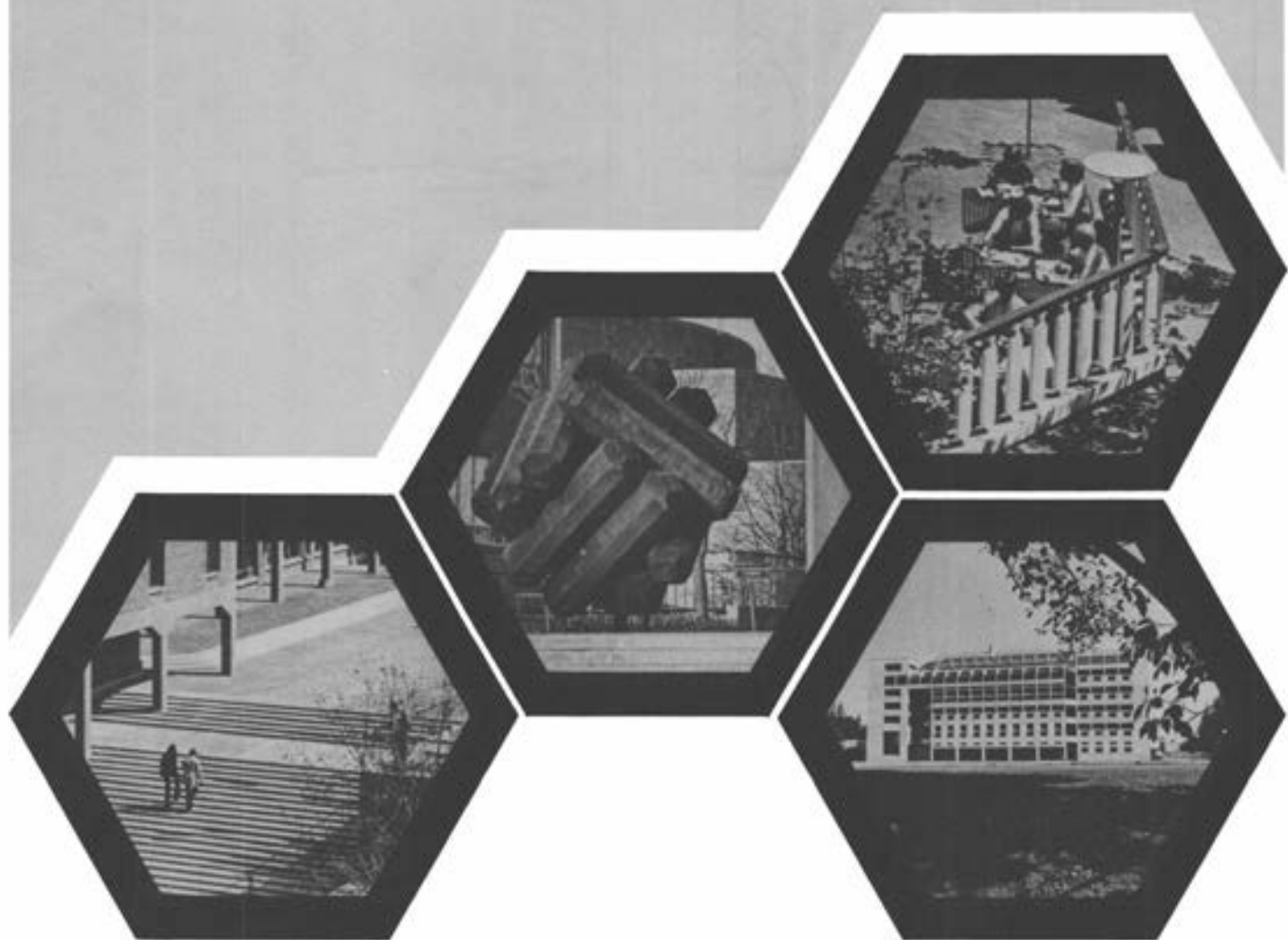


Western Washington State College Bulletin

GENERAL  
CATALOG

1973 □ 1974





WESTERN WASHINGTON STATE COLLEGE BULLETIN

Vol. 69

July, 1973

No. 1

Published in July, October, January and March. Entered as second class matter at the post office in Bellingham, Washington. Published by Western Washington State College, 516 High Street, Bellingham, Washington 98225.

