75 credits

This concentration satisfies both the major and the minor for junior high school teachers.

- Physical Science—25 credits under advisement,* including Phy Sci 492, Physics 131, 132, 133, and Chem 115 or 121 or equivalent
- Biological and Earth Sciences—25 credits in one field and 15 in the other, selected under advisement, including Biol 493 or Geol 390, Physics 204 and/or 321 or equivalent
- General Science 405 or equivalent
- Electives under advisement*

**Dr. John Whitmer, Chemistry Department, is the adviser for this major.*

COURSES IN GENERAL SCIENCE

405 HISTORY OF SCIENCE (5)

Prerequisite: 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.

THE HONORS PROGRAM

The undergraduate Honors Program provides a challenging opportunity for the student of high academic ability to realize his potential more fully. Freshmen and transfer students are invited into the Honors Program on the basis of entrance exams, high school grade averages, recommendations and interviews. Students already enrolled in college enter the program on the above bases or may be recommended by a college instructor.

Those selected for honors work participate in much of the general college 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 program provides a number of special colloquia and tutorials for honors students.

The Honors Program at Western is a four-year program involving both general honors courses and more specialized work within the major department. In 1969 the program was formally reorganized and now enables students to prepare alternates to the general college requirements, to undertake more independent study and to develop contracts for graduation.

The 1969 reorganization also gave departments more freedom in structuring honors work in particular majors and minors.

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

Admission to the Program

Students who have been 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 average of 3.7 or above.
3. Faculty recommendation.

Quarterly Courses of Study

Colloquia: Usually 2 or 3 credits, consisting of small groups of students and faculty who meet to study an area in depth. Several colloquia are offered each quarter. Some titles of past colloquia have been: "Socrates and Jesus," "The Common Law Tradition," "Philosophy of Science," "Geologic Hazards" and "The Russian Novel."

Tutorial: Usually 2 credits; one faculty member and one student work together on a problem of special interest to both of them.

Independent Study: Involves individual work with a very concentrated area of study which is usually related to the student's major or minor, not necessarily completed on campus. Some past examples for independent study include: working with ACT Theatre Company in Seattle by a drama major, studying medieval architecture in Europe, and a concentrated study of the Russian language.

Special majors, course waivers, early graduation: General college requirements may be waived in lieu of alternate work such as a relevant colloquium or tutorial. 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.

Policies within the Honors Program, all student-run colloquia, 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.

Interdepartmental Programs

Requirements for Graduation with Honors

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

- A *minimum* of 12 credits in honors (colloquia, tutorials, independent study). 20 credits of honors work is more typical.
- A minimum of 2 years in the Honors Program.
- An all-college grade point average of not less than 3.5 for the last 90 credits before graduation.
- Completion of department requirements for graduation with honors in the student's major.
- A senior thesis which has been approved by the student's thesis adviser and his department chairman. The thesis must be signed and delivered in proper form to the Honors Program office 3 weeks prior to expected graduation. (The thesis proposal should be presented to the Honors Board three quarters prior to expected graduation.)
- The student who has developed his own major, or has completed alternate work for general college requirements should check with the honors office prior to the registrar's senior evaluation. Notice of his work in honors will be forwarded to the registrar.

HONORS COURSES (Non-departmental)

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

151, 152, 153	TUTORIAL (2 ea)
161, 162, 163	COLLOQUIUM (2 or 3 ea)
251, 252, 253	TUTORIAL (2 ea)
261, 262, 263	COLLOQUIUM (2 or 3 ea)
290	SUMMER READINGS (2)
300	INDEPENDENT STUDY (variable credit)
361, 362, 363	COLLOQUIUM (2 or 3 ea)
390	SUMMER READINGS (2)
400	INDEPENDENT STUDY (variable credit)
461, 462, 463	COLLOQUIUM (2 or 3 ea)
490	SUMMER READINGS (2)

INDUSTRIAL DESIGN

The Bachelor of Science degree in industrial design provides an interdisciplinary course of studies that develops graduates for professional activities as designers, planners, managers, illustrators or specialists in the areas of industrial production, design education or marketing.

Industrial design students must complete the usual general college requirements. They should be aware of the prerequisite for Math 250. They should take Chemistry 115 and Physics 131.

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.

Early consultation with the adviser of the Industrial Design Program, Mr. Marvin A. Southcott, Department of Technology, is essential.

BACHELOR OF SCIENCE

Major 142 credits

Basic Core (Industrial Design/Technology)

- Technology 210, 212, 214, 215, 222, 223, 224, 231
- Technology 160 260
- Technology 311, 313, 315, 316, 317, 333, 391
- Technology 416
- Option I

12 credits of Technology 402
or Option II

12 credits of advanced electives under advisement of Industrial Design Program adviser

Supporting Courses

- Home Economics 175
- Chemistry 115
- Physics 131, 132
- Physics 133 or Chemistry 208 and 209
- Mathematics 250, 251, 252
- Physical Education 201 (prerequisite waived)
- Business Administration 271, 330 (prerequisite waived)

- Psychology 201 or General Studies 105
- Art History 220, 230, 240
- Art 101, 202, 370, and either 230 or 240 or 350

NOTE: Some of the above courses may be applied toward the General College Requirements of the College of Arts and Sciences. The courses are: Humanities—Home Economics 175, Art History 220, 230, 240; Social Sciences—Psychology 201, General Studies 105, Technology 391; Mathematics—Mathematics 250; Science—Chemistry 115, 208, Physics 131.

Minor 25 credits

- Approved courses selected from the Industrial Design major basic core, under advisement of Industrial Design Program adviser.

LATIN AMERICAN STUDIES

This program is offered so that the student interested in the area of Latin America may be able to concentrate a portion of his 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 College. 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 General Studies section of this catalog).

Minor 30 credits

- 15 credits in either Spanish or Portuguese 100 and 200 level courses, or demonstration of proficiency
- 15 credits in courses relating to Latin America

For advisement, consult Dr. Harley E. Hiller, Department of History.

LINGUISTICS

Linguistics 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 psychology, sociology/anthropology, 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 English, foreign languages, sociology/anthropology 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 6 credits selected under departmental advisement in a foreign language
- Sociology/Anthropology (Arts and Sciences)—add Anth 448 and 5 additional credits selected under departmental advisement
- Speech (consult the director)

For advisement, consult Dr. Vladimir Milicic (Humanities Building 219), Director of Interdepartmental Program in Linguistics.

COURSES IN LINGUISTICS

- 201 INTRODUCTION TO LINGUISTICS SCIENCE (3)
Survey of linguistic method and theory. (Also listed as Anthropology 248.)
- 202 COMPARATIVE LINGUISTICS (3)
Prerequisite: Linguistics 201. Principles of language typology, linguistic geography, comparative methods, and historical reconstruction.
- 203 SOCIOLINGUISTICS (3)
Prerequisite: Linguistics 201. Relationship between social classes and dialect in America, with attention to dialectic groups of interest to class.
- 301 PHONOLOGY (3)
Prerequisite: Linguistics 201. Theory, methods, and problems of phonological analysis and description.
- 302 MORPHEMICS (3)
Prerequisite: Linguistics 201. Theory, methods, and problems of morphemic analysis and description.

Interdepartmental Programs

303 SYNTAX (3)

Prerequisite: Linguistics 201. Comparative survey of modern theories of grammar with special reference to syntax.

402 READINGS IN LINGUISTICS (3)

Prerequisite: permission of instructor. Directed research on topic selected by student; may not be repeated.

404 LINGUISTICS AND LITERATURE (3)

Prerequisite: Linguistics 201 or Foreign Languages 310. Importance of linguistic contributions to literary analysis; linguistics and theory of literature; common problems.

PHYSICAL SCIENCE

BACHELOR OF ARTS IN EDUCATION

Major Secondary 45 credits

- General Science 405 or equivalent
- Chemistry 121, 122 and 251
- Physics 231, 232, 233 (or 131, 132, 133), 381
- Physical Science 492

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.

Minor Junior High 25 credits

- Courses in addition to the general education requirements selected under advisement

For the physical science majors and minors, Dr. John Miller, Chemistry Department, is the adviser.

COURSES IN PHYSICAL SCIENCE

382 PHYSICAL SCIENCE FOR THE ELEMENTARY SCHOOL (3)

Prerequisites: Sci Ed 380; general education requirements in science or equivalent. Philosophy, concepts, learning experiences and materials for the physical sciences suitable to the elementary school. (Also offered as Sci Ed 382.)

492 PHYSICAL SCIENCE FOR THE JUNIOR AND SENIOR HIGH SCHOOL (3)

Prerequisite: 15 credits in chemistry or physics. Content, materials, and methods of teaching general physical science, physics, and chemistry in junior and senior high schools.

RECREATION AND PARK MANAGEMENT

As our society becomes increasingly leisure-oriented and increasingly responsible to needs for leisure activity, career opportunities for professionals in recreation become more numerous and diverse. The recreation curriculum prepares students to plan, develop and manage leisure resources; to live in a leisure-oriented society; to pursue careers in the leisure-oriented professions; and to conduct, interpret and understand leisure research.

The curriculum adapts the quarter system of scheduling to a block system enabling the expanded use of recreation educators from other institutions, from supporting disciplines at Western, and from other recreation resources in the community. The modular scheduling facilitates a wider range of educational experiences by utilizing working professionals in the educational process.

The following outline illustrates the quarters selected for block scheduling of core classes.

	Fall	Winter	Spring	Summer
<i>Fresh.</i>				
<i>Soph.</i>			I	
<i>Junior</i>		II	III or IIII	
<i>Senior</i>		IV		

Students interested in this program should contact the Center for Leisure Studies for current information on admission procedures. The program is popular and the number of major and minor students is limited.

BACHELOR OF ARTS

Major Concentration 65 credits

- Basic Core:* RPM 171
- Phase I:* RPM 271, 272, 273, 274; Hux 301
- Phase II:* RPM 371, 373, 374, 375; Hux 377
- Phase III:* RPM 471
- Phase IV:* RPM 450, 472, 475; Hux 371

Supporting Areas

In addition to the basic core, majors must complete an area of support in one of the following areas (35 hours under advisement):

Community Services: This area of support is designed to give students a broader knowledge of contemporary social problems, community organization, cultures and sub-cultures, and other factors influencing the administration of leisure services in the community.

Students selecting this option will normally seek employment in municipal recreation departments, senior citizens centers, hospitals, correctional settings, armed services, industrial recreation, youth agencies and other community based recreation programs. (35 credits under advisement from the following:)

- RPM 323, 421
- Anth 201, 431, 481
- Soc 202, 310, 330, 340, 351, 352, 465, 467
- Ethnic Studies 300

Leisure and Natural Resources: This area is designed to study man's use of his natural resources for recreation services and draws heavily on the offerings of the Huxley College of Environmental Studies for this emphasis. It prepares personnel qualified to face the challenge in developing and managing our resources in the general interest of society. (35 credits under advisement from the following:)

- RPM 321, 322
- Hux 302, 303, 304, 311, 312, 320, 401, 411, 412, 413, 480, 483
- Biol 120, 311, 312, 401, 407
- Geol 211, 214
- Geog 341, 372, 421, 422, 430
- Econ 415, 482

Leisure Research and Planning: This option is intended to provide a foundation for further study in research and planning. Students will be prepared to conduct research, to understand and interpret it, and to communicate research to non-research recreational personnel. (35 credits under advisement from the following:)

- RPM 321, 322, 451, 452
- Computer Science 110 and Math 240
- Soc 310, 315
- Geog 341, 372, 430
- Hux 411, 412, 413
- Pol Sci 265

Minor 35 credits

- Basic Core: RPM 171
- Complete Phases I and II in the modular scheduling

COURSES IN RECREATION AND PARK MANAGEMENT

- 101 LEISURE AND SOCIETY (3)
Service course dealing with the expanding role of leisure in contemporary American life; emphasis on contemporary factors influencing leisure; analysis of leisure values as related to individual and society.
- 171 FOUNDATIONS OF RECREATION AND LEISURE (3)
Professional course dealing with the background, present status, future goals and challenges of leisure and the leisure service professions.
- 201 WILDERNESS AND LEISURE (3)
Service course dealing with the historical analysis of American wilderness; wilderness history, preservation, camping, overuse, ecology, geographic areas, and wilderness as a leisure experience.
- 271 COMMUNITY LEISURE SERVICES (3)
Survey course combining volunteer work in a local leisure service agency with a seminar covering the kinds of services available and who participates in them. The seminar will include agency personnel, faculty, students and people participating in the services.
- 272 LEISURE AND NATURAL RESOURCES (3)
Survey course on the interrelationships of man's leisure pursuits and the environment.
- 273 CAMPING AND OUTDOOR RECREATION (3)
Counselor training, types of camping, ACA standards. Includes actual camping experience.
- 274 CAREER DESIGNS (3)
Requires student to structure a tentative plan for completing his education based on the area of support he is considering, his individual strengths and weaknesses and employment interests. Includes seminar discussions on the value of individual proposals.
- 321 RECREATION RESOURCE POLICY (3)
Prerequisite: junior standing. Policy formation and analysis of recreation resources in federal and state land management agencies.
- 322 RECREATION RESOURCE DEVELOPMENT (3)
Prerequisite: junior standing. Analysis of recreation resources, agencies, and organizations, concepts of management, policies and problems, feasibility for development, planning and design considerations, and value determination.

Interdepartmental Programs

- 323 PROGRAMS FOR SPECIAL GROUPS (3)
Prerequisite: junior standing. Techniques, materials and methodology for conducting recreation programs for the aged, handicapped, mentally ill, mentally retarded, delinquent, disadvantaged and other special groups.
- 371 PHILOSOPHICAL AND HISTORICAL BASIS OF LEISURE (3)
Prerequisite: Phase I. Philosophical and historical implications of leisure; changing concepts of time, work, education and leisure, and their impact on American values, culture and life style.
- 373 PRINCIPLES OF PROGRAMMING/LEADERSHIP (3)
Prerequisite: Phase I. Basic principles of programming, promoting and leading a variety of activities in various community settings. Emphasis will be placed on correlating the programs with a philosophical rationale.
- 374 SUPERVISED FIELD WORK (3)
Prerequisite: Phase I. Supervised laboratory experience in the leisure service professions.
- 375 FUTURE TRENDS (3)
Prerequisite: Phase I. Seminar on the implications of contemporary and projected leisure trends for the future of society.
- 400 SPECIAL PROJECTS (1-5)
Prerequisite: Phase II. Approved and supervised individual research projects may be undertaken to supplement specific needs.
- 421 LEISURE AND RETIREMENT (3)
Prerequisite: junior standing. Concepts of leisure, recreation and retirement are developed and examined as potential social replacements for work and productivity in modern society.
- 450 LEISURE RESEARCH DESIGNS (3)
Prerequisite: Phase III. Course critique and analysis of current leisure research methods.
- 452 LITERATURE REVIEW AND ANALYSIS (3)
Prerequisite: Phase III. Current literature in the field of leisure is reviewed and analyzed. Emphasis is on discussion of selected literature and expanding student awareness of the resources available.
- 453 WILDERNESS WORKSHOP (9)
Summer workshop designed to study the impact of man on wilderness areas. Includes a six-week wilderness experience.
- 471 INTERNSHIP AND SEMINAR (15)
Prerequisite: Phase II. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of university and agency personnel.
- 472 ADMINISTRATION (5)
Prerequisite: Phase III. Planning, supervision, administration, personnel, financing, and evaluation of leisure service programs.

- 475 PARK MANAGEMENT (3)
Prerequisite: Phase III. Management principles, practices and problems of parks and outdoor recreation areas and systems.

SCIENCE EDUCATION

Students planning to major in a science for elementary or junior high teaching, see majors in general science, physical science or earth science.

Questions relating to these courses should be directed to Dr. John Whitmer, Chemistry Department, coordinator of Science Education. Students interested in other science education courses, see Biology 493, Geology 390, Physical Science 492, Education 423 and 429.

COURSES IN SCIENCE EDUCATION

- 380a,b,c SCIENCE FOR THE ELEMENTARY SCHOOL (3)
Prerequisites: 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.
380a Primary Emphasis
380b Intermediate Emphasis
380c K-6 Emphasis
- 381a,b SCIENCE FOR THE ELEMENTARY SCHOOL (3)
Prerequisite: Sci Ed 380. Classroom-laboratory study of "new" curricula: observation and participation in public schools. Intended for students preparing to teach at the elementary level.
381a Primary Emphasis
381b Intermediate Emphasis
- 382 PHYSICAL SCIENCE FOR THE ELEMENTARY SCHOOL (3)
Prerequisites: Sci Ed 380; general education requirements in science or equivalent. Philosophy, concepts, learning experiences and materials for the physical sciences suitable to the elementary school. (Also offered as Physical Science 382.)
- 383 BIOLOGICAL SCIENCE FOR THE INTERMEDIATE SCHOOL (3)
Prerequisites: Sci Ed 380; general education requirements in science or mathematics. Philosophy, concepts, learning experiences, and materials for the biological sciences suitable to the intermediate grades.
- 384 EARTH SCIENCE FOR THE INTERMEDIATE SCHOOL (3)
Prerequisite: Geol 101. Concepts, experiences, and materials from the earth sciences adaptable to the elementary school with emphasis on the intermediate grades. (Also offered as Geol 384.)

Interdepartmental Programs

- 430 ENVIRONMENTAL EDUCATION (2-5)
Prerequisites: permission of instructor. Examination of environmental problems; their causes and possible solutions.
- 445 CURRENT TRENDS IN SCIENCE EDUCATION
445a Classroom Methods (3-6)
445b Field Methods in Environmental Education (3-12)
- 480 SPECIAL PROJECTS IN SCIENCE FOR THE ELEMENTARY GRADES (2-5)
Prerequisites: one course from Sci Ed 381, 382 (or Phys Sci 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)
Prerequisites: one course from Biol 493, Geol 390, Phys Sci 492; permission of instructor. Projects involving science instructional materials and curriculum. Repeatable for credit.
- 497a SEX EDUCATION FOR GRADES K-9 (3)
Prerequisite: admission to teacher education, Rationale, objectives, curricula, materials and method for instruction in human reproduction and sexuality in grades K-9.
- 500 SPECIAL PROJECTS IN SCIENCE (2-5)
Prerequisite: completion of the undergraduate teacher education program or permission of instructor. Special science topics and their relation to a K-12 science program. Repeatable for credit.
- 501 ADVANCED STUDIES IN SCIENCE EDUCATION (3-5)
Prerequisite: teaching experience or permission of instructor. A critical study of research and developments related to science education. Repeatable for credit.
- 511 INTERNSHIP IN SCIENCE EDUCATION (3)
Prerequisite: permission of instructor. Assisting with the teaching of an on-campus science methods course for preservice elementary school teachers, S/U grading only.
- 512 INSERVICE WORKSHOPS IN SCIENCE EDUCATION (3)
Prerequisite: permission of instructor. Planning and implementing a series of not less than three inservice workshops in elementary school science. May be repeated for elective credit. S/U grading only.
- 513 SCIENCE CURRICULUM FOR THE ELEMENTARY SCHOOL (3)
Prerequisite: permission of instructor. Development of science curricula and teachers' guides for use in local school systems.
- 514 SEMINAR IN ELEMENTARY SCIENCE EDUCATION (1-3)
Prerequisite: permission of instructor.
- 580 SPECIAL PROBLEMS IN SCIENCE TEACHING IN THE ELEMENTARY SCHOOL (2-5)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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 PROJECTS IN SCIENCE TEACHING IN THE JUNIOR AND SENIOR HIGH SCHOOL (2-5)
Prerequisites: teaching experience or permission of instructor. Problems related to science instruction and credit. Repeatable for credit.
- 597c PROJECT IN SCIENCE CURRICULUM DISSEMINATION — MIDDLE SCHOOL (3)
Prerequisite: Sci Ed 597b or membership on a school dissemination and implementation team. Problems and strategies in designing, executing and evaluating a dissemination and implementation program for a middle school science which will meet individual needs of school districts.
- 690 RESEARCH (2-6)
Prerequisite: admission to program; permission of instructor. Restricted to thesis-related research; not more than 6 credits allowed toward the minimum of 45 credit hours.

Students preparing for teaching at the intermediate level should elect one of the following three courses:

Science Education 382 Physical Science for the Elementary School (3)

Science Education 383 Biological Science for the Intermediate School (3)

Science Education 384 Earth Science for the Intermediate School (3)

SOCIAL STUDIES EDUCATION

The interdepartmental programs emphasize history and the social sciences. Students electing these programs

Interdepartmental 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 Dr. Harry Jackson, director of social studies education.

BACHELOR OF ARTS IN EDUCATION

Major-Minor Concentration in History - Social Studies

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)
 - History 401
 - History 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

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
 - History 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

See Political Science section of this catalog for description.

Major-Social Studies 45 credits

(For Elementary Education minors only)

- History 203, 204; Geography 201, 311
- Anthropology 201
- Political Science 250 or Economics 201
- Electives--15 credits under advisement in one of the following four fields: geography, history, political science, or sociology/anthropology

Extended Minor 35 credits

- 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

- 400 PROJECTS AND PROBLEMS (2-5)
Prerequisite: permission of instructor. Specialized study under supervision.
- 425a,b SOCIAL SCIENCE FOR THE ELEMENTARY SCHOOL (3)
Prerequisite: Psych 316 (or 352). The development of social science concepts and skills in the elementary program.
 - 425a Primary Emphasis
 - 425b Intermediate Emphasis

Interdepartmental Programs

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.

445a CURRENT TRENDS IN SOCIAL STUDIES EDUCATION: STRUCTURES, MODELS AND STRATEGIES (1-5)

Prerequisite: permission of instructor.

445b CURRENT TRENDS IN SOCIAL STUDIES EDUCATION: LAW FOCUSED TEACHING AND CURRICULUM (1-5)

Prerequisite: 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.

500 PROJECTS, PROBLEMS AND RESEARCH (2-5)

Prerequisite: teaching experience and permission of instructor. Individually designed experiences to meet specific curricular and methodological situations.

VISUAL COMMUNICATION EDUCATION (VICOED)

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.

VICOED students will follow the usual general education sequence, but should take Mathematics 121 or 240 in lieu of 151, and Chemistry 115 rather than 101. Physics 101 will normally be taken.

VICOED Concentration 110 credits

- Art 101, 270, 371, Art History 240
- English 201 or 202 or Journalism 104
- Speech 340
- Technology 160, 210, 240, 260, 340, 341, 362, 379, 447, 448
- 15 credits in one of the following:

Option I

- Industrial Graphics (Technology)
- Graphic Arts (Technology)
- Photography (Technology)
- Graphic Design (Art and Technology)
- Professional Writing (English and Journalism)
- Educational Media (Education)

or Option II

15 credits in Senior Projects—the following to be taken under Technology 449 (3 credits each)

- (a) Motion Picture
 - (b) Slide Presentation
 - (c) Video Tape Presentation
 - (d) Printed Brochure
 - (e) Field Project
- Chemistry 208, 209
 - Business Administration 251, 330; Economics 338
 - Math 122 or Computer Science 110
 - Anthropology 431
 - Psychology 320
 - 14 credits selected from art, economics, business, sociology/anthropology, psychology, mathematics, physics, chemistry, educational psychology

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 493 (4) prior to student teaching. This program might require up to two (2) extra quarters to complete.

WOMEN'S STUDIES

The Women's Studies Program is designed to offer both men and women an orientation in the particularly female aspects of the entire educational process. It consists of three core courses, each of which exists within the appropriate department in order to make clear the academic relevance of the course and to place the study of the problems of women in the larger context of the study of the problems of society.

Interdepartmental Programs

The 18 hours of electives which complete the minor will be selected according to the individual needs of each student from the other relevant courses being taught in the various departments.

Dr. Meredith Cary, English Department, is the adviser for this minor.

Minor 30 credits

Anth 353 Sex Roles in Culture (4)
English 338b Sex Roles in Literature (4)

Psychology 319 Personality Theories and Sex Roles (4)

Electives under advisement; particularly recommended are the following:

Business Administration 426

Economics 388

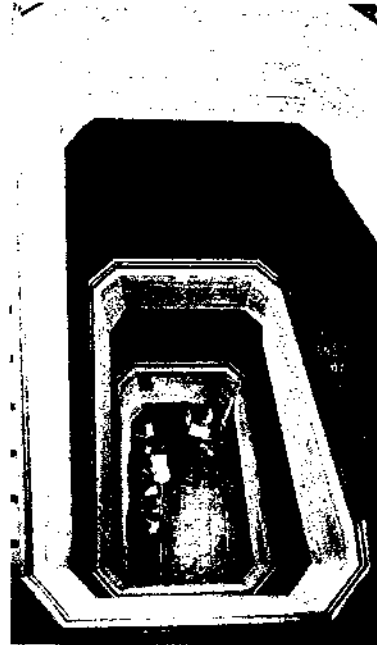
English 217

English 338a

History 490o

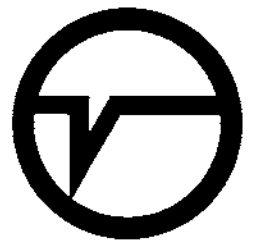
Political Science 345

English 365 or Anth 365



MATHEMATICS / COMPUTER SCIENCE

College of Arts and Sciences / Western Washington State College



Mathematics & Computer Science

The Department of Mathematics and Computer Science offers a wide variety of majors and minors. Degrees are offered in mathematics, mathematics education, and computer science. There are also joint degrees in mathematics and computer science, biology and mathematics, chemistry and mathematics, economics and mathematics, geology and mathematics, and physics and mathematics. On the graduate level there are three degrees available: Master of Arts, Master of Science and Master of Education.

The need for persons with quantitative skills is increasing dramatically as the world grows more complex. Mathematicians and computer scientists have employment opportunities in business, industry, government and teaching. Persons planning careers in almost any field will find their opportunities for interesting and challenging careers enhanced by the study of mathematics and computer science. The degrees are intended to prepare students for just such careers. It is generally the case that the person who develops his quantitative skills increases his ability to attack the more complex problems of society. Advances in science, technology, the social sciences, business, industry and government become more and more dependent upon precise analysis and the extraction of information from large quantities of data. Environmental problems, for example, require careful analysis by persons (or teams of persons) with skills in mathematics, statistics and computer science as well as biology, geology, physics and many other fields.

MATHEMATICS

The unique blending in mathematics of man's rational, creative and aesthetic impulses has attracted the intellectually curious for over 2,000 years. The body of mathematical knowledge is a magnificent achievement: it is now growing more rapidly than ever before. The habits of systematic and creative thought developed in the study of mathematics are recognized as invaluable in most areas of human endeavor. Western's Bachelor of Arts major in mathematics is designed to introduce the student to the excitement of mathematical ideas; it allows the maximum possible freedom to explore those areas of mathematics that the student finds most interesting.

The department has a sound program in mathematics with a proven record of preparing students for successful graduate study at the very best universities in the nation. There are sequences or courses in calculus, advanced calculus, linear algebra, applied analysis, number theory, abstract algebra, topology, geometry, differential geometry, statistics, complex analysis and mathematical analysis. Students of mathematics who do not go on to graduate school are well prepared for industrial or governmental jobs if they have some exposure to computer science or one of the natural, social or applied sciences.

APPLIED MATHEMATICS

Many of the greatest achievements in mathematics were inspired by problems in the natural sciences; today mathematics has wide application in both the natural and social sciences. Applied mathematics provides a broad arena for the intellectual and creative impulses of man. The Bachelor of Arts major in mathematics allows enough freedom in choice of courses so that students may prepare themselves well as applied mathematicians. Many students interested in applications of mathematics will want to pursue a joint major with some other department.

All of the sequences listed earlier are available to students of applied mathematics. The courses or sequences in calculus, linear algebra, applied analysis and statistics provide the central core of studies in applied mathematics. The courses or sequences in probability theory, numerical analysis and optimization theory (mathematical programming) are of great interest; the student of applied mathematics should study at least the basics of computer science. The student who contemplates graduate study in applied analysis will benefit from the study of abstract algebra and mathematical analysis.

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 great opportunity for employment in

business, industry, government and teaching. It also provides a wealth of problems of intellectual interest. As in mathematics, it is an area in which systematic habits of thought may be combined with rational and creative impulse to produce achievements of both aesthetical and practical significance.

The curriculum in computer science is broad and well-balanced. In addition to the usual introductory courses, there is a sequence in assembler language programming and courses in automata theory, advanced features of programming languages, computer organization, data structures, compiler design and implementation, operating systems, and simulation and modeling. There are also sequences in numerical analysis and advanced mathematical programming. The department offers both a computer science degree and a joint mathematics-computer science degree. The Computer Center has an IBM 360 model 40 with large scale auxiliary storage and an IBM 7090. There are a number of minicomputers on campus, among which is an Interdata 70 available to Computer Science students for hands-on experience. There are also facilities for interactive computing and for computer graphics.

Computer science students are encouraged to gain considerable competence in a field in which computer application plays a role (for example, accounting, biology, business administration, environmental sciences, geology, geography, or geophysics). Employment opportunities are enhanced by such a course of study. Students interested in entering business, industry, or government generally complete the computer science major. Those interested in scientific computing or graduate study of computer science generally complete the joint mathematics-computer science major.

The minor in computer science is of great value in improving the quantitative skills of students pursuing other majors. The person who completes such a minor will find that he is able to communicate with computer scientists. Such a skill is quite valuable today.

MATHEMATICS EDUCATION

The Bachelor of Arts in Education major may be completed with either of two concentrations; one prepares the graduate for teaching mathematics on the secondary level, the other concentrates on the elementary level. Those who intend to teach on the secondary level should complete at least one course in algebra and one course in geometry on the upper division level (these courses are almost always regarded as necessary for recommendation of competency to teach on the secondary 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 should contain as wide a variety of courses as possible. 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 who need advice in registering for the proper course in mathematics or computer science are urged to seek help at the departmental office in Bond Hall 202.

Freshmen

Both calculus and linear algebra are required for most majors offered by the department, including combined majors and majors in computer science. At least one of them is a prerequisite for almost every other course in mathematics. The prospective major should therefore normally take both in his freshman year. He is prepared

Mathematics & Computer Science

to take Math 122 and Math 201 if he has 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.

Math 121 is offered for students needing a knowledge of the topics listed in (d). The student who is deficient in (a) should enroll in Math 100; students deficient in (c) should enroll in Math 105. These courses, if needed, should be completed before enrolling in Math 122 or 201.

Mathematics and computer science majors are strongly 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 are allowed to begin study in computer science with the course CS 210 (Introduction to Computer Science) if they have had four years of high school mathematics including an introduction to calculus. Those without such preparation should complete Math 122 (Analytical Geometry and Calculus) before registering for CS 210. The latter group of students may, if they wish, take CS 101 (Introduction to Computers) and/or CS 110 (Introduction to Programming) before completing Math 122. Students with fewer than three years of high school mathematics should seek advice 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.

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. Those transfer students who have completed a calculus sequence but have not studied linear algebra are usually advised to register for Math 301 rather than Math 201 and Math 202.

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/I 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 certain of their courses will not apply toward a degree in computer science.

Transfer students must complete at this institution a minimum of nine upper division credits for a major in the department or five upper division credits for a minor in the department.

INFORMATION

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 State College, Bellingham, WA 98225. Telephone: (206) 676-3785.

MATHEMATICS AND COMPUTER SCIENCE FACULTY

- ROBIN W. CHANEY (1969) Chairman.
Professor. BA, PhD, Ohio State University.
- WILLIAM R. ABEL (1962) Professor. BA, Morningside College; MA, University of South Dakota; PhD, University of Missouri.
- DONALD R. CHALICE (1967) Associate Professor. BA, University of Wisconsin; MA, PhD, Northwestern University.
- KEITH CRASWELL (1966) Associate Professor. BS, MS, PhD, University of Washington.

BACHELOR OF ARTS IN EDUCATION

- JAMES E. DUEMMELE (1966) Associate Professor. BA, MA, PhD, Ohio State University.
 ALBERT J. FRODERBERG (1968) Associate Professor. BS, MS, PhD, 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) Assistant Professor. BA, MS, PhD, Washington State University.
 ROBERT I. JEWETT (1970) Associate Professor. BS, California Institute of Technology; MS, PhD, University of Oregon.
 ROBERT M. KAUFFMAN (1967) Associate Professor. BA, The University of the South; MS, PhD, Louisiana State University.
 SARA JEANNE KELLEY (1967) Associate Professor. BA, Linfield College; MA, Bowling Green State University; PhD, Washington State University.
 RICHARD G. LEVIN (1967) Associate Professor. BS, University of Pennsylvania; PhD, University of California, Davis.
 NORMAN F. LINDQUIST (1967) Assistant Professor. BA, Linfield College; PhD, Oregon State University.
 LARRY DEAN MENNINGA (1970) Associate Professor. BA, University of Iowa; MA, PhD, University of Washington.
 THOMAS T. READ (1967) Associate 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.
 *GAIL H. WILLIAMS (1968) Associate Professor. AB, MA, Indiana University; PhD, Michigan State University.
 GEORGE E. WITTER (1955) Associate Professor. BA, MA, Miami University.
 JOHN W. WOLL (1968) Professor. BS, Haverford College; PhD, Princeton University.

Major Elementary 45 credits

- Math 121, 122, 222
- Math 281, 481
- Not less than 12 credits numbered 300 or above
- Electives under departmental advisement

Major Secondary 45 credits

- Math 122, 222
- Both Math 201 and 202; or, both Math 223 and 301
- Math 483
- Not less than 15 credits in approved courses numbered 300 or above

Minor 24-30 credits

- Math 122, 222
- Math 201 and 202, or 223 and 301
- Math 483
- Not less than 3 courses 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 2.20.

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 2.20, an augmented minor which includes Math 122, 222, 223, 201 and 202 or 301, 241 or 305, 360 or 460, 321 or 401, 483.

*On Leave 1975-76

Mathematics & Computer Science

BACHELOR OF ARTS

Major—Mathematics

60 credits plus Supporting Courses

- Math 122, 222, 223
- Math 301 or both 201 and 202
- Not less than 20 credits in approved courses numbered 400 or above except Math 481 and 483
- Electives under departmental advisement
- Supporting courses: one of the following completed sequences:
 - Physics 231, 331, 332
 - Econ 201, 202, 301, 302
 - Psych 306, 307, 311
 - Computer Science 310, 311, 312
 - Chem 121, 122, 123
- Language competency in French, German or Russian strongly recommended for those students who may go on to graduate work

Minor 25 credits

- Math 122, 222, and 223
- Either Math 201 and Math 202 or Math 301
- Electives under departmental advisement

Major—Computer Science 66-68 credits plus Supporting Courses

- Computer Science 210, 211, 301, 310, 311, 312, 410, 440
- Math-Computer Science 335, 375
- Math 122, 222, 223, either 201 and 202, or 301
- 12 additional credit hours in 400 level computer science courses, which may include a maximum of 6 credit hours of Computer Science 400
- At least 12 approved credit hours in an area of application

Minor—Computer Science 25 credit hours (Not available to Mathematics majors)

- Computer Science 110 or 210, 211, 301
- Math 122 or 220
- 9 additional credit hours in computer science at the upper division level

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.

Physics-Mathematics Special Honors Concentration—See Physics Department section for details.

Geology-Mathematics—See Geology Department section for details.

Mathematics-Computer Science—81 credits plus Supporting Courses.

- Math 122, 222, 223; either 201 and 202 or 301; 312; 331; one of 328 or 332 or 430; 401 or 404
- Four of the courses Math-Comp Science 335, 435, 436, 375, 475, 476
- Computer Science 110 or 210, 310, 311
- 21 additional credits in computer science and mathematics as advised
- Supporting courses: Physics 231, 331, 332 or 15 credits as advised in an area related to the major

DEPARTMENTAL HONORS

Arts and Sciences

In order to graduate with "honors in mathematics," a student must complete Math 331, 401, 402, 403, 424, 425, 426; 18 additional upper division or graduate credits in mathematics as advised by the Honors Committee, at least 12 credits of which must be at the 400 or 500 level; attain a 3.5 grade average in the courses taken for the above, and a 3.0 grade average on all college courses; complete an Arts and Sciences major in mathematics together with supporting courses; complete two non-departmental Honors colloquia; be recommended by the departmental Honors Committee and the Honors Board.

In special cases, with the approval of the departmental Honors Committee, the student may elect to write a senior thesis.

Teacher Education

In order to graduate with "honors in mathematics," a student must complete Math 312, 401, 425, two quarters of geometry, and additional upper division credits in mathematics as advised by the Honors Committee to total 30 credits; attain a 3.5 grade average in the above courses and a 3.0 grade average in all college courses; complete the requirements for a teacher education major in mathematics; complete two non-departmental Honors colloquia; be recommended by the departmental Honors Committee and the Honors Board.

In special cases, with the approval of the departmental Honors Committee, the student may elect to write a senior thesis.

GRADUATE STUDY

For concentrations in mathematics leading to Master of Education, Master of Arts, or Master of Science degrees, see the *Graduate Bulletin*.

COURSES IN MATHEMATICS

(Courses in Mathematics-Computer Science and in Computer Science are listed after the listing in Mathematics.)

- 100 ALGEBRA (5)
Prerequisite: clearance of mathematics proficiency entrance requirement. 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 121 rather than Math 100. Cannot be counted toward majors or minors in mathematics or computer science.
- 105 TRIGONOMETRY (3)
Prerequisite: Math 100 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 105. Cannot be counted toward majors or minors in mathematics or computer science.
- 121 COLLEGE ALGEBRA (5)
Prerequisites: basic algebraic skills comparable to those described under Math 100; students should either have trigonometric skills comparable to those described under Math 105 or else they should register for Math 105 concurrently. 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 121 and go directly to a more advanced course.
- 122 ANALYTICAL GEOMETRY AND CALCULUS (5)
Prerequisites: knowledge of the topics listed under Math 105 and Math 121. Those students with little or no knowledge of trigonometry must take Math 105 while (or before) taking Math 122. Coordinate geometry of the plane, limits, the derivative, differentiation, the differential, elementary applications of differential calculus, introduction to integration.
- 151 INTRODUCTION TO MATHEMATICS (3)
Prerequisite: clearance of mathematics entrance test. Not open to students with credit in Math 121. 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 121, 122, 201, 220, 240, 241.

Mathematics & Computer Science

- 190 WORKSHOP FOR HIGH SCHOOL JUNIORS (5)
Prerequisites: intended for, but not restricted to, students who have completed the junior year but not the senior year of high school; high school students must submit a letter of recommendation from a high school counselor or mathematics teacher. Topics in number theory, combinatorics, probability, and computer science. The computer programs will be such as to aid in solution of the mathematical problems. Class meets for three to four hours per day during four weeks of the summer session. Not open to students with college-level credit in mathematics. S/U grading only. Offered in summer quarter only.
- 201, 202 INTRODUCTION TO LINEAR ALGEBRA (3 ea)
Prerequisite: Math 121 or 220 or 251; 201 prerequisite to 202. Vector spaces, subspaces, dependence, independence, bases, linear transformations, matrices.
- 220 INTRODUCTION TO CALCULUS (5)
Prerequisite: Math 100. An intuitive approach to the integral and differential calculus especially designed for students majoring in biology, psychology, and other social sciences. Not open to students who have credit in Math 132.
- 222, 223 ANALYTIC GEOMETRY AND CALCULUS (5 ea)
Prerequisite: Math 122; 222 prerequisite to 223. Elementary treatment of coordinate geometry of the plane and solid spaces. Math 222—the integral and integration, the differentiation of transcendental functions, and parametric equations; Math 223—methods of integration, improper integrals, indeterminate forms, infinite series, series expansion of functions, partial differentiation, and multiple integration.
- 240 INTRODUCTION TO STATISTICS (3)
Prerequisite: Math 100 or equivalent. Statistical reasoning treating the nature of statistics; statistical description; ideas of probability, measurement, sampling distributions, and organization of data.
- 241 INTRODUCTION TO PROBABILITY (3)
Prerequisite: Math 100 or 121. Introduction to probability with applications.
- 250 ALGEBRA WITH APPLICATIONS TO ECONOMICS AND BUSINESS (4)
Prerequisite: Math 100 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.
- 251 CALCULUS AND PROBABILITY WITH APPLICATIONS TO ECONOMICS AND BUSINESS (5)
Prerequisite: Math 250. Differential calculus, including the chain, product, and quotient rules and derivatives of exponential and logarithmic functions; antiderivatives and the area beneath a curve; elementary probability including conditional probability, Bayes theorem, probability laws, density functions, normal distributions, the normal probability table, mean, and standard deviation.
- 252 STATISTICS AND COMPUTER PROGRAMMING WITH APPLICATIONS TO ECONOMICS AND BUSINESS (5)
Prerequisite: Math 251. An elementary programming language such as BASIC is introduced and used in solving problems in statistics. The topics in statistics include ratios and frequency distributions, measures of dispersion, various probability distributions, decision making, statistical inference, and hypothesis testing.
- 281 THEORY OF ARITHMETIC (4)
Prerequisite: any one of the courses Math 100, 105, 121, 151; not open to students with credit in Math 301 or 307. Systems of numeration, sets, relations and number systems, and integration of these concepts.
- 301 VECTORS AND MATRIX ALGEBRA (4)
Prerequisite: Math 222. Not open to students with credit in Math 202. Linear spaces, subspaces, dimension, linear transformations, matrices of transformations, and determinants. More rapidly paced and abstract than 201, 202, requires more mathematical maturity.
- 305 NUMBER THEORY (4)
Prerequisite: Math 202 or 222. The properties of integers, Euclid's algorithm, Diophantine equations, congruences, continued fractions and residues.
- 307 THE ALGEBRAIC FOUNDATION OF MATHEMATICS (4)
Prerequisite: Math 222. Not open to students with credit in Math 401. Algebraic systems; the concept of order and completeness; the natural numbers and construction of rational and real numbers.
- 312 MAPPINGS AND CONTINUITY (4)
Prerequisites: Math 222 and one of 202, 301 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.
- 328 CALCULUS OF SEVERAL VARIABLES (4)
Prerequisites: Math 223 and either 202 or 301. Parametrized curves and surfaces; chain rule for differentiable mappings; implicit and inverse functions theorems; multiple integration, applications to a wide variety of problems.
- 331, 332 APPLIED ANALYSIS (4 ea)
Prerequisites: Math 223; students should have completed (or should take concurrently) either Math 202 or Math 301. An introductory course in differential equations and related material including topics selected from first order differential equations, higher order linear differential equations, series and numerical solutions, Laplace transforms, special functions, Fourier series, Sturm-Liouville systems, comparison theorems.
- 341, 342 STATISTICAL METHODS (4 ea)
Prerequisites: Math 121, 241, Computer Science 110 or 210; 341 prerequisite to 342. Elementary course in statistical methodology with emphasis on point estimates and confidence interval estimation, hypothesis testing, and analysis of variance.

- 360 EUCLIDEAN AND NON-EUCLIDEAN GEOMETRY (3)
Prerequisite: Math 202 or 222. Metric development of Euclidean geometry, and consideration of non-Euclidean geometries.
- 381 MATHEMATICS FOR ELEMENTARY TEACHERS (3)
Prerequisite: one year of teaching or Math 281. Informal geometry; measurement; data collection and organization.
- 396a,b,c HONORS TUTORIAL (2 ea)
Prerequisite: permission of department.
- 399 MATHEMATICS SEMINAR (1-3)
- 400 SPECIAL PROBLEMS (1-5)
An opportunity for individual study under departmental supervision.
- 401, 402, 403 INTRODUCTION TO ABSTRACT ALGEBRA I, II, III (4 ea)
Prerequisites: Math 202 or 301, plus junior standing. Each course prerequisite to the next. Vector spaces, linear transformations, matrices and determinants, introduction to algebraic structure, groups, rings, integral domains, fields and field extensions.
- 404 LINEAR ALGEBRA (4)
Prerequisites: Math 202 or 301, plus junior standing. Vector spaces, subspaces, linear independence, span, bases, dimension, linear transformations, the matrix of a linear transformation with respect to two given bases, rank and nullity of linear transformations, systems of linear equations, determinants, Cramer's rule, inner products, the transpose of a linear transformation, characteristic polynomials, eigenvalues, eigenvectors, reduction of a symmetric linear transformation to diagonal form by means of an orthogonal change of basis.
- 412 METRIC TOPOLOGY (4)
Prerequisite: Math 312. Metric spaces and metric topology; product metrics; uniform equivalence and homeomorphism; compactness and other topological properties.
- 417 SEMINARS IN SPECIAL TOPICS
417a Topics in Algebra (4)
417b Topics in Analysis (4)
417c Topics in Geometry (4)
417d Topics in Topology (4)
- 423 ADVANCED CALCULUS (4)
Prerequisite: Math 312. Uniform continuity, theory of differentiation and Riemann integration, uniform convergence.
- 424, 425, 426 MATHEMATICAL ANALYSIS (4 ea)
Prerequisite: Math 423; corequisite: Math 404; to be taken in sequence. Metric spaces; normed spaces; continuous linear operators on normed spaces; differential and integral calculus of several variables; differential equations including Sturm-Liouville theory and their physical significance.
- 430 APPLIED ANALYSIS (4)
Prerequisite: Math 331. Line integrals in the plane and Green's theorem; divergence theorem, Stoke's formula, line integrals in space with applications to field theory, fluid flow, heat flow, and hydrodynamics, partial differential equations including the vibrating string, the Dirichlet problem, double Fourier series, solutions by integrals, and elliptic, parabolic and hyperbolic equations.
- 431 INTRODUCTION TO COMPLEX VARIABLES (4)
Prerequisite: Math 331 or 423. Differentiation and integration of complex-valued functions; Cauchy integral theorem; calculations of residues.
- 441, 442, 443 MATHEMATICAL STATISTICS (4 ea)
Prerequisites: Math 223; either 202 or 301; 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)
Prerequisite: Math 202 or 301. General geometric structures, topics from affine and projective geometries. Offered in alternate years. To be offered in 1976-77.
- 461 MODERN GEOMETRY (4)
Prerequisite: Math 401. Bilinear functions, orthogoval groups, general symmetries. Offered in alternate years. To be offered in 1976-77.
- 465, 466 DIFFERENTIAL GEOMETRY (4 ea)
Prerequisites: Math 202 or 301; 328; 465 prerequisite to 466. Differential geometry of submanifolds of E^3 from the point of view of moving frames; the Frenet formulas; integration of differential forms and Stokes' theorem; curvature; introduction to Riemannian geometry. Offered only in alternate years. To be offered in 1975-76.
- 481 MATHEMATICS IN GRADES 1 THROUGH 8 (4)
Prerequisite: Math 281. The teaching of mathematics in terms of objectives and methods of presentation. S/U grading only.
- 483 MATHEMATICS IN THE SECONDARY SCHOOL (3)
Prerequisites: upper division courses in algebra and in geometry. Mathematics content of advanced high school courses from teacher's viewpoint; the major experimental programs.
- 495a DEVELOPING THE MATHEMATICAL LABORATORY ENVIRONMENT: PRIMARY (4)
Prerequisites: one year of teaching experience. Techniques for preparing and implementing the laboratory approach in elementary school mathematics programs at the primary level.
- 495b DEVELOPING THE MATHEMATICAL LABORATORY ENVIRONMENT: INTERMEDIATE (4)
Prerequisites: one year of teaching experience. Techniques for preparing and implementing the laboratory approach in elementary school mathematics programs at the intermediate level.

Mathematics & Computer Science

- 495c DEVELOPING THE MATHEMATICS LABORATORY ENVIRONMENT: JR-SR HIGH LOW ACHIEVERS (4)
Prerequisite: one year of teaching experience. Techniques for preparing and implementing the laboratory approach for junior and senior high low achievers in mathematics.
- 496a,b,c HONORS TUTORIAL (2 ea)
Prerequisite: permission of department.
- 499 MATHEMATICAL SEMINAR (1-3)
- 500 SPECIAL PROBLEMS (1-5)
Prerequisites: advanced standing and permission of instructor.
- 501, 502, 503 ADVANCED ABSTRACT ALGEBRA (3 ea)
Prerequisite: Math 403 or permission of instructor; to be taken in sequence. Topics selected from theory of fields and Galois theory, theory of rings and ideals, representation theory and groups with operators.
- 505, 506 THEORY OF NUMBERS (3 ea)
Prerequisite: Math 305. Properties of natural numbers, divisibility, congruences, quadratic reciprocity, diophantine equations, distribution of primes, algebraic numbers, continued fractions.
- 517, 518, 519 TOPOLOGY (3 ea)
Prerequisite: Math 412 or 424; to be taken in sequence. Topological spaces, metric spaces, connectedness, compactness, product and quotient spaces, function spaces, fundamental group.
- 520, 521, 522 ANALYSIS (3 ea)
Prerequisite: Math 426. Lebesgue integration, Banach and Hilbert spaces, and applications to classical analysis.
- 531, 532, 533 COMPLEX VARIABLES (3 ea)
Prerequisite: Math 423 or equivalent; to be taken in sequence. Complex numbers as a field; function theory including analytic functions; exponential and logarithmic functions; derivatives; linear and bilinear transformations; the complex integral calculus; Cauchy-Goursat Theorem; Cauchy Integral Formula; power series, residues and poles; conformal mappings.
- 550 MATHEMATICAL LOGIC (3)
Prerequisite: graduate status in mathematics. Topics selected from formal symbolic logic and algebraic logic.
- 551 SET THEORY (3)
Prerequisite: Math 550. Topics selected from set theory with special attention to applications in other areas of mathematics.
- 555 HISTORY OF MATHEMATICS (3)
Prerequisite: permission of instructor. Introduction to history of mathematics, with emphasis on evolution of branches of current importance and on mathematicians most prominent in this development.
- 560, 561, 562 DIFFERENTIAL GEOMETRY (3 ea)
Prerequisites: Math 404 and 426 or permission of instructor. Differentiable manifolds; differential forms; the exterior derivative and exterior algebra. Integration of differential forms. Differentiable maps, Frobenius theorem, Riemannian metrics, affine connections and related topics.
- 580 MATHEMATICS SEMINAR AND SPECIAL PROBLEMS (1-4).
- 581a,b,c RESEARCH DESIGN AND LITERATURE IN MATHEMATICAL LEARNING (2 ea)
Critical examination of research studies; emphasis on research design, the findings, and their implications.
- 582 PROBLEMS OF CONCEPT DEVELOPMENT AND MATHEMATICAL LEARNING (3)
The current state and applicability of topics for cognition, child development, concept attainment, memory, perception, attention, and other human factors important in mathematical learning.
- 583 CURRICULUM DEVELOPMENT IN SCHOOL MATHEMATICS (3)
Underlying assumptions on which programs were generated; curriculum design and modification; problems in individualization of instruction; experience in mathematics media laboratory.
- 590 SEMINAR ON SPECIAL METHODS IN MATHEMATICS EDUCATION (1)
Prerequisite: admission to the Master-Teacher program. The mathematics curriculum in the public schools.
- 598 RESEARCH (variable credit)
- 599 MATHEMATICS SEMINAR (1-3)
- 690 THESIS (variable credit)
- 699 MATHEMATICS SEMINAR (1-3)
Prerequisite: graduate course in the area of the seminar. Fields expected to be covered are analysis, algebra, topology, and geometry.

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 INTRODUCTION TO MATHEMATICAL PROGRAMMING (4)

Prerequisites: Math 202 or 301; Computer Science 210 or 211. Linear and quadratic programming; applications to game theory and to allocation and transportation problems.

375 NUMERICAL METHODS (4)

Prerequisites: Computer Science 210 or 211; Math 223. Elementary discussion of error, solution of nonlinear algebraic equations, polynomial interpolation, least squares approximation, numerical quadrature, and numerical differentiation.

435, 436 ADVANCED MATHEMATICAL PROGRAMMING (4 ea)

Prerequisites: Math 223, 312, Computer Science 335; 435 prerequisite to 436. Convex programming; duality and Lagrange multipliers; Kuhn-Tucker conditions and gradient methods; introductory dynamic programming; algorithms and applications.

475, 476 NUMERICAL ANALYSIS (4 ea)

Prerequisites: Computer Science 375; Math 202 or 301, Math 331. 475 prerequisite to 476. Numerical solution of ordinary differential equations, solution of systems of linear equations, calculation of eigenvalues and eigenvectors, numerical solution of partial differential equations.

541 APPLIED PROBABILITY MODELS (3)

Prerequisites: Math 441 or CS 439 and one quarter of advanced calculus or excellent grades in calculus, or permission of instructor. A semi-rigorous approach to probability theory centered on the concepts of individual expectation and martingales. Specific topics: laws of large numbers, zero-one laws, introductory decision-theoretic statistics, discrete Markov processes, optimal stopping rules, the Glivenko-Cantelli Theorem.

542 DYNAMIC PROGRAMMING AND RENEWAL THEORY (3)

Prerequisites: Math 328 or Math 430 and Math 404 and Math-CS 435 and 541 or permission of the instructor. Concepts from dynamic programming and renewal theory with specific applications to reliability theory, queuing theory, Markov decision processes, sequential analysis, and inventory theory. Monte Carlo and other simulation methods of solution. Individual projects.

543 STOCHASTIC OPTIMIZATION (3)

Prerequisites: Math 328 or Math 430 and Math 404 and Math-CS 436 or permission of the instructor. Probabilistic and chance constrained programming. Stochastic filtering and control, stochastic approximation, compound decision methods. Applications to pattern recognition, learning theory, and adaptive processes. Individual projects.



COURSES IN COMPUTER SCIENCE*

- 101 INTRODUCTION TO COMPUTERS (3)
Prerequisite: clearance of mathematics entrance proficiency test. The course is intended to survey the origins of computer science, to impart some knowledge of the impact of computing on modern society, and to provide instruction in a simple programming language such as BASIC.
- 110 INTRODUCTION TO PROGRAMMING (3)
Prerequisite: Math 100 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 Computer Science 210. Math and computer science majors should take 210.
- 123 ALGOL (1)
Prerequisite: Computer Science 110 or 210. Programming using the ALGOL language. Satisfactory/Unsatisfactory grading.
- 124 FORTRAN (1)
Prerequisite: Computer Science 110 or 210. Programming using the FORTRAN language. Satisfactory/Unsatisfactory grading.
- 125 COBOL (1)
Prerequisite: Computer Science 110 or 210. Programming using the COBOL language. Satisfactory/Unsatisfactory grading.
- 210 PROGRAMMING I (4)
Prerequisite: Math 122 or Math 220. Intended 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 (3)
Prerequisite: Computer Science 210 or "B" or "A" in Computer Science 110. Design and implementation of large programs. Emphasis on programming techniques which contribute to efficiency, legibility, generality, and correctness of programs.
- 301 INTRODUCTION TO DISCRETE STRUCTURES (4)
Prerequisite: Computer Science 110 or 210. Basic algebraic structures; Boolean algebra and propositional logic; elementary graph theory; applications to computer science.

*The facilities of the Computer Center, including an IBM 360/40 with large scale disk capacity and telecommunications capability, are available to qualified students free of charge for instruction in computer techniques, for research, and for general education in computer applications. Computer Science 110 or 210 provides basic instruction in the use of the computer.

- 310, 311, 312 COMPUTERS AND ASSEMBLER LANGUAGE PROGRAMMING (3 ea)
Prerequisite: Computer Science 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.
- 400 SPECIAL PROBLEMS (1-5)
An opportunity for individual study under departmental supervision.
- 401 INTRODUCTION TO AUTOMATA THEORY (4)
Prerequisite: Computer Science 301. Finite- and infinite-state machines, recursive functions, effective computability, the halting problem and other unsolvable problems.
- 410 PROGRAMMING LANGUAGES (4)
Prerequisites: Computer Science 211 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)
Prerequisites: Computer Science 211, 301 and 311. Basic digital circuits, Boolean algebra and combinatorial logic, digital arithmetic; input-output facilities, system organization, reliability; features for multiprogramming, multi-processing, and real-time systems; alternate organizations.
- 439 COMPUTER MODELING AND SIMULATION (4)
Prerequisites: a college level course in statistics; a college level course in calculus; Computer Science 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 modelling and system simulation, design and methodology of simulation models, model validation, simulation languages, application to decision making.
- 440 DATA STRUCTURES (4)
Prerequisites: Computer Science 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)
Prerequisite: Computer Science 440; 410 may be taken concurrently. Lexical and syntactical analysis; code generation and optimization; implementation of compilers and interpreters.
- 460 OPERATING SYSTEMS (4)
Prerequisites: Computer Science 420, 440. Batch processing; multi-programming and multi-processing; time-sharing; input-output; storage allocations; file system design and management.



MUSIC

College of Arts and Sciences / Western Washington State College



Music

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 State College we believe in the individualization of music education and the need for ongoing counseling for all music majors. The College takes pride in the quality of instruction and the fact that Western offers a *balanced* program in choral, instrumental, private instruction and academic music aimed toward professional competency in teaching and performance.

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 art through performance, composition and analysis.

Two undergraduate professional degree programs are available to entering freshmen and transfer students: The B.A. in music is offered for those who seek to pursue a non-teaching degree; it has an added emphasis on performance and advanced music classes. Those who receive this degree ordinarily continue advanced musical study in graduate school, enter private studio teaching or launch a professional career in music. The B.A. in Education is offered for those who plan to teach in the public schools and state certification to teach is received concurrent with the granting of the degree.

Job placement in public school music teaching has remained excellent in spite of the general overall decline in the availability of teaching positions. While most other professional degree holders continue in graduate programs those who do not usually secure positions in studio teaching, church music, professional performance, and allied fields such as radio, television and the music industry.

The Music Department 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.

Many music courses and activities are open to majors and non-majors. Students may select from among College Choir, Concert Choir, Chamber Choirs, Symphonic Band, Wind Ensemble, Jazz Workshop, Jazz Ensembles, College Symphony Orchestra, Chamber Music, Opera, and Collegium Musicum.

MUSIC FACULTY

- PHILIP AGER (1965) Chairman.
Associate Professor. BA in Ed, Western Washington State College; MA, University of Washington.
- AMERICOLE BIASINI (1970) Associate Professor. BS, MS, New York State University.
- WILLIAM D. COLE (1970) Professor. BS, University of Illinois; MA, University of Washington.
- BARTON FRANK (1969) Professor. Curtis Institute of Music; BM, MM, Tulsa University.
- JEROME GLASS (1955) Associate Professor. BS, New York University; MMus, University of Southern California.
- EDWIN M. LaBOUNTY (1968) Associate Professor. AB, Yankton College; BM, MM, MusD, Indiana University.
- ROBERT JOHN McINTYRE (1969) Associate Professor. ARCT, Artist Diploma, University of Toronto; MM, Boston University.
- C. BRUCE PULLAN (1975) Associate Professor. BA, MA, Cambridge; Diploma of Ed, Oxford.
- CARLA S. RUTCHMANN (1975) Lecturer. BA, University of Northern Colorado; MM, Arizona State University; PhD, University of Washington.
- ROBERT L. SCANDRETT (1967) Associate 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.
- EVELYN HINDS WELLMAN (1960) Associate Professor. BA in Ed, MEd, Western Washington State College.
- EUGENE S. ZORO (1969) Associate Professor. BM, MM, Eastman School of Music of the University of Rochester.

*On Leave 1975-76

MUSIC PERFORMANCE

All students majoring in music must be members of a major performance group on their major instrument during each quarter of residence except the quarter in which teacher education students are enrolled in student teaching. Pianists in the Bachelor of Arts program may, under advisement, substitute up to 12 credits in Chamber Music for this requirement. Performance groups may be repeated for credit.

APPLIED PERFORMANCE PROFICIENCY

All entering students in applied instrumental or vocal private study will be expected to demonstrate their proficiency before a faculty committee to assist in their proper placement in the program. This placement audition will be arranged for all incoming students during the first week of the quarter in which the student enters the program. 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:

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 4 octaves.

VOICE—Two songs of contrasting styles demonstrating potential beauty and body of tone, innate sensitivity to pitch and rhythm.

ORGAN—Ability to play, at the piano, a Bach *CHORALE* and a Bach *TWO-PART INVENTION*.

VIOLIN—Mazas, *SPECIAL STUDIES*, opus 36, Book 1, edited by Hermann or Saenger; Handel, Corelli, Vivaldi or other sonatas. Solo pieces through 5 positions; scales 2 octaves (major and melodic minor).

VIOLA—Handel, Purcell or other sonatas; Telemann Concerto in G major or Vivaldi Concerto in E minor. Scales 2 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.

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.

DOUBLE BASS—Simandi, *NEW METHOD FOR THE DOUBLE BASS*, Book 1. Scales through half, first and second positions.

FLUTE, OBOE, CLARINET, BASSOON, SAXOPHONE, FRENCH HORN, TRUMPET—Units one and two as described in the outline of the Rubank *ADVANCED METHOD* Vol 1 by Voxman and Gower; major and minor scales through four sharps and four flats.

TROMBONE—Units one and two as described in the outline of the Rubank *ADVANCED METHOD FOR TROMBONE AND BARITONE*, Vol 1 by Voxman and Gower. Major and minor scales through four sharps and four flats.

BARITONE AND EUPHONIUM—See the requirements for Trombone.

TUBA—Units one and two as described in the outline of the Rubank *ADVANCED METHOD FOR TUBA*. Major and minor scales through four sharps and four flats.

PERCUSSION—Demonstrate ability on the snare drum and/or xylophone, or timpani, including ability to read at sight percussion parts from Class A High School Band or Orchestra Literature.

UPPER DIVISION APPLIED MUSIC

Students wishing to take upper division applied music (Music 311-316, 411-416) must have the recommendation of their applied instructor and also perform a satisfactory upper division jury examination. All major programs require some upper division credit. Information concerning repertoire and performance standards may be obtained from individual applied instructors or the Music Department Office.

Music

THEORY AND MUSIC HISTORY PLACEMENT EXAMINATION—TRANSFERS

Placement examinations are required for all incoming freshmen and transfer music students to determine their correct status in the theory and music history programs. These examinations will be given prior to the opening of the quarter in which they enroll. Students will be advised as to time and requirements at final registration. Additional information can be obtained from the Music Department Office.

CONCERT ATTENDANCE

All music majors are required to attend at least six approved concerts each quarter, with the exception of the quarter spent in supervised teaching, in order to complete their total departmental music program.

PIANO COMPETENCY

All music majors are required to pass a piano competency examination in order to complete this program. Students who enter as freshmen should 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 college.

SCHOLARSHIPS

In addition to general college scholarships, several awards are available from off-campus music organizations. For further information, consult the Music Department.

PROGRAM ADVISEMENT

All undergraduate music majors are assigned to the departmental undergraduate program adviser for scheduling and program approval. Minor approval is secured from this adviser.

BACHELOR OF ARTS

Professional Programs 108 credits

Basic Core 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 Concentrations: Performance, Composition and Music History/Literature (see area concentration requirements)
- Chamber Music (Music History/Literature concentration substitute Collegium)
- Major performing group (pianists may substitute up to 12 credits in master classes/pedagogy/accompanying/chamber music under advisement)
- Concert attendance



Major—Performance 36 credits

- Entrance by performance audition
- Applied Music: on major instrument or voice
- Pedagogy/master classes (under advisement)
- Successful completion of junior-senior recital

Major—Composition 36 credits

- Entrance by compositional accomplishment and interview
- Courses in Composition
- Applied Music
- Music 331, 333
- Successful completion of a senior recital of original compositions

Major—Music History/Literature 36 credits

- Entrance by interview
- Musical media courses (select 3)
- Music 331, 332, 333
- Applied Music
- Music 444
- Successful completion of an undergraduate thesis

BACHELOR OF ARTS IN EDUCATION

Major 74 credits

This Specialist in Music Education concentration satisfies requirements for both a major and a minor.

- 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
- Music 351
- Music 451 (elementary emphasis) or Music 462 (secondary emphasis)
- Pedagogy: Music 105, 106, 204, 205, 301, 302 plus two courses selected from Music 107, 206, 207, 303. Vocal majors may substitute 402, 403 for 105, 106; are required to take only 204, 205, 301 with the remaining 3 credits in music under advisement
- Music electives (under advisement)
- Major performing group
- Concert attendance
- Successful completion of student teaching in music

Major Elementary 45 credits plus Performance Requirement

- Musicianship: Music 131, 132, 133, 231, 232
- Music History/Literature: Music 342, 343; 341 or 344
- Education: Music 351 (for Music 350) in Elementary Teaching minor; Music 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 group as stated above for all majors
- Concert attendance
- Music 233 recommended as an elective as it is prerequisite to graduate study

Minor 28 credits

- Musicianship: Music 131, 132, 133, 231, 232
- Music History/Literature: one from Music 341, 342, 343, 344
- Methods: Music 105
- Applied Music: major performing instrument or voice, 3 credits in courses numbered 211-216 or above

Teaching Competence

Recommendation for teaching competence in music normally requires completion of the major with a grade average of 2.5 or better and departmental approval.

Supervised Teaching

Students enrolling in the 74 credit major will complete a 16 credit supervised teaching assignment in secondary or elementary music; those enrolling in the 45 credit elementary major will complete supervised teaching in elementary music and in a general elementary assignment.

Music

GRADUATE STUDY

For concentrations in music leading to the Master of Arts and Master of Education degrees, see the *Graduate Bulletin*.

COURSES IN MUSIC

- 105 CLASS VOICE AND PEDAGOGY (1)
Prerequisite: open to music majors and minors 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)
Prerequisite: open to music majors and minors only; each course prerequisite to the next. Continuing emphasis on content of Music 105 with additional emphasis on sight singing.
- 110 INTERDISCIPLINARY ART (5)
For students planning interdisciplinary art majors and those wishing to broaden both their artistic knowledge and awareness. The course is team-taught; art, drama, music and creative writing. Emphasis will be given to the interconnecting aesthetic principles of all art forms. Also listed as Art 110, Speech 110.
- 111-116 CLASS INSTRUCTION (1 ea)
(May be repeated for credit.)
111 Organ
112 Piano
113 Strings
114 Winds and Percussion
115 Voice
116 Guitar
- 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)
Prerequisite: Music 128. Continuation of Music 128 with added emphasis upon ear-training and writing skills.
- 130 INTRODUCTION TO MUSICIANSHIP (3)
Prerequisite: Music 129. Continuation of Music 129 with expansion of harmonic vocabulary and emphasis upon practical applications.
- 131, 132, 133 MUSICIANSHIP I (4 ea)
Each course prerequisite to the next. Sound sources and the nature of sound. Writing skills and use of the musical symbol: notation. Basic vocabulary of music. Formal, stylistic and historical concepts and principles from music literature: evolution of concepts, techniques and processes. The scale and melody, harmony, counterpoint; the score and the concepts of mensuration and instrumentation; the emergence of modality-tonality and resultant 20th century practices. Performance skills: rhythmic, melodic and harmonic drill, invention and dictation, keyboard skills, score reading and score construction; the impact of modern technology and cultural forces on expanding uses of non-traditional techniques, sound-sources and formal organization. Implementation through organic combination of three major activities: performance, composition and analysis. Introduction to form and forms.
- 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)
Prerequisite: Music 112; each course prerequisite to the next. Functional techniques for utilizing the piano as a tool for musical study and preparation for piano competency examinations.
- 204 BRASS TECHNIQUES AND PEDAGOGY (1)
Basic principles and techniques of playing and teaching brass instruments.
- 205 CLARINET TECHNIQUES AND PEDAGOGY (1)
Basic principles and techniques of playing and teaching clarinet.
- 206 PERCUSSION TECHNIQUES AND PEDAGOGY (1)
Basic principles and techniques of playing and teaching percussion instruments.
- 207 WOODWIND TECHNIQUES AND PEDAGOGY (1)
Prerequisite: Music 205 or equivalent. Basic principles and techniques of playing and teaching flute, oboe, and bassoon.
- 211-216a,b,c,d INDIVIDUAL INSTRUCTION (1-4)
Prerequisite: open to music majors and minors only; minimum applied performance audition. One-half hour private instruction for "a" courses, one credit; one hour instruction per week for "b,c,d" courses, two to four credits ("b,c,d" courses require permission of area coordinator).
211a,b,c,d Organ
212a,b,c,d Piano
213a,b,c,d Strings
214a,b,c,d Winds and Percussion
215a,b,c,d Voice
216a,b,c,d Classical Guitar
- 219 BEGINNING CLASS GUITAR (1)
Strumming, chord progressions and guitar tablature reading for the beginning guitar player.

- 221 COLLEGE CHOIR (2)
Prerequisite: 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)
Open to all students with band experience.
- 229 JAZZ WORKSHOP (2)
Prerequisite: by audition. Performance and interpretation of contemporary jazz in an ensemble situation.
- 231, 232, 233 MUSICIANSHIP II (4 ea)
Prerequisite: Music 133; each course in this series prerequisite to the next. Sound sources and the nature of sound. Writing skills and use of the musical symbol: notation. Basic vocabulary of music. Formal, stylistic and historical concepts and principles from music literature: evolution of concepts, technics and processes. Performance skills: rhythmic, melodic and harmonic drill, invention and dictation, keyboard skills, score reading and score construction; the impact of modern technology and cultural forces on expanding uses of non-traditional technics, sound-sources and formal organization. Implementation through organic combination of three major activities: performance, composition and analysis. Advanced study of traditional forms and of new musical practices which deny older formal and aesthetic formulae in the making of music.
- 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.
- 251 MUSICAL THEATER IN EUROPE AND AMERICA (3)
Open to all students. Historical and cultural development of musical theater in England and America with emphasis on the late and present state of the art form.
- 252 POPULAR MUSIC SINCE 1965 (3)
Open to all students. Personalities, composers, entrepreneurs and musical content of America's popular music and its interface between the musical/cultural/social scene.
- 253 UNDERSTANDING MUSICAL SOUNDS AND STYLES BY EAR (3)
Open to all students. A course without prerequisite musical knowledge that will investigate how musical instruments operate and the sound they produce, as well as how composers deal with these sounds to write their own particular style of music. The course intends to establish an aural basis for musical understanding.
- 280 ELEMENTARY COMPOSITION (1-2)
Prerequisite: permission of instructor. Elementary craft of melodic, harmonic, rhythmic, instrumental and contrapuntal writing; participation in concomitant composition seminars. May be repeated for credit.
- 300 SPECIAL PROBLEMS (1-3)
Individual study under departmental supervision.
- 301, 302, 303 STRING TECHNIQUE AND PEDAGOGY (1 ea)
Each course prerequisite to the next. Principles and techniques of playing and teaching string instruments.
- 307 BASIC CONDUCTING (3)
Prerequisite: Music 233. Music 307 prerequisite to 308 and 309. Basic conducting, conducting techniques, score reading and interpretive analysis.
- 308 INSTRUMENTAL CONDUCTING (3)
Prerequisite: Music 307. Advanced instrumental techniques, score reading, interpretive analysis and rehearsal techniques.
- 309 CHORAL CONDUCTING (3)
Prerequisite: Music 307. Advanced choral techniques, score reading, interpretive analysis and rehearsal techniques.
- 311-316a,b,c,d INDIVIDUAL INSTRUCTION (1-4)
Prerequisite: open to music majors and minors only; upper-division examination. One-half hour private instruction for "a" courses, one credit; one hour instruction per week for "b,c,d" courses, two to four credits ("b,c,d" courses require permission of area coordinator).
311a,b,c,d Organ
312a,b,c,d Piano
313a,b,c,d Strings
314a,b,c,d Winds and Percussion
315a,b,c,d Voice
316a,b,c,d Classical Guitar
- 328 IMPROVISATION (2)
Prerequisite: demonstrated competence by audition of all major and minor scales on an instrument. Jazz improvisation laboratory, lecture with emphasis on practical application through performance.
- 330 HARMONIC STRUCTURE AND FORM (3)
Traditional harmonic usage emphasizing harmonic analysis and the function of harmony in musical forms.
- 331, 332, 333 COUNTERPOINT (3 ea)
Prerequisite: Music 233. Vocal and instrumental counterpoint from the 16th through the 19th centuries in theory and practice.
- 337 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.
- 339 PIANO TECHNOLOGY (3)
Techniques, equipment and its use for the tuning and maintenance of pianos. Laboratory experience stressed. Students must supply basic laboratory tools. Summers only.
- 341 HISTORY OF MUSIC TO 1600 (4)
Prerequisite: Music 232. Main styles, forms, terminology and composers up to 1600. Individual research projects.

Music

- 342 HISTORY OF MUSIC 1600-1750 (4)
Prerequisites: Music 232. Main styles, forms, terminology and composers from 1600-1750. Individual research projects.
- 343 HISTORY OF MUSIC 1750-1900 (4)
Prerequisite: Music 232. Main styles, forms, terminology and composers from 1750 to 1900. Individual research projects.
- 344 HISTORY OF MUSIC 1900 TO PRESENT (4)
Prerequisite: Music 232. Main styles, forms, terminology and composers from 1900 to present. Individual research projects.
- 345 MUSIC HISTORY PERSPECTIVES (4)
Prerequisite: 343 or equivalent. Music history from the time of the Ancient Greeks to the present day reviewed in terms of historical periods, musical styles, forms and representative composers.
- 347/348/349 PIANO HISTORY AND PEDAGOGY (3 ea)
Prerequisite: minimum of one year applied piano. History and pedagogy of piano including teaching materials, pacing, technique and style.
- 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)
Prerequisite: Music 232 and music major or minor. Teaching techniques, materials, and organization of the elementary music program; observations and laboratory experience.
- 397d IMPROVISATION AND SCORING (2)
Prerequisite: knowledge of basic theory. Practical application of basic chords, scales, progressions in improvisatory settings. Fundamentals of scoring large and medium sized jazz organizations. (Offered spring, 1974.)
- 400 SPECIAL PROBLEMS (1-3)
Individual study under departmental supervision.
- 402 VOCAL PEDAGOGY (1)
Prerequisite: 1 year of private voice study or permission of instructor. Vocal problems and their corrections; suitable collections of repertoire.
- 403 VOCAL PEDAGOGY (1)
Prerequisite: Music 402. Vocal problems and their corrections; suitable collections of repertoire.
- 404 VOCAL PEDAGOGY (1)
Prerequisite: Music 403. Vocal problems and their corrections; suitable collections of repertoire.
- 405 VOCAL TECHNIQUE AND PEDAGOGY (2)
Vocal problems and their corrections; suitable collections of repertoire for young soloists.
- 406 PRINCIPLES OF PRONUNCIATION FOR VOCALISTS (2)
Principles of pronunciation and diction relative to Italian, French, and German texts in vocal music.
- 411-416a,b,c,d INDIVIDUAL INSTRUCTION (1-4)
Prerequisite: open to music majors and minors only; upper-division examination. One-half hour private instruction for "a" courses, one credit; one hour instruction per week for "b,c,d" courses, two to four credits ("b,c,d" courses require permission of area coordinator).
- 411a,b,c,d Organ
412a,b,c,d Piano
413a,b,c,d Strings
414a,b,c,d Winds and Percussion
415a,b,c,d Voice
416a,b,c,d Classical Guitar
- 417a SYMPHONY ORCHESTRA (1)
Prerequisite: permission of instructor. Rehearsal of standard symphonic repertoire leading to a public concert.
- 417b SEMINAR IN CHORAL DIRECTION AND LITERATURE (12)
Techniques of choral development, tradition, style, direction, repertoire research, conducting techniques, musical manuscripts and instrument collections in England and Continental Europe.
- 418 PIANO PEDAGOGY (3)
Open to all students taking applied piano (312 or higher). A study of the basic concepts involved in piano pedagogy with special emphasis on beginning study as well as advanced pedagogy involving technique, style and interpretation.
- 419 PIANO PEDAGOGY (3)
Open to all piano students and private teachers. A study of the basic concepts involved in piano pedagogy with special emphasis on beginning study as well as advanced pedagogy involving technique, style and interpretation. Summers only.
- 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. Summers only.
- 421 CONCERT CHOIR (2)
Prerequisite: by audition. Selected group experience, vocal ability, reading skill, musicianship and interest in serious choral music considered for membership.
- 422 COLLEGE SYMPHONY ORCHESTRA (2)
Prerequisite: by audition; open to all students who qualify.
- 433 WIND ENSEMBLE (2)
Prerequisite: 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.
- 426 APPLIED CHAMBER MUSIC (2)
Open to string, woodwind, piano, and voice performers by permission of instructor.
- 427a,b,c,d CHAMBER VOCAL ENSEMBLES (2 ea)
May be repeated for credit. Prerequisite: permission of instructor.
- 427a Early Music Group
Voices with early instruments performing music prior to 1600.
- 427b Madrigal Ensemble
Secular literature of 16th century.
- 427c Workshop Choir
Experimental vocal music including popular styles and jazz. Audition required.
- 427d Chamber Choir
Literature for small vocal ensemble without period restrictions. Opportunities for student direction.
- 428 JAZZ ARRANGING (3)
Prerequisite: Music 233. Composition and arranging in contemporary idiom projects, lecture and discussion.
- 429 JAZZ ENSEMBLES (2)
Prerequisite: by audition. Advanced performance and interpretation of contemporary jazz in an ensemble situation; recent developments in the idiom; performance of student compositions and arrangements.
- 431 ORCHESTRATION (3)
Orchestration, with special reference to the needs of the instrumental director.
- 432 ANALYTICAL TECHNIQUES: 20th CENTURY MUSICAL PRACTICES (3)
Isolated phenomenon from various composers which have generated the major trends of the 20th century.
- 433 ANALYTICAL TECHNIQUES: LATE 19th CENTURY MUSICAL STYLES AND PRACTICES (4)
Techniques and practices unique to the late 19th century and their historical precedents in the works of Beethoven and Berlioz.
- 435, 436 COMPOSITION (3 ea)
Prerequisite: Music 233. Writing pieces in part forms, variation form, and sonata form, for solo instruments, voice, and small ensembles.
- 438 JAZZ ANALYSIS (3)
Prerequisite: Music 233 and 328. An historical and analytical study of jazz medium based on the Berklee Jazz in the classroom materials, with supplementary materials on performance styles of the major jazz contributors.
- 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)
Prerequisite: Music 343. Development and literature of important musical media from their origin to the present.
- 443a Choral Music
- 443b Solo Song
- 443c Opera
- 443d Keyboard Music
- 443e Chamber Music
- 443f Symphonic Music
- 443g Concerto
- 443h Symphonic Music in the 20th Century
- 444, 445 NOTATION (3 ea)
Reading and interpreting early, contemporary or other extant systems.
- 445b CURRENT TRENDS IN MUSIC EDUCATION PRACTICES (2-3)
Techniques, activities and materials in a program of music development for grades K-6. May be repeated with different topics.
- 445c CURRENT TRENDS IN MUSIC EDUCATION PRACTICES (2-3)
Techniques, activities and materials in a program of music development for middle school and high school. May be repeated with different topics.
- 451 ADVANCED METHODS FOR ELEMENTARY SCHOOLS (3)
Prerequisite: Music 350 or 351. Introduction to Kodaly method; advanced teaching techniques, activities, materials and literature for elementary music teaching.
- 454 STRING TECHNIQUES AND MATERIALS (2)
Summers only.
- 455 BRASS AND PERCUSSION TECHNIQUES AND MATERIALS (2)
- 456 WOODWIND TECHNIQUES AND MATERIALS (2)
- 458 CHAMBER MUSIC READING (6)
Prerequisite: 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.
- 459 COACHING SMALL ENSEMBLES (3)
Organization, coaching, and repertoire for small vocal and instrumental ensembles of high school students.
- 460 MARCHING BAND TECHNIQUES (3)
Marching band organization, parade marching, and show routine.
- 462 SECONDARY SCHOOL MUSIC ADMINISTRATION (3)
Curriculum, organization, problems and administration of secondary music programs.

Music

- 463 MUSIC IN GENERAL EDUCATION (3)
Organization, content, literature, and methods of teaching the structure and understanding of music in secondary school humanities courses, music classes, and performance groups.
- 465 GENERAL MUSIC WORKSHOP (2)
Offered summers only. May be repeated for credit.
- 466 STRING TEACHER WORKSHOP (2)
Offered summers only. May be repeated for credit.
- 467 BIRCH BAY BAND MUSIC WORKSHOP (2)
Offered summers only. May be repeated for credit.
- 468 CHORAL MUSIC WORKSHOP (2)
Offered summers only. May be repeated for credit.
- 469 INSTITUTE FOR PIANO TEACHERS (2)
Focuses on piano pedagogy, musicianship, repertoire recital preparation and teaching materials with particular emphasis on the elementary and intermediate areas of piano advancement. Offered summers only.
- 470 BRASS SYMPOSIUM (3)
A concentrated one-week symposium dealing with brass pedagogy, teaching materials, and analysis of performance problems. Demonstration and discussion of the fundamentals of tone production, intonation, technical advancement and teaching materials will be conducted by rationally recognized performers as well as by members of Western's faculty. Offered summers only. May be repeated for credit.
- 470a WOODWIND SYMPOSIUM (2)
A concentrated one-week symposium dealing with woodwind pedagogy, teaching materials and analysis of performance problems. Demonstrations and discussion of tone production fundamentals, intonation problems, technical advancement and reed adjustment. Sessions covering all woodwind instruments will be conducted by noted guest consultants and teaching and ensemble materials will be covered. Offered summers only. May be repeated for credit.
- 470b PERCUSSION SYMPOSIUM (2)
A concentrated one-week symposium dealing with percussion pedagogy, teaching and ensemble materials and analysis of performance problems. Demonstration and discussion of percussion performance techniques. Sessions covering pitched and non-pitched percussion instruments will be conducted by a noted guest consultant. Offered summers only. May be repeated for credit.
- 500 SPECIAL PROJECTS (1-3)
Individual study under departmental supervision.
- 501 INSTRUMENTAL CONDUCTING AND REHEARSAL TECHNIQUES (3)
Advanced work in baton technique, interpretation, score preparation, and rehearsal technique.
- 502 CHORAL CONDUCTING AND LITERATURE (3)
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.
- 504 RESEARCH TECHNIQUES IN MUSIC (4)
Prerequisite: Music 503. General research methods in music with concentrated study and research techniques related to the thesis area.
- 511 INDIVIDUAL INSTRUCTION — ADVANCED ORGAN (4)
Prerequisite: 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 (4)
Prerequisite: permission of the department. In addition to regularly scheduled private lessons, a public performance will be expected each quarter.
- 513 INDIVIDUAL INSTRUCTION — ADVANCED STRINGS (4)
Prerequisite: 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. Participation in a major performing group.
- 514 INDIVIDUAL INSTRUCTION — ADVANCED ORCHESTRAL WINDS AND PERCUSSION (4)
Prerequisite: 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. Required participation in a performance group.
- 515 INDIVIDUAL INSTRUCTION — ADVANCED VOICE (4)
Prerequisite: permission of the department. In addition to regularly scheduled private lessons, a public performance will be expected each quarter.
- 516, 517, 518 REPERTOIRE LITERATURE CLASS (2 ea)
Study and performance of solo and ensemble literature appropriate to the major instrument or voice; musical style, interpretation and technique.
- 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.
- 533 **ADVANCED COUNTERPOINT (4)**
 Prerequisite: Music 333. Writing and analytical study of contrapuntal forms and literature of the 16th to the 18th centuries.
- 534 **COMPOSITION (4)**
 Prerequisite: Music 436. Composition in the classic forms for solo instruments or small ensembles.
- 535 **COMPOSITION (4)**
 Prerequisite: Music 436. Composition for solo voice accompanied by piano or small ensembles; composition of choral works both a capella and accompanied.
- 536 **COMPOSITION (4)**
 Prerequisite: Music 436. Composition for large instrumental groups: band, orchestra, or a combination of these with chorus, voice, or solo instrument.
- 541, 542, 543, 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 (4)**
 Prerequisite: 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.
- 548 **THE ORGAN MUSIC OF J. S. BACH (3)**
 A study of the organ music of Bach with lecture recitals. Student participation in performances would be solicited but not required. (May substitute for required musical media courses in graduate programs.) Summers only.
- 552 **SUPERVISION OF ELEMENTARY SCHOOL MUSIC (3)**
 Advanced work in methods, materials, organization, and supervision of the music program. Summer only.
- 554 **DIRECTED READINGS AND RESEARCH (3)**
 Seminar discussion of areas of needed research in music education. To be taken concurrently with Educ 501.
- 555 **CURRICULUM FOR PERFORMANCE GROUPS (3)**
 Content, literature, sequence, teaching techniques, and demonstration used to meet the broad aims of music in general education.
- 690 **THESIS (4-6)**
 Students in the composition area of the Master of Arts 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 recital.





PHILOSOPHY

College of Arts and Sciences / Western Washington State College



Philosophy

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, or in many cases may be taken to satisfy general education requirements of the College.

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 them with profit, and the faculty invites interested students to join them in this pursuit.

PHILOSOPHY FACULTY

- STANLEY M. DAUGERT (1962) Chairman.
Professor. AB, MA, PhD, Columbia University.
THOMAS E. DOWNING (1968) Assistant Professor. AB, Wayne State University; PhD, Stanford University.
A. HUGH FLEETWOOD (1962) Associate Professor. AB, MA, PhD, The University of Michigan.

HALLDOR C. KARASON (1949) Associate Professor of Education and Philosophy. BA in Ed, Western Washington State College; MA, PhD, University of Washington.

*PHILLIP MONTAGUE (1966) Associate Professor. BS, Loyola University; PhD, Stanford University.

PAUL J. OLSCAMP (1975) Professor of Philosophy and President of the College. BA, MA, University of Western Ontario; PhD, University of Rochester.

RICHARD L. PURTILL (1962) Professor. BA, MA, PhD, University of Chicago.

**On Sabbatical Leave 1975-76*

BACHELOR OF ARTS

Major 50 credits

- Philosophy 102, 111, 112
- Philosophy 202
- Philosophy 303, 304, 306, 310
- One course from Philosophy 305, 307, 308
- Philosophy 404, 410, 420, 425
- Electives under departmental advisement

Minor 25 credits

- Philosophy 102, 111, 112, 202, 310
- Electives under departmental advisement

TEACHER EDUCATION

Minor 25 credits

- Philosophy 102, 111, 112, 202, 310
- Electives under departmental advisement

DEPARTMENTAL HONORS

A philosophy major who wishes to graduate "with honors" must meet the general requirements for all honors students. In addition, he must take advanced courses in philosophy beyond the major. He must achieve a grade average of 3.3 in philosophy courses.