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# Map key

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

\* under construction

# Departments

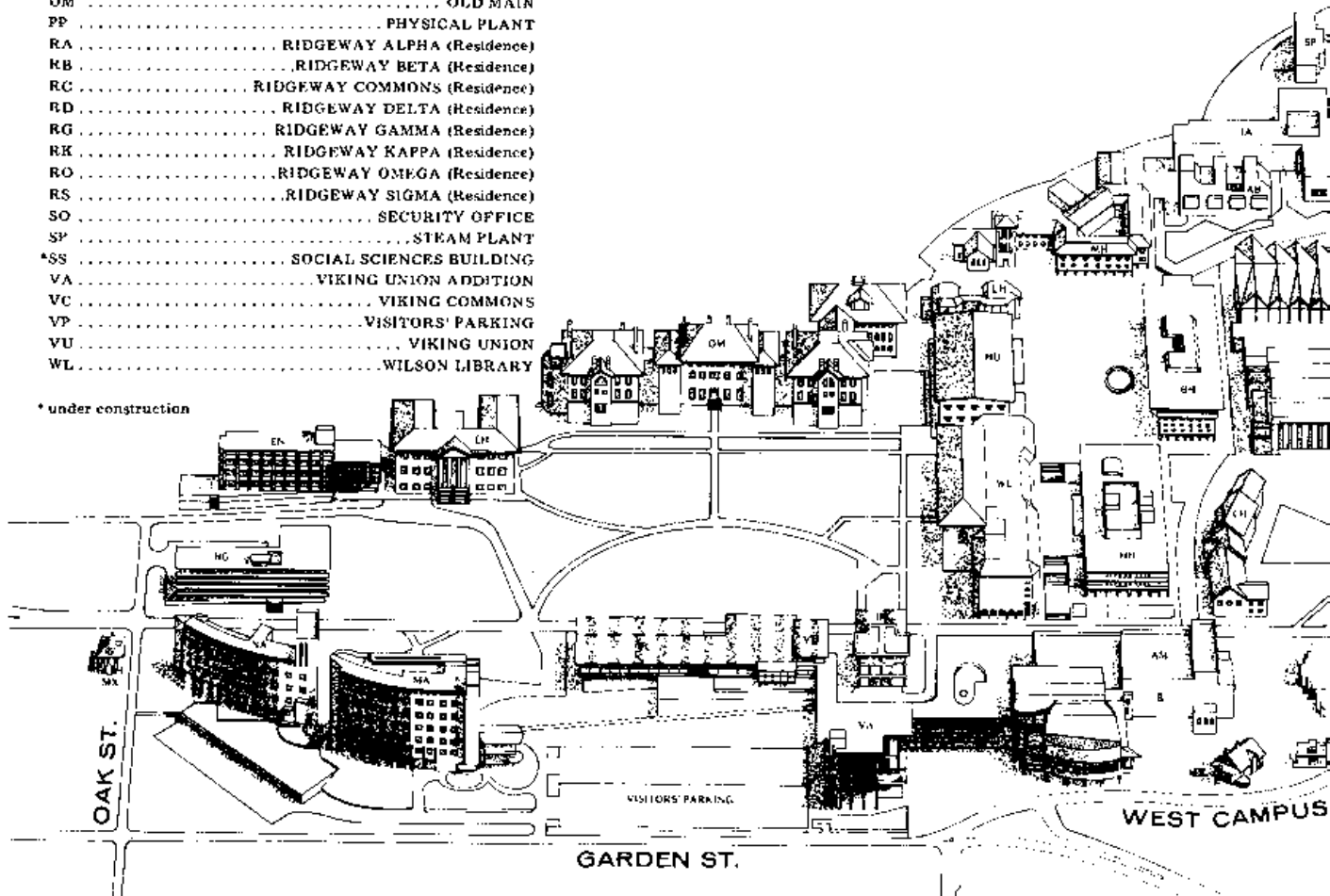
|   |          |                                 |
|---|----------|---------------------------------|
| ART   | (AB, IA) | Art-Industrial Art              |
| BIOLOGY   | (RH)     | Haggard Hall                    |
| CHEMISTRY   | (HH)     | Haggard Hall                    |
| CONTINUING STUDIES                                  | (CH)     | College Hall                    |
| ECONOMICS AND BUSINESS                              | (EH)     | Edens Hall                      |
| EDUCATION   | (MH)     | Miller Hall                     |
| ENGLISH   | (HU)     | Humanities Building             |
| FOREIGN LANGUAGES                                   | (HU)     | Humanities Building             |
| GENERAL STUDIES                                     | (MH)     | Miller Hall                     |
| GEOGRAPHY   | (OM)     | Old Main                        |
| GEOLOGY   | (ES)     | Environmental Studies Center    |
| HISTORY   | (HU)     | Humanities Building             |
| HOME ECONOMICS                                      | (OM)     | Old Main                        |
| LIBRARY SCIENCE                                     | (WL)     | Wilson Library                  |
| MATHEMATICS   | (BH)     | Bond Hall                       |
| MUSIC   | (AM)     | Auditorium-Music Building       |
| PHILOSOPHY  | (HU)     | Humanities Building             |
| PHYSICAL EDUCATION, HEALTH EDUCATION AND RECREATION | (CV)     | Carver Gymnasium                |
| PHYSICS   | (BH)     | Bond Hall                       |
| POLITICAL SCIENCE                                   | (HS)     | High Street Hall                |
| PSYCHOLOGY  | (MH)     | Miller Hall                     |
| SOCIOLOGY/ANTHROPOLOGY                              | (OM)     | Old Main                        |
| SPEECH  | (CH)     | College Hall                    |
| TECHNOLOGY  | (IA)     | Arts/Industrial Arts/Technology |