COURSES IN PHILOSOPHY

- 102 INTRODUCTION TO LOGIC (3)
Introduction to the techniques of formal reasoning. Acceptable general education alternative to Math 151.
- 107 LOGICAL THINKING (3)
An aid to clear, critical, responsive thinking and communication, 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: PHILOSOPHIC 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.
- 197a PHILOSOPHY AND FANTASY (3)
Offered fall, 1974. (See Phil 207.)
- 202 INTERMEDIATE LOGIC (4)
Prerequisite: Phil 102. Systems of logic and their application to philosophical problems.
- 207 PHILOSOPHY AND FANTASY (3)
Examination of some philosophical themes in the imaginative writing of C.S. Lewis, J.R.R. Tolkien and others.
- 215 INTRODUCTION TO EXISTENTIALISM (3)
Prerequisite: Phil 111. Major philosophers of the existentialist school, philosophical problems and answers as seen by existentialism.
- 301 MORALITY, MEDICINE, AND THE LIFE SCIENCES (3)
Prerequisite: 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)
Further development of the tools and techniques of logic; applications in mathematics, science, and philosophy.
- 303 PHILOSOPHY OF LANGUAGE (3)
Prerequisite: Phil 202. The nature of symbols; notions of synonymy, meaning, and reference; semantical and syntactical analysis applied to natural and artificial languages.
- 304 HISTORY OF PHILOSOPHY: ANCIENT TO EARLY MIDDLE AGES (4)
Prerequisites: Phil 102 or 202 and one additional philosophy course. Great philosophical thinkers from the early Greeks to the early Middle Ages; special attention to Plato and Aristotle.
- 305 HISTORY OF PHILOSOPHY: MIDDLE AGES TO RENAISSANCE (4)
Prerequisites: Phil 102 or 202 and one additional philosophy course. 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.
- 306 HISTORY OF PHILOSOPHY: RENAISSANCE TO THE AGE OF REASON (4)
Prerequisites: Phil 102 or 202 and one additional philosophy course. Great philosophical thinkers including Descartes and the rationalists, Locke and the empiricists.
- 307 HISTORY OF PHILOSOPHY: THE NINETEENTH AND TWENTIETH CENTURIES (4)
Prerequisites: Phil 102 or 202 and one additional philosophy course. Kantian and post-Kantian philosophy with some attention to other significant movements such as utilitarianism, early existentialism, and pragmatism.
- 308 AMERICAN PHILOSOPHY (3)
Prerequisites: Phil 102 or 202 and one additional philosophy course. Main currents in American philosophical thought from Jonathon Edwards to the present.
- 310 THEORY OF KNOWLEDGE (3)
Prerequisites: Phil 202 and one course numbered above 200. The attempt to understand the possibility, nature, origins, and limits of knowledge; problems and concepts.
- 330 SOCIETY, LAW AND MORALITY (3)
Concepts and principles involved in analysis and appraisal of social institutions with attention to natural rights, natural laws, social utility, social function and justice.
- 350 ORIENTAL PHILOSOPHY AND RELIGION (3)
Prerequisite: upper-division standing. Major philosophical and religious traditions of the Orient.
- 400 CONFERENCE IN PHILOSOPHY (2-5)
Prerequisite: permission of instructor. Special problems for individual students.
- 404 SEMINAR IN PHILOSOPHY (3)
Prerequisite: permission of instructor. Concentration upon the thought of an individual philosopher, a particular problem, or a movement.

Philosophy

- 405 **PHILOSOPHY OF ART AND CRITICISM (3)**
Philosophical study of beauty and of the creation, appreciation, and criticism of works of art.
- 410 **METAPHYSICS (3)**
Prerequisites: Phil 202 and one additional course numbered above 200. Philosophical issues surrounding such notions as particular and universal, space, time, existence, substance and attribute; views of contemporary and traditional philosophers.
- 411 **PHILOSOPHY OF SCIENCE (3)**
Prerequisite: permission of instructor. Varying theories as to the nature, presuppositions, limitations and interrelations of the sciences.
- 415 **PHILOSOPHY, LAW AND EDUCATION (3)**
Prerequisite: juniors require instructor's approval. Philosophical background and justification for legal (chiefly civil rights) issues affecting education.
- 420 **ETHICAL THEORY (3)**
Prerequisite: Phil 112. Critical analysis of writings of several major theorists in ethics—ancient, modern, and contemporary—and their treatment of ethical problems.
- 425 **PHILOSOPHY OF MIND (3)**
Prerequisites: Phil 202 and one additional course numbered above 200. The nature of mind and the meaning of such concepts as intelligence, attention, will, emotion, and feeling and imagination.
- 460 **PHILOSOPHY OF HISTORY (3)**
Prerequisite: seven credits in philosophy. The idea of history; concepts and categories allied to it—process, permanence and change, cause, time.
- 483 **SOCIAL CHANGE AND THE MORAL ORDER IN LITERATURE (4)**
Also offered as Eng 463 and Anth 483.
- 515 **PHILOSOPHY OF EDUCATION (3)**
Prerequisite: seven credits in philosophy. The idea of history; concepts and categories allied to it—process, permanence and change, cause, time.



PHYSICAL EDUCATION/ HEALTH EDUCATION

College of Arts and Sciences / Western Washington State College



Physical Education

The Department of Physical Education offers a wide variety of activities for those students interested in the development of life-time sports skills and/or the promotion of personal fitness and physical development. In addition to team sports and individual and dual activities, classes are offered in several outdoor pursuits; including skiing, mountaineering, sailing, horsemanship, and ice skating.

All students are eligible to participate in intramural sports, dance, and swimming programs. An extensive intercollegiate athletic program is available for both men and women students.

For students planning a professional career in physical education, health education or recreational leadership, several major and minor concentrations are offered which may lead to rewarding careers with either educational agencies or in private enterprise.

The Arts and Sciences major in physical education offers career opportunities through coaching, sports writing, dance, pre-physical therapy, and business sports options.

PHYSICAL EDUCATION FACULTY

- MARGARET H. AITKEN (1946) Chairman. Professor. BA, University of Washington; MA, EdD, Teachers College, Columbia University.
- EVELYN E. AMES (1964) Assistant Professor. BS, University of Nevada; MS, Washington State University; PhD, University of Maryland.
- M. CHAPPELLE ARNETT (1960) Associate Professor. BS, Centenary College; MS, Purdue University; EdD, University of Missouri.
- PATRICIA A. FRIEDLAND (1972) Assistant Professor. BS, Oregon State College; MS, University of Oregon.
- LYNDA M. GOODRICH (1973) Assistant Professor. BA in Ed, MA, Western Washington State College.
- MONICA C. GUTCHOW (1960) Assistant Professor. BS, University of Oregon; MFA, University of North Carolina Women's College.
- ALTA J. HANSEN (1961) Associate Professor. BS, Pacific University; MS, PhD, University of Oregon; BS in PT, University of California Medical Center.

- 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.
- CHARLES R. RANDALL, JR. (1962) Associate Professor. BA, Eastern Washington State College; MA, Washington State University.
- RALPH A. VERNACCHIA (1973) Assistant 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) Assistant Professor. Teacher Training - Homerton College, Cambridge, England; Dip in Ed, University of Birmingham; MEd, Western Washington State College.

BACHELOR OF ARTS IN EDUCATION

Physical Education Majors

Physical education major programs are available for men and women students. Options within the program offer a variety of opportunities for students to prepare for secondary, elementary, or for K-12 programs. In addition, the dance/gymnastics option is available for those interested in teaching secondary school.

The physical education options designated as Option I: K-12 Specialist; Option II: Secondary; Option III: Elementary, have similar requirements and courses selected from four core areas. Core areas are as follows: Core A: Professional Activities; Core B: Scientific Foundations; Core C: Professional Curriculum, Methods, Practicum; Core D: Professional-Administrative, Evaluation, First Aid, Athletic Injuries.

Students should first select an option as a major; then in each of the four core areas, a number of credits to be taken in each core are indicated. Students select, *under advisement*, courses which they will take from each of the four areas. *Selection of courses must be arranged with a departmental adviser.* All students are encouraged to complete a minor to be granted academic competency in another teaching area.

Physical Education Majors: Options I, II, III

- Option I: K-12 Specialist; minimum 57 credits.
- Option II: Secondary; minimum 47 credits (supporting course: Biology 348).
- Option III: Elementary; minimum 42 credits.

Core Areas

Core A: Professional Activities

- At least one course must be taken from each of the following areas: team sports, individual and dual sports, dance, aquatics. In addition, major students (Options I,II) must show advanced proficiency, 2 credits, in intercollegiate activities, performance activities, and/or officiating. It is recommended that students take additional credits in Outdoor Pursuits (PE 155, 157, 158 or 159, 160, 161 or 164, 166)
- Professional Activities Courses: 203, 208, 209, 211, 223, 232, 234, 236, 238m, 241, 242m or w, 244m or w, 245m or w, 247, 250, 251m or w, 254, 256m or w
- Options I and II: 14 credits and a minimum of 10 different professional activity courses
- Option III: 8 credits and a minimum of 6 different professional activity courses

Competency above the beginning level must be established before taking courses from the professional sequence. Beginning courses in the above areas cannot be applied to the major and minor requirements.

Core B: Scientific Foundations

- Courses: 201, 202, 302, 303, 307, 407
- Options I, II, III: 15-19 credits

Core C: Professional – Curriculum, Methods, Practicum

- Courses: 311, 313, 326, 401, 402, 485
- Option I: 15-17 credits
- Option II: 8 credits
- Option III: 14-17 credits

Core D: Professional – Administration, Evaluation, Athletic Injuries, First Aid

- Courses: 304, 403, 404, 410, 441, 490, 498
- Health Education 252
- Option I: 12 credits
- Option II: 8 credits
- Option III: 5 credits

Dance/Gymnastics Option: Secondary

48 credits plus supporting courses

- Professional Activities: 8 credits from PE 209, 211, 223, 251w and other activities under advisement

- Activity and Technique Classes: PE 123, 153, 191w, 346w, and 2 credits under advisement
- PE 201, 202, 302, 303, 307, 313 or 401
- 13 credits under advisement
- Supporting course: Biology 348

Teaching Competence

Recommendation for teaching competence for physical education normally requires completion of a major or an augmented minor with a minimum grade average of 2.5. Participation in intramural activities is required of all majors and minors during four quarters of the first two years.

Minor—Physical Education Secondary 25 credits

- 14 credits from the professional activity sequence
- 5 credits selected from PE 201, 202, 302, 303, or 407
- PE 304 or Health Ed 252, PE 307, 401

Minor—Physical Education Elementary 25 credits

- 7 credits: Professional Activity Sequence
- 5 credits: PE 201, 202, 302, 303, 307
- 7-9 credits: PE 311, 326, 313, 403
- Health Ed 252
- 2-3 credits under advisement

Minor—Athletic Coaching (men and women)

25-28 credits

- 8 credits from coaching courses: PE 380, 381, 382, 383, 384, 385, 386, 387
- PE 304, 491 and 6 credits from PE 301, 307, 406, 410, 441, 498
- 2 credits from officiating courses: PE 341, 342, 343, 344, 345, 346
- 3-6 credits from PE 208, 280, 411, 485, and Health Ed 252

Concentration of study in one sports area is recommended with additional participation in activity classes and intercollegiate teams in other sports.

Physical Education

Minor—Health Science 25 credits

Health Ed 252, 350, 447, 450 or 449
Home Economics 150
Biology 348, 349
Electives under departmental advisement

Minor—Dance 25 credits

- PE 122, 126, 326
- 16 credits under advisement
- Electives under advisement

Minors must plan, under departmental advisement, to take additional course work to attain teaching competency.

BACHELOR OF ARTS (MEN AND WOMEN)

Major—Physical Education 85-90 credits

The Arts and Sciences physical education major provides concentrated study of the concepts and skill of human movement, a study of man engaging in motor performance in his daily life and in other motor performances yielding aesthetic values or serving as an expression of his physical and competitive nature. The major is career oriented to prephysical therapy, research and graduate study, recreational leadership or professional roles of coaching or writing in sports.

The major requires demonstrated competency in a number of professional activities, a background knowledge in the scientific foundations of human movement and the cultural implications of sport in society, and an elective core selected as to the individual's professional goals.

85 credits, selected as follows:

- Professional activities and skill competencies: select 15 hours from professional activities PE 203 through 256; select 3 credits from PE 155 through PE 167

- Scientific foundations of human movements: select 25 credits from PE 201, 202, 302, 301, 303, 307, 402, 485, 490. Biology 348-49 should be included as part of general college requirement
- Socio-cultural aspects of sports and physical education: select 20 credits from PE 225, 407, 309, 310, 441, 491
- Specialization area: select 24-35 credits from one of the following specializations:
 - Coaching of Sports: PE 341 through 346, PE 380 through 387; PE 406, 410
 - Journalism: complete the journalism minor, see English Department section of this catalog
 - Dance: complete dance minor
 - Recreation and Park Management Option: completion of Recreation and Park Management minor, see Interdepartmental section of this catalog
 - Pre-Physical Therapy: see requirements listed in the Professional Transfer Programs section of this catalog
 - Business Administration: complete the business administration minor, see the Economics and Business Department section of this catalog

Minor—Physical Education 24-30 credits

- 8-10 credits from professional activities PE 203-256
- 8-10 credits from scientific foundations: PE 201, 202, 301, 302, 303, 307, 402, 485, 490
- 8-10 credits from socio-cultural aspects: PE 225, 407, 309, 310, 441, 491

Minor—Athletic Coaching (men and women)

25-28 credits

- 8 credits from coaching courses: PE 380, 381, 382, 383, 384, 385, 386, 387
- PE 304, 491 and 6 credits from PE 301, 307, 406, 410, 441, 498, 491
- 2 credits from officiating courses: PE 341, 342, 343, 344, 345, 346, 347
- 3-6 credits from PE 208, 380, 411, 485, and Health Ed 252

Concentration of study in one sports area is recommended with additional participation in activity classes and intercollegiate teams in other sports.

Minor—Dance 25 credits

- PE 122, 126, 128, and 13 dance credits under advisement
- Philosophy 405
- 6 credits under departmental advisement

Minor—Health Science 25 credits

- Health Ed 350, 447
- Biol 348-349, Home Econ 150
- 6 credits selected under departmental advisement

*Major Concentration—
Recreation and Park Management*

See Interdepartmental Programs section for detailed requirements.

Minor—Recreation and Park Management

See Interdepartmental Programs section for detailed requirements.

GRADUATE STUDY

For concentrations in physical education leading to the Master of Education degree, see *Graduate Bulletin*.

ACTIVITIES COURSES

Activities courses, with the exception of varsity sports, may not be repeated for credit. Courses marked "m" are for men students only; those marked "w" are for women only.

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)

- 101 Adapted Physical Education
- 102 Conditioning
- 103 Jogging
(repeatable to a maximum of 3 credits)
- 108 Weight Training
(repeatable to a maximum of 3 credits)

110 LIFETIME PHYSICAL ACTIVITY PLANNING (2)

An introduction to planning for lifetime physical activity and recreation. The course is divided into two parts: (1) Individual appraisal of interests, skills, fitness levels with guideline for selection and participation in an individualized activity program such as activities—jogging, swimming, cycling, and weight training; relaxation techniques, weight control. (2) Lecture/slide/film presentation on opportunities in and requirements of the following activities: Outdoor recreation—backpacking, mountain climbing, ski touring, skiing, sailing. Sports—handball, racquetball, squash. Dance—folk and ethnic. Other activities—judo, karate, kendo, yoga.

111-119 AQUATICS (1 ea)

- 112 Beginning Swimming
(For non-swimmers.)
- 113 Intermediate Swimming
Prerequisite: PE 112 or ability to swim twenty-five yards and support self in deep water.
- 114 Advanced Swimming
Prerequisite: PE 113 or ability to swim 100 yards with one stroke and to use a variety of other strokes.
- 115 Aquatic Art
Prerequisite: PE 114 or equivalent.
- 116 Advanced Aquatic Art
- 118 Scuba Diving (2 credits)
Prerequisite: student must pass swim test. (The student pays cost of basic equipment.)

120-129 DANCE (1 ea)

- (See Speech Department for additional dance offerings.)
- 120 Beginning Social Dance
 - 121 Intermediate Social Dance
 - 122 Beginning Folk and Square Dance
 - 123 Intermediate Folk and Square Dance
 - 125 Modern Dance
 - 126 Intermediate Modern Dance
 - 128 Ballet I
 - 129 Ballet II

130-139 DUAL SPORTS (1 ea)

- 130 Beginning Handball
- 131 Beginning Squash
- 132 Beginning Badminton
- 133 Intermediate Badminton
- 134 Fencing
- 135 Intermediate Fencing
Prerequisite: PE 134 or equivalent.
- 136 Beginning Tennis
- 137 Intermediate Tennis
- 138m Beginning Wrestling
- 139 Beginning Racketball
The student furnishes equipment for PE 130, 131, 136, 137, 139.

140-149 TEAM SPORTS (1 ea)

- 141w Field Hockey
- 142m,w Basketball
- 143m,w Softball
- 144m,w Speedball and Soccer
- 145m,w Volleyball
- 148 Lacrosse

Physical Education

150-169 INDIVIDUAL SPORTS (1 or 2 ea)

- 150 Archery
- 151m,w Gymnastics and Tumbling
- 152 Beginning Bowling
(Bowling alley fee, \$8.)
- 153 Intermediate Gymnastics
Prerequisite: PE 151m or w or equivalent.
- 154 Golf
- 155 Ski Touring (2)
- 156m,w Track and Field
- 157 Beginning Skiing
- 158 Intermediate Skiing
- 159 Advanced Skiing
- 160 Sailing and Canoeing
Prerequisite: swimming test.
- 161 Mountain Climbing (2)
- 162 Basic Horsemanship
- 163 English or Western Equitation
Prerequisite: PE 162.
- 165 Bait and Fly Casting
- 166 Ice Skating
- 167 Bicycling (1)
- 168 Fundamental Karate Principles (1)
- 169 Judo (1)

The student enrolling in 157, 158, 159, 160, 161, 162, 163, 166 pays cost of transportation and individual instruction. Students in 157, 158, 159, 161, 165, 166, 167 also furnish own equipment.

170 HIKING AND ALPINE TRAVEL (2)

180-193 INTERCOLLEGIATE SPORTS (1 ea)

- 180m Intercollegiate Football
- 180w Intercollegiate Field Hockey
- 181m,w Intercollegiate Basketball
- 182m Intercollegiate Baseball
- 183m,w Intercollegiate Track and Field
- 184m Intercollegiate Wrestling
- 185m Intercollegiate Golf
- 186m,w Intercollegiate Tennis

- 188m Intercollegiate Swimming
- 189m Intercollegiate Cross Country
- 190m Intercollegiate Crew
- 191w Intercollegiate Gymnastics
- 192w Intercollegiate Volleyball
- 193w Intercollegiate Badminton

197f KAYAKING (1)

(Winter, 1975, only.)

199 SPORTS CLINIC (2)

Participation in a week workshop in one of the following sports: basketball, gymnastics, track and field, volleyball, or wrestling. Repeatable for a maximum of 6 credits.

PROFESSIONAL COURSES

201 BIOMECHANICS I (2)

Prerequisites: physical education or industrial design major or minor. Analysis of prerequisites of efficient movement, including physical qualities of strength, flexibility and endurance, and basic mechanical principles of gravity, equilibrium, force and leverage; basic locomotor movements and calisthenic-type activities.

202 BIOMECHANICS II (2)

Prerequisite: PE 201. Application of basic mechanical principles to sports, rhythmic and aquatic skills; buoyancy and motion; use of implements; angles of spin and rebound; trajectory of projectiles. Not open to students who have taken PE 302.

203-256 PROFESSIONAL ACTIVITIES

Required of majors and/or minors in physical education. Prerequisite: for women—competency in skills and knowledges as established by proficiency tests given when student enters the major field. For men—completing test or completion of 100 level course in this activity.

- 203 Aquatics (or demonstrate 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)
- 238m Wrestling (2)
- 241 Field Hockey (1)
- 242m Basketball (2)
- 242w Basketball (2)
- 244m Soccer (2)
- 244w Soccer and Speedball (2)
- 245m Volleyball (2)
- 245w Volleyball (2)
- 247 Football Techniques (2)
- 250 Archery (1)
- 251m Gymnastics (2)
- 251w Gymnastics (2)
- 254 Golf (1)
- 256m Track and Field (2)
- 256w Track and Field (2)



Physical Education

- 216 **LIFESAVING AND WATER SAFETY (2)**
Prerequisite: advanced level in swimming proficiency test. Instruction leading to qualification for the American Red Cross Lifesaving Certificate.
- 217 **WATER SAFETY INSTRUCTORS' COURSE (2)**
Prerequisite: current American Red Cross Senior Lifesaving Certificate. Stroke analysis and methods of teaching lifesaving and aquatics skills; instruction leading to qualification as an American Red Cross Water Safety Instructor.
- 280 **SPORTS CONDITIONING (1)**
A program of conditioning established in consultation with the instructor to meet specific athletic needs of the student.
- 301 **SCIENTIFIC FOUNDATIONS FOR ATHLETIC COACHING (5)**
Not open to students with credit in Biol 348, PE 302, 303. Essential elements of human anatomy, kinesiology, and physiology related to athletic coaching.
- 302 **KINESIOLOGY (5)**
Prerequisite: 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)**
Prerequisites: 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)**
Prerequisite: Biol 348. Care and prevention of athletic injuries; procedures for building physical stamina; experience in taping procedures. Laboratory fee.
- 306a,b,c **PHYSICAL EDUCATION FOR ELEMENTARY SCHOOL (3)**
Prerequisite: Psych 352. Purposes and requirements of the program; developmental aspects of curriculum for classroom teachers.
306a Emphasis in grades K-3
306b Emphasis in grades 4-6
306c General elementary grades K-6
- 307 **MOTOR LEARNING (3)**
Prerequisite: 10 credits in PE professional sequence. Introduction to motor learning; presentation and discussion of the learning and retention processes as they relate to physical activities; a synthesis of current research findings concerned with learning gross motor skills; emphasis on practical experiences related to teaching methodology and coaching techniques.
- 309 **PSYCHOLOGY OF SPORT (3)**
A study of psychological principles and states which are present in sporting activities both at recreational and highly competitive levels in our society. Particular emphasis is placed on evaluation and assessment of personality, sport as a stress seeking domain, emotional states, motivation, aggression, relationship of motor and intellectual performance, and personality theory and dynamics as they relate to sport.
- 310 **SOCIOLOGY OF SPORT (3)**
A study of the sociological implications of sport in contemporary American society. Particular interest is given to political, religious, and economic aspects of sport and society as well as such additionally related areas as social mobility, discrimination, and female participation in sporting activities.
- 311 **MOVEMENT DISCOVERY FOR CHILDREN (3)**
Prerequisites: PE 211, Psych 352. Use of movement experiences in child centered education; methods, activities in gymnastics, games and sports, gross motor skills for pre-school through grade six.
- 313 **PHYSICAL EDUCATION LABORATORY EXPERIENCE WITH CHILDREN (1-3)**
Prerequisites: PE 306 or 311 or taken concurrently. Teaching K-6 grade children.
- 326 **DANCE FOR CHILDREN (3)**
Creative dance, basic rhythms, simple folk and square dance for children.
- 341-347 **SPORTS OFFICIATING (2 ea)**
Officiating techniques for individual and team sports.
341m Football
341w Field Hockey
342m Basketball
342w Basketball
343 Track and Field
344 Tennis
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 materials being utilized.
380 Football (3)
381 Basketball (3)
382 Baseball (2)
383 Track (2)
384 Wrestling (2)
385 Volleyball (2)
386 Gymnastics (2)
387 Tennis (2)
- 400 **SPECIAL PROJECTS IN PHYSICAL EDUCATION (2-5)**
Prerequisites: senior status and permission of instructor. Individual instruction in special projects under supervision.

Physical Education

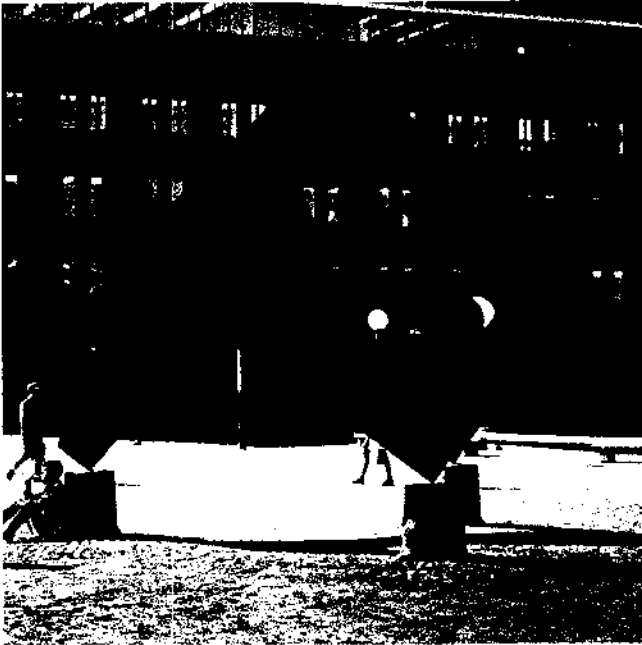
- 401 METHODS SEMINAR AND PROFESSIONAL PRACTICUM (5)
Prerequisite: junior status and completion of 20 hours in the major program. Seminar, observation, and practical experience in teaching physical education in secondary schools.
- 402 CORRECTIVE PHYSICAL EDUCATION (3)
Prerequisites: Biol 348 or equivalent; PE 302. Implications of growth patterns, coordinations and postural deviations relating to the physical education program; conditioning techniques, corrective procedures.
- 403 PHYSICAL EDUCATION PROGRAM FOR THE ELEMENTARY SCHOOL (3)
Prerequisites: Psych 352; PE 311, 326. Criteria for selecting activities; selection and maintenance of facilities and equipment; evaluative procedures and techniques; administrative policies.
- 404 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION FOR SECONDARY SCHOOL (3)
Prerequisites: PE 307. Criteria for the selection of program activities, the organization of classes, personnel policies, purchase and care of equipment.
- 406 THE ADMINISTRATION OF ATHLETICS (3)
Prerequisite: senior status. Organization and administration of policies and procedures for interschool athletic programs with special emphasis on management of contests, financing, care and maintenance of facilities and equipment.
- 407 HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION (3)
Prerequisites: 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.
- 410 INTRAMURAL AND INTERSCHOOL PROGRAMS (2)
Program content and planning for athletic events in secondary schools.
- 411 INDIVIDUALIZED INSTRUCTION FOR SECONDARY PHYSICAL EDUCATION (2)
Prerequisite: professional activity sequence equivalent. Utilization of inquiry, problem-solving and direct teaching methods.
- 441 SOCIAL-PSYCHOLOGICAL ASPECTS OF SPORT AND COACHING (3)
Introduction to the social-psychological aspects of sport with emphasis placed on their application to teaching and coaching.
- 445 CURRENT TRENDS IN PHYSICAL EDUCATION (2-6)
445a Physical Education for the Elementary School (3)
445f Coaching Clinic for Women (2)
Prerequisite: senior or graduate status.
445m Track & Field Coaching Clinic for Men and Women (2)
Analysis and in-depth study of techniques and training methods in track and field events. Utilization of event films, seminars, lectures, and practical experience to explore and study each track and field event. Coaching psychology is also covered.
445n Basketball Coaching Clinic (5)
Prerequisites: senior or graduate status, some coaching experience. This course is for basketball coaches, grades 5-12, who participate in a summer camp experience comprised of lectures, demonstrations and work teams of children who are also residents at the camp.
- 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)
Prerequisites: senior standing and permission of department. Practical experience in local public schools and voluntary agencies in conducting activity programs.
- 492 SEMINAR AND PRACTICUM IN PHYSICAL EDUCATION (2)
Prerequisites: upper division status, permission of department. Seminar and individualized practicum in teaching physical education activities. The course may be repeated.
- 495 PHYSICAL EDUCATION FOR THE MENTALLY RETARDED (3)
Prerequisite: senior or graduate status. The characteristics and needs of the mentally retarded child as they relate to physical education; adaptation of methods, materials and techniques.
- 497m GAMES AND SPORTS: A PROBLEM-SOLVING APPROACH FOR ELEMENTARY AND MIDDLE SCHOOLS (3)
Prerequisite: PE 306 or equivalent. Developing problem-solving strategies, modified games/sports, creative games in cooperative and competitive activities. Use of learning centers/station.

- 497n **SPORTS MEDICINE PROGRAMS FOR THE MALE AND FEMALE ATHLETE (2)**
 Prerequisite: coaching or teaching experience. A workshop for teachers and coaches on athletic conditioning for prevention of injuries and treatment of injuries common to sports participation. Guest orthopedists, physical therapists and athletic trainers will present their views, followed by discussion and demonstrations.
- 498 **STRAIGHT LINE PHILOSOPHY (3)**
 A philosophical approach to game strategies. Not limited to those with athletic experience.
- 500 **PROBLEMS IN PHYSICAL EDUCATION (2-5)**
 Prerequisite: teaching experience. Controversial issues in the field; the professional problems pertinent to the individual members of the group.
- 501 **SURVEY OF PROFESSIONAL LITERATURE (3)**
 Prerequisite: teaching experience. Selected research, published books, dissertations and periodicals which have influenced physical education thought and practice.
- 502 **DEVELOPMENTAL AND ADAPTED PHYSICAL EDUCATION (3)**
 Prerequisites: Biol 348, PE 302 and 402. Development of programs of adapted activities for the low-fitness and handicapped elementary and secondary school student, with emphasis on common postural deviations, screening techniques and adapted activities.
- 503 **PHYSICAL EDUCATION EQUIPMENT AND FACILITIES (2)**
 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 (3)**
 Prerequisite: teaching experience. Physical education programs based on the needs, interests, abilities of students.
- 506 **RESEARCH DESIGN AND TECHNIQUE IN PHYSICAL EDUCATION (5)**
 Prerequisite or concurrent: PE 303, Ed 501. Utilization of laboratory equipment and techniques pertinent to research; design of experiments, conduct of laboratory research, evaluation of research reports.
- 507 **MOTOR LEARNING: ADVANCED (3)**
 Prerequisite: PE 307 or permission of instructor. Factors affecting the acquisition of skill; individual and group differences, retention, transfer of training, motivation in learning motor skills.
- 530 **SEMINAR: ADMINISTRATION OF PHYSICAL EDUCATION AND ATHLETICS (3)**
 Prerequisite: teaching experience. Administration of school physical education and athletic programs; current problems, plant, personnel, structure and organization, public relations and emergent patterns.
- 531 **SEMINAR: COMPARATIVE PHYSICAL EDUCATION (3)**
 Prerequisite: PE 407. Physical education systems in major countries; backgrounds, types, aims and present function; comparison with the American system.
- 532 **SEMINAR: CURRENT DEVELOPMENTS IN PHYSICAL EDUCATION (3)**
 Prerequisite: teaching experience. Developments of current significance in the field of physical education, including health education, athletics, and recreation.
- 533 **SEMINAR: CURRICULUM AND SUPERVISION IN ELEMENTARY PHYSICAL EDUCATION (4)**
 Prerequisite: permission of instructor. Design and development of curriculum and materials, administrative policies, supervision, facilities and equipment.
- 534 **SEMINAR: SUPERVISION OF INSTRUCTION IN PHYSICAL EDUCATION (3)**
 Prerequisite: teaching experience. Fundamentals for supervision of physical education instruction in the public schools; procedures, organization, evaluation of programs.
- 540 **SEMINAR: EXERCISE PHYSIOLOGY (3)**
 Prerequisite or concurrent: PE 506. Review of research in exercise physiology; topics such as: cardiovascular dynamics, stress, fatigue, neural control of muscular activity and metabolism.
- 541 **SEMINAR: SPORT PSYCHOLOGY (3)**
 Prerequisite: teaching experience. Application of data from psychology to sport activity, athletics, performance and coaches.
- 542 **SEMINAR: SOCIOLOGY OF SPORT (3)**
 Prerequisite: 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)**
 Prerequisite: PE 302. Application of mechanical principles to analysis of motor skills and athletic events.
- 544 **SEMINAR: ELECTROMYOGRAPHY IN PHYSICAL EDUCATION RESEARCH (2)**
 Prerequisite or concurrent: PE 506. Electromyographic instrumentation and techniques applicable to motor performance analysis.
- 545 **SEMINAR: PERCEPTUAL-MOTOR DEVELOPMENT: IMPLICATIONS FOR PROGRAM (3)**
 Prerequisite: PE 485. Review of research in perceptual-motor development and application to program in physical education and special education.
- 546 **SEMINAR: ELEMENTARY SCHOOL PHYSICAL EDUCATION (2-6)**
 Prerequisite: admission to program. Seminar for physical education specialists with emphasis on movement education.
- 690 **THESIS (1-6)**
 Prerequisite: formal advancement to candidacy for the master's degree in physical education.

Physical Education

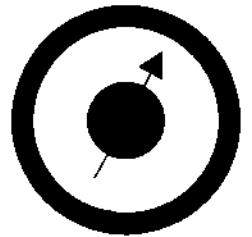
COURSES IN HEALTH EDUCATION

- 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.
- 252 FIRST AID AND PERSONAL SAFETY (2)
First aid for common injuries and illnesses based on the American Red Cross Standard and Advanced First Aid and Personal Safety course. The student qualifies for the American Red Cross Certificate.
- 350 CURRENT INFORMATION IN HEALTH SCIENCE (5)
Prerequisite: junior status. Topics covered are consumer health, human sexuality, drug education, cancerous and cardio-vascular and other chronic and degenerative diseases, behavioral diseases such as venereal disease, and infectious diseases. (Not available to those who have taken HED 150, 151, and 152.)
- 352 ADVANCED FIRST AID AND EMERGENCY CARE (3)
The course is designed to develop the functional first aid capabilities required by persons who are responsible for giving emergency care to the sick and injured. American Red Cross certificates are given on completion of course requirements.
- 397a BASIC FIRST AID AND CARDIO-PULMONARY RESUSCITATION (1)
First aid using a multi-media program including units on cardio-pulmonary resuscitation.
- 400 SPECIAL PROJECTS IN HEALTH SCIENCE (2-5)
Prerequisite: senior status and permission of instructor. Special problems for individual students.
- 402 HEALTH PROBLEMS OF COLLEGE STUDENTS (3)
Prerequisite: junior status. Course specifically relates to the needs and interests of college students. Includes identifying vulnerability, causes and symptoms of specific health problems of college students such as overweight and obesity, respiratory ailments, allergies, venereal disease, diet, gynecological disorders, suicide, alcohol, cigarette smoking and the recognizing of preventative measures for future optimum health.
- 406 HEALTH PROBLEMS OF SCHOOL AGE CHILDREN (3)
Prerequisite: junior status. The role of the elementary school teacher in identifying children with health problems and offering appropriate referral; identifying and incorporating school health services and school and community health services to the best advantage.
- 445 CURRENT TRENDS IN HEALTH EDUCATION (1-3)
Prerequisite: teaching experience. Seminars or workshops for the study of current health education topics. May be repeated with different topics.
- 447 COMMUNITY HEALTH (3)
Prerequisite: 10 credits in biology, health education, home economics, or Huxley. Analysis and application of models of health behavior; epidemiology of communicable and noncommunicable diseases; transmission of infectious diseases; analysis of community, national and world health problems; involvement with governmental and voluntary health agencies; comprehensive health care models.
- 449 HEALTH EDUCATION IN ELEMENTARY SCHOOLS (3)
Prerequisite: H Ed. 350 or equivalent. Basic principles and application of methods in elementary school health instruction, curriculum resource materials, school health services.
- 450 HEALTH EDUCATION IN SECONDARY SCHOOLS (3)
Prerequisite: H Ed 350 or equivalent. Basic principles and application of methods in secondary school health instruction; curriculum resource materials, school health services for secondary schools.
- 451 FIELD EXPERIENCE IN COMMUNITY HEALTH (1-3)
Prerequisites: H Ed 350, 447, and health science minor. Practicum in public health agencies and programs.
- 452 FIRST AID INSTRUCTOR'S COURSE (2)
Prerequisite: current American Red Cross first aid certificate. Instructional methods, skills, resource materials applicable to teaching first aid. On completion of the course the student qualifies for American Red Cross certification in standard or advanced first aid.
- 497c HEALTH EDUCATION CURRICULA WORKSHOP (2)
Prerequisite: teaching experience. Current health education curriculum designs will be analyzed. Application to instructional and learning experiences. (Summer, 1975.)
- 497d CRITICAL HEALTH ISSUES OF THE TEENAGER, ADULT, AND OLDER ADULT (1-3)
Prerequisite: teaching experience or permission of instructor. A series of three two-week sessions (first two-week period relates to the teenager, second two weeks to adults, and third two weeks to older adults) which will identify and investigate critical health issues such as obesity, alcohol, dental disease, nutrition, chronic disease and suicide. (Summer, 1975.)
- 500 PROBLEMS IN HEALTH EDUCATION (2-5)
For the graduate student concerned with a special problem in the field.



PHYSICS / ASTRONOMY

College of Arts and Sciences / Western Washington State College



Physics & Astronomy

The undergraduate major provides a broad coverage of basic physical topics and principles and combines both lecture and laboratory work. Students may choose from one of a number of programs which allow different relative emphasis on physics and supporting mathematics, computer science or other science courses. Our strong astronomy program will be of particular interest to many students. Combined with the general education 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 college-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 senior and graduate research projects in experimental nuclear and solid state physics, environmental pollution and in studies in theoretical physics.

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

- W. LOUIS BARRETT (1968) Chairman.
Associate Professor, BS, University of Idaho; MS, PhD, University of Washington.
- *RICHARD A. ATNEOSEN (1968) Associate Professor, BS, MS, University of Minnesota; PhD, Indiana University.
- WILLARD A. BROWN (1956) Associate 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 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.
- **ALEX MAKSYMOWICZ (1969) Assistant Professor, BA, Massachusetts Institute of Technology; PhD, University of California, Berkeley.
- ROBERT J. QUIGLEY (1970) Associate Professor, BS, MS, California Institute of Technology; MA, PhD, University of California, Riverside.
- AJIT S. RUPAAL (1964) Professor, BSc, MSc, Panjab University; PhD, University of British Columbia.
- LESLIE E. SPANEL (1968) Associate Professor, BS, University of Missouri, Rolla; PhD, Iowa State University, Ames.
- DONALD L. SPRAGUE (1965) Associate Professor, BS, MS, PhD, University of Washington.
- **PAUL A. THOLFSEN (1968) Assistant Professor, B of Elec Engineering, The Cooper Union School of Engineering; MS, University of Pennsylvania; PhD, Stephens Institute of Technology.
- 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.

BACHELOR OF ARTS IN EDUCATION

Recommendation for Teaching Competency

Students are certified for academic competency in physics upon completion of the physics minor or equivalent. Consultation with approval by the department chairman is required.

Major—Physics

Secondary 45 credits plus Supporting Courses

- Physics 231
- Physics 331, 332, 325 or 355, 381, 382, 384, 385, 398 (one credit)
- Physical Science 492 or Physics 492
- Electives under departmental advisement, 13 credits
- Supporting courses: 15 credits in mathematics including calculus

*On Sabbatical Leave 1975-76

**On Leave 1975-76

Physics & Astronomy

Minor—Physics 25 credits plus Supporting Courses

- Physics 231 (or 131)
- Physics 331, 332 (or Physics 132, 133)
- Physics 381 and 384
- Physical Science 492 or Physics 492
- Electives, 3 credits (or 6 credits if Physics 131, 132, 133 is taken)
- Supporting courses: 14 credits in mathematics including calculus

Major Concentration—Physics-Mathematics 70 credits

This concentration provides depth leading to recommendation for teaching competence in both areas; it satisfies requirements for both a major and a minor.

- Mathematics 121 and Physics 231
- 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.

BACHELOR OF ARTS

Major—Physics 53 credits plus Supporting Courses

- Physics 231
- Physics 331, 332, 355, 371, 381, 382, 383, 384, 385, 386, 391, 392
- Either Physics 407 or Gen Sci 405
- Upper division electives, 6 credits, recommended are statistical mechanics, mechanics and optics
- Supporting courses: 30 credits in mathematics, including Math 121, 122, 222, 223, 301 (or 201-202), 331, 332

Also recommended: reading knowledge of a foreign language and 10 credits in chemistry.

Minor—Physics 25 credits plus Supporting Courses

- Physics 231
- Physics 331, 332
- Physics 371 and either of 355 or 471; or Physics 381, 382, 384 and 385; or Physics 391 and 392
- Supporting courses: 18 credits in mathematics including Math 222

Minor—Astronomy 28 credits plus Supporting Courses

- Physics 231 (or 131)
- Physics 331, 332 (or 132, 133)
- Astronomy 315, 316, 317
- Physics 381

Major—Astronomy Emphasis 64 credits plus Supporting Courses

This concentration provides emphasis in astronomy and depth in physics courses that are relevant to astronomy.

- Physics 231
- Physics 331, 332, 325, 355, 381, 382, 383, 384, 385, 386, 407, 425, 441
- Astronomy 315, 316, 317, 491
- Upper division electives: 6 credits recommended are statistical mechanics (362), quantum mechanics (391-392) and relativity theory (489)
- Supporting courses: 30 credits in mathematics and computer science including Math 121, 122, 222, 223, 301 (or 201-202), 331, 332
- Chemistry 121, 122

Major Concentration — Physics-Mathematics 110 credits

This combined concentration provides depth in both fields and satisfies the requirements for both a major and a minor.

- Math 121 and Physics 231
- 100 credits in mathematics and physics under advisement

Recommended courses include Physics 331, 332, 371, 381, 382, 383, 384, 385, 386, 391, 392 and other upper division electives; Computer Science 210; Math 222, 223, 301 (or 201, 202), 331, 332, and upper-division

Physics & Astronomy

electives. Courses will normally be distributed equally between mathematics and physics, depending somewhat on the student's high school background. Ten to fifteen credits in related courses may be included.

Major Concentration—Physics-Mathematics

Honors Program 107 credits plus
Supporting Courses

This combined major satisfies requirements for a major and a minor. It is open to superior students; a grade average of 3.0 is required for admission to and continuation in this program. Apply for admission jointly to the departments of mathematics and physics during the second year of college study in lower division calculus and general physics.

- Math 121, 122, 222, 223, 301, 312, 331, 332, 420, 421
- Computer Science 210
- 8 credits from approved 300 and 400 level courses (at least 4 credits in the latter)
- Physics 231, 331, 332, 371, 381, 382, 383, 384, 385, 386, 391
- 15 credits in upper division courses, including Physics 392, 441, 442 or Physics 485, 486, 489
- Supporting courses: 7 credits under advisement

BACHELOR OF SCIENCE

Major 110 credits

- Physics 231
- Physics 325, 331, 332, 355, 362, 371, 381, 382, 383, 384, 385, 386, 391, 392, 407
- Math 122, 222, 223, 301 (or 201 and 202), 331, 332
- Upper division electives: 15 credits selected from 356 and 400 level courses excluding 492
- Supporting courses: 15 credits in computer science, chemistry, geology, or biology selected under advisement

DEPARTMENTAL HONORS

Physics majors who wish to graduate "with honors" should consult the department chairman for special requirements.

GRADUATE STUDY

For concentrations in physics and in physical science leading to the Master of Education and the Master of Science degrees, see *Graduate Bulletin*.

COURSES IN PHYSICS

Laboratory instruction is included in Physics 101, 132, 133, 155, 225, 231, 325, 331, 332, 355, 356, 401, 402, 403, 425, 455

101 PHYSICS FOR THE LIBERAL ARTS (4)

Prerequisite: mathematics entrance exam or equivalent. Not available for credit to students with high school physics nor to science majors. Introduction to physical methods through a survey of topics in mechanics, electricity, magnetism, optics, and modern physics; historical and philosophical foundations.

131 PRINCIPLES OF PHYSICS (4)

Prerequisites: high school algebra and geometry or equivalent; concurrent enrollment in college-level algebra recommended. Classical mechanics, including energy, momentum, gravitation, wave motion.

132 PRINCIPLES OF PHYSICS (5)

Prerequisite: Physics 131. Electricity and magnetism and thermodynamics.

133 PRINCIPLES OF PHYSICS (5)

Prerequisite: Physics 132. Introduction to relativity, quantum theory, optics, and atomic and nuclear physics.

155 ELEMENTARY ELECTRONICS (3)

Study of simple electronic circuits. Vacuum tubes, transistors, amplifiers, oscillators, oscilloscopes, modulators, rectifiers, pulse circuitry, and microcircuits; laboratory.

- 201 **MATHEMATICAL METHODS IN THE PHYSICAL SCIENCES (2)**
Prerequisite: Math 121 or concurrent. Elementary mathematics with application to physics. Vectors, trigonometric and other functions. Recommended for students who need additional mathematics background prior to Physics 131 or 231.
- 225 **INTRODUCTION TO OPTICS (4)**
Prerequisites: high school algebra and trigonometry. Reflection and refraction at plane and spherical surfaces; thin lenses and their aberrations; optical instruments; interference, diffraction at single and multiple slits, diffraction grating, resolving power; production and detection of polarized light; lecture and laboratory.
- 231 **GENERAL PHYSICS WITH CALCULUS (5)**
Prerequisite or concurrent: Math 122. Kinematics and dynamics of particles and rigid bodies.
- 301 **PHYSICS AND ENVIRONMENTAL PROBLEMS (3)**
Prerequisite: General Ed Science program. Examination of environmental problems, including nuclear power and weapons production, thermal pollution, radiation hazards, air pollution and atmosphere transport, etc.
- 302 **ENVIRONMENTAL MEASUREMENTS LABORATORY (3)**
Prerequisite: permission of instructor. Instrumental techniques in making laboratory and field measurements and instrument calibration.
- 306 **THE PHYSICAL FOUNDATIONS OF MUSIC (4)**
Prerequisite: junior standing. This course is an introduction to the nature of sound waves. Particular attention will be given to the musical and physical aspects of sound phenomena. The acoustic and electronic methods of producing and modifying sound will be discussed. Some topics included are: the synthesis and analysis of musical sounds, characteristics of musical instruments, the distinction between various "natural" scales and the tempered scale. Not intended for science majors.
- 307 **PHYSICS OF ELECTRONIC SOUND REPRODUCTION (3)**
Prerequisite: junior standing. Discussion of storage (and retrieval) of complex sound waves on records and on magnetic tape. Principles of operation and discussion of performance of phonograph cartridges, different types of microphones, amplifiers and speakers. Impedance matching. Not intended for science majors.
- 311 **RADIATION BIOPHYSICS (3)**
Prerequisites: Physics 133 and Math 121. Physical and biological effects of penetrating radiations.
- 321 **ATMOSPHERE SCIENCE (3)**
Prerequisites: one year of college physics. The nature and motion of the atmosphere.
- 325 **PHYSICAL OPTICS (4)**
Prerequisites: one year college physics and Math 222. Interference; laser light and theory of coherence; interferometers; Fraunhofer and Fresnel diffraction; holography; polarization; laboratory.
- 331 **WAVES AND THERMODYNAMICS (5)**
Prerequisite: Physics 231. Mechanical and acoustical waves; kinetic theory; classical thermodynamics.
- 332 **ELECTRICITY AND MAGNETISM (5)**
Prerequisite: Physics 331. Laws of electrostatics; d.c. circuits; magnetic fields of steady currents, magnetic induction, induced electromagnetic forces; magnetic properties of matter.
- 355 **FUNDAMENTALS OF ELECTRONICS (3)**
Prerequisite: Physics 332. A.C. circuit analysis, A.C. bridges, filters, network theorems, vacuum tubes, solid state diodes and transistors, transistor amplifiers; laboratory.
- 356 **ELECTRONIC CIRCUITS (3)**
Prerequisites: Math 222, Physics 355. Multistage amplifiers, feedback and feedback oscillators, modulation and demodulation; laboratory.
- 361 **THERMODYNAMICS (3)**
Prerequisites: Physics 332 and Math 223. Kinetic theory and the laws of thermodynamics.
- 362 **STATISTICAL MECHANICS (3)**
Prerequisites: Physics 332 and either Physics 381 or 391. Many body mechanics; Maxwell, Fermi and Bose statistics; applications to metals, astrophysics; photons and phonons.
- 371 **INTRODUCTION TO ELECTROMAGNETIC THEORY (4)**
Prerequisites: Physics 332 (or 133) and Math 222. Maxwell's equations in free space and media, with applications; alternating electric currents.
- 380 **MILESTONES IN MODERN PHYSICS (3)**
Prerequisite: one college-level physics course. Important discoveries in modern physics will be discussed by reviewing original works in selected areas. Areas to be selected from include special relativity; discovery of nuclei, electrons, x-rays, elementary particles; atomic and nuclear models; Schrodinger wave equation and the uncertainty principle; fission and fusion. Not intended for physics majors. (Summer only.)
- 381, 382, 383 **MODERN PHYSICS (4 ea)**
Prerequisites: Physics 133 and Math 222; or Physics 332 (may be taken concurrently—permission of department required); concurrent enrollment in Physics 384-5-6 sequence required for physics majors and minors, recommended for others; to be taken in sequence. Theory of relativity; basic interactions of elementary particles; quantum properties of waves and particles; atomic models; quantum mechanics applied to atomic structure; multielectron atoms; molecular physics, structure and property of solids; structure, properties, and decay of atomic nuclei; basic nuclear reactions.

Physics & Astronomy

- 384, 385, 386 MODERN PHYSICS LABORATORY (1 ea)
Prerequisites: Physics 381-2-3 sequence (or concurrent enrollment). Experiments in modern physics.
- 391, 392 INTRODUCTION TO QUANTUM MECHANICS (4, 3)
Prerequisite or concurrent registration: Physics 332 and Math 223; 391 prerequisite to 392. Introduction to quantum mechanics. Physics 391—basic postulates and foundations, conservation laws, solutions of wave equation, wave packets, angular momentum. Physics 392—steady-state perturbation theory, identical particles, time-dependent perturbations, scattering theory, applications.
- 397a AERONAUTICS (3)
Prerequisite: junior standing. Fundamental theory of flight, navigation and meteorology for private pilots.
- 398 LABORATORY DEVELOPMENT (1 ea quarter)
Laboratory programs and instructional methods in general physics laboratories. Limited to maximum of three credits.
- 400 SPECIAL PROJECT OR PROBLEMS (1-3)
Prerequisite: permission of instructor. Special projects or independent study under supervision.
- 403 SENIOR LABORATORY (3)
Prerequisite: Physics 383 and 386. Advanced experiments in nuclear reaction physics.
- 407 FOUNDATIONS AND PHILOSOPHY OF PHYSICS (3)
Prerequisite: one year college physics. Development of concepts from the Greek period through the 20th century.
- 425 LASERS AND SPECTROSCOPY (3)
Prerequisite: Physics 382. Theory of lasers; selected topics in modern optics with emphasis on coherence, interferometry and spectroscopy in the visible region; laboratory.
- 431 INTRODUCTION TO SOLID STATE PHYSICS (4)
Prerequisite: Physics 382. Phonons and lattice vibrations; free electron theory of metals; electrical conductivity; thermal properties; energy band theory; diamagnetism and paramagnetism.
- 441, 442 CLASSICAL DYNAMICS (3 ea)
Prerequisites: Physics 332 and a course in differential equations. Lagrangian mechanics, perturbation techniques for dynamical systems, theory of oscillations, central forces and scattering theory.
- 451 ELEMENTS OF NUCLEAR PHYSICS (3)
Prerequisites: Physics 371, 383; Math 331. Basic nuclear properties, nuclear models; interaction of radiation with matter; radioactive decay; elementary nuclear reactions.
- 455 PULSE AND DIGITAL EQUIPMENT (3)
Prerequisite: Physics 356. Pulse switching and digital circuits; design and operation of computers and other digital research equipment; laboratory.
- 471 ELECTROMAGNETIC THEORY (3)
Prerequisites: Physics 371 and Math 331; Potential theory, Maxwell's field equations, electromagnetic waves.
- 485, 486 MATHEMATICAL METHODS OF PHYSICS (3 ea)
Prerequisites: 3C credits in physics, linear algebra and differential equations; courses not sequential. Physics 485—Physical applications of linear vector spaces and operators with emphasis on Fourier transforms; Green's functions, and other special functions (Legendre, Bessel, gamma, erf, etc.). Physics 486—Introduction to and physical applications of group theory, probability theory, and numerical analysis.
- 489 RELATIVITY THEORY (3)
Prerequisites: 30 credits in physics including Physics 381 and 471; Math 332. Special relativity is reviewed including the Lorentz-Einstein transformation of Maxwell's equations. Tensor analysis and Riemannian geometry is entered into sufficiently to sketch the three major Einstein predictions: (1) advance of the perihelion of planetary orbits; (2) the bending of light in a gravitational field; (3) the Einstein red shift.
- 490 APPLIED PHYSICS (3)
Prerequisites: Physics 383, 386 and senior standing. Application of physical theories and mathematical methods to solve problems commonly encountered in scientific laboratories. Examples of typical problems are transport phenomena, hydrodynamics and fluid flow, stress systems, acoustics and ultrasonics, plasmas, lasers, course to include project and report.
- 491 ASTROPHYSICS (3)
Prerequisites: Physics 381, 382, 383; Math 331; permission of instructor. Theories of stellar processes and stellar evolution.
- 492 HIGH SCHOOL PHYSICS PROGRAMS (3)
Prerequisites: general physics; Physics 381 (or concurrent). Materials and methods of curricula such as P.S.S.C. and H.P.P.
- 497a INTRODUCTORY PHYSICAL SCIENCE (IPS) WORKSHOP (8)
Prerequisite: science teaching experience. A workshop to train science teachers in the Introductory Physical Science (IPS) program.

- 498 RESEARCH PROJECTS IN PHYSICS (6)
Prerequisite: permission of instructor. Investigation of a problem in physics under the sponsorship and supervision of the physics faculty; project must extend over a minimum of two quarters.
- 499 SEMINAR IN PHYSICS (1-3)
Prerequisites: junior or senior status and permission of instructor.
- 500 SPECIAL PROBLEMS IN ADVANCED PHYSICS (1-3)
Prerequisites: graduate standing and permission of the instructor. Detailed study of a special problem in physics.
- 531, 532 SOLID STATE PHYSICS (3 ea)
Prerequisite: Physics 431 or equivalent. Physics 531 prerequisite to 532. Crystal structure and reciprocal lattice space; dielectric properties; ferroelectric crystals; magnetism and super-conductivity.
- 541 HAMILTONIAN DYNAMICS (3)
Prerequisites: 45 credits in physics including Physics 442. Variational principles; Hamilton's equations; canonical transformation theory.
- 542 SPECIAL TOPICS IN MECHANICS (3)
Prerequisite: Physics 541.
- 551, 552 NUCLEAR THEORY (3 ea)
Prerequisite: 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)
Prerequisites: 45 credits in physics including Physics 471. Electromagnetic waves; wave guides and resonant cavities; radiation.
- 572 SPECIAL TOPICS IN ELECTROMAGNETIC THEORY (3)
Prerequisite: Physics 571.
- 581 QUANTUM THEORY (3)
Prerequisites: 45 credits in physics including Physics 392 or equivalent. Interaction of radiation with matter; approximation methods in quantum theory; scattering theory.
- 582 SPECIAL TOPICS IN QUANTUM THEORY (3)
Prerequisite: Physics 581.
- 598 GRADUATE SEMINAR (1-3)
- 690 RESEARCH (3-12)
Prerequisite: 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)
Prerequisites: graduate standing and permission of instructor. Detailed study of a special problem in physics.

COURSES IN ASTRONOMY

- 103 ASTRONOMY FOR THE LIBERAL ARTS (4)
A survey of astronomy including the solar system, stellar evolution, galactic structure, and cosmology. Not recommended for science majors.
- 123 RELATIVITY FOR NON-SCIENTISTS (2)
Prerequisite: mathematics entrance exam or equivalent. Basic evidence for and consequences of the theory of relativity with applications to astronomy. Space-time events, the twin paradox, curved space, black holes and the expanding universe.
- 197a HIGH SCHOOL JUNIORS: STUDY OF ASTRONOMY AND RELATIVITY THEORY (5)
Prerequisite: intended for, but not restricted to, students who have completed the junior year of high school; high school students must submit a letter of recommendation from a high school science teacher or counselor. Not open to students with previous college-level credit in physics or astronomy. S/U grading only. (Summer, 1975.)
- 204 GENERAL ASTRONOMY (4)
Prerequisite: one and one-half years of high school algebra or equivalent. A previous physics or astronomy course required. Recommended for science-oriented students. A general study of the physical characteristics of astronomical systems, their origin and evolution. Topics include solar systems, stellar systems, planets, quasars, supernovas, neutron stars, black holes and extraterrestrial life.
- 303 RADIO ASTRONOMY (3)
Prerequisite: Astronomy 204 or equivalent. Radio signals from space, molecules between the stars; exploding galaxies; quasars and pulsars; radio cosmology; extraterrestrial radio communication.
- 315 SOLAR SYSTEM ASTRONOMY (3)
Prerequisite: Physics 131. Study of the structure and evolution of the solar system. Topics include: our sun as a star, planets, planetary satellites, asteroids, comets, eclipses, planet motions and atmospheres.
- 316 STELLAR ASTRONOMY (3)
Prerequisite: Physics 131. Study of the structure, evolution and motion of the stellar systems such as binary stars, nebula, planetary star systems, star clusters and galaxies. Other topics will include neutron stars, black holes, pulsars, quasars, supernova and cosmic rays.
- 317 COSMOLOGY (3)
Prerequisites: completion of three credits of college astronomy and three credits of college physics; one and one-half years of high school algebra or equivalent. Study of the various theories of the origin and evolution of the universe.
- 333 EXTRATERRESTRIAL LIFE (3)
Prerequisite: 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.

Physics & Astronomy

- 400 SPECIAL PROJECTS OR PROBLEMS (1-3)
Prerequisite: permission of instructor. Special projects or independent study under supervision.
- 404 TELESCOPE DESIGN AND CONSTRUCTION (1-3)
Prerequisites: Astronomy 204 and upper-division standing. Design and construction of a telescope including optical design and lens grinding.
- 491 ASTROPHYSICS (3)
Prerequisites: Physics 381, 382, 383; Math 331; permission of instructor. Theories of stellar processes and stellar evolution.
- 497a EXTRATERRESTRIAL LIFE (3)
Offered summer, 1975. (See Astronomy 333.)
- 498 SEMINAR ON CURRENT TOPICS IN ASTRONOMY (1-3)
Prerequisite: three credits in college astronomy at 200 level or higher. Investigation and discussion of current topics in astronomy.
- 499 SEMINAR ON ELEMENTARY ASTRONOMY INSTRUCTION (1-3)
Prerequisites: three credits in college astronomy and junior or senior standing. Development of techniques and materials used in teaching astronomy; instruction in the use of telescopes and the planetarium.



POLITICAL SCIENCE

College of Arts and Sciences / Western Washington State College



Political Science

THE DISCIPLINE

Whether we like it or not, government affects every part of our lives—what taxes we pay, what news we may hear, what wars (if any) we fight, the quality of the food we eat, water we drink, air we breathe—ultimately, whether we live or die. Many other questions which at times may loom large in our lives are decided by government—whether workers may organize into unions, whether marijuana smokers will go to jail, whether abortion is a crime

It should not come as a surprise to learn that political science is one of the oldest fields of academic inquiry. The systematic investigation of government was going on in ancient Greece long before many of the other fields we today call “science” got their start. This is only logical, since the form of government determines whether there even will be free inquiry, and the political process determines whether resources will be set aside for the study of molecules and atoms. Even the purest mathematician and the most theoretical physicist must know something about how government operates and how it influences them if they are to have any hope of influencing it.

Courses in political science attract many kinds of students, including those who want to become specialists in the art and science of government; perhaps even those who want to run for governor 20 years from now. It also attracts those who seek immediate post-graduate employment in the vast field of public and private organizations dealing with government. And it attracts those who wish to learn to become competent and effective citizens.

THE DEPARTMENT

The Department of Political Science is one of unusual breadth of interest, approaches to the study of political science, academic backgrounds, ideological orientations and fields of specialized interests. An examination of the course descriptions will illustrate that there are few areas of human concern in regard to political systems which are not treated.

The specialized interests of departmental members are so broad as to limit detail here. Some are particularly

interested in relations among nations, including war and peace, espionage and international organizations. One emphasizes international law, including environmental law. Others are specialists in a particular area, such as East Asia, Africa, North America or Europe. Still others are especially interested in the study of political parties, interest groups, government administration, problems of poverty and minorities in relation to government, legislative systems, and the judiciary, with emphasis on decisions of the Supreme Court of the United States. The Presidency is closely examined, as are state and local legislative bodies, executives, courts and political processes. Environmental politics and administrations are also considered. Political theory receives detailed study, both in several historical periods and in its contemporary and empirical aspects.

SPECIAL PROGRAMS

The department has several special programs of which students should be aware. It is an integral part of the Canadian-American studies program, which presently offers a minor. It is equally involved in the East Asian studies program, which provides a minor. Other special programs include the pre-law program, public administration, social studies education program, and those related to the law enforcement assistance program, having particular concern in training persons in the area of law enforcement and criminal justice. For several years, also, the department has been closely involved with the Washington State Legislature, having a number of legislative internships which allow a student to work closely with a legislator during the yearly sessions. There are also summer administrative internships which the department may assist students in obtaining, and which are reasonably well compensated. Students may also intern in governmental offices in Whatcom County.

TO WHAT CAREERS MAY POLITICAL SCIENCE LEAD?

So you complete a political science major. What can you do with your major in vocational terms? Run for President? Obviously. Such former political science majors as Woodrow Wilson and John F. Kennedy have made it. Others, like Hubert Humphrey, have tried, and

obtained at least the Vice-Presidency. Still others, perhaps now in Congress, are among those to be considered in the future. At a less exalted level, one may contest for many offices in state and local, as well as national, government.

For those who prefer not to hold elective office (or who do not succeed), there are tens of thousands, indeed millions, of jobs at all levels of the United States' many political systems. Whether an appointive administrative post or in elective office, there are many possible avenues of employment and career satisfaction for those in political science. Many students go on to law school, where their pre-law program in political science is often a strong factor in their success.

Research and executive positions are found in a variety of organizations interested in influencing or improving government. For example, organizations representing various industries, farmers groups, or war veterans; labor organizations; taxpayers' associations and chambers of commerce; "good government" leagues, the National Municipal League, and the National Civil Service League; leagues of municipalities or other units of local government; the Council of State Governments; and citizen-supported or university-sponsored bureaus of governmental research.

Beyond these aspirations, there are possibilities for graduate study in political science, leading to a Master of Arts degree at Western or elsewhere, and a Ph.D. in those institutions offering that degree. A career in teaching at levels including junior and senior high school, or teaching and research at the university level, are all possible for those who have had extensive exposure to political science.

Many political science graduates go into business. They enter into international companies such as American Express or are employed by various air lines. They enter banks, insurance companies, real estate agencies, industries and other enterprises closely involved with government. Others enter related governmental fields such as planning, personnel, budgeting and research. Some become city managers. A very few have reached into the White House itself, as perhaps a liaison officer to the Congress for higher education, or into the Office of Management and Budget in the executive office of the President. It should be noted that a professional political

scientist, Dr. Henry Kissinger, has earned the stature of perhaps the second most powerful figure in the United States government. Many others high in the federal, state, and local bureaucracies come from a major and perhaps graduate study in political science.

POLITICAL SCIENCE FACULTY

- RALPH E. MINER (April 1970) Chairman. Associate Professor. BA, San Jose State College; MA, PhD, University of Oregon.
- ALFRED S. ARKLEY (1970) Assistant Professor. AB, Harvard College; MA, Columbia University; MA, PhD, Michigan State University.
- MICHAEL W. BARNHART (1968) Assistant Professor of Political Science and Executive Assistant to the President. BA, Western Washington State College; MA, PhD, University of Washington.
- DAVID E. CLARKE (1966) Associate Professor. BA, MA, Trinity (Cambridge); PhD, Stanford University.
- MAURICE H. FOISY (1970) Assistant Professor. BA, Gonzaga University; MA, Georgetown University; PhD, University of Oregon.
- JOHN J. HEBAL (1962) Associate Professor. PhB, 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.
- JEANNE L. MARTIN (1972) Assistant Professor. BA, University of Michigan; MA, PhD, Michigan State 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 (1960) 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.

Political Science

The department's faculty and staff are most open to 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 directed to the Department of Political Science, Western Washington State College, Bellingham, Washington 98225.

BACHELOR OF ARTS

Major 65 credits

- Political Science 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: Political Science 291, 301-309, 343, 372, 406, 417a, 417b, 417c, 417d, 417h, 430, 431, 432

Politics and Government: Political Science 340, 343, 345, 346, 353, 417a, 423, 426, 427, 429, 440, 441, 443, 450, 455, 480, 481

Public Policy and Administration: Political Science 320, 346, 353, 413, 414, 415, 417g, 420, 421, 422, 423, 424, 425, 426, 427, 429, 444a,b, 481

Public Law: Political Science 311, 313, 410, 411, 413, 415

Political Theory: Political Science 360, 365, 366, 417f, 424, 450, 461, 462, 463, 464, 465, 467, 480, 481

International Relations: Political Science 270, 305, 375, 376, 411, 417a, 417b, 417c, 417d, 445a, 470, 476

Minor 25 credits

- Political Science 250
- Remaining credits from at least 2 areas

Minor—Canadian and Canadian American Studies 30 credits

Program Adviser: Dr. Gerard Rutan

See Interdepartmental Programs section for specifications.

Minor—East Asian Studies 30 credits

Program Adviser: Dr. Henry Schwarz

This may be added to the major for a major concentration.

See Interdepartmental Programs section for specifications

Major-Minor Concentration—Public Policy and Administration 99 credits, minimum

Program Adviser: Dr. Ralph Miner

Students majoring in political science having a particular interest in governmental administration 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.

- English 101 (subject to waiver, see General College Requirements) and 201 or 202
- Speech 204 or 438
- Anthropology 201 or Sociology 202
- Psychology 201, and 320 or 315
- Economics 201
- Mathematics 250 (Math 100 or qualifying exam a prerequisite)
- Business Administration 251, 252, 356
- Political Science 250, 313 or 410 or 413, 320, 353, 365, 423, 427, 429, and 463
- Plus *one* course from *each* of the following groups:
 - (1) Business Administration 301, 402, or Political Science 424
 - (2) Business Administration 322 (BA 301 a prerequisite), Political Science 417g or 422

- (3) Political Science 346, 420, 421, or Huxley 482, or one course from the College of Ethnic Studies
- (4) Political Science 414, 425, 426, Economics 410 (Econ 202 or permission of instructor required), or 442 (Econ 202 or permission of instructor required)
- (5) Political Science 440, 441, 443*, 444a**

Students choosing the public policy and administration concentration are encouraged to complete Math 251 and 252 as electives 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.

BACHELOR OF ARTS IN EDUCATION

Program Adviser: Dr. Alfred S. Arkley

The Political Science Department has two programs and participates in another for the student who is preparing to teach at the elementary and secondary levels. These programs are designed to help the student to achieve the following objectives:

1. To learn the basic concepts of political science.
2. To know, to evaluate and be able to utilize current political science curricula.
3. To relate political socialization research to social studies education.

Those preparing for secondary school teaching may take either the political science - social studies major-minor

**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.*

concentration or the political science minor. 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 96 credits

Political science - social studies for junior and senior high school teachers.

- Political Science—53 credits: Political Science 101, 250, 270, 291, 311, 320, 481, 482; political science electives under advisement to total 13 credits
- History—23 credits: History 391; history electives under advisement to total 20 credits
- Social Science—20 credits: electives under advisement from anthropology, economics, geography, psychology and sociology

(Completion of this program with a minimum 2.5 grade point leads to teaching competency recommendations for both political science and the social studies.)

Minor 35 credits

- Political Science 101, 250, 270, 481, 482
- Electives under departmental advisement to total 10 credits

(Completion of the minor with a minimum 2.5 grade point leads to a teaching competency recommendation in political science.)

Minor—East Asian Studies 30 credits

See Interdepartmental Programs section for specifications.

Minor—Canadian and Canadian American Studies 30 credits

See Interdepartmental Programs section for specifications.

Political Science

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a political science major who wishes to graduate "with honors" 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 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 a concentration in political science leading to the Master of Arts degree, see *Graduate Bulletin*.

COURSES IN POLITICAL SCIENCE

- 101 GOVERNMENT AND POLITICS IN THE MODERN WORLD (5)
Introduction to concepts of politics; types of governments, and political problems in the world today.
- 170 A CITIZEN'S GUIDE TO FOREIGN POLICY (5)
Issues and trends in international politics; United States foreign policy and how it is made; public influence on policy; sources of information on current events.
- 250 THE AMERICAN POLITICAL SYSTEM (5)
Consideration of the system and process of American politics and government with primary focus on the national level.

- 270 INTRODUCTION TO INTERNATIONAL POLITICS (5)
Interaction of states and other factors in the international system in terms of basic relationships of war and peace.
- 291 INTRODUCTION TO COMPARATIVE POLITICS (5)
Basic structures, functions, and socio-cultural environments of foreign political systems; methods of comparative study.
- 301 BRITISH MODEL PARLIAMENTARY SYSTEMS (5)
Prerequisite: Pol Sci 101 or 250 (or Gen 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)
Prerequisite: Pol Sci 101 or 291. Governments and politics of selected western European states.
- 303 SOVIET UNION AND EASTERN EUROPE (5)
Prerequisite: Pol Sci 101 or 291. The political system of the Soviet Union and other communist states in Eastern Europe.
- 304 LATIN AMERICA (5)
Prerequisite: Pol Sci 101 or 291. Political, socio-economic and cultural problems of Latin America.
- 305 INTERNATIONAL POLITICS IN THE MIDDLE EAST (3)
Prerequisite: 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.
- 306 CENTRAL EUROPE (5)
Prerequisite: Pol Sci 101 or 291. Governments and politics of selected central European states.
- 307 EAST ASIA (5)
Prerequisite: Pol Sci 101 or 291. Survey course covering China, Japan, and Korea since the mid nineteenth century.
- 308 SUB-SAHARAN AFRICAN POLITICAL SYSTEMS (5)
Prerequisite: Pol Sci 101 or 291. Politics of independent black African states with emphasis on nation-building and economic development; governments of white dominated southern portion.
- 309 SOUTHEAST ASIA (5)
Prerequisite: Pol Sci 101 or 291. Selected political systems.
- 311 JURISPRUDENCE (3)
Prerequisite: Pol Sci 250 (or Gen St 200 with permission of instructor). An introduction to the origins of the legal and juridical systems found in the Western world; emphasis upon jurisprudential development, philosophies, and legal structures. Examination of legal reasoning, terminology, and concepts.

- 313 AMERICAN CONSTITUTIONAL LAW (5)
Prerequisite: Pol Sci 250. Significant Supreme Court decisions interpreting major parts of the Constitution in practice. Emphasis on separation of powers and federal division of powers.
- 320 PUBLIC ADMINISTRATION (5)
Prerequisite: Pol Sci 250 (or Gen St 200 with permission of instructor), or one course from Psych 201 or 340, Econ 201, or BA 101. Consideration of contemporary concepts of organizational structure and behavior, administrative processes and procedures, and individual behavior in complex public organizations.
- 340 POLITICAL PARTIES (5)
Prerequisite: Pol Sci 250 (or Gen St 200 with permission of instructor). The origin, development, structure, organization, and activities of political parties. Various party theories are presented and discussed in the light of current political conditions and changing patterns of political participation and political leadership.
- 343 POLITICAL COMMUNICATION (5)
Prerequisite: Pol Sci 101 or 250 (or Gen St 200 with permission of instructor). Channels of communication in politics as they affect policy-making, political and electoral behavior, and political development; the role of face to face communication, communication within and between political organizations, the media, political polling, and political propaganda in the political process.
- 345 WOMEN AND POLITICS (3)
Prerequisite: Pol Sci 101 or 250 (or Gen St 200 with permission of instructor). Exploration of the history and current ideas of women's organizations. Investigation of the changing role of women in American politics including legal status, economic position, and political behavior.
- 346 POVERTY, MINORITIES, AND GOVERNMENT (5)
Prerequisite: Pol Sci 250 (or Gen 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)
Prerequisite: Pol Sci 250 (or Gen St 200 with permission of instructor). Sub-national levels of government and intergovernmental relations; developing and administering policies for problems of race, population, pollution, crime, poverty, housing, resource depletion.
- 360 INTRODUCTION TO POLITICAL THEORY (5)
Prerequisite: Pol Sci 101 or 250 (or Gen St 200 with permission of instructor). Origin and evolution of major concepts of political theory.
- 365 POLITICAL INQUIRY (5)
Prerequisite: Pol Sci 101 or 250 (or Gen 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)
Prerequisite: Pol Sci 101 or 250 (or Gen St 200 with permission of instructor). Fundamentals of research design, including basic methods for the collection and analysis of political data.
- 372 POLITICAL CHANGE: AN INTRODUCTION TO POLITICAL DEVELOPMENT (5)
Prerequisite: Pol Sci 101. Basic concepts such as modernization, social mobilization, institutionalization examined in a few selected countries.
- 375 FOREIGN POLICIES (5)
Prerequisite: Pol Sci 270. International politics on the level of foreign policy decision making; emphasis on major powers other than U.S.; simulated foreign policy problems.
- 376 AMERICAN FOREIGN POLICY (5)
Prerequisite: Pol Sci 270. Background organization of American foreign policy; the conduct of diplomatic relations with other states; current issues and problems in foreign affairs.
- 397a ISSUES IN AMERICAN POLITICS (2)
Reading and discussion on contemporary issues and personalities in American politics.
- 400 SELECTED READINGS AND RESEARCH (2-5)
Prerequisite: permission of department. Supervised readings and/or research in a selected area of political science.
- 406 CANADA (5)
Prerequisite: Pol Sci 250 (or Gen 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)
Prerequisite: Pol Sci 250 (or Gen St 200 with permission of instructor). A comparative study and analysis of public policy on outstanding contemporary socio-political issues.
- 411 INTERNATIONAL LAW (5)
Prerequisite: Pol Sci 270. Origin, principles, and problems.
- 413 LAW AND PUBLIC ADMINISTRATION (5)
Prerequisites: Pol Sci 313 and 320. Consideration of the relationships between the law, organizational behavior, and the public administrative process. Consideration of law in relation to agency mission, agency interests, and strategies of program implementation. Not offered every year.
- 414 THE REGULATORY PROCESS (3)
Prerequisite: Pol Sci 320. Administrative regulation in relation to the political process. Not offered every year.

Political Science

- 415 PRE-LAW AND CRIMINAL JUSTICE (3)
Prerequisite: permission of instructor. Introduction to the study and practice of law, with particular reference to the formulation of criminal law, law enforcement, judicial administration, and the administration of penal and corrective policy in the United States.
- 417 SEMINARS IN SPECIAL PROBLEMS (3 ea)
- 417a State Policy, Espionage, and Intelligence Utilization
Prerequisite: permission of instructor.
- 417b Seminar in International Politics
Prerequisite: Pol Sci 270.
- 417c Seminar in Political Development
Prerequisite: Pol Sci 372.
- 417d Selected Problems in East Asian Politics
Prerequisite: Pol Sci 307.
- 417f Political and Social Simulations
- 417g Modern Bureaucratic Politics
Prerequisite: Pol Sci 320.
- 417h Contemporary Canadian Politics
- 420 ENVIRONMENTAL POLITICS AND ADMINISTRATION (5)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: Pol Sci 320. Comparative analysis of public personnel systems in selected countries, with special attention to the United States; general principles of public administration and specialized aspects such as recruitment, training, and employee morale. Not offered every year.
- 423 THE AMERICAN PRESIDENCY (3)
Prerequisite: Pol Sci 250 (or Gen 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)
Prerequisite: Pol Sci 320. Consideration of organization theory as related to public organizations and the political system.
- 425 THE BUDGETARY PROCESS (5)
Prerequisite: Pol Sci 320. Consideration of public budgeting as both a political and administrative process.
- 426 POLITICS AND PUBLIC FINANCE (5)
Prerequisite: Pol Sci 250 (or Gen St 200 with permission). Consideration of the American political system as it relates to the development and maintenance of the structure of taxation and the distribution of governmental benefits.
- 427 POLICY-MAKING AND POLICY ANALYSIS (5)
Prerequisite: Pol Sci 250 (or Gen St 200 with permission of instructor). Consideration of the relationships between political, economic and social inputs into policy-making systems and the nature and consequences of policy outputs for various groups and sectors of the polity. Particular attention is paid to the possibility and problems of objective analysis conducted from within the boundaries of the subject political system.
- 429 ADMINISTRATION AND DEMOCRACY (5)
Prerequisite: Pol Sci 320. Relationships of various administrative forms, processes, and behaviors to varying theoretical conceptions and empirical descriptions of democracy.
- 430 MODERN CHINESE POLITICS (5)
Prerequisite: Pol Sci 307. Governments and political movements in the twentieth century.
- 431 MODERN JAPANESE POLITICS (5)
Prerequisite: Pol Sci 291 or 307. Politics and government since the Meiji Restoration. Japan as a case study of political development; political, socio-economic, and cultural problems in contemporary Japan.
- 432 MODERN KOREAN POLITICS (3)
Prerequisite: Pol Sci 307. The development of modern Korean political systems from the 19th century to the present. The contemporary political systems of both North and South Korea will be considered. Not offered every year.
- 440 STATE LEGISLATURES (5)
Prerequisite: 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)
Prerequisite: Pol Sci 250 (or Gen 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.

- 443 LEGISLATIVE INTERNSHIP (5)
Prerequisite: 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 INTERNSHIP (5, 5)
Prerequisite: two courses in public administration area and permission of department. Part-time internships in administrative agencies of the federal, state, and local governments. Priority given to seniors. Where the number of applicants exceeds the available intern positions, competitive selections will be made. Requests for internships should be filed with the department one quarter in advance of registration for this course.
- 445a CURRENT TRENDS IN INTERNATIONAL POLITICS (3)
Prerequisite: Pol Sci 101 or 250 (or Gen St 200 with permission of instructor) or equivalent. Current events in the light of long term trends in world politics; attention to sources of information and scholarly as well as journalistic interpretations of events.
- 448 LEGISLATIVE PROCESSES (3)
Prerequisite: Pol Sci 353. A seminar focused on activities of special interest groups, agencies of state government, and the Executive Branch as they contribute to and affect state legislative processes. Particular attention given to budgeting, program planning, partisan issues, and the activities of public agencies seeking legislative action and financial support. Emphasis will be upon Washington State's bicameral system and the legislative systems of other states as appropriate.
- 449 POLITICS AND SOCIAL CHANGE (3)
Prerequisite: Pol Sci 315. Selected controversies in contemporary American society and the phenomena of related political activities. It is assumed that changes in social values will appear as abrasions to the established political order. Emphasis given to agencies of national and state government affected by the responses of the political system(s) to the pressures of groups manifesting varying social and economic values.
- 450 POLITICS, CAMPAIGNS AND ELECTIONS (5)
Prerequisite: Pol Sci 340. Voters and voting behavior; candidates and campaign strategy; the resources of politics—workers, money, and mass media.
- 455 COMMUNITY POWER STRUCTURES (5)
Prerequisite: Pol Sci 353. Interrelation of formal and informal decision-making structures at metropolitan and regional levels and below; power structure and "elite" literature. Not offered every year.
- 460 POLITICAL THEORY: ANCIENT AND MEDIEVAL (3)
Prerequisite: Gen 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)
Prerequisite: Gen 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)
Prerequisite: Gen 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)
Prerequisites: History 203, 204, or equivalent, or Pol Sci 101 and/or 250 (or Gen St 200 with permission of instructor). Major concepts in American political thought from the Colonial period to the present.
- 464 CONTEMPORARY POLITICAL THEORY (5)
Prerequisite: 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)
Prerequisite: 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.
- 467 POLITICS, TRANSFORMATION AND ENVIRONMENTAL CONSTRAINT (5)
Prerequisite: Pol Sci 101 or 250. Incompatibility between the growth-oriented goals of contemporary political cultures and environmentally derived "steady-state" imperatives. Alienation and environmental degradation as the dual result of the "conquest of nature" ideology. The politics of transformation and value-change. (Also offered as Huxley 467.)
- 470 WAR AND PEACE (5)
Prerequisite: Pol Sci 270. Causes of war and proposals for preventing it; special attention to arms races, disarmament, negotiation.
- 476 CHINA, JAPAN AND THE U.S.: WAR AND PEACE IN EAST ASIA (5)
Prerequisite: Pol Sci 270 or 307. Background, contemporary problems, and future alternatives in American-East Asian relations. Emphasis on role of cultural images, foreign policy decision-making, diplomatic and economic relations in bringing about conflict or alliance.
- 480 POLITICS, GOVERNMENT, AND RELIGION (3)
Prerequisite: permission of instructor. Relationships between political activity and government structures on the one hand, and religious perceptions and organizations on the other; problem areas in relationships between politics, government, and religion; role of religion (perceptions and organizations) in modern political life and governmental structures. Not offered every year.
- 481 POLITICAL SOCIALIZATION (5)
The content, process, and function of political socialization at individual, institutional and societal levels.

Political Science

- 482 TEACHING POLITICS AND GOVERNMENT (5)
Prerequisites: 15 credit hours in political science and Social Science Ed 425 or 426 or teaching experience. The course surveys and evaluates current and proposed political science curricula in the elementary and secondary schools. Teaching materials are evaluated in terms of stated objectives and influence upon student political orientations and behavior. Also covered is current research on the influence of the school upon student political socialization. This course is intended for experienced and pre-service teachers.
- 483a,b SIMULATION AND GAMES WORKSHOP IN POLITICS (2 ea)
Prerequisite: junior or senior status. Games and simulations of political processes related to social studies teaching at the middle school and high school levels. (a) Simulation introduction and administration. (b) Simulation evaluation and construction.
- 496a,b,c HONORS TUTORIAL (2-5 ea)
- 497a POLITICS, TRANSFORMATION AND ENVIRONMENTAL CONSTRAINT (3)
Offered summer, 1975. See Pol Sci 467.
- 497b LAW OF THE SEA (4)
Inquiry into the history, principles and development of legal regulations pertaining to the sea. Discussion of modern problems.
- 500 SPECIAL PROBLEMS (3-5)
Individual studies to meet the needs of a student's program.
- 501 POLITICAL SCIENCE AS A DISCIPLINE (5)
History of political science; description and critique of fields; trends and challenges.
- 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.
- 510 SEMINAR IN AMERICAN PUBLIC LAW (5)
The tradition and emerging trends.
- 511 SEMINAR IN INTERNATIONAL LAW AND ORGANIZATION (3)
Intensive concentration on international law and specific problems in the field of the "Law of the Sea."
- 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 analysis.
- 523 SEMINAR IN POLITICS AND PUBLIC FINANCE (3)
Advanced problems in politics and public finance.
- 525 SEMINAR IN MODERN POLITICAL ECONOMY (3)
Prerequisite: 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.
- 530 SEMINAR IN MODERN CHINESE POLITICS (3)
Prerequisite: Pol Sci 430 and permission of instructor. Individual readings and research.
- 531 SEMINAR IN MODERN JAPANESE POLITICS (3)
Prerequisites: Pol Sci 431 and permission of instructor.
- 540 SEMINAR IN THE POLITICAL PROCESS (5)
The influence of organizations and individuals in the formation of public policy.
- 550 SEMINAR IN STATE AND LOCAL GOVERNMENT (3)
Problems at sub-national levels, both American and other, internally and in relation to national levels.
- 560 SEMINAR IN POLITICAL THEORY (3)
Function and history of political theory; the crisis in traditional theory; emerging trends.
- 570 SEMINAR IN INTERNATIONAL AFFAIRS (3)
The contemporary international scene, emerging international problems and possible solutions.
- 575 SEMINAR IN FOREIGN POLICY AND DIPLOMACY (3)
Process of policy formation; emerging trends in modern diplomacy.
- 690 THESIS (6-9)



PSYCHOLOGY

College of Arts and Sciences / Western Washington State College



Psychology

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 communications 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 more. 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 begins after the first course and early in the student's college 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: Child Development, Human Services, Social Psychology, and Biopsychology. 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.A. and M.S. degree in General Psychology, with concentrations available in Clinical and Counseling and School Psychology. In cooperation with the Department of Education, the M.Ed. degree is offered in School Counseling and School Psychology. Complete descriptions of these programs are included in the Graduate Bulletin.

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. BA, MA, University of Kentucky; PhD, University of Illinois.
- DON F. BLOOD (1931) Professor of Psychology and College Examiner. 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) Associate Professor. BA, Youngstown State University; MA, Akron State University; PhD, Kansas State University.
- CAROL J. DIERS (1963) Professor of Psychology and Director of Honors Program. BA, BA in Ed, Western Washington State College; MA, University of British Columbia; PhD, University of Washington.

FREDERICK W. GROTE, JR. (1970) Assistant Professor. AB, Dartmouth College; PhD, University of North Carolina.

ROBERT S. HELGOE (1970) Assistant Professor. BA, Western Washington State College; PhD, University of Illinois.

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) Associate 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, The 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) Assistant Professor. BA, Southern Illinois University; MA, PhD, Brown University.

RONALD W. SHAFFER (1970) Assistant Professor. BA, California State College, Los Angeles; MA, PhD, University of New Mexico.

SANDRA S. SMILEY (1969) Associate Professor. AB, Whittier College; MA, PhD, University of Illinois.

CHRISTOPHER J. TAYLOR (1968) Associate Professor. AB, Wittenberg University; MS, PhD, Ohio University.

SAUNDRA J. TAYLOR (1968) Associate Professor of Psychology and Director of the Counseling Center. BA, DePauw University; MA, Bowling Green State University; PhD, Ohio University.

*On Leave 1975-76

RICHARD W. THOMPSON (1967) Professor. BA, MA, PhD, Michigan State University.

ROBERT M. THORNDIKE (1970) Associate Professor. BA, Wesleyan University; PhD, University of Minnesota.

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 (1939) Distinguished Service Professor of the College. 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.

BACHELOR OF ARTS

Major 60 credits

Core Program

- Psych 201, 306, 307
- Two courses from Psych 311-316
- Two courses from Psych 321-326
- One course from Psych 401-403
- One course from Psych 404-406
- One course from Psych 411-412
- Fifteen credits in psychology under advisement

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: 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; 405, 407

Psychology

Human 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

Child Development: Advisers – F. Grote and M. Lippman

- Core program plus three courses from Psych 457-461

Social Psychology: Adviser – G. Cvetkovich

- Core program to include Psych 315, 403
- Two of the following: Psych 440, 441, 442

Industrial Psychology: Adviser – C. Taylor

- Core program to include Psych 311, 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, 409, 442; Biology 310, 312, 321, 366, 368, 370, 424, 460, 465, 478, 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 in Psychology

- 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 Science concentration in Child Development.

Minor 20 credits

- Psychology 201
- 15 credits in psychology other than the required professional educational psychology courses; recommended courses include 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 departmental honors adviser, complete Psychology 425 and prepare a thesis which he will defend before a faculty committee.