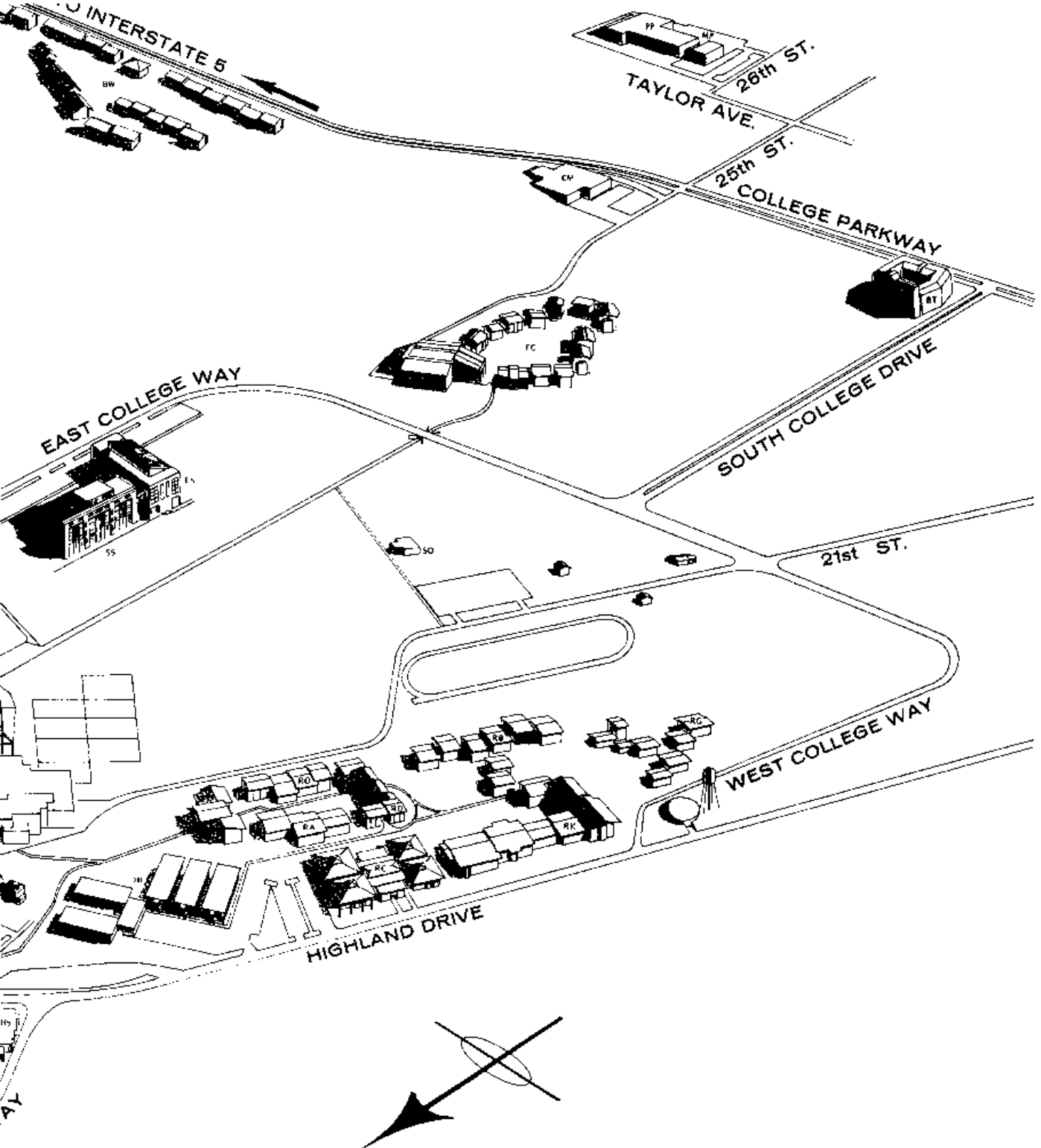
COLLEGE OF ETHNIC STUDIES .....(EH) Edens Hall