GRADUATE STUDY

For concentrations in psychology leading to the Master of Education, the Master of Arts, or the Master of Science degrees, see *Graduate Bulletin*.

COURSES IN PSYCHOLOGY

Courses in educational psychology include Psych 316, 351, 371, 372, 353, 451, 491, 492. With the exception of Psych 316 and 353, these courses are not applicable to the arts and science major or minor.

201 INTRODUCTION TO PSYCHOLOGY (5)

Examination of basic psychological processes utilizing results of research investigations; participation in at least two experiments or equivalent activities.

300 SPECIAL PROBLEMS (1-3)

Prerequisite: permission of instructor.

305 ADVANCED GENERAL PSYCHOLOGY (5)

Prerequisite: Psych 201. An integrative course covering broad philosophical issues in psychology as well as more specific issues of contents and methodologies in psychology. Specific content areas include psychophysics, perception, learning and memory, cognitive processes, motivation, and analyses of decision making and problem solving.

306 EXPERIMENTAL PSYCHOLOGY AND STATISTICS I (5)

Prerequisite: Psych 201. Introduction to experimental methodology in psychology and statistical treatment of results. Lectures and laboratory.

- 307 **EXPERIMENTAL PSYCHOLOGY AND STATISTICS II (5)**
 Prerequisite: 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)**
 Prerequisite: Psych 201. Philosophy, history and development of psychological measurement. Reliability, validity, standardization and norms. A study of representative 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)**
 Prerequisite: 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)**
 Prerequisite: Psych 201. An examination of the three major approaches to personality development: psychodynamic, behavioral and humanistic. Historical and philosophical development; research issues; and current applications.
- 314 **ABNORMAL PSYCHOLOGY (5)**
 Prerequisite: Psych 201. Human behavior patterns culturally labeled as abnormalities, or as mental illness; their etiology, incidence, treatment, and social attitudes toward such patterns. Presents an historical review of the concepts used to explain such behavior and a review of the research relating to the treatment of psychoses and neuroses.
- 315 **SOCIAL PSYCHOLOGY (5)**
 Prerequisite: Psych 201. Socialization (moral development, racial, ethnic and class differences), attitudes and attitude change, conformity, inter-personal attraction. Theories and methods of social psychology stressing applicability of social psychological research and knowledge to contemporary social problems.
- 316 **DEVELOPMENTAL PSYCHOLOGY (5)**
 Prerequisites: Psych 201 or Gen St 105. Basic principles of development with special attention to the preschool and elementary school-age child. Topics include behavior genetics, early experience, language, cognition, personality, and social development.
- 317 **HUMAN SEXUALITY (5)**
 Prerequisite: Psych 201. Developmental aspects of sexuality, physiology and anatomy of sex, human sexual behavior, sex roles and stereotypes, sexism, homosexuality, treatment of sexual problems, research in sexuality. A research or term paper required.
- 318 **PSYCHOLOGY AND CULTURE (3)**
 Prerequisite: 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.
- 319 **PERSONALITY THEORIES AND SEX ROLES (4)**
 Prerequisites: Psych 201 and 313. This course will examine major personality theories and their philosophical assumptions; historical perspective and empirical findings about sex roles, culturally and cross-culturally. The course will focus on the psychological ramifications of sex role development for men and women.
- 320 **INDUSTRIAL PSYCHOLOGY (4)**
 Prerequisite: Psych 201 or Gen St 105. Application of psychological principles to industrial problems of personnel selection and appraisal, human relations, marketing, training and engineering psychology.
- 321 **LEARNING (5)**
 Prerequisite: 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.
- 322 **MOTIVATION (5)**
 Prerequisite: Psych 201. Theoretical and empirical study of human and subhuman motivational process. Topics covered range from basic physiological drives to achievement motivation and conformity. Emphasis on both biological and social sources of motivation.
- 323 **SENSORY PROCESSES (5)**
 Prerequisite: 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)**
 Prerequisite: Psych 201. Classical and contemporary descriptions of human perceptual behavior are discussed together with 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)**
 Prerequisite: Psych 201. Phylogenetic comparison of animal behavior, learning, motivation and sensory processes in selected species of animals.
- 326 **PHYSIOLOGICAL PSYCHOLOGY (5)**
 Prerequisite: Psych 201. The biological foundations of behavior.
- 342 **THINKING AND IMAGINATION (3)**
 Prerequisite: Psych 201. Empirical studies and theories relevant to the topics of intuitive and analytical thought, creativity, and fantasy. (Formerly Psych 443.)

Psychology

- 347 HUMANISTIC PSYCHOLOGY (3)
Prerequisite: 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 in psychology as Adler, Allport, May Maslow, Rogers, Frankl and Fromm.
- 348 HUMAN POPULATION PROBLEMS (3)
Prerequisite: Psych 201 or Gen St 105. An examination of critical ecological, social and personal problems concerned with population, birth planning, contraception, etc.
- 349 PSYCHOLOGY IN LITERATURE (3)
Prerequisite: Psych 201. Approximately ten literary works with an especial psychological content will be examined primarily through class discussion. A majority of the books will be twentieth century American and European novels. Novels will be selected because of their literary description of various psychological phenomena. Each will be analyzed in terms of appropriate psychological theories and concepts.
- 351 PSYCHOLOGY OF HUMAN LEARNING AND INSTRUCTION (3)
Prerequisite: Gen St 105 or Psych 201; not open to those with credit in 321. Application of psychological principles of learning to classroom teaching.
- 353 ADOLESCENT PSYCHOLOGY (4)
Prerequisites: Psych 351 or 201. Basic principles of development with special attention to the secondary school age child; implications for educational practices.
- 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)
- 397a PSYCHOLOGY OF RELIGION (3)
Prerequisite: Psych 201 or Gen St 105. A study of certain major works in the psychology of religion. Works by James, Freud and Jung will be included.
- 400 ADVANCED PSYCHOLOGICAL RESEARCH PROBLEMS (3)
Prerequisite: Psych 307 and permission of instructor. Individual project in psychology based on empirical research.
- 401 SEMINAR IN INDIVIDUAL DIFFERENCES AND PSYCHOLOGICAL MEASUREMENT (3)
Prerequisites: Psych 307 (may be taken concurrently), 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)
Prerequisites: Psych 307 (may be taken concurrently), 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)
Prerequisites: Psych 307 (may be taken concurrently), 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)
Prerequisites: Psych 307 (may be taken concurrently), 321 or 322. Major issues and methods in the study of learning and motivation. Laboratory and research.
- 405 SEMINAR IN PERCEPTION AND SENSORY PROCESSES (3)
Prerequisites: Psych 307 (may be taken concurrently), 323 or 324. Major issues and methods in the study of perception and sensation. Laboratory and research.
- 406 SEMINAR IN COMPARATIVE AND PHYSIOLOGICAL PSYCHOLOGY (3)
Prerequisites: 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)
Prerequisites: senior status, 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)
Prerequisites: senior status, permission of instructor. A seminar examining the philosophical assumptions of science in general and psychology in particular.
- 420 ADVANCED INDUSTRIAL PSYCHOLOGY (5)
Prerequisites: Psych 306 and 320. Psychological theories, methodology and findings related to the problems of business and industry, lectures, and laboratory.
- 425 HONORS SEMINAR (3)
Prerequisite: permission of instructor. Intensive examination of selected problems in psychology.
- 431 INTRODUCTION TO GUIDANCE SERVICES (3)
Prerequisites: 15 credits in psychology and junior status. Roles of teacher principal, psychologist, counselor, and other specialists in an integrated program; guidance and counseling techniques.

- 432 **INTERVIEWING THEORY AND PRACTICE (4)**
 Prerequisite: permission of instructor will be granted upon determination that student has had either academic or practical experience which would familiarize him/her with varieties of human behavioral problems, differences in attitudes, and differences in emotional responses to the interaction with other people. This course will teach skills and underlying psychological principles which facilitate communication between individuals, particularly in the helping interview. Focus will be on developing awareness of one's own impact on others, listening skills, and a variety of interviewing techniques appropriate for a large number of interpersonal settings. Format includes demonstrations of techniques, practice using role playing feedback, and lecture on theoretical aspects of interviewing. Evaluation based on interviewing performance and examination of reading material.
- 433 **MENTAL HEALTH PRINCIPLES, PROGRAMS AND PROBLEMS (3)**
 Prerequisites: Psych 432 (must be taken concurrently with or prior to 499). Survey and analysis of community problems and resources as they affect the psychological welfare of the individual. Selective review of current approaches, facilities and philosophies in community mental health as they reflect the shift toward greater assumption of treatment responsibilities by the community, more adequate safeguards for individual human rights, and the development of preventative treatment strategies.
- 440 **SOCIAL PSYCHOLOGY AND SOCIAL ISSUES (3)**
 Prerequisites: Psych 306, 315. Recent empirical and theoretical work on human conflict, aggression and competition.
- 441 **CROSS-CULTURAL PSYCHOLOGY (3)**
 Prerequisites: Psych 306 and permission of instructor. A seminar approach to selected theoretical and methodological problems and issues relating to cross-cultural research as a major method in psychology.
- 442 **SOCIAL BEHAVIOR IN ANIMALS (3)**
 Prerequisite: Psych 306. Comparison of social organization and behavior patterns in various species; aggression, population control, communication systems; evolution of behavior.
- 445 **CURRENT TRENDS IN PSYCHOLOGY**
 Prerequisite: 20 credits in psychology. Selected topics in psychology which vary from quarter to quarter. Consult time schedule and Department of Psychology for further information.
- 449 **FIELD EXPERIENCES IN PSYCHOLOGY (5)**
 Prerequisite: 20 credits in psychology (Psych 443, or concurrent, required for students in Human Services concentration). Topics included are mental health, child development, behavior problems of adolescence, and other relevant topics. Field work combined with readings and seminars.
- 451 **MOTIVATION IN THE CLASSROOM (3)**
 Prerequisite: 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)**
 Prerequisite: permission of instructor. Primarily for the practicing teacher and the prospective teacher. Principles of interpersonal behavior, development of skills needed to interact effectively with students and fellow professionals, and to create productive healthy learning environment. Includes appropriate use of school counselor and other specialists as consultants and as referral sources, appropriate use of standardized tests and cumulative records, parent conference techniques, and group interaction in the class. The relationship of guidance activities to the curriculum will be explored.
- 455 **ADVANCED CHILD PSYCHOLOGY (3)**
 Prerequisite: Psych 316 or equivalent. Selected topics in child development. Research and theory in child development and behavior.
- 457 **DEVELOPMENTAL PSYCHOLINGUISTICS (5)**
 Prerequisites: Psych 306, 307 prerequisite or concurrent, one course from Psych 311-316, and one from Psych 321-326. Experimental findings and theoretical interpretations of the biological, psychological, and linguistic aspects of language; special attention to implications for a theory of language acquisition.
- 458 **COGNITIVE DEVELOPMENT (5)**
 Prerequisites: Psych 306, 307 prerequisite or concurrent, one course from Psych 311-316, and one from Psych 321-326. Historical, theoretical and empirical aspects of cognitive development of children; critical analysis of research and methodology.
- 459 **EARLY EXPERIENCE (5)**
 Prerequisites: Psych 306, 307 prerequisite or concurrent, one course from Psych 311-316, and one from Psych 321-326. Effects of early experience upon behavior of the organism of different stages of development.
- 460 **SOCIAL DEVELOPMENT (5)**
 Prerequisites: Psych 306, 307 prerequisite or concurrent, one course from Psych 311-316, and one from Psych 321-326. Development of social behavior from infancy to adulthood.
- 461 **CHILD LEARNING (5)**
 Prerequisites: Psych 306, 307 prerequisite or concurrent, one course from Psych 311-316, and one from Psych 321-326. Early learning from a developmental viewpoint. Emphasis upon experiential factors affecting early growth and maturation.
- 471 **STANDARDIZED TESTS (3)**
 Prerequisite: Psych 371 or 413. Standardized group tests commonly used in the public schools; selection and administration of tests; interpretation of norms.

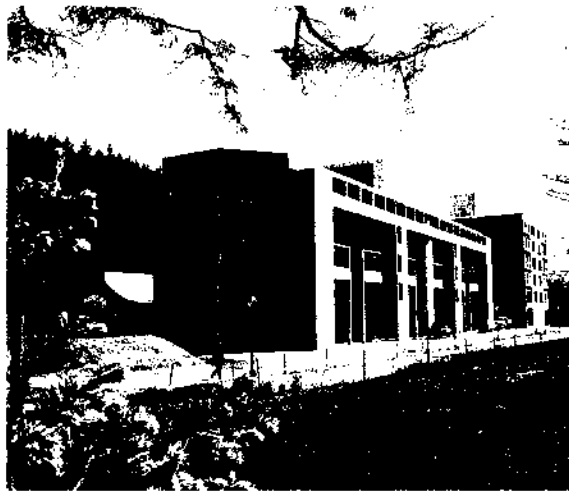
Psychology

- 481 BEHAVIORAL MODIFICATION AND PSYCHOTHERAPY (3)
Prerequisite: Psych 313 or 314. Brief consideration of the three prominent approaches to helping people with clinical problems. Description and demonstration of each approach are included. Clear emphasis upon treatment stemming from social learning theory, but the student will also be exposed to the assumptions and techniques of the psychoanalytic, and phenomenological models.
- 491 LABORATORY IN PREPARATION OF INSTRUCTIONAL PROGRAMS (6)
Prerequisites: admission to teacher education, and permission of department. Individual study of learning principles and their application in cooperating schools; selecting and justifying objectives and defining them operationally; designing plans, selecting strategies and materials to implement plans, adapting to actual pupils in the schools. (Also offered as Ed 491.)
- 492 LABORATORY IN INTERACTION AND EVALUATION (6)
Prerequisite or concurrent: Psych 491. Implementing significant learning objectives through interaction with pupils; evaluation of learning under guidance of cooperating public school teachers and college faculty. (Also offered as Ed 492.)
- 496a,b,c HONORS TUTORIAL (2-5)
- 497a GUIDANCE STRATEGIES FOR TEACHERS (3)
Offered summer, 1975. See Psych 452.
- 497b VOCATIONAL TESTING (3)
Prerequisite: possession of a valid ESA initial or continuing level certificate in counseling and admission into the Advanced Vocational Counseling Workshop. Theory and practice of vocational interest and aptitude measurement. Consideration is given to the construction, administration and interpretation of psychometric and other devices for the assessment of vocational interests and aptitudes. Particular attention will be given to the GATB, ASVAB, the interest checklist of the uses and other approaches to the subprofessional occupations.
- 497c OCCUPATIONAL PSYCHOLOGY (3)
Prerequisite: possession of a valid ESA initial or continuing level certificate in counseling and admission into the Advanced Vocational Counseling Workshop. An intensive examination of the application of selected elements of industrial psychology to counseling regarding careers. Particular attention will be given to the relationships between work environment and job satisfaction, personal characteristics and job success, personnel selection techniques and contemporary labor legislation.
- 497w APPLIED MOTIVATION (3)
Motivational problems in applied settings. In-depth coverage of the literature on curiosity, mastery and achievement motivation. Techniques for assessing motives and strategies for working with them in the applied setting. (Offered summer, 1975, only.)
- 497x CONTROL OF HUMAN BEHAVIOR (3)
The control of human behavior through biological, genetic, psychological and physical means. Social and personal implications. Uses and abuses of control techniques. (Offered summer, 1975, only.)
- 497y DEVELOPING SELF-DIRECTION IN CHILDREN (10)
Prerequisite: 10 credits in psychology, work experience with children or adolescents and approval of department. Primarily for child care and youth workers. Using behavior principles, human potential approaches and clinical strategies to foster the development of autonomy in young people to cope with academic, social and emotional problems. (Summer, 1975, workshop.)
- 500 SPECIAL PROBLEMS (1-3)
Prerequisite: permission of instructor. S/U grading only.
- 501a-d PSYCHOLOGICAL FOUNDATIONS (3 ea)
501a Systems of Psychology
501b Perception
501c Learning
501d Motivation
501e Social
501f Personality
501g Developmental
501h Physiological
501i Behavior Pathology
- 502, 503 DESIGN AND ANALYSIS OF EXPERIMENTS (3 ea)
Prerequisite: Psych 306; 502 prerequisite to 503. Multidimensional analysis of variance, trend analysis, and analysis of covariance.
- 504 MULTIVARIATE ANALYSIS (3)
Prerequisites: Psych 306, 503. Topics in correlation theory and application, including factor analysis and regression analysis.
- 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)
Prerequisite: Psych 413 or equivalent.
- 520 SEMINAR IN PERCEPTION (3)
Prerequisite: Psych 501b or permission of instructor.
- 521 SEMINAR IN LEARNING (3)
Prerequisite: Psych 501c or permission of instructor.
- 522 SEMINAR IN MOTIVATION (3)
Prerequisite: Psych 501d or permission of instructor.
- 523 SEMINAR IN SOCIAL PSYCHOLOGY (3)
Prerequisite: Psych 501e or permission of instructor.
- 524 SEMINAR IN PERSONALITY (3)
Prerequisite: Psych 501f or permission of instructor.

- 525 SEMINAR IN PHYSIOLOGICAL PSYCHOLOGY (3)
Prerequisite: Psych 501h or permission of instructor.
- 526 SEMINAR IN COMPARATIVE PSYCHOLOGY (3)
Prerequisite: permission of instructor.
- 527 SEMINAR IN DEVELOPMENTAL PSYCHOLOGY (3)
Prerequisite: Psych 501g or permission of instructor.
- 528 SEMINAR IN BEHAVIOR PATHOLOGY (3)
Prerequisite: Psych 501i or permission of instructor.
- 529 SEMINAR IN ADVANCED MEASUREMENT THEORY (3)
Prerequisite: Psych 512 or permission of instructor.
- 530 SEMINAR IN CURRENT PHILOSOPHICAL ISSUES IN PSYCHOLOGY (3)
Prerequisite: Psych 501a or permission of instructor.
- 553 INTRODUCTION TO CLINICAL AND COUNSELING PSYCHOLOGY (3)
Prerequisites: admission to the graduate program in psychology and Psych 313, 411, or permission of instructor. Basic orientation to professional psychology and behavioral approaches, relation of theories to treatment techniques, relevant research, and an applied project.
- 555 PSYCHOLOGY OF OCCUPATIONS (3)
Prerequisite: Psych 431 or permission of instructor. Sources of occupational materials; theories of career development; applications to vocational counseling.
- 556 PROBLEMS IN PSYCHOLOGICAL ASSESSMENT (4)
Prerequisites: Psych 413 or 471, 553 or concurrent registration, and permission of instructor. All students will take a competency exam in psychological measurement and must demonstrate a level of competency equivalent to that obtained in Psych 413. Failure to show such competency will require additional outside preparation or refusal of admission. Problems of inference and assessment, the appropriate use of assessment, research basis for different techniques, past, current and emerging trends in assessment, controversies over assessment, and an applied project.
- 557 INDIVIDUAL APPRAISAL IN COUNSELING (3)
Prerequisites: Psych 471 or 413, Psych 306 or Ed 473 and Psych 553 and admission to graduate program. Collection, evaluation, application, and interpretation of data available to the school counselor.
- 559 PSYCHOLOGICAL ASSESSMENT (5)
Prerequisites: Psych 556; conference course permit required from instructor before registering. Development of skill in administration and interpretation of representative psychological assessment procedures and reporting results. Lecture and lab.
- 561 SEMINAR IN SCHOOL PSYCHOLOGICAL AND COUNSELING SERVICES (3)
Prerequisites: Psych 553 and admission to the program. Consideration of the issues and special problems in the application of counseling and clinical theories and research to school psychology and educative settings.
- 562 PRACTICUM IN PSYCHOLOGICAL EVALUATION (3)
Prerequisite: Psych 559 or concurrent diagnostic and interpretive work with selected cases under direct supervision. Psychometric instruments selected will vary with the individual student's needs; selected from the areas of general intellectual functioning, perceptual-motor development, special learning difficulties and personality development.
- 564 INDIVIDUAL COUNSELING AND PSYCHOTHERAPY TECHNIQUES (5)
Prerequisites: Psych 553; conference course permit required from instructor before registering. 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 therapies.
- 565 GROUP PROCESS IN COUNSELING AND PSYCHOTHERAPY (3)
Prerequisites: Psych 553; conference course permit required from instructor before registering. 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 IN CLINICAL AND COUNSELING TECHNIQUES AND CASE PRESENTATION (1-10)
Prerequisites: Psych 555 or 564 or 565, and arrangement for supervision; conference course permit required from instructor before registering. Experience in a counseling center or other setting in which vocational counseling, group or individual psychotherapy, group process or behavior modification may be practiced by student under professional supervision. Case presentation and staff meetings will ordinarily be part of experience. May be repeated.
- 575 SEMINAR IN CLINICAL AND COUNSELING PSYCHOLOGY (2)
Prerequisites: Psych 553, permission of instructor, and admission to clinical/counseling specialization. An in-depth look at the theory and practice in therapy and counseling. Specifically, behavioristic and psychodynamic therapies will be examined to provide a better basis for the practice of therapy and counseling.
- 576 SEMINAR IN CLINICAL AND COUNSELING RESEARCH (2)
Prerequisites: permission of instructor, Psych 501. Research investigation of selected theoretical and practical problems in psychopathology, clinical and counseling psychology. Each student will design an original research study.

Psychology

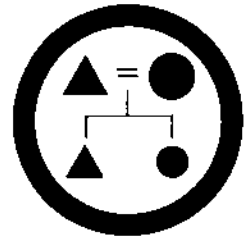
- 580 SEMINAR IN COLLEGE TEACHING OF PSYCHOLOGY (3)
- 581 PRACTICUM IN COLLEGE TEACHING OF PSYCHOLOGY (1-12)
Prerequisite: permission of the instructor. S/U grading only.
- 582 PRACTICUM IN RESEARCH IN PSYCHOLOGY (1-12)
Prerequisite: permission of the instructor. S/U grading only.
- 648 PROFESSIONAL INTERNSHIP IN SCHOOL PSYCHOLOGY (1-3)
Prerequisites: master's degree in psychology or school psychology, and permission of department. An academic year of college supervised work during the first year in professional school psychology; this course and two years of experience required for State Standard Certificate in school psychology.
- 649 SEMINAR IN COUNSELOR SUPERVISION (3)
Planning, organizing and implementing counseling experiences for graduates in counseling in the public schools or other agencies. Development of effective techniques for assessment of counseling competence. Recommended for practitioners in the field who would be supervising students in counseling practicum or internships.
- 690 THESIS (1-6)
S/U grading only.



Arntzen Hall

SOCIOLOGY / ANTHROPOLOGY

College of Arts and Sciences / Western Washington State College



Sociology/Anthropology

Sociology and anthropology are, generally speaking, the study of man's social institutions and his various cultures, respectively. Each approaches its studies from several viewpoints. While traditionally the anthropologist works in a cross-cultural framework, sociologists too study ethnic minorities and societies other than the Western European derivatives. In anthropology, archaeology provides the historical and prehistoric background for contemporary societies. Sociology also has its historical viewpoint, while yet stressing the contemporaneous processes of society.

The Sociology/Anthropology Department offers a broad range of courses in both disciplines. Courses in anthropology focus on the introductory, theoretical and culture-area aspects of cross-cultural studies. Archaeology and the physical facets of the study of man are other directions. The historical foundations of both sociology and anthropology are a part of the core course work. More advanced sociology courses cover areas from the methods of data collection to social psychology, criminology, social deviance and demography.

There are from time to time field or practicum courses in which it is possible to combine the academic with on-site work, study and data collection. Studies of demography, populations and the use of statistical methods are well covered in courses. U.S. Census Bureau data, local surveys and collections of vital statistics provide concrete materials for use in methods courses. A modest field and laboratory program in archaeology is designed to teach methods and techniques of data collection and analysis in that facet of anthropology. The range of course and field work in both anthropology and sociology prepares the student for a liberal arts education, and with some specialization is excellent preparation for graduate schools.

A library holding important for anthropological studies is the Human Relations Area File. This file allows quick reference to a wide variety of anthropological data for courses in both anthropology and sociology. Use of census data, federal documents and access to computer-use further enhances the sociology curriculum. A study

of the regional prehistory is being carried on with student participation in field and laboratory. This involves field archaeology and interpretive work, ethnohistory and paleoenvironmental studies. Library resources in sociology and anthropology are growing, and are adequate for a useful graduate program and undergraduate resource. Current periodical and book acquisitions are being stressed with additions of reprints of classical works as they appear. Physical anthropology courses are supplemented by laboratory studies of dentition, bone structure and some comparative anatomical materials.

The department has programs leading to the B.A. in Arts and Sciences, the B.S. in sociology and the B.A. in Education. The latter is presently designed only for the elementary school teacher. A minor for the secondary school teacher is available, however. The B.A. in Arts and Sciences is a degree course designed to provide a liberal arts degree, with individual specialization under advisement. In this degree program graduates have filled numerous kinds of positions in public and private social service agencies, government, business and industry. Many, too, have pursued careers in more or less related fields. The B.S. in sociology degree is designed to provide the graduate with not only a theoretical and substantive background of sociology, but adds the accessory skills of statistics and computer techniques.

Career opportunities for graduates are varied. While teaching has been a goal of numerous former students there is presently a tendency for many to seek positions in agencies concerned with probation, hospital work, administration of social services and other related areas. A significant number of graduates have continued in advanced studies.

SOCIOLOGY/ANTHROPOLOGY FACULTY

- G. EDWARD STEPHAN (1970) Chairman.
Associate Professor of Sociology. BA, San Francisco State College; PhD, University of Oregon.
- EDWIN JOSEPH ALLEN, JR. (1969) Assistant Professor of Anthropology. BA, Yale College; MA, Columbia University.
- ANGELO ANASTASIO (1955) Professor of Anthropology. Certificate, Juilliard School of Music; AA, Boston University; MA, PhD, University of Chicago.

JAMES W. BOSCH (1967) Associate Professor of Anthropology. BA, San Francisco State College; MA, PhD, Stanford University.

DONALD J. CALL (1958) Associate Professor of Sociology. BA, MA, PhD, University of Oregon.

GEORGE F. DRAKE (1968) Associate Professor of Sociology. BA, MA, University of California, Berkeley; PhD, University of Wisconsin.

CHARLES GOSSMAN (1968) Associate Professor of Sociology. BA, University of Puget Sound; MA, PhD, University of Washington.

GARLAND F. GRABERT (1967) Vice-Chairman for Anthropology. Associate Professor of Anthropology. BA, MA, PhD, University of Washington.

HOWARD L. HARRIS (1966) Associate Professor of Anthropology. BA, University of Iowa; MA, University of Missouri; BD, Hartford Theological Seminary.

JOHN MacGREGOR (1972) Associate Professor of Sociology. BA, University of Maine; PhD, Cornell University.

E. R. MAHONEY (1970) Vice-Chairman for Sociology. Associate Professor of Sociology. BA, Chico State College; PhD, University of Oregon.

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) Assistant Professor of Sociology. BA, MA, University of British Columbia; PhD, University of London.

JOHN G. RICHARDSON (1974) Assistant Professor of Sociology. BA, University of the Pacific, Stockton; MA, PhD, University of California, Davis.

HERBERT C. TAYLOR, JR. (1951) Professor of Anthropology. BA, MA, University of Texas; PhD, University of Chicago.

COLIN E. TWEDDELL (1965) Lecturer in Anthropology and Linguistics. BA, MA, PhD, University of Washington.

BACHELOR OF ARTS IN EDUCATION

Major Elementary 45 credits

- Anth 201 and 210 or 215
- Anth 301 or Soc 302
- Soc 202 and 330
- One course from: Anth 361, 362, 363, 364, 451, 462, 463
- 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

- Two courses from Anth 201, Soc 202, Anth 215
- Electives under departmental advisement

BACHELOR OF ARTS

Major—Anthropology 70 credits

- Anth 201, 210, 215
- Anth 301
- Anth 248 or Ling 201
- Math 240
- Two courses from Anth 361, 362, 363, 364, 451, 462, 463 (or 464)
- Electives in sociology or anthropology under departmental advisement

Minor—Anthropology 25 credits

- Anth 201
- Anth 210 or 215
- One course from Anth 330, 341, 351, 425, 448
- Electives under departmental advisement

(Note: No more than 10 credits in the anthropology major or minor may be applied to the sociology major or minor.)

Major—Sociology 70 credits

- Soc 202
- Soc 302, 303
- Soc 315
- Soc 310 or 311, 330, 321
- Math 240 or equivalent course in statistics
- Electives in sociology or anthropology under departmental advisement

Minor—Sociology 25 credits

- Soc 202
- Soc 302
- Soc 321 or 330
- Electives under departmental advisement

(Note: No more than 10 credits in the sociology major or minor may be applied to the anthropology major or minor.)

Minor—Sociology/Anthropology 25 credits

- Two courses from Anth 201, Soc 202, Anth 215
- Electives under departmental advisement

Sociology/Anthropology

BACHELOR OF SCIENCE

Major—Sociology 90 credits

- Math 121, 220, 241, 341, 342*
- Computer Science 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

*Math 341 and 342 effectively meet the prerequisite for Soc 415; students in this program will be exempt, therefore, from Soc 315, 316.

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a sociology or anthropology major who wishes to graduate "with honors" must demonstrate a reading knowledge of a foreign language and submit a senior thesis.

COURSES IN ANTHROPOLOGY

- 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.
- 209 FIELD COURSE IN ARCHEOLOGY (15)
Prerequisites: Anth 201, 210, or equivalent; permission of instructor. On-site training in methods and techniques of archeological survey and analysis.
- 210 INTRODUCTION TO ARCHEOLOGY (3)
The nature of archeology as seen by classicists, art historians, historians and anthropologists. Methods, techniques and theories used by the different conceptions of the discipline.
- 215 HUMAN VARIATION AND EVOLUTION (5)
A study of differences in modern human populations as a basis for a discussion of human evolution and the fossil record.

- 248 ANTHROPOLOGICAL LINGUISTICS (3)
Prerequisite: Anth 201. Language as a form of communication. Distinctions between spoken and written language. Introduction to phonology, morphology, and syntax. The ways in which different languages employ different spectra of the phonological, morphological, and syntactical universe. (Also listed as Linguistics 201.)
- 300 SPECIAL PROJECTS (1-3)
Prerequisites: 10 credits in anthropology and Conference Course Permit from instructor required before registering. Supervised reading and/or research in selected areas.
- 301 DEVELOPMENT OF ANTHROPOLOGY (5)
Prerequisite: Anth 201. The development of anthropology with emphasis on the period beginning with H. L. Morgan and E. B. Tylor.
- 309 CURATORIAL METHODS IN ANTHROPOLOGY (5)
Prerequisites: Anth 201 and 210 and permission. The study of museum techniques in cataloguing, preparation, storage, and preservation of ethnographic, archaeological, and historical artifacts and other materials. Assistance of the curatorial staff in preparation, assembly, and research concerning displays and public information. Students will work with the staff of the Whatcom Museum of History and Art and will write a report of their activities to include particular aspects of research and preparation in which they were engaged.
- 310 THE RISE OF CIVILIZATIONS (5)
Prerequisites: Anth 201, 210 or 215. Village agricultural societies as revealed by archeology; crystallization of village farming societies into urban civilizations in the Near East, Egypt, India, China and New World parallel developments.
- 311 PREHISTORY FOR PUBLIC SCHOOL TEACHERS (3)
An intensive introduction to the prehistory of New World Native Americans. Current state of knowledge is outlined, sources and data organized, and methods of presentation are discussed in laboratory. Students are introduced to building of resource bibliographies. One week of the three is devoted to acquaintance with field techniques, with students taking part in ongoing archaeological excavations. Some emphasis is placed on regional prehistory and ethnology. Summer only.
- 315 PRIMATE EVOLUTION (5)
Prerequisite: Anth 215. Interrelations of socio-cultural factors and organic structure and function in the evolution of primates, especially hominoids. Substantive areas include a comparative osteology of anthropoids, anthropometry, and dental evolution.
- 320 ECONOMIC ANTHROPOLOGY (5)
Prerequisite: Anth 201. Economic values and systems viewed in relationship to other aspects of culture; a cross-cultural perspective.
- 325 SYMBOLIC ANTHROPOLOGY (5)
Prerequisite: Anth 201. The study of symbols and the arbitrary assignments of meanings involved in behavior, use of cultural objects, idea systems, and the physical environment.

- 330 RELIGION AND CULTURE (5)
Prerequisite: Anth 201. Comparative study of religious thought, belief, and behavior; relationship of religious experience and institutions to other aspects of culture and society.
- 340 POLITICAL ANTHROPOLOGY (5)
Prerequisite: Anth 201. Political structure in selected areas of the world; a cross-cultural analysis of the relationship between political institutions and other aspects of the socio-cultural system.
- 341 ECOLOGY AND INTERGROUP RELATIONS (5)
Prerequisite: 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 COGNITIVE ANTHROPOLOGY (5)
Prerequisite: Anth 248 or Ling 201. Language as a reflection of world view and cognition. Methods and theories in the anthropological analysis of language from the Sapir-Whorf hypothesis to current generative grammars and componential analysis.
- 351 FAMILY AND KINSHIP ORGANIZATION (5)
Prerequisite: Anth 201. Cross-cultural study of family types, and the definition of social roles through kinship organization.
- 353 SEX ROLES IN CULTURE (4)
Prerequisite: Anth 201. The concepts of status and role as they relate to sexual differentiation in a variety of cultures. Socialization and education, marriage and family, social and economic patterns, attitudes and values, and religion and mythology are among the areas that will be studied in the attempt to understand the nature of sexual differentiation in culture.
- 361 INDIANS OF NORTH AMERICA (5)
Prerequisite: Anth 201. Ethnographic survey of the peoples and cultures.
- 362 PEOPLES OF ASIA (5)
Prerequisite: Anth 201. Ethnographic survey of the peoples and cultures.
- 363 PEOPLES OF AFRICA (5)
Prerequisite: Anth 201. Ethnographic survey of the peoples and cultures of Africa south of the Sahara.
- 364 PEOPLES OF THE PACIFIC (5)
Prerequisite: Anth 201. Ethnographic survey of the peoples and cultures of the Pacific area.
- 365 SEX ROLES: TRADITIONS, STEREOTYPES AND LIBERATION (4)
This course will use the tools of anthropology and literary criticism to determine the extent to which we make unconscious assumptions about sex roles. Stereotypes will be examined in the context of their relation to value systems, and their development will be traced through the history of the women's movement in America. Also listed as English 365. (Offered summer only.)
- 371 RESEARCH METHODS IN CULTURAL ANTHROPOLOGY (5)
Prerequisites: Anth 301, Math 240. The anthropologist as fieldworker; historiography for the anthropologist; formal analysis of kinship; cross-cultural analysis.
- 396a,b,c HONORS TUTORIAL (3-5 ea)
- 400 SPECIAL PROJECTS (1-3)
Prerequisites: 25 credits in anthropology and Conference Course Permit from instructor required before registering. Supervised reading and/or research in selected areas.
- 409 ARCHEOLOGICAL FIELD METHODS (3)
Prerequisites: Anth 201, 210 or 215, and permission of instructor. Site surveys and evaluation; mapping methods and recording of data; field experience in excavation techniques, preservation of artifacts.
- 410 ARCHEOLOGICAL ANALYSIS AND INTERPRETATION (3)
Prerequisites: Anth 201, 210 or 215. Archeological laboratory methods; artifact identification, classification, measurement; map reproduction, soil and feature profiles, use of photographs and other graphic methods.
- 411 ARCHAEOLOGY OF NORTHWESTERN NORTH AMERICA (3)
Prerequisites: 10 credits in anthropology including 210 or equivalent. Prehistoric archaeology of the Northwest. Culture changes and adaptations as evidenced in the archaeological data. Northwest coast and interior regions are considered in the prehistoric context of paleo-environment, space, and time. The several hypotheses of origins, interrelationships and cultural developments are discussed.
- 412 ARCHAEOLOGY OF THE NEW WORLD (3)
Prerequisites: 10 credits in anthropology including 210 or equivalent. Origins of the New World cultures from the earliest to the historic Native Americans are discussed. The framework for developmental interpretation and the nature of the evidence are examined. Both the nuclear areas of Mexico and Peru are treated, but the hunting cultures of the Archaic and Woodland periods are considered equally as contributive to the totality of New World prehistoric cultural developments.
- 415 HUMAN VARIATION AND RACE FORMATION (3)
Prerequisites: Anth 315; Math 240; Biol 370. Studies of natural selection in hominid populations with emphasis on those criteria by which generic, specific, and racial distinctions are made.
- 417 SEMINARS (3)
Prerequisite: Conference Course Permit from instructor required before registering.
417f Mental Institutions
417w Cross Cultural Perspectives on Warfare
- 425 CULTURE AND PERSONALITY (3)
Prerequisites: Anth 201 and five additional credits in anthropology. The ways in which the study of the individual and his culture has been approached in anthropology.

Sociology/Anthropology

- 431 SOCIAL CHANGE IN AMERICA (3)
Prerequisite: 10 credits in anthropology. Social change in the United States since 1900; contemporary theories of social change; problems in predicting change.
- 437 SEMINAR IN COMPARATIVE RELIGION (3)
Prerequisite: Anth 330. Myths, rituals, religious institutions, and values in selected cultures. Critical analysis of various approaches to the scientific study of religion.
- 448 LANGUAGE IN CULTURE AND SOCIETY (3)
Prerequisite: Anth 201. Language as related to semantics and world view; speech communities, processes of change in language.
- 451 LATIN AMERICAN ETHNOLOGY (3)
Prerequisite: Anth 201. Analysis of major institutions of Latin America; special attention to contemporary developments and dynamics of change; relationship of urbanization, agrarian reform, population increase and revolution to traditional values.
- 461 NORTH AMERICAN INDIAN ACCULTURATION (3)
Prerequisite: 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)
Prerequisite: 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 AND INSTITUTIONS OF SOUTH ASIA (3)
Prerequisite: Anth 201. Ethnographic survey of the peoples and cultures: Pakistan to the Philippines.
- 464 PEOPLES AND INSTITUTIONS OF EAST ASIA (3)
Prerequisite: Anth 201. Ethnographic survey of the peoples and cultures.
- 470 RESEARCH (3-5)
Prerequisite: permission of instructor. Investigation of a problem through field or library research.
- 481 CHILDHOOD AND CULTURE (3)
Prerequisite: 15 credits in anthropology. The nature of childhood viewed from a cross-cultural perspective.
- 483 SOCIAL CHANGE AND THE MORAL ORDER IN RECENT LITERATURE (4)
Also offered as Eng 483 and Phil 483.
- 484-489 READING AND CONFERENCE (3-5)
Prerequisite: Conference Course Permit from instructor required before registering. 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
- 491 SEMINAR IN ANTHROPOLOGICAL THEORY (3)
Prerequisite: permission of instructor. Selected problems in anthropological theory.
- 495 TEACHING-LEARNING PROCESSES IN INTRODUCTORY ANTHROPOLOGY (3)
Prerequisite: 25 credits in anthropology and Conference Course Permit from instructor required before registering. Practicum as discussion leaders in Anth 201 or 215.
- 496a,b,c HONORS TUTORIAL (3-5 ea)
- 503 HISTORY OF ANTHROPOLOGY (5)
Prerequisites: 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 IN ANTHROPOLOGY (5)
Prerequisites: graduate status and permission of department. Analysis of major theoretical approaches; research methods and procedures; relationship of theory and method in formulating research problems.
- 505 ETHNOLOGICAL FIELD METHODS AND MONOGRAPH ANALYSIS (3)
Prerequisites: Anth 504 and permission of instructor. Nature of field work; selection and treatment of problems; relevance of techniques and methods for gathering, handling and analyzing data. The analysis of content, organization and style of selected monographs presenting cultures in their entirety.
- 520 APPROACHES TO THE STUDY OF HUMAN EVOLUTION (3)
Prerequisites: Biol 101, 370; Anth 215, 415 and permission of instructor. Investigations into the paleontological evidence for human evolution, while remaining central to the endeavor, have in recent years been supplemented by contributions from biochemistry, genetics, medicine and ethology. These contributions broaden and deepen our understanding of what it is to be *Homo sapiens*.
- 522 SEMINAR: OLD WORLD PREHISTORY (3)
Prerequisites: 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)
Prerequisites: 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 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)
How scholars characterize cultures as wholes by reference to value configurations, themes, world views or philosophies; difficulties in characterization of value systems in unself-conscious societies.
- 532 COMPARATIVE SOCIAL ORGANIZATION (3)
Prerequisites: 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."
- 539 MEDICINE AND CULTURE (3)
Prerequisites: minimum of 15 credits of anthropology undergraduate courses and permission of instructor. Differences cross-culturally in the organization of medical delivery systems reflect various perceptions of what science is, what illness is, and what constitutes the structure of human relationships in professional-client interactions. The modernization of medical systems further provides useful models for the study of cultural change.
- 540 LANGUAGE, LEXICON AND CULTURE MAPPING (3)
Prerequisites: Linguistics 201 or Anth 248, Anth 348 or equivalent, Language and ethnography; or, the differential relationships existing between the lexicon and the grammar of languages and their speakers' respective cultures, societies and world view.
- 690 THESIS RESEARCH (3)
Prerequisite: formal advancement to candidacy for the M.A. in anthropology. S/U grading only.
- 691 THESIS (3)
Prerequisite: formal advancement to candidacy for the M.A. in anthropology. S/U grading only.
- COURSES IN SOCIOLOGY**
- Key to Revised (1974) Numbering System*
- 01-09 Concepts and Theory
10-19 Methods and Statistics
20-29 Demography and Ecology
30-39 Social Psychology
40-49 Organizations
50-59 Deviance and Control
60-69 Institutions
- Course Number Conversion Guide**
- 303 (402), 310 (370), 315 (375), 321 (311), 322 (312), 330 (350), 340 (366), 351 (354), 352 (446), 360 (352), 361 (320), 362 (342), 364 (435), 365 (441), 410 (470), 415 (475), 421 (411), 422 (412), 433 (450), 435 (452), 440 (380), 454 (442),
- 465 (482), 466 (417e), 467 (347), 490 (484, 487), 491 (471), 502 (510), 510 (575), 521 (511), 530 (515), 540 (531), 551 (517), 566 (556).
- 202 INTRODUCTION TO SOCIOLOGY (5)
Introduction to the analytical study of social phenomena.
- 251 SOCIOLOGY OF SOCIAL PROBLEMS (5)
Prerequisite: Soc 202 or equivalent. A survey of selected social problems, conditions, and issues from the sociological perspective.
- 261 PRINCIPLES OF SOCIAL WORK (5)
Introduction to the theory and practice of social work.
- 300 SPECIAL PROJECTS (1-3)
Prerequisites: 10 credits in sociology and Conference Course Permit from instructor required before registering. Supervised reading and/or research in selected areas.
- 302 SOCIOLOGICAL THEORY I (5)
Prerequisite: Soc 202. The development of social thought in Europe and America during the nineteenth and twentieth centuries.
- 303 SOCIOLOGICAL THEORY II (5)
Prerequisite: Soc 302. Major contemporary perspectives in sociology.
- 310 INTRODUCTION TO RESEARCH METHODS (5)
Prerequisite: Soc 202. The nature of scientific theory; the development of social research; the basic methods and techniques of data gathering, processing and analysis.
- 311 EVALUATING SOCIAL PROGRAMS (5)
Prerequisite: Math 240 or equivalent. Methods of assessing the effectiveness of social programs.
- 313 SOCIAL PLANNING (5)
Prerequisites: Soc 202, 251, or Soc 261. Principles, problems, and techniques of applying sociological knowledge to the planning process.
- 315 SOCIAL STATISTICS (5)
Prerequisite: Math 240 or equivalent course in statistics. Application of statistical reasoning and methods in sociological research.
- 321 WORLD DEMOGRAPHY (5)
Prerequisite: Soc 315 or equivalent. Growth, distribution and composition of human population; elementary demographic techniques essential to understanding the components of population change.
- 322 SOCIAL ECOLOGY (5)
Prerequisite: Soc 202. Development of human ecology as a discipline and its relationship to general ecology; basic concepts, theories, and methods developed by human ecologists as applied to the study of cities, community structures, and social areas; the ecosystem as a sociological frame of reference. Offered in alternate years.
- *Previous Soc/Anth course numbers listed in parentheses.