FAIRHAVEN COLLEGE .....(FC) Fairhaven College

HUXLEY COLLEGE .....(ES) Environmental Studies Center

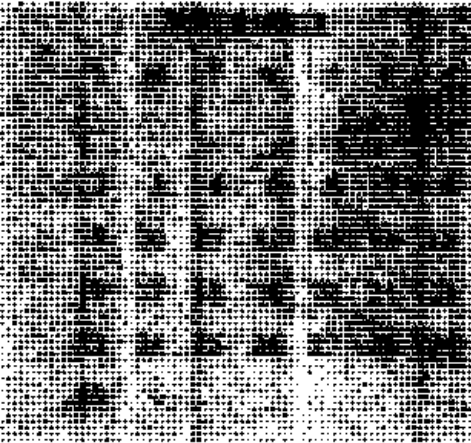
FRESH WATER INSTITUTE (ES) Environmental Studies Center





GARDEN ST

# College Calendar



## *Fall Quarter 1973*

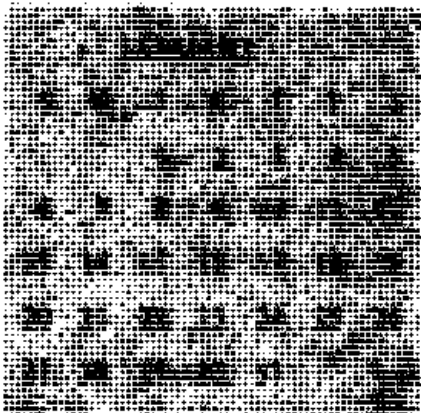
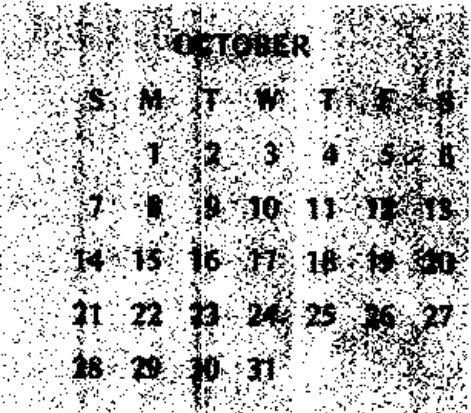
September 24  
Registration of returning students

September 26, 8:00 a.m.  
Classes begin

October 22  
Veterans Day Holiday

November 21, noon-November 26,  
8:00 a.m., Thanksgiving Recess

December 10-14  
Schedule of the final week of the quarter



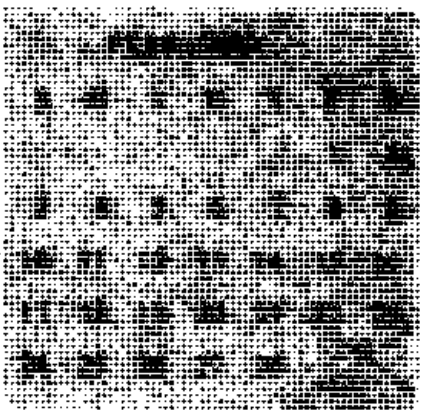
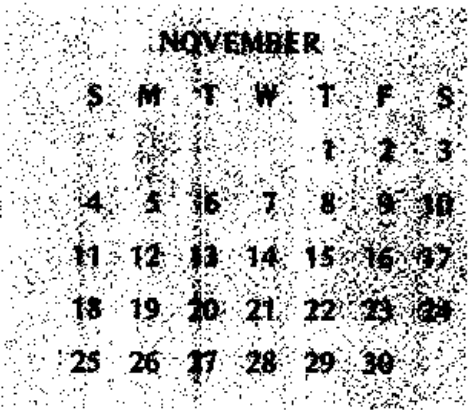
## *Winter Quarter 1974*