Sociology/Anthropology

- 323 URBAN SOCIOLOGY (5)
Prerequisite: Soc 202. Sociological analysis of cities, suburbs, and metropolitan communities.
- 330 INTRODUCTION TO SOCIAL PSYCHOLOGY (5)
Prerequisite: Soc 202. A general introduction to the study of interpersonal behavior. Examination of the 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.
- 333 SOCIOLOGY OF AGING (5)
Prerequisite: Soc 202. Analysis of societal age structure; age status and age-sex roles; social and social-psychological correlates of aging; continuities over the life cycle; intergenerational relations; social attitudes and policies regarding aging and the aged. Offered in alternate years.
- 335 SOCIOLOGY OF MEDICINE, HEALTH AND ILLNESS (5)
Prerequisite: Soc 202. Examination of the distribution of health, illness and disease in American society by age, sex, race, ethnicity, socio-economic status and selected social-psychological factors. Particular emphasis on current research on psychosomatic factors in illness, disease, and treatment response.
- 337 SOCIOLOGY OF SEXUAL BEHAVIOR (5)
Prerequisite: Soc 202. Sociological analysis of varying forms of sexual behavior and the place of sexual behavior in society and the world of the individual. Examination of 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)
Prerequisite: Soc 202. The study of the development, structure, and interrelationships of social systems that address the definition and solution of problems facing people within specified geographical areas.
- 351 SOCIOLOGY OF DEVIANT BEHAVIOR (5)
Prerequisite: 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)
Prerequisite: 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 explanations of their causation.
- 353 JUVENILE DELINQUENCY (5)
Prerequisite: Soc 202. Juvenile delinquency as a social phenomenon with emphasis on the distinction between delinquency and delinquent behavior and the factors related to juvenile; moving from delinquent behavior to delinquency. The extent and correlates of delinquent behavior; group and gang delinquency; the juvenile justice system.
- 354 TREATMENT AND CORRECTIONS (5)
Prerequisite: 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. Offered in alternate years.
- 360 SOCIOLOGY OF THE FAMILY (5)
Prerequisite: Soc 202. Analysis of the family as an institution and network of relationships in American life.
- 361 ECONOMY AND SOCIETY (5)
Prerequisite: Soc 202. Economic behavior and its relationship to the wider social context. Offered in alternate years.
- 362 POLITICAL SOCIOLOGY (5)
Prerequisite: Soc 202. Sociological aspects of political phenomena, with emphasis on power and authority, conflict and change.
- 363 SOCIOLOGY OF RELIGION (5)
Prerequisite: Soc 202. Relations between religion and other elements of social structure; in particular, the political, economic, and social impact of religious beliefs, behaviors, and organizations, as well as the social determination of these beliefs, behaviors, and organizations.
- 364 SOCIAL STRATIFICATION (5)
Prerequisites: Soc 310 and 315. Differentiation and evaluation of groups and individuals in society; the consequences for behavior in different spheres of society.
- 365 PUBLIC OPINION (5)
Prerequisite: 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 SPORTS, RECREATION AND LEISURE (5)
Prerequisite: Soc 202. The social organization and distribution of professional and non-professional sports activity in American society; the sociological and social-psychological factors related to involvement and participation in professional and non-professional sports; distribution and correlates of non-participant sports involvement; performance, competition, and spectatorship as related to various sociological variables including sex and age. Analysis of the distribution and correlates of non-work time behavior and specific leisure behaviors in American society. Offered in alternate years.

- 367 **SOCIOLOGY OF WORK AND OCCUPATIONS (5)**
Prerequisite: Soc 202. Sociological and social-psychological significance of work; factors affecting contemporary occupational structures; factors associated with typical career patterns and choices with particular attention to life cycle changes in occupational and work orientations; sex, race, ethnic, and social class differences in occupational choice and involvement; the structural characteristics of selected occupational areas.
- 368 **SEX ROLES AND SOCIAL STRUCTURE (5)**
Prerequisite: Soc 202. Socially constructed differences between the sexes; processes of socialization into sex roles; reactions to deviation from traditional sex role behavior; the connection between family structure and interaction and institutions in society with regard to sex role differentiation and socialization; the effect on life chances of sex socialization; sex typed behavior as a criterion for assuming "normal" adult status; sex roles and occupational entrance and structure; sex typing variations in the occupational structure of industrial societies; changes in sex role typing.
- 396a,b,c **HONORS TUTORIAL (3-5 ea)**
- 400 **SPECIAL PROJECTS (1-3)**
Prerequisite: 25 credits in sociology and Conference Course Permit from instructor required before registering. Supervised reading and/or research in selected areas.
- 410 **RESEARCH (3-5)**
Prerequisite: permission of instructor. Investigation of a problem through field or library research.
- 415 **ADVANCED QUANTITATIVE METHODS (3)**
Prerequisite: Soc 315 or equivalent. Experimentation and tests of significance applied to research problems.
- 421 **DEMOGRAPHIC ANALYSIS (3)**
Prerequisites: Soc 315, 321, or equivalents. Theory and method of population analysis; measures of mortality, fertility and migration; population forecasting techniques.
- 422 **SEMINAR IN SOCIAL ECOLOGY (3)**
Prerequisite: Soc 322. Review of contemporary research in human ecology. Offered in alternate years.
- 430 **ADVANCED SOCIAL PSYCHOLOGY (3)**
Prerequisites: Soc 330 or Psych 340, Soc 310, 315 or Psych 306. Designed for students with a continued interest in social psychology and set as an advanced sequel to Soc 330. Specific course content is determined by student's previous course work and interests in social psychology. Emphasis is placed on in-depth examination of selected topics of current research interest in social psychology with students gaining experience in design, methods, measurement, and analysis in social psychological research.
- 431 **THEORIES IN SOCIAL PSYCHOLOGY (3)**
Prerequisites: Soc 310, 315 (or Psych 306), Soc 330. A critical examination of selected theoretical orientations in social psychology, emphasizing related research literature as it bears upon evaluation of theories. Offered in alternate years.
- 433 **SMALL GROUP THEORY AND RESEARCH (3)**
Prerequisites: 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)**
Prerequisites: 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.
- 440 **SOCIOLOGY OF ORGANIZATIONS (3)**
Prerequisites: Soc 302, 310, 315. Sociology of organizations 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.
- 452 **SEMINAR IN CRIMINOLOGY (3)**
Prerequisites: Soc 202 and two courses from Soc 352, 353, 354. An in-depth examination of selected areas in sociological criminology.
- 454 **SOCIOLOGY OF LAW (3)**
Prerequisite: Soc 202. The interrelationship between law and society. The law as an aspect of social control and the law in action. Legislative and judicial law-making; substantive and procedural laws and their impact on defendants and plaintiffs. Offered in alternate years.
- 465 **SOCIOLOGY OF ADOLESCENCE (3)**
Prerequisites: Soc 202, 330 or equivalents. Age-sex status definition and role taking; institutional and processual aspects of maturation.
- 466 **SOCIOLOGY OF EDUCATION (3)**
Prerequisites: Soc 202, 330 or equivalents. Institutional, organizational, and interpersonal aspects of schools and schooling; emphasis on research on educational issues.
- 467 **RACIAL AND CULTURAL MINORITIES (3)**
Prerequisite: 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.
- 490 **READING AND CONFERENCE (3-5)**
Prerequisite: Conference Course Permit from instructor required before registering. The specific study topic will be determined by the instructor, in consultation with each student.

Sociology/Anthropology

- 491 FIELD EXPERIENCE PRACTICUM (15)
Prerequisites: junior status; completion of Soc 302, 310, 330; permission of sociology/anthropology department advising committee. Participant observation in research and applications in human services agencies and organizations.
- 492 SENIOR THESIS (5)
Prerequisite: 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 INTRO-DUCTORY SOCIOLOGY (3)
Prerequisites: 25 credits in sociology and Conference Course Permit from instructor required before registering. Practicum as discussion leaders in Soc 202.
- 496a,b,c HONORS TUTORIAL (3-5 ea)
- 497a TEACHING SOCIOLOGY IN THE SECONDARY SCHOOL (5)
Prerequisite: degree in social science or history or major concentration in those areas. An overview of the content and method of "Inquiries in Sociology," the secondary curricular materials developed by the American Sociological Association (SRSS Curricular Project). Offered summer, 1975.
- 501 PRO SEMINAR IN SOCIOLOGY (2)
Presentation of research reports by faculty and advanced graduate students, designed to familiarize students with examples of research and attendant problems: values, professional ethics, organization and utilization of sociological resources, etc.
- 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.
- 510 SEMINAR IN METHODOLOGY (3)
Prerequisite: Soc 415 or equivalent. Analysis and evaluation of the procedures, assumptions and modes of explanation employed in sociological research.
- 521 SEMINAR: DEMOGRAPHY (3)
Prerequisites: Soc 321 or equivalent, Soc 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, communication, task, performance, deviation, sanctioning, leadership, and other processes occurring in face-to-face and extended social interaction contexts.
- 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)
Prerequisites: 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 the society.
- 690 THESIS RESEARCH (3)
Prerequisite: formal advancement to candidacy for the M.A. in sociology. S/U grading only.
- 691 THESIS (3)
Prerequisite: formal advancement to candidacy for the M.A. in sociology. S/U grading only.



SPEECH

College of Arts and Sciences / Western Washington State College



Speech

The Department of Speech offers majors from three specialized areas: speech communication, speech pathology and audiology, and theatre. 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 a 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 radio or television, 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.

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, debate, and theatre, 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.

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.

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; a speakers' bureau, offering speaking experience before schools and community organizations; and radio and T.V. production classes where students participate in a regular series of radio and T.V.

broadcasts. In addition, a limited number of work-study programs in radio and television are available.

SPEECH PATHOLOGY AND AUDIOLOGY

Speech pathology and audiology are disciplines which have developed out of a concern for people with speech, language and hearing disorders. Preparation leading to certification as a "communication disorders specialist" features 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, centers or hospitals, are advised that clinical certification by the American Speech 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." (Consult the area adviser for details of this program.)

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 course work in speech and language 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 "communication disorders specialist."

THEATRE

Theatre at Western offers an academic major and programs for the student in dramatic arts and in dance, as well as specific programs for the student preparing for teaching or for a career in the professional world of theatre and dance.

Beginning with the introduction to Theatre course, appropriate sequences are available in dance and choreography, acting, directing, dramatic literature, creative dramatics and children's theatre, and theatrical production (e.g. costuming, lighting, make-up). Western

also offers a wide variety of on-stage experiences. Each quarter at least two major productions are presented, ranging from classic Greek drama to recent Broadway plays and dance concerts. In addition, some 30 to 40 student-directed productions are presented every year in connection with directing and advanced dance and choreography classes and the graduate production thesis program.

Children's theatre has an active program, both in classwork and production. Creative dramatics and developmental drama classes are offered each quarter. During winter quarter, Western's Youth Theatre plays to between 35,000 to 40,000 grade school and high school students across the state.

The study-abroad program, a 10-week session conducted in London, offers students a quarter of credit while living with English families and seeing the best of English theatre. A week at the Royal Shakespearean Company at Stratford-Upon-Avon highlights the program.

The Dance Program offers courses to general students as well as an undergraduate major which leads to a Bachelor of Arts degree. Sequence courses are offered in dance technique (jazz, ballet, modern), choreography, music for dance, labanotation, and history and philosophy of dance. In addition to the dance courses, the major includes related area courses in theatre and art. Each quarter a formal dance concert is presented in the college auditorium by Western's concert dance ensemble. There are also frequent opportunities for performing and choreographing in various student productions.

Western Theatre also includes a full season of Summer Stock. During the nine-week session, the student may sign for a series of individual classes or elect to take Speech 440—Summer Stock Workshop, a block of 15 credit hours. During the season nine plays are presented—six adult offerings, two children's theatre productions and a reader's theatre performance.

A complete program leading to the Master of Arts degree is also available.

The Department of Speech through its three specialized areas offers broad opportunities for learning. Further

information and guidance may be obtained by speaking with the department chairman, Dr. Arthur Solomon, College Hall 103, or calling (206) 676-3869 or 676-3870.

SPEECH FACULTY

- ARTHUR L. SOLOMON (1969) Chairman. Professor. BA, Antioch College; MA, University of North Carolina; PhD, Stanford University.
- LAURENCE W. BREWSTER (1948) Professor. BA, Yankton College; MA, PhD, University of Iowa.
- SENE R. CARLILE (1947) Professor. BA, BS, Fort Hays, Kansas State College; MA, Colorado State College; PhD, University of Wisconsin.
- DENNIS E. CATRELL (1966) Associate Professor. BA, University of Michigan; MA, Northern Illinois University.
- WILLIAM A. GREGORY (1968) Professor. 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 Women's College.
- PAUL E. HERBOLD (1952) Associate Professor. BA in Ed, Western Washington State College; MA, University of Washington; PhD, University of Minnesota.
- DANIEL M. LARNER (1968) Associate Professor. AB, Harvard College; MS, PhD, University of Wisconsin, Madison.
- MARVIN L. OLMSTEAD (1969) Associate Professor. BS in Ed, Black Hills Teachers College; MA, Washington State University; PhD, University of Washington.
- SAMUEL B. POLEN (1972) Assistant Professor. BS, Kent State University; MA, Ohio University; PhD, Ohio University/College of Communications.
- LARRY S. RICHARDSON (1970) Assistant Professor. BA in Ed, Western Washington State College; MEd, Central Washington State College; MA in Speech, PhD in Speech, Washington State University.
- ERHART A. SCHINSKE (1957) Professor. BA, Hamline University; MA, PhD, University of Minnesota.
- MICHAEL T. SEILO (1970) Associate Professor. BS, Northern Michigan University; MA, University of Arizona; PhD, Ohio University.
- BYRON E. SIGLER (1963) Associate Professor. BA, MFA, Tulane University; PhD, Stanford University.
- ALDEN C. SMITH (1966) Associate Professor. BS, Florida Southern College; MS, Syracuse University; PhD, University of Illinois.
- DOUGLAS R. VANDER YACHT (1970) Associate Professor. BA, Western Washington State College; MA, Purdue University; PhD, Ohio State University.
- LOREN L. WEBB (1965) Professor of Speech and Acting Vice President for Academic Affairs. BS, University of California, Berkeley; MA, University of Redlands; PhD, University of Washington.

Speech

Affiliated Speech Staff

Donald Adams, Roger Germain, Richard L. Sullivan, Michele Wipplinger.

BACHELOR OF ARTS IN EDUCATION

Major—General Classroom for Elementary Teachers 45 credits

- Speech 130, 203, 319, 330
- Speech 351, 354, 357, 373, 430, 484
- Electives under departmental advisement

Minor—General Classroom for Elementary Teachers 25 credits

- Speech 484
- One of the following communication skills courses taken under departmental advisement: Speech 203, 204, 304, 319
- Three courses from: Speech 330, 350, 351, 354, 373, 430
- Electives under departmental advisement

Major for Secondary Teachers 45 credits

- Speech 130, 202, 205, 236, 304, 319, 486
- Speech 332, 337, 350, 485
- Electives under departmental advisement

Minor for Secondary Teachers 30 credits

- Speech 130, 205, 236, 304, 319, 337, 485, 486
- Electives under departmental advisement

Major—Speech Pathology & Audiology 45 credits

Minor in elementary education optional.

- Speech 351, 352, 353, 354, 356, 357, 361, 370, 373, 452, 454, 455, 461
- Electives under departmental advisement

For students interested in or desirous of certification as a public school speech pathologist or audiologist, the professional education sequence is recommended.

The program leading to certification as a speech pathologist and/or audiologist in the public schools has been formulated by the WWSC-BEA-BPS consortium. For details regarding academic, clinical and internship requirements, please consult area adviser.

The American Speech and Hearing Association recommendation for certification of speech therapists includes a minimum of 90 quarter hours academic preparation. Such preparation would extend into the fifth year or graduate degree program. Consult the department for details.

Interdisciplinary Speech/English Major Concentration 80 credits

(Satisfies both major and minor and leads to teaching competency in both speech and English.)

Speech 40 credits

- Speech 130, 202, 204, 205 or 206 for 4 credits, 236, 319, 332, 337
- Speech 340 (or Journalism 340 or 406)
- Speech 485, 486
- Electives in speech under departmental advisement

English 40 credits

- English 301 or 302
- English 303
- Two courses in British literature before 1800
- One course in American literature before 1900
- One course from English 445-449
- Electives in English under departmental advisement with up to two literature courses allowable from the 200 level English Department offerings

BACHELOR OF ARTS*Major—General Speech* 60 credits

- Speech 130, 309, 340, 350, 351
- 9 credits from each of the major areas:
 - Speech Communication
 - Speech Pathology and Audiology
 - Theatre and Dramatic Arts
- Electives under departmental advisement

Minor—General Speech 25 credits

- Speech 130, 309, 340, 350, 351
- Electives under departmental advisement from the above three areas

Major—Speech Communication 70 credits

- Speech 204, 205, 304, 309, 319, 340, 350, 490
- 21 credits in speech communication under area advisement
- 20 credits of supporting courses taken outside the speech communication area under area advisement

(Program approval must be obtained from the speech communication area during the quarter in which the major is declared. Any changes or deletions must be approved by the area.)

Major—Broadcast Communication 70 credits

- Speech 240, 304, 309 or 405, 340, 343, and 449
- 30 credits from Speech 130, 204, 236, 241, 300, 309, 319, 332, 341, 342, 345, 346, 350, 400, 401, 402, 404, 405, 409, 441, 442, 443, 444 and 445a, taken under Speech Communication area advisement
- Journalism 104 and 18 credits of additional supporting courses taken outside the Speech Department under Speech Communication area advisement

Major—Speech Pathology & Audiology 50 credits

- Speech 351, 352, 353, 354, 356, 357
- Speech 373, 452, 454, 458, 459, 461
- Electives under area advisement

Major—Theatre & Dramatic Arts 85 credits

- Speech 130, 203, 235, 236, 236a, 237, 338
- Speech 310, 319, 320, 330, 332, 333, 337, 373
- Speech 424, 425, 426, 432, 435, 437
- Choose one of the following: Speech 427a, 427b, 427c
- Music 130
- PE 125, 134
- Recommended electives under area advisement: Music 121, 223; PE 126; Tech 210, 310

Major—Dance 71 credits

- Speech 130, 225, 235, 236, 237, 311, 314, 315, 316, 321, 322, 323, 332, 339, 411, 412
- Art 101
- Physical Education 125, 126, 128, 129, 326
- Biology 348
- Recommend at least 2 credits from Speech 230a, 231a, or 232a; others under departmental advisement

A minor is recommended in one of the following areas: music, literature, art, theatre.

GRADUATE STUDY

For concentrations in speech or speech pathology and audiology leading to the Master of Education or Master of Arts degree, see *Graduate Bulletin*.

COURSES IN SPEECH

Courses in the Department of Speech cover a range of subject matter specializations. For ready reference, courses may be classified as follows:

SPEECH COMMUNICATION 100, 202, 203, 204, 205, 206, 240, 241, 300, 301, 302, 304, 309, 318, 319, 340, 341, 342, 343, 345, 346, 350, 400, 401, 402, 404, 405, 406, 407, 407w, 409, 419, 441, 442, 443, 444, 445a, 449, 480, 481, 482, 483, 484, 485, 486, 486s, 487s, 488, 490, 491, 495, 497a, 497t, 500, 501, 502, 505, 507, 540, 541, 585, 588s, 595, 690, 691, 693, 694

Speech

SPEECH PATHOLOGY AND AUDIOLOGY 203, 300, 350, 351, 352, 353, 354, 356, 357, 361, 370, 373, 400, 452, 453, 454, 455, 456, 457, 458, 459-60, 461, 462, 463, 464, 465, 466, 468, 469-70, 498, 499, 500, 501, 502, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559-60, 561, 562, 563, 564, 565, 566, 568abc, 572, 573, 574, 575, 690, 691, 696

THEATRE AND DRAMATIC ARTS 111, 112, 130, 203, 211, 212, 225, 230, 230a, 231, 231a, 232, 232a, 235, 236, 236a, 237, 300, 310, 311, 314, 315, 316, 318, 319, 320, 321, 322, 323, 325, 330, 331, 332, 333, 335, 336, 337, 338, 339, 345, 346, 400, 410, 411, 412, 414, 415ab, 420, 421, 422, 423, 424, 425, 426, 427abc, 428, 429abc, 430, 431, 432, 433, 435, 436, 437, 438, 439, 440, 445a, 500, 501, 502, 511, 512, 527, 530, 535, 536a, 536b, 537, 538, 690, 691, 695

For a listing of speech courses which satisfy the General Education requirements, see the College of Arts and Sciences section of this catalog.

100 FUNDAMENTALS OF SPEECH (3)

Functional approach to effective communication; application of principles to practical problems in speech. Teacher education sophomores (or above) needing the general college requirement are advised to take Speech 302. Liberal arts transfer students are advised to take Speech 301.

110 INTERDISCIPLINARY ART (5)

For students planning interdisciplinary art majors and those wishing to broaden both their artistic knowledge and awareness. The course is team-taught: art, drama, music, and creative writing. Emphasis will be given to the interconnecting aesthetic principles of all art forms. (Also listed as Art 110, Music 110.)

130 INTRODUCTION TO THE THEATRE (3)

An introduction to the basics of the art of the theatre through participation; experiences with improvisation, mime, script analysis, criticism, sensory awareness; also touching on the allied arts of film and television.

202 PARLIAMENTARY PROCEDURE (1)

Parliamentary principles and procedures.

203 VOICE AND ARTICULATION IMPROVEMENT (3)

Background on the speaking process; theory and practice designed to improve articulation, projection, and vocal quality. (See Speech Office for exemption test.) Grading will be S/U only.

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 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.

225 INTRODUCTION TO DANCE (2)

An overview of dance subjects and problems with emphasis on the dance as a performing art; brief historical survey; similarities and differences of dance forms, vocational opportunities, notation, dance therapy, dance in education.

230, 231, 232 THEATRE THEORY AND PRODUCTION (2 ea)

Instruction and experience in all aspects of theatre organization and production. A maximum of 6 credits may be earned. Grading will be S/U only.

230a, 231a, 232a DANCE THEORY AND PRODUCTION (2 ea)

Group and individual experience in dance as a theatre art; participation in the dance concert. A maximum of 6 hours may be earned.

235 DESIGN FOR THE STAGE (3)

Aesthetic principles common to all contributory arts of the theatre; practical problems in scenic and costume design. Grading will be S/U only.

236 INTRODUCTION TO STAGECRAFT AND LIGHTING (5)

Basic theory of planning, drafting, construction, and rigging of scenery and lighting. Practical laboratory experiences in scenery construction; painting, handling and rigging of scenery and lighting; scene shop assignment on one production, backstage assignment on second.

236a STAGECRAFT LIGHTING LABORATORY (2)

Prerequisite: Speech 236 or concurrent. Practical experience in planning, handling and rigging stage lighting and special effects; assignments on two major productions.

237 STAGE MAKE-UP (2)

Theory and practice of applying make-up for the stage. Grading will be S/U only.

240 INTRODUCTION TO BROADCASTING (3)

Theory and technique of basic broadcast procedures; 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.

- 300 SPECIAL PROBLEMS (1-3)
Prerequisite: permission of instructor. Investigation of special problems in the field of speech.
- 301 SPEECH COMMUNICATION (3)
An investigation and analysis of problems and questions raised when man is involved in the act of communication either as a speaker or listener. Recommended for transfer students who are in liberal arts.
- 302 SPEECH FOR THE TEACHER (3)
Open only to teacher education students without Speech 100. 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)
Prerequisite: Speech 100, 301 or 302. Theory and practice in the art of public discourse.
- 309 HUMAN COMMUNICATION I (4)
Theories and processes of human communication; contributions of social sciences to communication theory, models and theories of intrapersonal and interpersonal communication.
- 310 INTRODUCTION TO HISTORY OF THE THEATRE (5)
Development of theatre arts from primitive origins to the present.
- 311 MODERN JAZZ DANCE (2)
Prerequisites: PE 125, 128. Development and practice of skills to enhance the body as an instrument of jazz dance: emphasis on control and isolation of muscles used in jazz dancing and a discipline and refinement of such movement techniques. The class will meet for two 75-minute periods per week.
- 312 ADVANCED MODERN JAZZ DANCE (2)
Prerequisites: PE 125, 128 and Speech 311. Continued development and practice of skills to enhance the body as an instrument of jazz dance, emphasis on control and isolation of muscles used in jazz dancing and a discipline and refinement of such movement techniques. The class will meet for two 75-minute periods per week.
- 314 ADVANCED MODERN DANCE TECHNIQUES AND IMPROVIZATIONS (2)
Prerequisites: PE 126 and 4 credit hours in dance or equivalent. A study of advanced modern dance techniques and styles.
- 315 ADVANCED MODERN DANCE TECHNIQUES AND IMPROVIZATIONS (2)
Prerequisite: Speech 314. A continuation of Speech 314 in further advanced form including the area of improvisation.
- 316 ADVANCED MODERN DANCE TECHNIQUES AND IMPROVIZATIONS (2)
Prerequisite: Speech 315. Further development of materials in Speech 315 leading toward composition.
- 319 ORAL INTERPRETATION (3)
Art and techniques of oral interpretation as method of literary criticism and means of communicating total meaning of a literary work to an audience.
- 320 SHAKESPEARE (3)
Survey of principal plays. Also offered as English 314f.
- 321 RHYTHMIC ANALYSIS AND ACCOMPANIMENT (3)
Prerequisite: PE 126 or equivalent. Technical aspects of music and rhythm essential to dancers, emphasis on metric rhythms and musical forms as applied to dance movement; the function of percussion and accompaniment for dance techniques, improvisations, and accompaniment.
- 322 DANCE COMPOSITION I — CHOREOGRAPHY (3)
Prerequisites: PE 126 and Speech 321. Fundamentals of composition emphasizing theme and development; form or design; time, force and special aspects in solo and duet studies.
- 323 DANCE COMPOSITION II — CHOREOGRAPHY (3)
Prerequisite: Speech 322. Composition in pre-classic and modern forms.
- 325 REPRESENTATIVE PLAYS (5)
Introductory survey of historically significant and stageworthy plays from all periods.
- 326, 327, 328 INTERMEDIATE BALLET TECHNIQUE (2 ea)
Prerequisite: two credit hours in ballet or equivalent. Speech 326 is the study of classical academic technique through the strict adherence to fundamental principles. Speech 327, a continuation of 326; increase in terminology and movement vocabulary. Speech 328, further development of the classic technique with increasing difficulty in tours, jumps, combinations in adagio and allegro. Open to non-majors.
- 330 INTRODUCTION TO CHILD DRAMA (3)
Prerequisite: Speech 130. Children's theatre, creative dramatics, puppetry; history, value, philosophy and literature of child drama; its uses in theatre, speech therapy, education and recreation.
- 331 PUPPETRY (3)
Prerequisite: 6 credits of theatre courses. 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. Grading will be S/U only.
- 332 ACTING I (3)
Prerequisite: Speech 130. Fundamentals of acting; emphasis on improvisation, pantomime, and basic stage movement.
- 333 ACTING II (3)
Prerequisite: Speech 332. Major exercise in body and voice applied to the realistic convention of acting.

Speech

- 334 DRAFTING, RENDERING AND MODELS FOR THE STAGE (3)
Prerequisite: Speech 235 and 236 or concurrent. Theory and practical experience in communicating technical and artistic information through drafting, color-rendering, and model construction techniques.
- 335 ADVANCED STAGECRAFT (3)
Prerequisite: Speech 236. Technical analysis of scripts; special effects and properties; laboratory work on productions.
- 336 ADVANCED STAGE LIGHTING (3)
Prerequisite: Speech 236a. Technical and artistic study of light and color as they affect other theatre arts and contribute to artistic design; laboratory work in production.
- 337 PLAY DIRECTION I (3)
Theory and practice of stage direction including selection of play, casting and blocking, and production of a scene for public performance.
- 338 HISTORIC COSTUME FOR THE STAGE (3)
Evolution of fashion from ancient Greece through the 19th century with reference to contemporary representation.
- 339 STAGE COSTUMING (3)
Prerequisite: Speech 235. Costume design and execution; specific emphasis on draping and rudimentary flat pattern techniques.
- 340 INTRODUCTION TO MASS COMMUNICATION MEDIA (3)
Development of mass media; newspapers, films, radio and television; their contemporary role in society.
- 341 BROADCAST COMMUNICATION II (3)
Prerequisites: Speech 241, 340. Laboratory practice in production of radio news and public service programs.
- 342 T/V PRODUCTION I (3)
Prerequisite: Speech 340 and written permission of the Speech Communication Area adviser. Theory and technique of basic television production. Laboratory practice utilizing instructional media facilities. Also offered as Tech 342.
- 343 BROADCAST WRITING (3)
Prerequisite: Speech 240 and Journalism 104. The preparation of news, advertising and public service copy for radio and television.
- 345 THE ART OF FILM (3)
Film as distinguished from but related to other art forms; film aesthetics; technology.
- 346 FILM GENRE (3)
Distinctive elements of melodrama, comedy, serious drama, documentary or fantasy.
- 350 BASES OF SPEECH (4)
Bases of verbal communication, physical, physiological and phonetic. Practice in phonetic transcription.
- 351 INTRODUCTION TO COMMUNICATION DISORDERS (3)
Survey of speech disorders; identification, classification, and the fundamentals of therapy.
- 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)
Prerequisite: Speech 352. Recommended 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)
Prerequisites: Speech 351, 352. Symptomatology, etiology, and therapy for articulation disorders.
- 357 OBSERVATION OF SPEECH AND HEARING THERAPY (2)
Prerequisite: Speech 351. (Speech pathology majors take concurrent with Speech 356.) Directed observation and evaluation of the methods, materials, and techniques used in treating speech and hearing cases.
- 361 LANGUAGE LEARNING DISABILITIES IN CHILDREN (3)
Prerequisites: Speech 351, 354, 357. Etiologies of language learning disabilities in children: diagnosis and treatment procedures.
- 370 SEMINAR IN SPEECH PATHOLOGY AND AUDIOLOGY (1)
Restricted to speech pathology and audiology majors only. Methods of instruction, human relations in the public school setting, self evaluation of candidates as potential speech pathologists and audiologists. Observation and field experiences. Repeatable for a maximum of 3 credits.
- 373 PHONETICS (3)
Training in recognition and production of sounds of spoken English through use of the International Phonetic Alphabet.

- 400 SPECIAL PROBLEMS (1-3)
Prerequisite: permission of instructor. Investigation of special problems in the fields of speech.
- 401 SPEECH WRITING (3)
Prerequisite: Speech 304. Manuscript preparation for selected audiences; theory and practice.
- 404 SMALL GROUP LEADERSHIP (4)
Prerequisite: Speech 204. Exploration of concepts of leadership of small groups in both formal and informal settings. Development of leadership skills.
- 405 PERSUASION (4)
Study of principles that influence attitudes and opinions in persuasive situations.
- 406 ADVANCED FORENSICS AND DEBATE (2)
Prerequisite: 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 406 may be applied to a major in speech.
- 407 INTERPERSONAL COMMUNICATION (4)
Experiences and skill training in small group settings to promote interpersonal relationships and to overcome communication barriers. Grading will be S/U only.
- 407w WORKSHOP IN INTERPERSONAL COMMUNICATION (1-3)
Prerequisite: 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. Grading will be S/U only.
- 409 HUMAN COMMUNICATION II (4)
Prerequisite: Speech 309. Theories and processes of human communication, verbal and non-verbal; models and theories of message systems; investigation of group, organizational and mass communication, including the diffusion of innovation.
- 410 TWENTIETH CENTURY THEATRE (3)
Prerequisite: Speech 310. Significant practices, trends, and figures in contemporary European and American theatres.
- 411 LABANOTATION (3)
Prerequisites: PE 126, Speech 225, 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.
- 412 HISTORY AND PHILOSOPHY OF DANCE (3)
Prerequisite: Speech 225. Historical and philosophical development of the dance from primitive man through the contemporary period.
- 414 DANCE PRODUCTION (2)
Prerequisites: PE 126, Speech 225, and 4 credit hours in dance. Lighting, costuming and make-up; formulating, developing, and presenting various types of dance programs.
- 415a,b HIGH SCHOOL DRAMA DIRECTORS WORKSHOP (2-3)
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 workshop utilizes the resources of the concurrent acting workshop for high school students. (Summer only.)
- 416 ADVANCED FORENSICS: ANALYSIS OF PUBLIC POLICY ISSUES (4)
Prerequisite: experience debating the current debate resolution. 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)
Prerequisite: Speech 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.
- 420 STUDIES IN SHAKESPEARE (3)
Prerequisite: Speech 320 or English 314f. Seminar in selected plays. Also offered as English 414r.
- 421, 422, 423 DEVELOPMENT OF THE ENGLISH DRAMA (3 ea)
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. (Also offered as English 412a,b,c.)
- 424 MODERN AMERICAN DRAMA (3)
American plays and playwrights from 1920 to 1950.
- 425 MODERN EUROPEAN DRAMA (3)
Selected European playwrights from 1850-1920.
- 426 CONTEMPORARY DRAMA (3)
Selected plays and significant trends in contemporary English, European and American drama.

Speech

- 427a,b,c MAJOR DRAMATISTS (3 ea)
Prerequisite: 6 credits in theatre literature. In depth treatment of playwrights influential in development of drama.
427a European
427b English
427c American
- 428 GREAT PLAYS FOR THE SECONDARY SCHOOL STAGE (3)
Finest plays of past and present form from point of view of production on secondary school stage.
- 429a,b,c PLAYWRITING (3 ea)
Opportunity for disciplined expression in writing drama for stage, film, television, or other media. May be repeated as b and c with a limit of one course per quarter. (Also offered as English 452a,b,c.)
- 430 CREATIVE DRAMA (3)
Speech 330 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.
- 431 CREATIVE DRAMATICS LEADERSHIP (3)
Prerequisite: Speech 430. Advanced techniques; supervised teaching.
- 432 PERIOD STYLES IN ACTING (3)
Prerequisite: Speech 333. Problems in playing the classical repertoire; emphasis on Shakespearean tragedy and Restoration comedy.
- 433 CHILDREN'S THEATRE (3)
Speech 330 recommended. Plays for children studied for appreciation of their values for the child audience; principles of children's theatre play selection.
- 435 SCENIC DESIGN (3)
Design for the modern theatre; emphasis on interpretation of the play through design; practical designs and techniques.
- 436 TOURING THEATRE (5)
Prerequisite: permission of instructor. Theory and principles of touring technique and problems; participation in college theatre touring program. Grading will be S/U only.
- 437 PLAY DIRECTION II (3)
Prerequisite: Speech 337. Producing and directing a one act play for public performance; special emphasis on working with the actor.
- 438 PLAY DIRECTION III (5)
Prerequisite: Speech 437. Producing and directing a full length play for public performance; emphasis on problems in high school, community and professional theatres.
- 439 PROFESSIONAL TECHNIQUES IN THEATRE ARTS (2-6)
Theoretical instruction and correlated laboratory experience in acting, directing, stage design, costuming, business management. Grading will be S/U only.
- 440 ADVANCED WORKSHOP IN SUMMER STOCK (15)
Prerequisite: written permission of instructor required before registering. Offered only summer quarter. Contact Director of Theatre for details.
- 441 PRODUCING AND DIRECTING THE BROADCAST PROGRAM (4)
Prerequisite: Speech 341. Production and direction for radio and closed circuit instructional television; preparation and execution of scripts; studio practice with radio and television equipment.
- 442 TELEVISION NEWS PRODUCTION (2)
Prerequisite: Speech 341 or 342, Journalism 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 Journalism 431, 432, or 433 recommended.)
- 443 T/V PRODUCTION II (3)
Prerequisite: Tech 342 or Speech 342, and written permission of the Speech Communication Area adviser. Advanced theory and technique of television production. Laboratory experience utilizing instructional media facilities.
- 444 PRODUCING AND MODERATING TELEVISION DISCUSSION (3)
Prerequisite: Speech 204 or 404. 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.
- 445a NEW DEVELOPMENTS IN THE ART OF FILM (3)
New developments in film as an art form. The course will cover the latest experiments in new methods of expression, as they would be defined by aesthetic principles.
- 449 FIELD INTERNSHIP IN MASS COMMUNICATION (1-6)
Prerequisite: junior 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.
- 452 DIAGNOSTIC METHODS IN SPEECH AND LANGUAGE DEVELOPMENT (4)
Prerequisites: Speech 459 or concurrent and permission of instructor. Methods, procedures, techniques, and instruments; supervised practice; planning therapy.

- 453 PRACTICUM IN DIAGNOSTIC METHODS (2)
Prerequisites: Speech 452 and permission of instructor. Clinical practicum in the administration of diagnostic tools in speech and language pathology.
- 454 INTRODUCTION TO STUTTERING: THEORY AND THERAPY (3)
Prerequisite: Speech 351. Characteristics of stuttering behavior; current theories of etiology of stuttering; principles and practices of therapy; cluttering as a related disorder.
- 455 SPEECH THERAPY IN THE PUBLIC SCHOOLS (3)
Prerequisites: Speech 351 and 357. Role of the clinician in organizing and directing a speech therapy program.
- 456 ORGANIC SPEECH DISORDERS (3)
Prerequisite: Speech 458. Symptomatology, etiology, and therapy for cerebral palsy, cleft palate, aphasia, dysarthria, and laryngectomy.
- 457 METHODS IN SPEECH THERAPY (3)
Prerequisite: Speech 356. Operant, traditional and play therapy with special application to the articulatory and language defective child.
- 458 INTRODUCTION TO CLINICAL PRACTICE IN SPEECH THERAPY (3)
Prerequisites: Speech 351, 352, 353, 354, 356, 357, 373. Supervised clinical practicum in therapy for the more prevalent voice and articulation disorders.
- 459, 460 CLINICAL PRACTICE IN SPEECH THERAPY (2 ea)
Prerequisite: permission of instructor, Continuation of Speech 458.
- 461 INTRODUCTION TO AUDIOLOGY (5)
Structure and function of auditory mechanism; basic acoustics as related to determination of hearing level; psychophysics of audition; nature of hearing loss.
- 462 AUDIOMETRIC TESTING (4)
Prerequisite: Speech 461. Theory and application of pure tone and speech audiometry to evaluation of hearing function; implications for rehabilitation.
- 463 AURAL REHABILITATION (4)
Prerequisite: Speech 461. Auditory training, speech reading and language training for the aurally handicapped.
- 464 HEARING AIDS (2)
Prerequisite: Speech 462. Description of hearing aids, hearing aid evaluation and auditory training in the rehabilitation of the auditorily handicapped.
- 465 SIGN LANGUAGE OF THE DEAF (2)
Theory and practice in use of the manual language methods for communication with the deaf.
- 466 MEDICAL AUDIOLOGY (3)
Prerequisites: Speech 461, 462. The medical pathologies of the hearing mechanism and their auditory manifestations. Problems of diagnosis, referral and report writing.
- 467 CLINICAL PRACTICE IN AURAL REHABILITATION (1)
Prerequisite: Speech 463. Supervised practice in the rehabilitation of the hard of hearing.
- 468 CLINICAL PRACTICUM IN AUDIOLOGY (1)
Prerequisites: Speech 461, 462. Supervised clinical practice in audiologic evaluation.
- 469, 470 CLINICAL PRACTICUM IN AUDIOLOGY (1 ea)
Prerequisite: Speech 468. Supervised clinical practice in audiologic evaluation.
- 480 HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS: 1740-1890 (3)
Relationship of prominent speakers to American political, social and intellectual life; from Jonathon Edwards through Booker T. Washington.
- 481 HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS: 1890-PRESENT (3)
Relationship of prominent speakers to American political, social, and intellectual life; William Jennings Bryan to contemporary speakers.
- 482 HISTORY AND CRITICISM OF BRITISH PUBLIC ADDRESS (3)
Examination and analysis of representative speeches of selected British orators; 1700-present.
- 483 HISTORY AND CRITICISM OF CANADIAN PUBLIC ADDRESS (3)
Critical examination of speakers and speeches concerned with significant issues—emphasizing those involving the U.S.A.—from 1800 to the present.
- 484 SPEECH FOR THE ELEMENTARY TEACHER (3)
Methods of utilization of the speech arts in the elementary classroom.
- 485 TEACHING SPEECH IN THE SENIOR HIGH SCHOOL (3)
Prerequisite: 15 credits in speech. Materials and methods useful in teaching drama, interpretation, and public address.
- 486 DIRECTING THE FORENSICS PROGRAM (4)
Prerequisite: Speech 205 or 206 (taken for 4 credits). Conducting tournaments, criticizing debates and individual events, budgeting.

Speech

- 486s HIGH SCHOOL DEBATE COACH WORKSHOP (2)
Prerequisite: 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.)
- 487s 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. (Summer only.)
- 488 BUSINESS, PROFESSIONAL AND GOVERNMENTAL SPEECH (3)
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)
Rhetorical principles and practices from the early Greek to the fall of the Roman Empire.
- 491 RHETORICAL THEORY AND PRACTICE—MEDIEVAL THROUGH MODERN (4)
Rhetorical principles and practices from the sixth to the twentieth centuries.
- 495 CAMPAIGN SPEAKING: ANALYSIS AND CRITICISM (3)
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.)
- 497u INDUSTRIAL NOISE AND THE ROLE OF AUDIOLOGY (3)
Prerequisite: Speech 461. Problems in noise pollution; federal and state regulations regarding noise, noise induced hearing loss and the role of audiology in prevention and control.
- 498 CLINICAL ADMINISTRATION OF SPEECH AND HEARING PROGRAMS (3)
Analysis of funding and program structure of clinics, schools and hospital organizations.
- 499 PUBLIC SCHOOL INTERNSHIP IN SPEECH PATHOLOGY AND AUDIOLOGY (8-16)
Prerequisite: completion of the undergraduate major requirements and permission of department. Supervised experience providing opportunities to develop and demonstrate clinical competence in the management of children with communication disorders. S/U grading only.
- 500 SPECIAL PROBLEMS (1-3)
Prerequisite: permission of instructor. For advanced students who wish to investigate special problems.
- 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)
Prerequisite: Speech 405. Readings in persuasion; logical and psychological modes of proof.
- 507 SEMINAR IN INTERPERSONAL COMMUNICATION (4)
Interpersonal communication in both group and dyadic situations; communication choice, social context, channels and nonverbal interaction.
- 511 SEMINAR IN DRAMATIC THEORY AND CRITICISM (4)
Prerequisite: undergraduate major in speech or permission of instructor. Evaluating concepts, principles and issues dominant in main periods of dramaturgical thought.
- 527 SEMINAR IN MAJOR DRAMATISTS AND DRAMATIC PERIODS (3)
Prerequisite: 6 credits in dramatic literature. Intensive study of life and works of playwright or period selected.
527a Ibsen
527b Strindberg
527c Shaw
527d The Dramatic Literature of Greece
527e The Drama of the French Neo-Classic Period
- 530 SEMINAR IN CHILD DRAMA (3)
Prerequisite: Speech 385 or 430 and 433. Critical review of theories and research findings in children's theatre and creative dramatics; individual artistic or research projects.
- 535 SEMINAR IN SCENIC DESIGN AND STAGE LIGHTING (3)
Prerequisites: Speech 336 and 435. Historical survey of the aesthetic principles and practices in the scenic arts with special emphasis on stage design and lighting.
- 536a PLAYWRITING SEMINAR (3)
Individual projects in dramatic writing will be submitted for group discussion. (Also listed as English 503a.)
- 536b ADVANCED PLAYWRITING SEMINAR (3)
Prerequisite: Speech 536a or permission of instructor. Individual projects in playwriting. (Also listed as English 503b.)
- 537 SEMINAR IN PLAY DIRECTION (4)
Prerequisite: Speech 438. Theories of play direction beginning with the emergence of the director in the work of the Duke of Saxe-Meiningen and including Stanislavsky, Craig, Meyerhold, Brecht, Reinhardt, Littlewood, Artaud, and Grotowski.
- 538 PLAY ANALYSIS AND THEATRE PRODUCTION PLANNING (3)
Theories of play analysis and theatre production organization from point of view of the play director preparing to produce a play.

- 540 SEMINAR IN MASS COMMUNICATIONS (3)
Prerequisite: undergraduate major in speech, or permission of instructor. Critical issues in the development, structure, and function of mass communications in a democratic society: responsibilities, means of control, and regulation.
- 550 VOICE DISORDERS AND THERAPY (3)
Prerequisites: Speech 351, 352. 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)
Prerequisite: 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 (3)
Prerequisite: Speech 452. Specialized methods, tests, and instruments used in diagnosis of more complex morphological and neuropathological disorders; supervised practice.
- 553 SEMINAR: LANGUAGE DISORDERS (3)
Prerequisites: Speech 354, 361. Abnormal speech and language acquisition and development with special focus on current research findings; communication disruption as result of brain injury, mental retardation, emotional disturbances and other organic and functional conditions.
- 554 SEMINAR: STUTTERING (3)
Prerequisite: Speech 454. Critical analysis of recent research findings relating to stuttering and cluttering disorders; chief rationale for therapy and evaluation of therapy procedures and results.
- 555 ADVANCED STUDIES IN LANGUAGE DEVELOPMENT IN CHILDREN (3)
Experimental findings and theoretical interpretations of normal speech and language acquisition with an emphasis on studies in syntax and semantics; origins and growth of symbolic processes; factors influencing learning of speech and language.
- 556 APHASIA AND KINDRED DISORDERS (3)
Prerequisite: Speech 456. Diagnosis and treatment of language impaired adults with specific brain injury patterns; aphasia, apraxia, dysarthria, etc.
- 558 ADVANCED CLINICAL PRACTICE IN SPEECH THERAPY (3)
Prerequisite: Speech 458. Supervised clinical practicum dealing with more complex cases.
- 559, 560 ADVANCED CLINICAL PRACTICE IN SPEECH THERAPY (2 ea)
Prerequisite: Speech 558. Continuation of Speech 558.
- 561 SEMINAR IN AUDIOLOGY (3)
Prerequisite: Speech 461. Study of research in basic auditory correlates: auditory process, psychoacoustics, psychophysical methods, and the psychological manifestations.
- 562 ADVANCED AUDIOMETRY (3)
Prerequisite: Speech 462. Theory and application of advanced diagnostic audiometric procedures.
- 563 SEMINAR IN AURAL REHABILITATION (3)
Prerequisite: Speech 463. Research in the training of the hearing handicapped.
- 564 ADVANCED CLINICAL PRACTICE IN AURAL REHABILITATION (2)
Prerequisites: Speech 358, 463 and 467. Supervised practice in rehabilitation of the hard of hearing.
- 565 PSYCHOACOUSTICS (3)
Prerequisites: Speech 561 and 574. Application of standard psycho-physical techniques and theory of signal detection to audiologic research.
- 566 BIOACOUSTICS (3)
Prerequisite: Speech 561. The ear as a transducer and analyzer: electro, physiological and mechanical properties of the ear.
- 568a,b,c ADVANCED CLINICAL PRACTICUM IN AUDIOLOGY (1 ea)
Prerequisites: Speech 461, 462, 468; to be taken in sequence. Clinical practicum designed to advance skills in audiology.
- 572 CHILD PHONETICS AND PHONOLOGY: PERCEPTION AND PRODUCTION (3)
The acquisition of phonetic perception and production.
- 573 ADVANCED PHONETICS (3)
Prerequisite: Speech 373. The phonetic structure and symbolization of principal American and other English dialects and certain European languages.
- 574 EXPERIMENTAL PHONETICS (3)
Prerequisite: Speech 573. Study of laboratory investigations of phonetic problems; analysis and measurement of variables in speech production.
- 575 INTERVIEWING AND COUNSELING TECHNIQUES FOR THE SPEECH AND HEARING CLINICIAN (5)
Prerequisite: permission of instructor. Readings, discussion and supervised practice in the counseling of parents having speech and hearing handicapped children.
- 585 INTERNSHIP IN THE TEACHING OF COLLEGE SPEECH (3)
Prerequisite: permission of instructor. Supervised teaching of the basic speech course.

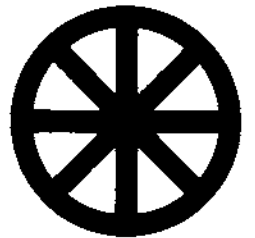
Speech

- 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. Summer only.
- 595 SEMINAR IN RHETORICAL CRITICISM (4)
Prerequisite: Speech 501. Literature of rhetorical criticism and the application of rhetorical theory in the criticism of significant speeches.
- 690 THESIS (6-9)
- 691 WRITING SEMINAR: THE RESEARCH MONOGRAPH IN SPEECH (3)
Prerequisites: 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.
- 693 INTERNSHIP IN SPEECH COMMUNICATION (3)
Prerequisite: 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. This report may be applied in partial fulfillment of the M.A., Option II requirement.
- 694 FIELD INTERNSHIP IN PUBLIC INFORMATION/ MASS COMMUNICATION (6-12)
Prerequisite: permission of instructor. (Maximum credit will be granted only for a full-time training internship.) 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.
- 695 INTERNSHIP IN THEATRE ARTS (3)
Prerequisite: permission of instructor. Experimentation leading to development of new methods and materials in the teaching and practice of theatre; supervised assistance in curricular and co-curricular programs in theatre. A Field Project Report will be required. This report may be applied in partial fulfillment of the M.A., Option II requirement.
- 696 INTERNSHIP IN SPEECH PATHOLOGY AND/OR AUDIOLOGY THERAPY (3)
Prerequisites: Speech 558, 559 and experience as a speech therapist and permission of instructor. Experimentation with new methods and materials, and clinical implementation of current practices; planning, directing and supervising speech clinicians. A Field Project Report will be required. This report may be applied in partial fulfillment of the M.A., Option II requirement.



TECHNOLOGY

College of Arts and Sciences / Western Washington State College



Technology

Many students are surprised and pleased to hear that Western offers technical education programs on its campus; indeed, the Department of Technology is the largest and strongest of its kind in the entire Northwest. Students enroll in the technology courses either because they are interested in completing one of the three 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 college experience.

By counting the courses listed in this section of the catalog, students can be impressed by the number of courses (over 80) which are offered. By reading some of the titles and course descriptions, some understanding of the breadth of offering can be gained. These 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 160, 210, 211, 212, 240, 260, 265, 310, 312, 313, 340, 341, 360, 362, 363, 413, 419, 440, 441, 447, 448, 449, 460, 469, 540, 541, 542, 543, 544.

Materials and Processes 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 (material forming, casting, molding, shaping and machining), and polymer science (plastics, thermoplastics and thermosets). The specific courses offered in this area include 222, 223, 224, 225, 231, 303, 320, 321, 322, 323, 324, 325, 326, 327, 328, 331, 333, 335, 417, 420, 422, 425, 428, 429, 433, 434, 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 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, 280, 281, 370, 371, 372, 375, 379, 381, 382, 477, 478, 479, 484, 489.

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, 317, 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, 394, 400, 402, 417, 459, 491, 492, 493, 495, 496, 497, 499, 590, 591, 592, 594, 595.

PROGRAMS AND MAJORS

There are three programs in the Department of Technology for those who wish to become majors; all three offer the Bachelor of Science degree.

Direct Transfer Program

A technical "block" transfer program has been approved at WWSC. 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 WWSC general education requirement).
2. One course in physics (to be counted toward WWSC 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.

Industrial Arts

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.

Industrial Technology

This program is for those who wish to enter supervisory and management levels of technical industries. Prospective students are encouraged to include physics, chemistry and mathematics in their high school preparation. Many employers are now seeking supervision, management and sales personnel who have the unique educational combinations offered in the industrial technology program at Western. That is, a general education with a liberal intent, extensive work in the sciences and mathematics, and breadth and depth in the theoretical and practical approaches to industries' basic materials, processes and problems. Industrial technology does not offer highly specialized engineering content; instead, the program provides graduates who have proven their industrial interests and the ability to meet the expectations of employers who emphasize continuing developmental and educational progress on the job. An increasing number of employers are seeking industrial technology graduates, and positions taken by recent graduates include the following examples: design associate, outside engineer, industrial design trainee, production management, media specialist, sales engineer, graphic illustrator, engineering assistant, industrial engineer and city-planning assistant.

Visual Communications Education (VICOED)

Growing out of an earlier graphic arts program, the Ford Foundation funded an innovative and interdisciplinary pilot program called visual communications education (VICOED). This program seeks to develop communicators who understand the processes of communication

*Excluding sub-college and/or remedial courses.

Technology

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 college careers. A complete description of the program is offered in this catalog under the "Interdepartmental Programs" listing.

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. But it should be remembered that there are thousands of students in colleges who do not expect direct placement from their college careers; they are in higher education for other valid reasons. The liberal arts are in themselves frequently claimed to be the 'best' type of vocational education; technology majors are not denied the liberal arts. In addition, however, technology majors study in subjects which are germane to a modern technological society and, though their placement cannot be guaranteed, the combination of disciplines they have studied 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 correspon-

dence 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.

Students interested in Design Center projects should consult the WDC personnel in home economics and technology.

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.
- JERRY L. BURWELL (1974) Instructor. BA, MEd, University of Washington.
- GERRIT BYEMAN (1972) Instructor. BA, Western Washington State College.
- ROBERT D. EMBREY (1971) Assistant Professor. BA, MA, MFA, University of Oregon.
- RICHARD J. FOWLER (1965) Associate Professor. BA, MS, Washington State University; EdD, Texas A. & M. University.
- CLAUDE E. HILL (1967) Associate Professor. BA, MA, University of Washington.
- DONALD E. MOON (1966) Associate Professor. BS in Ed, California State College, California, Pa.; MA, Teachers College, Columbia University; EdD, Oregon State University.
- RONALD C. MUGGERUD (1973) Assistant Professor. Diploma, Oregon Technical Institute; BA, MEd, 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 Communication 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.
- RICHARD F. VOGEL (1971) Associate Professor. BA, MAT, Washington State University; DEd, Texas A. & M. University.

*On Leave 1975-76

BACHELOR OF SCIENCE

(Industrial Arts Education)

Major Secondary 110 credits
(includes professional education)

- 25 credits in lower division technology courses: Tech 210, 214, and 19 credits under advisement
- 25 credits in upper division technology courses: Tech 391, 491, 493, and 16 credits under advisement from one or two of the following:
 - a. Graphic Communications Technology (industrial graphics, graphic arts, photography, industrial design)
 - b. Materials and Processes Technology (woods, metals, material science, plastics, crafts)
 - c. Mechanical and Electrical Technology (electricity, electronics, power mechanics)
- 24 credits from the following:
 - a. Student-designed, departmentally approved interdisciplinary sequences
 - b. Additional upper division technology courses
 - c. Approved cooperative work-study courses
- 36 credits—the Professional Education Sequence (see Education Department listing). Note: the department recommends Option A of the Professional Education Sequence for industrial arts education majors

Teaching Competence

Recommendation for teaching competence normally requires completion of the major with a grade point average of 2.5 or better.

Minor 25 credits

Courses to be selected under departmental advisement.

BACHELOR OF SCIENCE

(Industrial Technology)

Major 110 credits

- 25 credits in lower division technology courses

- 20 credits in upper division technology courses from one of the following:
 - a. Graphic Communications (industrial graphics, graphic arts, photography)
 - b. Materials and Processes Technology (woods, metals, material science, plastics)
 - c. Mechanical and Electrical Technology (electricity, electronics, power mechanics)
 - d. Industrial Design
- 25 credits related to the major from one or more of the following:
 - a. Student-designed departmentally approved interdisciplinary sequences
 - b. Additional upper division technology courses
 - c. Approved cooperative work-study courses
- 40 credits supporting courses: Physics 131 or 231; Math 122 or 220, 240; Computer Science 110; 15 credits in economics or business administration; any one of the following sequences: (a) Chem 121, 122; (b) Chem 115, 208, 209; (c) Chem 115, 251; (d) Chem 115, Physics 132, 133

Minor 25 credits

Courses selected under departmental advisement.

*Visual Communications
(VICOED) Concentration*

See Interdepartmental Programs section for specifications.

GRADUATE STUDYFor a concentration in industrial arts leading to the degree of Master of Education, see *Graduate Bulletin*.**COURSES IN TECHNOLOGY**

Courses in Technology cover a wide range of subject areas. For ready reference, courses may be classified as follows:

Graphic Communications Technology—160, 210, 211, 212, 240, 260, 265, 310, 312, 313, 340, 341, 342, 360, 362, 363, 413, 419, 440, 441, 443, 447, 448, 449, 460, 469, 540, 541, 542, 543, 544

Materials and Processing Technology—222, 223, 224, 225, 231, 303, 320, 321, 322, 323, 324, 325, 326, 327, 328, 331, 333, 335, 417a,c, 420, 422, 425, 428, 429, 433, 434, 439

Technology

Mechanical and Electrical Technology—270, 280, 281, 370, 371, 372, 375, 379, 381, 382, 477, 478, 479, 484, 489

Industrial Design 214, 215, 311, 315, 316, 317, 318, 416, 418

Driver Education 480, 481, 482, 483, 485, 487

General and Professional Courses 101, 201, 301, 302, 304, 350, 391, 394, 400, 402, 417b, 450, 459, 491, 492, 493, 494, 495, 496, 497k, 497m, 499, 590, 591, 592, 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 only for this course.

160 TECHNICAL FUNDAMENTALS OF PHOTOGRAPHY (2)

A non-laboratory approach to the basic technical concepts.

210 INDUSTRIAL GRAPHICS (3)

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.

211 INDUSTRIAL GRAPHICS (3)

Prerequisite: 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.

212 GRAPHIC ANALYSIS (3)

Prerequisite: Tech 210 or equivalent. Relationships of points, lines and planes in space with practical applications to engineering, geologic formation definition and graphical vector analysis. Use of true length diagrams, auxiliary views and revolution in graphical problem-solving.

214 FUNDAMENTALS OF PRODUCT DESIGN (3)

Basic design concepts and aesthetics of form, color, and space involved in the design process. Considered preliminary to courses in design with graphic media, wood, plastics, metals, and industrial design.

215 EVOLUTION IN INDUSTRIAL DESIGN (3)

Interrelationship with the arts, sciences, and society; designers, their philosophies and resultant impact on culture.

222 HOT METAL PROCESSES (3)

Basic concepts and skills in hot metal fabrication processes, including casting, forging, heat treating, forming, and welding.

223 MACHINE METAL PROCESSES (3)

Prerequisite: 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.

224 INTRODUCTION TO STRENGTH OF MATERIALS (4)

Elementary statics, stress and strain in members; riveted and bolted joints; statically determinate beams; and torsion in shafts.

225 INDUSTRIAL MATERIALS (3)

Prerequisite: general education chemistry and mathematics requirements, or equivalent. Materials of industrial technology; introduction to the science of materials.

231 GENERAL WOODS (3)

Prerequisite: 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 communications field including visual communications theory, information design, reproduction, presentation, and management; involves the print and non-print media.

260 GENERAL PHOTOGRAPHY (3)

Prerequisite: Tech 160. Application of photographic technique.

265 FUNDAMENTALS OF CINEMATOGRAPHY (3)

Planning, photographing, and editing motion pictures; producing single concept films.

270 APPLIED ELECTRICITY (3)

Principles and concepts of electricity; laboratory experiences with electrical components, circuits and measuring equipment.

280 POWER MECHANICS (3)

Design principles of major power sources; techniques of torque and power measurement.

281 POWER TRANSMISSION (3)

Principles and practice of mechanical and fluid transmission of power.

301 CRAFTS (3)

Design and construction in a variety of craft materials.

302 MAINTENANCE OF INDUSTRIAL EQUIPMENT (3)

Prerequisite: Tech 223, 231, 270. 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.
- 310 TECHNICAL ILLUSTRATION (3)
Prerequisite: Tech 210 or equivalent. Preparation of three-dimensional pictorial drawings using isometric drawing, axonometric projection and perspective drawing with application of time saving techniques such as: pre-printed grids, ellipse templates, and other specialized equipment. Introduction to rendering techniques with pencil, ink, pressure sensitives, airbrush and other media.
- 311 APPLIED PERSPECTIVE AND RENDERING (3)
Prerequisite: 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)
Prerequisite: Tech 211. Problems in machine drawing, linkage analysis, intersections and developments, and successive auxiliary view construction. Visitations to observe current drafting practices in industry.
- 313 ARCHITECTURAL DESIGN AND HOUSE PLANNING (3)
Prerequisite: Tech 210. Historical development; considerations of design; analysis of needs; utilization of sites, preparation of plans.
- 315 INDUSTRIAL DESIGN PROCESSES (3)
Prerequisite: Tech 210. 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 (3)
Prerequisite: Tech 315. Application of multi-view projections, pictorials, mock-ups and prototypes to the resolution of a design problem.
- 317 PRODUCT SYNTHESIS IN INDUSTRIAL DESIGN (3)
Prerequisite: 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.
- 318 PACKAGING (3)
Prerequisite: Tech 214, 210; Art 370 prior to or concurrent with this course recommended. Composition, properties, and application of a variety of packaging materials to products of sundry shape and rigidity. Involves graphics, design, construction, and testing of packaging as well as an introduction to the problems of mechanical packaging.
- 320 ADVANCED METALWORKING (3)
Prerequisites: Tech 222 and 223. Advanced skill and developments of metalworking processes and machines. Includes machine tool skills, tool room operation and fabrication of jigs and fixtures.
- 321 MATERIALS AND MANUFACTURING (4)
Prerequisite: upper-division standing. Materials and their properties as related to manufacturing processes; component design and utilization; and the economics of the entire system.
- 322 PRODUCTION ENGINEERING (3)
Prerequisite: upper-division standing. Planning and coordination of manufacturing facilities for economical production; scheduling; plant layout; numerical control using manual and computer assisted programming methods, with emphasis on APT.
- 323 MECHANICS OF MATERIALS (3)
Prerequisite: Math 100 or equivalent and upper-division standing. Stress and strain; internal response of engineering members to forces; principal stresses and strains; stress concentrations; photoelasticity and strain gauge techniques.
- 324 STRENGTH OF MATERIALS (3)
Prerequisites: Tech 323 and Math 122. Elasticity and strength with applications to tension, shear, torsion, beams and columns.
- 325 PHYSICAL METALLURGY (4)
Prerequisite: upper-division standing. Structure of metals and alloys; equilibrium diagrams; nucleation and growth; recovery and recrystallization; heat treatments; and relation between properties and microstructure.
- 326 FERROUS METALLURGY (4)
Prerequisite: Tech 325 or equivalent. The metal iron, its alloys and heat treatments.
- 327 NON-FERROUS METALLURGY (3)
Prerequisite: Tech 325 or equivalent. The important industrial metals other than iron; and their alloys.
- 328 METALLURGY LABORATORY (1)
Prerequisite: Tech 325. Study of metal specimens and metallography.
- 331 ADVANCED WOODS (3)
Prerequisite: Tech 231. Skill and development in the more complex woodworking processes with related information on the woodworking industry.
- 333 PLASTICS (5)
Prerequisite: 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.

Technology

- 335 **TOOLING FOR PLASTICS PROCESSING (3)**
Prerequisite: 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)**
Prerequisite: Tech 240. Graphic arts technology as related to reproduction of graphic design techniques.
- 341 **GENERAL GRAPHIC ARTS II (5)**
Prerequisite: Tech 340. Techniques, processes, and products of the graphic arts industry: designing, reproducing, presenting, and managing graphic materials.
- 342 **T/V PRODUCTION I (3)**
Prerequisites: Speech 340 and written permission of the Director of VICOED. Theory and technique of basic television production. Laboratory practice utilizing instructional media facilities. Also offered as Speech 342.
- 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)**
Prerequisite: 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.
- 362 **VISUAL COMMUNICATION PHOTOGRAPHY (3)**
Prerequisite: Tech 260. Function of photography in visual communication; application of theory and techniques to projects.
- 363 **COLOR PHOTOGRAPHY (3)**
Prerequisite: Tech 260. Fundamentals of color theory; techniques of producing color transparencies and prints.
- 370 **BASIC ELECTRONIC CIRCUITS (4)**
Prerequisite: Tech 270. Theory and application of power supplies, amplifiers, oscillators and digital circuits.
- 371 **SEMI-CONDUCTORS (4)**
Prerequisite: Tech 370. Characteristics of semi-conductor devices and circuits.
- 372 **INDUSTRIAL ELECTRONICS (4)**
Prerequisite: 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 **MOTORS AND GENERATORS (3)**
Prerequisite: Tech 270. Theory and characteristics of motors and generators.
- 379 **VISUAL COMMUNICATION ELECTRONICS (3)**
Prerequisite: Tech 341. Principles and applications of instrumentation, electronic systems and computer graphics technology in the communication industry.
- 380 **ADVANCED POWER MECHANICS (3)**
Prerequisite: Tech 280. Efficiency determinants, power measurement, development of concepts introduced in Tech 280.
- 381 **ADVANCED POWER TRANSMISSION (3)**
Prerequisite: Tech 281. Practical application of hydraulic and fluidic theory; development of concepts introduced in Tech 281.
- 382 **AUTOMOTIVE ELECTRICITY (2)**
Prerequisite: Tech 270 or 280. Basic principles of electrical components and systems of the automobile and other engines.
- 391 **MAN AND TECHNOLOGY (3)**
Development, scope, and impact of technology upon man.
- 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.
- 400 **SPECIAL PROBLEMS (1-5)**
Prerequisite: permission of instructor; open only to technology majors. Specialized advanced study through individual instruction.
- 402 **COOPERATIVE WORK/STUDY (1-15)**
Prerequisites: junior standing; conference course permit; 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)**
Prerequisite: Tech 313. Advanced residential planning, cost estimating; FIA standards, building codes; individual and group research.
- 416 **STRUCTURAL-AESTHETIC FACTORS IN INDUSTRIAL DESIGN (3)**
Prerequisite: Tech 316. Tectonic principles applied to consumer products, problems related to functional and emotional factors of environmental design involving space, structure, furniture and lighting.
- 417 **SPECIAL INTEREST SEMINARS**
- 417a **Woodcarving (3)**
Prerequisite: art or industrial arts teaching experience
- 417b **Industrial Arts in the Middle School (3)**
Prerequisite: teaching experience.
- 417c **Wood Sculpture and Design (3)**
Prerequisite: Tech 417a.

- 417d Material Testing in Industrial Arts (3)
Prerequisite: industrial arts teaching.
- 417e 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 Studies.
- 417f Special Interest Seminar — Industrial Careers (3)
To provide industrial education teachers with current information on industrial careers, i.e., positions, salaries, requirements, working conditions and other pertinent career information that can be incorporated into industrial education programs. (Offered through Continuing Studies.)
- 417h The World of Construction (3)
(Extension)
- 417j Surveyor's Transit Technology (1)
(Extension)
- 417k The World of Manufacturing (3)
(Extension)
- 417m Visual Communications (3)
Prerequisite: a basic course in graphic arts, art or photography.
- 417n Individualizing Instruction for Occupational Versatility (3)
Prerequisite: teaching experience.
- 417p Student Management Systems (3)
A class designed for teachers wishing to incorporate the student management and direction system of the "Occupational Versatility" program.
- 417q Self Instructional Systems (3)
A class designed for teachers wishing to incorporate the self instructional phase of the "Occupational Versatility" method of teaching industrial arts.
- 418 DESIGN CENTER RESEARCH PROJECT (1-3)
Prerequisite: Tech 214 or Home Econ 101. Directed research in design under the auspices of the Western Design Center. (Also offered as Home Econ 418.)
- 419 DIRECTED RESEARCH IN DRAFTING/DESIGN (1-3)
Prerequisite: Tech 211. Research problem in drafting or design conducted under supervision.
- 422 INDUSTRIAL ENGINEERING (3)
Prerequisite: junior or senior standing. Organization, structure, production control and operation of industrial manufacturing enterprises; methods analysis; economic considerations; computer simulation and linear programming; and quality control.
- 428 DIRECTED RESEARCH IN MATERIAL SCIENCE (1-3)
Prerequisite: permission of instructor. Research under supervision in an area of material science.
- 429 DIRECTED RESEARCH IN METALS (1-3)
Prerequisites: Tech 223, 320. Selection, development, and research, under supervision, within one of the areas of metals technology.
- 433 ADVANCED PLASTICS (3)
Prerequisite: 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 (3)
Prerequisite: Tech 333. Resin and reinforcement systems; material testing and strength analysis; mold design and development; theory and involvement in reinforced plastics production processes.
- 439 DIRECTED RESEARCH IN WOODS (1-3)
Prerequisites: Tech 231, 331. Selection, development, and research, under supervision, within one of the areas of wood technology.
- 440 GRAPHIC DESIGN (5)
Prerequisites: Tech 341 and 362. Principles and application of effective visual communication, design, and reproduction.
- 441 VISUAL COMMUNICATION SERVICES MANAGEMENT (5)
Prerequisite: Tech 341. Estimating and pricing, simplified cost accounting; organization and administration of visual communication services; production, quality and color control instruments and techniques.
- 442 INSTRUCTIONAL MATERIALS (5)
Prerequisite: 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.
- 443 T/V PRODUCTION II (3)
Prerequisites: Tech 240, Tech 342 or Speech 342, and written permission of the Director of VICOED. Advanced theory and technique of television production. Laboratory experiences utilizing instructional media facilities. Also listed as Speech 443.
- 447 PUBLICATIONS PRODUCTION (3)
Prerequisite: concurrent enrollment in Tech 448. Experiences in design, layout, and production of publications through printed media, film, television, or other means.
- 448 VISUAL COMMUNICATION (5)
Prerequisite: completion of the VICOED sequence. Synthesis of basic concepts, models, and theories, the perceptual, social, cultural, and technological determinants of visual form, style and content.
- 449 DIRECTED RESEARCH IN GRAPHIC ARTS (1-3)
Prerequisites: Tech 240, 340. Selected problems in graphic arts.

Technology

- 450 CAREER AWARENESS IN ELEMENTARY SCHOOLS (1-3)
Prerequisite: 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.
- 459 DIRECTED RESEARCH IN INDUSTRIAL ARTS FOR THE ELEMENTARY SCHOOL (1-3)
Prerequisite: Tech 350. Developing industrial arts content with emphasis on the relationship between industrial arts and the elementary school curriculum.
- 460 INDUSTRIAL PHOTOGRAPHY (3)
Prerequisite: Tech 363. Application of photographic theory and techniques to selected problems.
- 469 DIRECTED RESEARCH IN PHOTOGRAPHY (1-3)
Prerequisite: Tech 260. Research problems in photography chosen and conducted under supervision.
- 477 THEORY AND OPERATION OF ELECTRONIC TEST EQUIPMENT (4)
Prerequisite: Tech 371. Theory and practice in the operation of electronic test equipment common to industrial arts electronic programs.
- 478 PRACTICAL RADIO AND TELEVISION (4)
Prerequisite: Tech 371. Theory of radio and television transmitters and receivers.
- 479 DIRECTED RESEARCH IN ELECTRICITY (1-3)
Prerequisite: Tech 371. Advanced study in problems chosen and conducted under supervision.
- 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.
- 480a SAFETY PRINCIPLES AND PRACTICES FOR INDUSTRIAL EDUCATION TEACHERS (3)
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.
- 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 experience.
- 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.
- 483* DIRECTED RESEARCH IN DRIVER AND TRAFFIC SAFETY EDUCATION (1-3)
A special problem in driver and traffic safety.
- 484 VEHICLE DESIGN (3)
Prerequisite: 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)
Prerequisite: Tech 481 and 482 or concurrent enrollment. An examination of the 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 drivers education teachers.
- 487* ORGANIZATION, ADMINISTRATION AND SUPERVISION OF TRAFFIC SAFETY EDUCATION PROGRAMS (3)
Prerequisite: Tech 481 and 482 or concurrent enrollment. Organizational, administrative and supervisory aspects of traffic safety education programs in the public schools. Includes the relationships of these programs to the total school program, related professional organizations and current issues. Methods and materials of classroom instruction and curriculum development are included.
- 489 DIRECTED RESEARCH IN POWER MECHANICS (1-3)
Prerequisites: Tech 280, 381. Advanced study in problems chosen and conducted under supervision.
- 491 HISTORY AND PHILOSOPHY OF INDUSTRIAL ARTS (2)
Development of programs in industrial arts and industrial-vocational education; evolving philosophies, issues, and objectives.
- 492 FACILITIES FOR INDUSTRIAL ARTS (3)
Prerequisite: senior standing in teacher education. Planning, development and utilization of industrial arts facilities.

**Not applicable to undergraduate or graduate programs in Technology.*

- 493 THE TEACHING OF INDUSTRIAL ARTS (4)
Prerequisite: 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.
- 494 CAREER EDUCATION CONCEPTS (1-3)
Prerequisite: teaching experience or senior status in teacher education. History, philosophy, purpose, and status of career education. Applications and examples drawn from various school subjects at all school levels. Specific instruction in the installation of a career education dimension to the total school curriculum.
- 495 EVALUATION IN INDUSTRIAL AND OCCUPATIONAL EDUCATION (3)
This course concerns the methods of evaluation such as the preparation of measuring devices, methods of assessing technical competency, interpretation of standardized test results, statistical analyses of test data and the improvement of instruction. This course is required by the state for vocational certification of trade and industrial teachers. (Offered through Continuing Studies.)
- 497a WORKSHOP IN CAREER EDUCATION DEVELOPMENT — OPERATION GUIDANCE (1-5)
A workshop to facilitate the implementation of operation guidance. A project out of Ohio State University, that involves students, staff and community working together to identify specific needs and available resources; provides a system for converting career needs to goals; facilitates writing of career development units and provides on-going evaluation of all efforts being made to meet students' career development needs. May be repeated with varied content to a total of 15 credits. For the teacher in Interlake High School, Bellevue; Issaquah High School, Issaquah; and Marc Morris High School, Longview, Washington. (Offered through Continuing Studies.)
- 497j CAREER EDUCATION CURRICULUM DEVELOPMENT (3)
- 497p WORKSHOP IN IMPROVEMENT OF INSTRUCTION IN APPLIED PERSPECTIVE AND RENDERING (4)
Systems of perspective drawing shadow construction and illustration techniques are presented along with rationale and teaching techniques for representing thought process. (Offered through Continuing Studies.)
- 499 SENIOR PROJECT (1)
Prerequisite: 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.
- 500 SPECIAL PROBLEMS (1-5)
Individual problems under supervision.
- 580 DEVELOPMENTS IN AUTOMOTIVE EMISSION CONTROL SYSTEMS (3)
Prerequisites: 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 experiences for industrial arts courses.
- 591 INDUSTRIAL TECHNOLOGY (3)
Development of trade, technical, and industrial technology; forces, concepts, issues and trends.
- 592 CURRICULUM DEVELOPMENT IN INDUSTRIAL ARTS (3 ea)
Development of content, laboratory experiments, projects and teaching aids useful in up-dating specific industrial arts curriculum areas to include recent and current industrial developments in that curriculum area.
592a Electronics
592b Industrial Graphics
592c Metals
592d Plastics
592e Power Mechanics
592f Woods
- 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.

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Chalice, Donald R. / Mathematics
Chaney, Robin W. / Mathematics
Christman, Robert A. / Geology
Clarke, David E. / Political Science
Clevidence, William Gary / Fairhaven
Clothier, Nita / General Studies
Cole, William D. / Music
Copenhaver, Brian P. / General Studies
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

Dallas, Lee A. / Education
Darrow, Helen F. / Education
Daugert, Stanley M. / Philosophy
Davidson, Melvin / Physics
DeLorme, Roland L. / History
Diers, Carol J. / Psychology
Dittrich, William J. / Physics

Donker, Marjorie J. / English
Downes, Kevin / Economics and Business
Downing, Thomas E. / Philosophy
Drake, George F. / Sociology/Anthropology
Dresbeck, LeRoy Joseph / History
Drum, Ryan W. / Fairhaven
Dube, Maurice A. / Biology
Duemmel, James E. / Mathematics

Easterbrock, Don J. / Geology
Eddy, Lowell P. / Chemistry
Eddy, Peter A. / Foreign Languages
Ehemann, Jane H. / Geography
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
Everitt, Jack M. / Huxley

Faber, Eurice D. / Foreign Languages
Faulkner, Constance P. / Fairhaven
Faulkner, J. Kaye / Economics and Business
Fennimore, Flora / Education
Feringer, F. Richard / Education
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
Francis, Richard L. / English
Frank, Barton / Music
Frazier, Thomas / Library
Freeman, Kenneth D. / Fairhaven
Frerichs, Bernard H. / Economics and Business
Friedland, Patricia A. / Physical Education
Froderberg, Albert J. / Mathematics

Garber, Eugene K. / English
Gayden, Ernst L. / Huxley
Gelder, Harvey M. / Fairhaven
Gerhold, George A. / Chemistry
Gilbert, Donn D. / Education
Glass, Jerome / Music
Glenn, Paul C. / Fairhaven
Goldsmith, Helen H. / Foreign Languages
Goodrich, Lynda M. / Physical Education
Gossman, Charles / Sociology/Anthropology
Grabert, Garland F. / Sociology/Anthropology
Graves, Janet M. / General Studies
Gray, Neil R. / Mathematics
Gregory, William A. / Speech
Grote, Frederick W. Jr. / Psychology
Grover, Burton L. / Education
Gutchow, Monica C. / Physical Education, Speech

Hackler, Clyde M. / Technology
Haglund, Byron E. / Economics and Business
Hammill, Roger N. / General Studies
Hansen, Alta J. / Physical Education
Hanson, Lawrence / Art
Harder, K. Peter / Economics and Business
Harris, Howard / Sociology/Anthropology
Harris, William A. / Ethnic Studies
Harrison, R. Gordon / Economics and Business
Hashisaki, Joseph / Mathematics
Hebal, John J. / Political Science
Heid, William H. / Fairhaven
Helfgott, Leonard M. / History
Helgoe, Robert S. / Psychology
Hengen, Nona L. / Library
Herbold, Paul E. / Speech
Higbee, C. Max / Education
Hildebrand, Francis H. / Mathematics
Hildebrand, James L. / Mathematics
Hill, Claude E. / Technology
Hiller, Harley E. / History
Hiraoka, Jesse / Ethnic Studies
Hitchman, James H. / History
Hite, F. Herbert / Education
Hogan, Eugene J. / Political Science
Horn, Thomas C. / History
Hovde, Annis J. / Fairhaven
Hovenier, Peter J. / Education
Huff, Robert E. / English

Inniss, Kenneth B. / English
Ives, Fred M. / Mathematics

Jack, Rand F. / Fairhaven
Jackson, Harry D. / History
Jensen, Robert A. / Art
Jewett, Robert I. / Mathematics
Johnson, Ellwood G. / English
Johnston, Thomas A. / Art
Jones, Elvet G. / Psychology
Jones, Henry W. / Education

Kaplan, Edward H. / History
Karason, Halldor C. / Education, Philosophy
Kauffman, Robert M. / Mathematics
Keep, William C. / English
Keller, Robert H. / Fairhaven
Kelley, Sara Jeanne / Mathematics
Kelly, Samuel P. / Education
Kest, Evelyn C. / Home Economics
Kim, Hyung-Chan / Ethnic Studies
Kimmel, Arthur S. / Foreign Languages
King, Donald M. / Chemistry
Kintz, B. L. / Psychology
Kleinknecht, Ronald A. / Psychology
Kohn, Hubertus E. / Biology
Kraft, Gerald F. / Biology
Krauss, Ellis S. / Political Science
Krieger, Milton H. / General Studies
Kriz, George S. Jr. / Chemistry
Kuhns, Kathleen J. / Library

LaBounty, Edwin M. / Music
 Lamb, George S. / Education
 Lampman, Gary M. / Chemistry
 Lerner, Daniel M. / Speech
 Larrabee, Edith B. / Home Economics
 Larsen, Golden L. / English
 Latta, Raymond F. / Education
 Lavers, C. Norman, Jr. / English
 Lawyer, W. Robert / Library, English
 Lee, Lawrence L. / English
 Lee, Tommy / English
 Levin, Richard G. / Mathematics
 Lewis, Merrill E. / English
 Lindquist, Norman F. / Mathematics
 Lindsay, Richard H. / Physics
 Lippman, Louis G. / Psychology
 Lippman, Marcia Z. / Psychology
 Lobue, Wayne N. / General Studies
 Long, Boyde / Physical Education
 Lonner, Walter J. / Psychology
 Lounsbury, James R. / Physical Education
 Lummis, Charles D. / Fairhaven

 McAllister, Richard G. / Economics and Business
 McClendon, John C. / Fairhaven
 McCormick, Patrick F. / Art
 McCracken, Robert A. / Education
 McElroy, Arthur A. / Education
 McGaw, Howard F. / Education
 MacGregor, John / Sociology/Anthropology
 McInnis, Raymond / Library
 McIntyre, Mary A. / Art
 McIntyre, Robert John / Music
 MacKay, William R. / Psychology
 McLeod, Donald B. / Fairhaven
 McLeod, Raymond R. / Physics
 Mahoney, Eldon R. / Sociology/Anthropology
 Maksymowicz, Alex / Physics
 Mammitzch, Ulrich / General Studies
 Manley, Harriet J. / Geology
 Margaritis, Stephen C. / Education
 Mariz, George Eric / History
 Marsh, David F. / Art
 Martin, James S. / Biology
 Martin, Jeanne L. / Political Science
 Marx, Robert D. / Psychology
 Mason, David T. / Fairhaven
 Mason, Evelyn D. / Psychology
 Mather, Dan / Library
 Mayer, Erwin S. / Economics and Business
 Mazur, D. Peter / Sociology/Anthropology
 Meade, Robert D. / Psychology
 Mees, Hayden L. / Psychology
 Menninga, Larry Dean / Mathematics
 Merrill, Reed B. / English
 Miles, John C. / Huxley
 Millicic, Vladimir / Foreign Languages
 Miller, John A. / Chemistry
 Miller, Gerson A. / English
 Miller, Laurence P. / Psychology

 Miner, Ralph E. / Political Science
 Mischaikow, Michael K. / Economics and Business
 Mitchell, Howard E. / Economics and Business
 Moerschner, Kurt W. / Foreign Languages
 Monahan, Robert L. / Geography
 Monat, Jonathan S. / Economics and Business
 Montague, Phillip / Philosophy
 Mookherjee, Debnath / Geography
 Moon, Donald E. / Education, Technology
 Moore, S. Elizabeth / Education
 Moore, John S. / Economics and Business
 Mork, Theodore A. / Education
 Mugerud, Ronald / Technology
 Muldrow, George M. / English
 Murray, Keith A. / History

 Neuzil, Edward F. / Chemistry
 Newman, James R. / Huxley
 Nickelson, Alden L. / Education, Biology
 Nugent, Frank A. / Psychology

 O'Brien, James H. / English
 Olmstead, Marvin L. / Speech
 Olscamp, Paul J. / Philosophy
 Olsen, Fred A. / Technology
 Owens, Eugene / Economics and Business

 Paeglis, Vilis / Library
 Panek, David M. / Psychology
 Parakh, Jal S. / Biology
 Param, Charles E. / Foreign Languages
 Patton, Robert T. / Economics and Business
 Paulus, Ingeborg L. E. / Sociology/Anthropology
 Pavia, Donald L. / Chemistry
 Payton, Rodney J. / General Studies
 Peach, Janice R. / Home Economics
 Peters, Robert A. / English
 Petersen, Lois E. / Economics and Business
 Peterson, Gilbert A. / Huxley
 Peterson, Richard K. / Library
 Pevear, David R. / Geology
 Pielstick, Norval L. / Psychology
 Pinney, Robert H. / Education
 Polen, Samuel B. / Speech
 Porter, Sam R. / Technology
 Prim, Merle M. / Psychology
 Pufan, C. Bruce / Music
 Purtil, Richard L. / Philosophy

 Quigley, Robert J. / Physics

 Radke, August / History
 Rahm, David A. / Geology
 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 Languages
 Read, Thomas T. / Mathematics
 Reay, John R. / Mathematics

Rees, Earl R. / Psychology
 Richard, Jerome E. / Fairhaven
 Richardson, John G. / Sociology/Anthropology
 Richardson, Larry S. / Speech
 Riffey, Meribeth M. / Biology
 Ritter, Harry Ray, Jr. / History
 Ritter, Marian B. / Library
 Robbins, Lynn A. / Huxley
 Roberts, Jane E. / Home Economics
 Robinson, Walter L. / Foreign Languages
 Roe, Alfred L. / History
 Roley, Paul L. / History
 Romine, Ray S. / Education
 Ross, Charles A. / Geology
 Ross, J. Alan / Education
 Ross, June R. D. / Biology
 Rupaal, Ajit S. / Physics
 Russo, Salvatore / Chemistry
 Rutan, Gerard F. / Political Science
 Rutchmann, Carla / Music
 Ryan, Marjorie / English
 Rygg, Paul T. / Mathematics

Safavi, Farrok / Economics and Business
 Sailors, William M. / Economics and Business
 Sanderson, Donovan F. / Mathematics
 Savitch, Leonard / Education
 Scandrett, Robert L. / Music
 Schaub, David B. / Music
 Schinske, Erhart A. / Speech
 Schlotterback, Thomas / Art
 Schneider, David E. / Biology
 Schuler, Carl U. / History
 Schmedinhof, Dorothy S. / Education
 Schwalm, Ray A. / Technology
 Schwartz, Maurice L. / Geology, Education
 Schwartz, Sy / Education
 Schwarz, Henry G. / Political Science, History
 Schwemmin, Donald J. / Biology
 Scott, James W. / Geography
 Scott, William H. O. / Library
 Seal, Michael / Technology
 Seito, Michael T. / Speech
 Senger, Clyde M. / Biology
 Shaffer, Ronald W. / Psychology
 Sherwood, Tom M. / Fairhaven
 Sigler, Byron E. / Speech
 Skinner, Knute / English
 Slesnick, Irwin L. / Biology
 Smiley, Sandra S. / Psychology
 Smith, Alden C. / Speech
 Smith, Pamela J. / Ethnic Studies
 Smith, Richard G. / Geography
 Solomon, Arthur L. / Speech
 Southcott, Marvin A. / Technology
 Spanel, Leslie / Physics and Astronomy
 Sprague, Donald L. / Physics
 Stannard, R. E., Jr. / English
 Starbird, Richard O. / Education
 Steffens, Peter / English

Stephan, G. Edward / Sociology/Anthropology
 Stoever, William K. D. / General Studies
 Stoner, Paul H. / Music
 Summers, William C. / Huxley
 Swift, Larry E. / Education
 Swineford, Ada / Geology
 Swint, John M. / Economics and Business
 Symes, Ken M. / English

Taylor, Christopher J. / Psychology
 Taylor, Herbert C., Jr. / Sociology/Anthropology
 Taylor, Ronald J. / Biology
 Taylor, Sandra J. / Psychology
 Templeton, David E. / Art
 Terey-Smith, Mary / Music
 Terich, Thomas A. / Geography
 Teshera, Robert W. / Geography
 Tholfsen, Paul A. / Physics
 Thomas, Edward B. / Art
 Thomas, Leslie J. / History
 Thompson, Richard W. / Psychology
 Thomson, Tommy / Economics and Business
 Thoreson, Hubert N. / Economics and Business
 Thorndike, Robert M. / Psychology
 Towner, John C. / Education
 Truschel, Louis W. / History
 Tweddell, Colin E. / Sociology/Anthropology
 Tyler, Vernon O., Jr. / Psychology

Urso, Robert A. / Art
 Utendale, John F. / Education

Vander Velde, Philip B. / Education
 Vander Yacht, Douglas R. / Speech
 Van Wingerden, Stewart / Education
 Vawter, Richard D. / Physics
 Veit, J. Joseph / Physics
 Vernacchia, Ralph A. / Physical Education
 Vike, Gene E. / Art
 Vogel, Richard F. / Technology

Wallace, William L. / General Studies
 Walter, Ada G. / Economics and Business
 Warner, Beverly M. / Fairhaven
 Waterman, C. Fred / Library
 Watrous, Mary W. / Education
 Webb, Loren L. / Speech
 Webber, Hubert H. / Huxley
 Wegner, Walter F. / Art
 Weiner, Homer A. / Art
 Weiner, Ruth F. / Huxley
 Weiss, Rudolf / Foreign Languages
 Wellman, Evelyn H. / Music
 Weyh, John A. / Chemistry
 Whitmer, John C. / Chemistry
 Wicholas, Mark L. / Chemistry
 Wilkins Jr., James W. / Psychology
 Williams, Don C. / Biology
 Williams, Gail H. / Mathematics
 Wilner, Jeffrey D. / Ethnic Studies

Wilson, H. William / Chemistry
Wiseman, Don W. / Physical Education
Wiseman, Evelyn D. / Physical Education
Witter, George E. / Mathematics
Woll, John W. / Mathematics
Woodring, Paul / Education, Psychology
Wright, Evelyn C. / English

Wuest, John J. / Political Science

Yu, Ming-Ho / Huxley

Ziegler, David W. / Political Science

Zoro, Eugene S. / Music

WILSON LIBRARY

W. ROBERT LAWYER (1960) Associate Professor of English and Director of the Library.
BA, PhD, University of Washington.
NONA L. HENGEN (1970) Associate Professor in Classroom Media Services and Director of Educational Media.
BA, Fort Wright College (Spokane); MA, University of Colorado; PhD, Indiana University.

Librarians

MARIAN L. ALEXANDER (1970) Assistant Professor and Head Catalog Librarian. AB, Occidental College; MLS, University of California, Los Angeles.
STEVEN CAMPBELL (1974) Instructor and Assistant Acquisitions Librarian. BA, University of Colorado; M.Lib., University of Washington.
ROBERT J. CROSS (1969) Associate Professor and Assistant 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.

KATHLEEN J. KUHN (1972) Instructor and Serials Librarian. BA, Western Washington State College; MLS, University of Washington.
RAYMOND G. McINNIS (1965) Associate Professor and Head Reference Librarian. BA, University of British Columbia; MLS, University of Washington.
DAN MATHER (1969) Associate Professor and Asst. Director for Technical Services & Library Systems. BA, MLS, University of Washington.
MOLLY R. MIGNON (1969) Assistant Professor and Education Librarian. BA, MLA, University of Washington.
VILIS PAEGLIS (1961) Assistant Professor and Catalog Librarian. Mag.Phil, University of Latvia; MALS, University of Michigan.
RICHARD K. PETERSON (1966) Assistant Professor and Reference Librarian. BA, University of Washington; BA in Ed, Western Washington State College; MA, PhD, MLib, University of Washington.
MARIAN A. RITTER (1969) Assistant Professor and Music Librarian. BME, 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 Head Acquisitions Librarian. BS, MLS, University of Pittsburgh.

AFFILIATED TEACHERS OF MUSIC

BLIVEN, FRANK
Classical Guitar. BM, San Francisco Conservatory of Music.

BUSSARD, NICHOLAS
Oboe. BA, Whitman College; MM, University of Oregon.

ERICKSON, SUSAN
Voice. MA, Western Washington State College.

EUBANKS, MARK
Bassoon, BA, University of Washington.

FORBES, DAVID
Brass. Professional Musician.

GOFF, SCOTT
Flute. MS, Julliard School of Music.

GUYER, JOHN
Brass. BME, College of Emporia.

HIGGINSON, WILLIAM
Viola. Professional Musician.

KARDALIAN, SERGE
Violin. BM, Julliard School of Music.

KRAEMER, CATHY
Brass. BA, Western Washington State College.

RODRIQUEZ, COLLEEN
Voice. MA, Western Washington State College.

SMITH, DENNIS
Brass. BM, University of Southern California.

ACCOMPANISTS

NANCY BUSSARD
Piano. BA, Whitman College.

LUCILLE OSTER
Piano. Diploma, Olga Steeb Piano School.

ASSOCIATES IN THE ARTS

DONALD A. ADAMS (1964)
Associate in Theatre Arts. BA, MA, University of Washington.

ROGER GERMAIN
Associate in Theatre Arts. BA, Goddard College; MA, University of Washington.

JEANETTE SCOTT (1972)
Associate in Music.

RESEARCH ASSOCIATES

JOHN BOLLINGER (1972) Huxley College
AB, San Diego State College; PhD, University of California, Berkeley.

THEODORE R. BOSS (1975) Geography
BS, MS, Western Washington State College.

JAMES D'ARGAVILLE CLARK (1964) Chemistry Department
BSc, Capetown; BSc, University of London; PhD, Institute of Paper Chemistry, Lawrence College.

MALCOLM CLARK (1972) Geology Department
BSc, University of Leicester, England.

FRANK DANES (1973) Geology Department
BS, PhD, Charles' University, Prague, Czechoslovakia.

RICHARD T. HAARD (1974) Biology Department
AAS, State University of New York; BS, University of Georgia; MS, PhD, Kansas State University.

DONALD SWANSON (1973) Geology Department
BS, Washington State University; PhD, John Hopkins University.

DEPARTMENT CHAIRMEN

Dr. Thomas Schlotterback Art
Dr. Clyde M. Senger Biology
Dr. Donald M. King Chemistry
Dr. Howard Mitchell Economics & Business
Dr. Paul M. Ford Education
Dr. Golden L. Larsen English
Dr. Walter Robinson Foreign Languages
Dr. Roscoe L. Buckland General Studies
Dr. James W. Scott Geography
Dr. Don Easterbrook Geology
Dr. Roland L. DeLorme History
Dr. Dorothy Ramsland Home Economics
Dr. Robert Lawyer Library
Dr. Robin W. Chaney Mathematics
Mr. Philip R. Ager Music
Dr. Stanley Daugert Philosophy
Dr. Margaret Aitken Physical Education
Dr. W. Louis Barrett Physics
Dr. Ralph E. Miner Political Science
Dr. Peter J. Elich Psychology
Dr. G. Edward Stephan Sociology/Anthropology
Dr. Arthur Solomon Speech
Dr. Clyde M. Hackler Technology

MASTER'S DEGREE PROGRAM AND SPECIALIZATION ADVISERS

Adult Education	
Administration	Dr. Richard F. Feringer
Anthropology	Dr. Garland Grabert
Art: Elementary,	
Secondary	Dr. David E. Templeton
Biology	Dr. Richard W. Fonda
Business Education	Dr. Hubert N. Thoreson
Chemistry—M.Ed.	Dr. John A. Miller
M.S.	Dr. John A. Weyh
Earth Science	Dr. Don J. Easterbrook
Economics	Dr. Peter K. Harder
Education—Consultant Early	
Childhood Education	Dr. Roberta Bouverat
Education—Curriculum Consultant	
Secondary	Dr. Mary W. Watrous
Education—Elementary	
School	Dr. Helen Darrow
Education—Elementary Consultant	
Supervisor	Dr. Helen Darrow
Education—Junior High,	
Middle School	Dr. Don W. Brown
Education—Reading	
Consultant	Dr. Robert A. McCracken
Education—Remedial Reading	
Teacher	Dr. H. O. Beldin
Education—School	
Administration	Dr. Donn Gilbert

Education—Teacher of Exceptional	
Children	Dr. C. Max Higbee
English	Dr. Kenneth Innis
French	Dr. Arthur S. Kimmel
General Science	Dr. Willard A. Brown
Geography	Dr. Richard G. Smith
Geology	Dr. Don J. Easterbrook
German	Dr. Kurt W. Moerschner
History	Dr. Keith A. Murray
Mathematics	Dr. John W. Woll
Music—M.Ed.	Dr. David B. Schaub
Music—M.A.	Dr. David B. Schaub
Physical Education:	
Men	Dr. James Lounsberry
Women	Dr. M. Chappelle Arnett
Physical Science	Dr. Willard A. Brown
Physics—M.Ed.	Dr. Raymond R. McLeod
M.S.	Dr. Richard H. Lindsay
Political Science	Dr. Alfred S. Arkley
Psychology	Dr. Richard W. Thompson
Psychology—School	
Counselor	Dr. Elvet G. Jones
Psychology—School	
Psychologist	Dr. Norval L. Pielstick
Science Education	Dr. John A. Miller
Sociology	Dr. Eldon R. Mahoney
Spanish	Dr. Herbert L. Baird, Jr.
Speech	Dr. Sene R. Carlile
Student Personnel Administration	
Higher Education	Dr. Ray Romine
Technology	Dr. Richard J. Fowler

SUMMARY OF ENROLLMENT— INDIVIDUALS

Resident

Summer Quarter, 1974	4,137
Fall, Winter, Spring, 1974-75	10,702

Extension

Independent Study	295
Evening Classes (on campus)	4,025
Extension Classes (off campus)	4,294
Total Extension Enrollment	8,614

DEGREES AND CERTIFICATES

Degrees granted from August, 1974 to June, 1975, inclusive:

Master of Education	175
Master of Arts	47
Master of Science	31
Bachelor of Arts in Education	438
Bachelor of Arts	850
Bachelor of Science	213

Total	1,754
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Teaching Certificates issued from August, 1974, to June, 1975, inclusive:

Provisional	551
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Recommended for certification to the State Superintendent of Public Instruction

Standard Teaching Certificate	350
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STUDENT RIGHTS AND RESPONSIBILITIES

PREAMBLE

The purpose of this "Guide to Student Rights and Responsibilities" is to (1) protect the rights of the students, and (2) to inform students of their ethical and legal responsibilities to each other and to the college. The Guide applies to all students at the College, including students from the cluster colleges.

It is intended to be an informative and educative document composed by a student/faculty committee for the enlightenment of students—a consensus of opinion regarding standards of behavior at Western.

Hopefully, this Guide will help students to grow in their consideration of others and thereby enhance the learning and living environment. All students, faculty and administration are strongly urged to participate in the constantly on-going process of revising this document.

When a student enrolls at Western Washington State College, the College and the student enter into an agreement of mutual responsibility. The College is obligated to advise students of established policies and procedures as well as to provide opportunities for participation and representation in those matters with which they are directly concerned. The student is expected to respect the established college policies, federal, state and local laws, and to act as a responsible member of the college community. It should be further understood that the civil authorities have the obligation to perform their normal functions on campus. In some instances a violation of the Guide to Student Rights and Responsibilities may also subject a student to criminal prosecution by the civil authorities.

The President of the College or his designee may at his discretion call upon civil authorities for assistance in cases where a demonstration or a group expression of a point of view raises a clear and present danger of physical injury to persons or property and/or when personal appeals by college authorities fail to achieve the cessation of acts which materially and substantially disrupt college work and discipline.

THE LAW AND ITS APPLICATION

Within the framework of public law, and subject at all times to it, exist the special rules and regulations which explain the relationships between individuals and the College. By law, the student must be assured of his rights as a citizen, including the right to due process of law. By law, the College has the authority to refuse admission or to suspend a student for violating its regulations.

While college officials have this authority according to state code, they are also responsible to educate and counsel wherever possible in preference to punitive measures. Judiciary action is intended to be the result of serious and thorough deliberation in which the interests and rights of the student, college and community are considered and where justice is served. Any student who violates the following Guide to Student Rights and Responsibilities is subject to judicial proceedings by the appropriate campus body.

I. REGULATIONS

A. ACADEMIC HONESTY

POLICY:

Acts of academic dishonesty are considered as serious breaches of honor. Sustaining a situation in which the vast majority of students are protected from those who are dishonest is an administration-faculty-student responsibility. The College provides all possible security measures regarding examinations and conditions under which examinations are given.

The teaching faculty is responsible for formulating examinations which are secure and for taking all reasonable steps to detect dishonesty. Students must necessarily be committed to refrain from any acts of academic dishonesty.

RULES:

1. Plagiarism, cheating on examinations and all other acts which are normally considered acts of academic dishonesty are prohibited.
2. The first finding of academic dishonesty ordinarily carries the penalty of an F in the course involved and an official account of the offense shall be filed in the office of the Dean of Students.

PROCEDURE:

Accusations of academic dishonesty shall be reviewed by the Dean of Students in consultation with the faculty member(s) and students involved. Should an impasse occur an ad hoc committee will review the evidence evoked at a full hearing if such is requested by the student. The committee shall be composed of four members with equal faculty/student representation. The Provost shall appoint the faculty members of the committee and the student body president shall appoint the student representatives. The Dean of Students will convene the meeting and serve as chairman (ex officio without vote). At such a hearing the student shall be accorded the procedural rights enumerated under II-A of this document.

B. FREEDOM OF EXPRESSION

1. Demonstrations

POLICY:

The rights of free speech, petition, and assembly are fundamental to the democratic process guaranteed under the Constitution of the United States. Such freedoms are guaranteed to all members of the Western Washington State College community. Participation in political and social activities of which peaceful demonstrations are often an integral part is recognized by Western Washington State College as enhancing the education of the individual and contributing to the betterment of American society. The College further recognizes that it has an obligation to maintain on campus an atmosphere which allows the institution to perform the fundamental task of providing an opportunity for

all members of this community to pursue knowledge through accepted academic processes. To maintain a balance between the stated objectives of the College and the rights of the student to demonstrate, it is essential that demonstrations and other expressions of opinion be peaceful. The trustees, the administration, and the faculty of the College subscribe to the proposition that an important aspect of the education of college students is the opportunity to listen to speakers representing a wide variety of opinions and beliefs on important public issues.

RULE:

No person shall participate in a demonstration which materially and substantially disrupts the work or normal operations of the College or the requirements of appropriate discipline.

2. Free Speech - Speakers and Sound Amplification

POLICY:

Because of the confidence reposed in Western Washington State College students' capacity to listen critically and to judge intelligently the statements made by advocates of varying ideologies, beliefs and philosophies and in conformity with American traditions of free speech and free inquiry the following rules are established governing the appearance on campus of speakers not themselves members of the college community. In addition certain regulations have been established to assure the rights of free speech to students. Because of the congested nature of Western's

campus certain ground rules in the use of public address and amplified sound equipment must be established to meet the needs of the students and at the same time recognize the needs of the academic community for quiet in areas where students are studying or classes are in session.

RULES:

- a. *Any student, faculty member, or college group may invite to the campus any speaker the group would like to hear. Normal restraints imposed by law—such as rules and regulations concerning slander or obscenity shall be observed by speakers.*
- b. *The appearance of an invited speaker on the campus does not involve an endorsement, either implicitly or explicitly, of his views by the college's faculty, its administration, or its Board of Trustees, nor does the college assume any responsibility for views expressed by speakers.*
- c. *A person who is not a member of the community of Western Washington State College does not have an inherent right to deliver a formal address on campus unless he has been invited by a student, faculty member, or by a recognized college group. A person who is not a member of the WWSC community does not have a right to demand that he be allowed to listen to an address of an invited speaker.*
- d. *The scheduling of speakers will always be subject to the availability of appropriate space and the exigencies of regularly scheduled college activities.*

- e. The Dean of Student's office will be notified at least seven days before the appearance of an invited speaker.
- f. *The President may take steps to have views other than those of an invited speaker represented at a subsequent meeting.*
- g. **Sound Amplification Equipment**—Public address or audio-amplification equipment may be used only at the free speech platform. Exceptions may be made by the Director of Student Activities.
- h. The free speech platform located in the Viking Union Plaza may be used at any time by any college student, faculty member, college group or anyone who has been invited in accordance with this rule.
- i. *The right of free speech does not spare the speaker from legal action if the substance of the remarks is found to violate the legal rights of others. Use of the free speech platform does not accord speakers immunity from legal action.*
- j. The essence of the right to speak is the freedom of the speaker to make his statement; both the speaker and the audience are entitled to proceed without being subjected to physical violence. Persons deliberately engaging in acts of violence or threats of violence or in other conduct which materially and substantially disrupts the exchange of ideas are subject to removal from the premises, to college discipline, and/or to prosecution under civil law.
- k. The program council is responsible for administering and interpreting the policies for the use of the free speech platform.

3. Printed Material

POLICY:

In order to provide some means to convey news to students and to provide space for advertising coming events, the College provides bulletin boards and other methods for disseminating information through leaflets, handbills and posters.

RULES:

a. Handbills

Handbills, leaflets, statements and similar materials, except those which are commercial, obscene or unlawful in character, may be distributed, without review or approval, by any student, faculty, staff, or group of students enrolled at Western Washington State College. It is to be understood that such materials do not necessarily represent the views of the College, its student body, faculty or staff. Such materials may be distributed from any room properly scheduled for that reason, from authorized public areas in the Viking Union, any scheduled table area, and at other outdoor areas on the campus consistent with the maintenance of college property, with the free flow of traffic and persons, and not in any manner which in itself materially and substantially disrupts the operation of the college. Efforts must be made to avoid litter. All such material shall indicate the name of the sponsoring person or student organization and its chairman by which the distribution is made. Handbills distributed in the Residence Halls require the approval of the Resident Director or the Hall President.

b. Posters

Any poster or notice not bearing the approval stamp or not posted in adherence to the following regulations shall be removed.

- (1) The primary use of the bulletin boards is to provide the Associated Students and other campus organizations with adequate communication facilities.
- (2) Except on bulletin boards otherwise designated, posters may not represent any commercial interests other than those involving some temporary entertainment attraction that may be of student interest.
- (3) Religious groups may use the bulletin boards but the material presented must be informational rather than promotional in nature.
- (4) Posters must specify time, place and sponsor of event.
- (5) *Posters in Old Main are restricted to the bulletin board in the south wing and to the board at the main entrance. Posters in the Viking Union are restricted to the board in the main lobby, the board by the entrance to coffee shop, and other designated areas. All posters distributed in areas mentioned above must be approved by the Director of Student Activities. All posters placed in residence halls require the approval of the resident director or hall president. Posters in all other areas not specified above must be approved by the building chairman of the respective building.*
- (6) Posters may be disapproved if their content is obscene or slanderous.

C. PLACEMENT

POLICY:

The College endorses a free and open placement and recruitment policy.

RULE:

Any person representing himself or a company/organization who is interested in hiring individuals for employment shall be defined as a recruiter. Recruiters, as defined above, or students wishing to contact said recruiter, cannot be discriminated against under the present antidiscrimination regulations of the State Board Against Discrimination. Any student wishing to use the Placement Office to talk with recruiters for reasons other than employment must adhere to the procedures required of those seeking employment.

D. DISORDERLY CONDUCT

RULE:

No student shall materially or substantially disrupt college activities, nor shall a student intentionally physically abuse another person or damage property at the College or while engaged in college activities on or off campus.

E. ALCOHOLIC BEVERAGES

RULE:

With regard to alcoholic beverages on the College campus, the following policy is in effect. The College prohibits the use or possession of alcoholic beverages on College property except by persons of legal age within the following prescribed limits:

1. Alcoholic beverages may be used or possessed only in living unit rooms, suites or apartments. For the purposes of this policy, the College considers these to be private residences.

2. Alcoholic beverages may only be used or possessed in those buildings where such is first approved by the Dean of Students and where a policy permitting such is ratified by a two-thirds majority of the students in residence.
3. The intent of this policy is not to provide opportunities for large gatherings for the consumption of alcohol. Keggers or cocktail parties are not permitted under this policy.
4. Alcoholic beverages may be used or possessed only within the confines of Washington State Law.

In order that all students be fully aware of existing state statutes regarding alcohol use and possession, the following are included in this section for your information.

RCW 66.04.010 (24) defines "public place" in part as follows: "Public place" includes streets and alleys of incorporated cities and towns; state or county or township highways or roads; buildings and grounds used for school purposes; . . . public buildings, public meeting halls, lobbies, halls and dining rooms of hotels, restaurants, theatres, stores, garages and filling stations which are open to and are generally used by the public, and to which the public is permitted to have unrestricted access; . . . publicly owned bathing beaches, parks, and/or playgrounds; and all other places of like or similar nature to which the general public has unrestricted right of access, and which are generally used by the public.

RCW 66.44.100 Opening or consuming liquor in public place. Except as permitted by this title, no person shall open the package containing liquor or consume liquor in a public place. Every

person who violates any provision of this section shall be guilty of a misdemeanor, and on conviction therefore shall be fined not more than ten dollars.

RCW 66.44.110 Intoxication in public place. No person who is intoxicated shall be or remain in any public place, and every person who violates any provision of this section shall be liable, on conviction for a first offense to a penalty of not more than ten dollars; and for a third or subsequent offense to imprisonment for not more than thirty days, with or without hard labor, without the option of a fine.

RCW 66.44.130 Sales of liquor by drink or bottle. Except as otherwise provided in this title, every person who sells by the drink or bottle, any liquor shall be guilty of a violation of this title.

RCW 66.44.150 Buying liquor illegally. If any person in this state buys alcoholic beverages from any person other than the board, a state liquor store, or some person authorized by the board to sell them, he shall be guilty of a misdemeanor.

RCW 66.44.270 Furnishing liquor to minors—possession, use. Except in the case of liquor given or permitted to be given to a person under the age of twenty-one years by his parent or guardian for beverage or medicinal purposes, or administered to him by his physician or dentist for medicinal purposes, no person shall give, or otherwise supply liquor to any person under the age of twenty-one years, or permit any person under that age to consume liquor on his premises or on any premises under his control. It is unlawful for any person under the age of twenty-one years to ac-

quire or have in his possession or consume any liquor except as in this section provided and except when such liquor is being used in connection with religious services.

RCW 66.44.290 Minor purchasing or attempting to purchase liquor. Every person under the age of twenty-one years who purchases or attempts to purchase liquor shall be guilty of a violation of this title.

RCW 66.44.291 Penalty against persons between ages of eighteen and twenty, inclusive. Every person between the ages of eighteen and twenty, inclusive, who is convicted of a violation of RCW 66.44.290 shall be punished by a fine of not less than twenty-five dollars nor more than one hundred dollars, or by imprisonment in the county jail for a term of not more than thirty days, or both.

RCW 66.44.300 Treating minor, etc., in public place where liquor sold. Any person who invites a minor into a public place where liquor is sold and treats, gives or purchases liquor for such minor, or permits a minor to treat, give or purchase liquor for him; or holds out such minor to be over the age of twenty-one years to the owner of the liquor establishment shall be guilty of a misdemeanor.

RCW 66.44.310 Minors frequenting taverns - misrepresentation of age. (1) It shall be a misdemeanor, (a) To serve or allow to remain on the premises of any tavern any person under the age of twenty-one years; (b) For any person under the age of twenty-one years to enter or remain on the premises of any tavern; (c) For any person under the age of twenty-one years to represent his age as being twenty-one or more years for the purpose of securing admission to or

remaining on the premises of any tavern.

RCW 66.44.320 Sales of liquor to minors a felony. Every person who shall sell any intoxicating liquor to any minor shall be guilty of a felony.

RCW.44.325 Unlawful transfer to a minor of an identification of age. Any person who transfers in any manner an identification of age to a minor for the purpose of permitting such minor to obtain alcoholic beverages shall be guilty of a misdemeanor: *Provided*, that corroborative testimony of a witness other than the minor shall be a condition precedent to conviction.

F. DRUGS

POLICY:

With respect to the use of drugs by members of the college community, the College recognizes a responsibility to provide educational information and counseling facilities. Information and a listing of locations where students may seek confidential assistance can be found in the college drug publication.

The College acknowledges and upholds the legal restrictions regarding drugs. In light of this educational relationship between the College and its students, the College believes that illegal drugs, by virtue of their alleged physical and psychological effects, are inappropriate in an educational setting.

RULE:

The use, possession, sale, gift or exchange of illegal drugs is prohibited on campus or at college sponsored events on or off campus.

G. THEFT

RULE:

Theft of personal or public property shall constitute a violation of this code.

H. FIREARMS AND EXPLOSIVES

RULE:

Possession or use of firearms or explosives on the campus is prohibited, except possession of firearms is permitted when a residence hall student is in the process of checking a firearm in or out of storage with a residence hall staff member. The loading and unloading of firearms on campus is prohibited.

I. RESIDENCE HALL ROOM VISITATION

RULE:

Room visitation by members of the opposite sex is permitted within the policy established by Inter-Hall Council as approved by the administration (and the Board of Trustees). Each hall's program becomes effective when (1) the proposal has been approved by a favorable vote of two-thirds of that hall's residents, and (2) I-HC has passed the hall's proposal. Hours and any additional regulations will be posted conspicuously in each hall, and it is the responsibility of host-hostess and guests alike to be acquainted with the regulations of each individual hall. Violations of these regulations are considered violations of this guide.

J. STUDENT IDENTIFICATION CARD

POLICY:

Each student, upon enrollment at the College, is issued a student identification card. The College, through this card, maintains the

right to seek proper identification of persons on the campus and to determine what connection, if any, they have with the campus. Students, when identified as legitimate members of the campus community, are to be afforded all rights due them under this guide.

RULE:

Upon the request of security officers or other individuals charged with the responsibility of enforcing college regulations, a person suspected of violating this guide is required to identify himself as a student by showing his student identification card.

K. FAILURE TO APPEAR BEFORE A JUDICIAL HEARING

RULE:

The failure of a student (formally charged under this guide) to appear before a judiciary body when so requested shall be a separate violation of the Guide to Student Rights and Responsibilities.

L. FAILURE TO ADHERE TO JUDICIAL BOARD SANCTIONS

RULE: Failure of a student to obey a sanction of a judicial body shall be a violation of the Guide to Student Rights and Responsibilities.

II. JUDICIAL PROCEEDINGS

A. Procedural Rights of Students

1. Rights of the Accused

a. An accused student has the right to a fair and impartial hearing before the appropriate committee composed of members of the academic community.

b. *No student may be asked by a college official or judiciary body to give information or to answer any question concerning the alleged violation of the Guide to Student Rights and Responsibilities which he is suspected of having committed until he has been informed of:*

(1) the fact that he is suspected of having violated the Guide to Student Rights and Responsibilities and which regulation he is suspected of having violated,

(2) the nature and approximate date of the activity in which he is suspected of having engaged,

(3) the fact that he need not give any information regarding the alleged acts.

c. In all judicial proceedings the student shall enjoy the right to speak on his own behalf.

d. Both the judiciary body and the student shall enjoy the right to call any resource persons whom they wish to speak concerning the case, subject to the rules of privilege recognized by law and rules excluding evidence which is incompetent, irrelevant, immaterial or unduly repetitious.

e. *The accused student has the right to know his accuser(s) and to cross-examine him (them) and those who present evidence against the accused.*

f. A student shall not be subjected to college judicial action more than once for a single violation of a regulation.

g. The burden of proof rests with the accuser(s). Said burden shall be carried if guilt is indicated by a fair preponderance of the evidence considered as a whole.

2. Procedures

a. All students required to appear before a judiciary body shall be notified in writing as to why their appearance has been requested. Such notification shall include:

(1) a specific list of charges,

(2) the specific rules, policies and/or guidelines violated,

(3) the time and place of hearing,

(4) a copy of the student's rights as stated herein.

The notification shall be sent by certified mail or hand delivered. When certified mail is used as a means of notification, the letter will be mailed to the student charged at the last known address on file in the Dean of Students office. The letter shall be considered received by this rule two working days after deposit in the U.S. mail. The student must receive notification of the charge one week prior to the Intermediate All-Student Judiciary Board or the College Judiciary Board hearing. Residence hall judiciaries may hear cases 24 hours after notification unless the accused requests in writing an extension of up to one week.

b. *Any student who withdraws from the College and absents himself from a scheduled appearance before a judiciary body is not excused from the jurisdiction of that body if at some time in the future he wishes to re-enroll. A "hold" will be placed on the accused's official record for five years unless he makes an appearance before the appropriate board before that time. In residence hall cases, if the accused leaves the hall before its judiciary can hear the case, the case will*

be referred to the Intermediate All-Student Judiciary Board.

- c. All hearings shall be closed to the public and all persons not directly related to the proceedings. The hearing will be opened if the student so requests in writing to the chairman of the board. The board chairman may declare an open hearing closed if in his judgment the observers demonstrate disruptive behavior. The chairman of any judiciary body may require resource persons to leave the hearing if in the judgment of the chairman these persons are demonstrating disruptive behavior.
- d. Each member of a judicial body shall have one vote in arriving at conclusions of that body. A simple majority shall be required to render a decision. A member who considers himself unable to render an impartial decision in any particular case shall absent himself from the deliberations. The decision of the judiciary body shall be based solely on the evidence presented.
- e. *The judiciary body will notify the accused in writing as to the disposition of his case and the appeal resource available to him.*
- f. The judiciary body will make a procedural record of each case it handles. This record shall include:
 - (1) a statement of charges,
 - (2) a listing of participants in the judicial action,
 - (3) a summary of evidence presented (pro and con),
 - (4) a clear designation of action taken,

(5) a statement of the appeal recourse available.

This record will be delivered to the Dean of Students office for filing. It may not be opened to public inspection except at the written request of the student. In residence hall cases, a copy of the procedural record shall be retained in the hall judiciary's file for one year. The same strictures governing confidentiality of records shall apply.

g. College judiciary proceedings are instituted only for violations of college regulations established in advance and published in a place generally accessible to students.

h. Responsibility for interpreting the Guide to Student Rights and Responsibilities is vested in the judiciary body while deliberating on the disposition of particular cases. A decision whether certain acts constitute a violation of the Guide to Student Rights and Responsibilities shall be made with reference to "was forewarning that the act was prohibited given to students according to a reasonable interpretation of the language of the regulation?" In discharging its responsibility of interpretation, the judiciary body may call upon the Committee on Student Rights and Responsibilities for an advisory interpretation of the Guide to Student Rights and Responsibilities.

3. Appeals

a. An accused student shall enjoy the right of appeal, and no sanction(s) may be invoked while such appeal is pending.

Any appeal may be considered de novo at the discretion of the appellate body.

- b. The appeal route shall be from the residence hall judicial board to the Intermediate All-Student Judiciary Board, thence to the College Judiciary Board. Any decision of the College Judiciary Board may be appealed to the President of the College.
- c. Within one week of receipt of a decision of a judicial body, the student may appeal that decision to the next highest body in the following manner:
 - (1) The appellant shall inform the Dean of Students of his intent in writing. This letter must include his reason(s) for appeal.
 - (2) The Dean of Students will forward the appeal to the judiciary body's chairman, who will arrange for a suitable time and place for a hearing and will notify all individuals involved.

B. Judicial Boards

1. College Judiciary Board

a. Structure

The College Judiciary Board will consist of six members: two faculty, three students, and one member of the student personnel staff.

b. Selection

- (1) The two faculty members will be appointed by the Faculty Council.
- (2) The representative of the student personnel staff will be appointed by the Dean of Students.
- (3) The three student members will be selected by the same procedure used in the selection of student repre-

sentatives to the Intermediate All-Student Judiciary Board. All appointments for each academic year will be made during the Fall quarter of each year.

- (4) The chairman will be elected from within the group.

c. Jurisdiction

The College Judiciary Board will only entertain appeals from the Intermediate All-Student Judiciary Board with the exception of sanctions recommending suspension from the College, which will be reviewed automatically.

2 Intermediate All-Student Judiciary Board

a. Structure

- (1) The Board will be coeducational, composed of eight student members.
- (2) A minimum of two members must be of the opposite sex of the other six.
- (3) The chairman will be elected from within the group.
- (4) A non-voting faculty adviser for the Board will be appointed by the College President.

b. Selection

- (1) The Board will be selected by a group composed of the Associated Students' President, a legislator selected by the A.S. Legislature, the Inter-Hall Council Chairman, four students drawn randomly from the student body, the Dean of Students, and the Board's faculty adviser.
- (2) Only students submitting application forms will be considered for selection.
- (3) Board members' term of office will be three consecutive quarters. Four Board members will be

selected within the first three weeks of Fall quarter and four will be selected within the first two weeks of Spring quarter. Three alternates will be chosen and ranked concurrently with the above selections.

- (4) Should a vacancy occur in the Board between selection times, that position will be filled by the top-ranked alternate. The selection board will be convened in the event alternates are unavailable.

c. Jurisdiction

The areas of jurisdiction for the Intermediate All-Student Judiciary Board will be:

- (1) all appeals and referrals from the residence hall judicial boards.
- (2) violations of college regulations outside the jurisdiction of the residence hall boards, including
 - (a) violations occurring when more than two residences are involved,
 - (b) violations by individuals who are not residing in college residence halls,
 - (c) violations at college-sponsored functions,
 - (d) violations of the drug policy,
 - (e) violations of the college regulations outside the physical confines of residence halls.

3. Residence Hall Judiciaries

a. Structure

Each residence hall has its own judicial body as provided for by the hall constitution.

b. Selection

Judicial board members are selected from the hall's resident population, and the specific method of selection varies by halls.

c. Jurisdiction

(1) Each Residence Hall Judiciary Board will have jurisdiction over:

- (a) violations of hall regulations by residents within their hall,
- (b) violations of college regulations by residents within their hall,
- (c) violations of hall or college regulations by their residents in another hall,

EXCEPTIONS: areas within the jurisdiction of the Intermediate All-Student Judiciary Board, as previously listed.

4. Fairhaven Judiciary Board
Fairhaven College, by implication of its charter, has autonomy with respect to the judiciary process on the Fairhaven Campus. The procedure at Fairhaven is subject to community review and change, and is established in a manner consonant with the Fairhaven Philosophy. The current judicial guidelines are consistent with the judicial guidelines and due process rights outlined in the Guide to Student Rights and Responsibilities.

The Fairhaven Judiciary Board currently handles all violations of the Guide to Student Rights and Responsibilities and any violations of special Fairhaven restrictions by Fairhaven students on the Fairhaven Campus. Violations of the Guide to Student Rights and Responsibilities by Fairhaven students on the Western Campus will normally be handled by the appropriate Western Judicial Body.

C. Types of Judicial Action

1. College Judiciary Board

- a. The sanction of suspension is reserved to this board.
- b. This board entertains appeals.

2. Intermediate All-Student Judiciary Board

- a. Sanctions recommended as appropriate for the Intermediate All-Student Judiciary Board are:

(1) all sanctions available to residence hall judicial board.

(2) campus activity restriction--loss of right to attend college social, athletic and entertainment events;

(3) loss of right to represent college in a) athletics, b) debate, c) drama, d) music, e) student government and other elected offices, f) appointive offices;

(4) loss of campus employment (it is recognized that this sanction could constitute, in effect, suspension for those in dire economic need);

(5) appropriate measures as defined by the Board's discretion;

(6) recommendation to the College Judiciary Board for suspension from the institution.

3. Residence Hall Judiciary Boards

- a. Sanctions recommended as

appropriate for hall boards include:

(1) official warning/reprimand with letter to be kept on file in the Dean of Students office,

(2) hall social probation,

(3) campus social probation,

(4) removal from the hall for a specified length of time,

(5) referrals to the Intermediate All-Student Judiciary Board when:

(a) recommendation is for removal from the Residence Hall system,

(b) in the judgment of an individual hall board it cannot handle a particular case.

III. COMMITTEE ON STUDENT RIGHTS AND RESPONSIBILITIES

Of primary concern to this committee is the student conduct and judicial program. Composed of three students, three faculty, and one representative from the Dean of Students Office, this committee encourages free, responsible, exemplary student conduct at Western. The specific responsibilities of this committee are to:

1. Recommend policies relating to student rights and responsibilities.
2. Re-evaluate on a continual basis the Guide to Student Rights and Responsibilities.
3. Formulate rules and enforcement procedures within the framework of existing policies.

4. Recommend changes in the administration of student rights and responsibilities.

5. Act as a clearing house for recommendations and comments from all members of the college community that relate to the Guide to Student Rights and Responsibilities.

6. Serve as an authority for interpretation of the Guide to Student Rights and Responsibilities.

JUDICIAL STRUCTURE

PRESIDENT OF
THE COLLEGE

COLLEGE
JUDICIARY
BOARD

(Appellate)

INTERMEDIATE
ALL-STUDENT JUDICIARY BOARD

(Appellate)

(Original)

RESIDENCE HALL
JUDICIARY BOARD

NON-RESIDENT
STUDENTS

(Original, referral)

INDEX

Academic Advisement	21, 52	Degrees Offered	48	Master of Arts and	
Academic Honors	38	Dental Hygiene (pre-professional)	29	Master of Science	43
Academic Probation	38	Dentistry (pre-professional)	29	Mathematics & Computer Science	231
Academic Programs	25	Deposit, Enrollment	12	Mathematics Proficiency	39
Academic Regulations	36	Deposit, Housing	18	Medical Technology (pre-professional)	32
Accounting	80	Earth Science	173	Medicine (pre-professional)	32
Accreditation of the College	7	East Asian Studies	219	Military, Credit for Service	44
Administrative Officers	332	Economics & Business	79	Military, Withdrawal for Service	41
Admission, General	10	Education	93	Music	243
Admission—Freshmen	10	Elementary Education	99	Nondiscrimination Policy	8
Admission—Transfers	10	Employment, Part-Time	17	Non-resident candidates	10
Admission to Teacher Education	96	Engineering (pre-professional)	30	Nursing (pre-professional)	33
Advanced Placement	42	English	115	Objectives of the College	7
Agriculture (pre-professional)	28	Enrollment Summary, 1974-75	342	Occupational Therapy (pre-prof.)	33
American Studies	218	Entrance Tests	12	Oceanography (pre-professional)	33
Anthropology	297	Ethnic Studies, College of	129	Optometry (pre-professional)	34
Application Deadline	10	Evening Classes	43	Parking and Traffic	15
Aquatic Studies Program	201	Examinations, Final	40	Part-Time Employment	17
Architecture (pre-professional)	28	Extension Study	43	Pass-Fail Grading	40
Art	53	Faculty	335	Pharmacy (pre-professional)	34
Art History	55	Faculty, Emeritus	333	Philosophy	255
Arts and Sciences, College of	47	Fairhaven College	137	Physical Education	259
Assistantships, Graduate	17	Family and Community Services	190	Physical Science	224
Astronomy	269	Fees	13	Physical Therapy (pre-professional)	34
Attendance Requirements	37	Fifth Year Program for Teachers	102	Physics & Astronomy	269
Auditors	11, 37	Finances	13	Placement Services	24
Bachelor Degree Requirements	36, 48	Financial Assistance	15	Political Science	277
Biology	61	Fisheries (pre-professional)	30	Portuguese	155
Broadcast Communication	311	Foreign Languages & Literatures	145	Prerequisite Waiver	42
Business Administration	80	Foreign Study	44	Probation, Academic	38
Business Education	82	Forestry (pre-professional)	31	Professional Programs	26
Calendar, Official	4	French	151	Professional Transfer Programs	28
Campus Map	2	Freshwater Institute—see Aquatic Studies		Psychology	287
Canadian-American Studies	219	General College Requirements	48	Public Policy & Administration	280
Career Planning	24	General Studies	159	Readmission	11
Certificates Issued, 1974-75	342	General Science	220	Recreation & Park Management	224
Challenge, Course	42	Geography & Regional Planning	163	Refund of Fees	15
Changes in Registration	13, 40	Geology	171	Registration	13
Chemistry	71	Geochemistry	174	Repeating Courses	40
Child Development & Family Relationships	192	Geophysics	174	Required Entrance Exams	12
Chinese	150	German	153	Research	9
Classical Studies	150	Grading System	39	Reservations, Room	18
College Personnel	332	Graduate Study	12	Residence Halls	18
Communications (pre-professional)	28	Graduation, Application for	36	Resident Status	13
Communications, Speech	308	Graduation Requirements	48	Russian	155
Complaints, Academic	42	Greek	154	Scholarships	16
Computer Center	8	Health Education	268	Scholarship Standards	37
Computer Science	231	Health Examination	12	Science Education	226
Continuing Studies	43	Health Services	21	Secondary Education	99
Correspondence Courses	43	History	179	Shannon Point	9
Counseling Center	21	Home Economics	189	Short Courses & Conferences	43
Courses (See individual subjects)		Home Economics (pre-professional)	31	Social Studies Education	227
Course Numbering System	37	Honors Program	221	Social Work (pre-professional)	34
Creative Writing	117	Housing	18	Sociology / Anthropology	297
Credit Evaluations	36	Human Services	134	Spanish	156
Credits, Definition of	36	Humanities	160	Special Education	101
Dance	311	Huxley College	199	Special Students	11
Declaring a Major	51	Independent Studies	43	Speech	307
Degrees Granted, 1974-75	342	Industrial Arts	323	Speech Pathology & Audiology	308
		Industrial Design	222, 323	Student Activities	22
		Industrial Technology	323	Student Affairs Office	20
		Interdepartmental Programs	217	Student-Faculty Designed Majors	51
		Interdisciplinary Major	160	Student Living	18
		International Students	12	Student Records Policy	44
		Japanese	155	Student Rights & Responsibilities	46, 343
		Journalism	126	Supervised Teaching	98
		Korean	155	Teacher Certification	95
		Latin	155	Teacher Education Curriculum	97
		Latin American Studies	223	Technology	321
		Law (pre-professional)	31	Termination of Enrollment	40
		Liberal Studies	160	Theatre & Dramatic Arts	308
		Library, Wilson	8	Transfer Program	28
		Library Science	112	Transfer Students	10
		Linguistics	223	Trustees, Board of	332
		Living Costs	19	Tuition	13
		Load, Academic	36	Urban & Regional Planning	168
		Loans, Student	16	Veterans	44
		Majors and Minors, Teacher Education	99	Veterinary Medicine (pre-prof.)	35
		Master of Education	43	Visual Communication Education	229
				Withdrawal from Courses or College	40
				Women's Studies	229

RETURN POSTAGE GUARANTEED

Western Washington State College
BELLINGHAM, WASHINGTON 98225