January 7  
Registration

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

February 18  
Washington's Birthday Holiday

March 18-22  
Schedule of the final week of the quarter



*Spring Quarter 1974*

April 1  
Registration

April 2, 8:00 a.m.  
Classes begin

May 27  
Memorial Day Holiday

June 7-13  
Schedule of the final week of the quarter

June 14  
Commencement

*Summer Quarter 1974*

June 24-August 2  
Six-Week Session

June 24-August 23  
Nine-Week Session

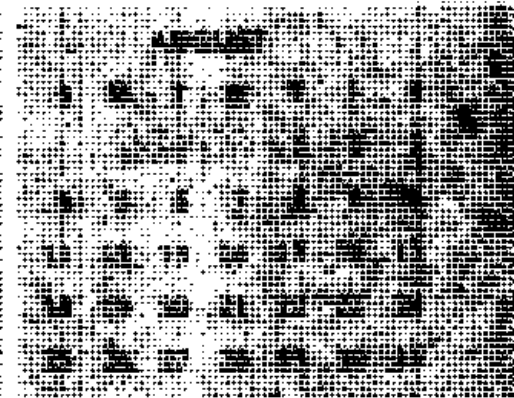
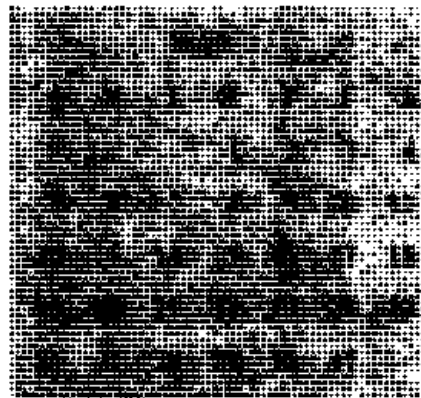
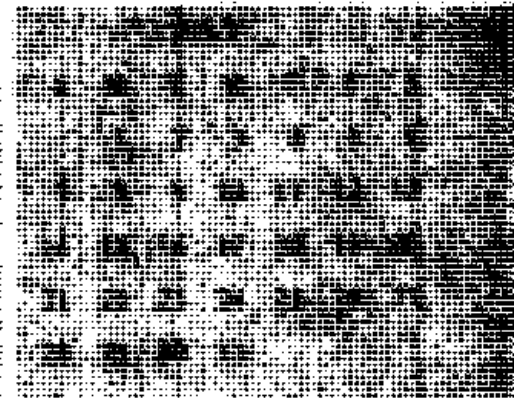
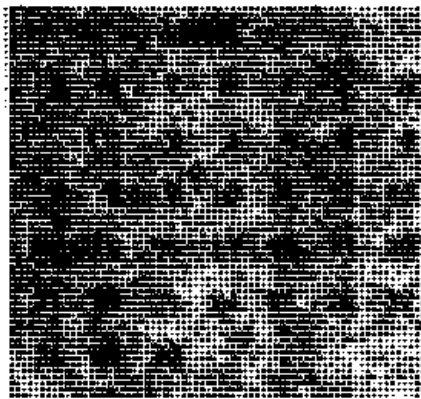
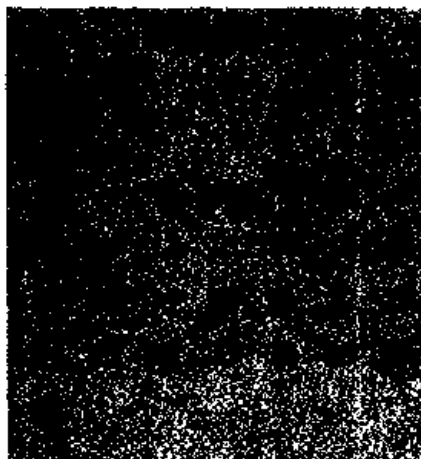
June 24  
Registration

June 25  
Classes begin

July 4  
Independence Day Holiday

*Fall Quarter 1974*

September 30  
Quarter opens







# 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 42,000 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**

The policy of Western Washington State College does not permit discrimination among persons because of race, color or national origin. The College has given assurance to the Federal Government of compliance with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which provides that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any programs or activity receiving Federal financial assistance." Further, the College is committed to an Affirmative Action program.

## **THE CAMPUS**

Over the past 15 years, the campus has been the scene of continuous growth and development to meet the changing demands and functions of a rapidly growing institution of higher education. To meet the needs of student enrollment and academic programs during this period, the campus has expanded to 181 acres, with 60 buildings, located on Sehome Hill overlooking Bellingham Bay and downtown Bellingham.

Currently under construction are the Social Sciences Building, Old Main remodeling, and a marine laboratory on Shannon Point near Anacortes.

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

## **THE LIBRARY**

The Mabel Zoe Wilson Library houses over 500,000 items, including 272,000 volumes of cataloged books and bound periodicals, 127,000 units of microtext, and large collections of federal and state government publications, curriculum materials, pamphlets and college catalogs. The Library maintains subscriptions to nearly 4,000 current periodicals and newspapers.

The recently completed addition to the Wilson Library more than doubles its size and provides open stacks for

the collections, together with reading and study areas, carrels and seminar rooms. The final phase of this construction, to be completed during the 1972-73 academic year, will include facilities for the storage and retrieval of the Library's growing collection of non-book materials and expanded space for College archives.

## **THE COMPUTER CENTER**

The Computer Center operates IBM 360/40 and 7090 computers with appropriate peripheral hardware. A terminal network provides problem solving and computer assisted instruction services. Equipment serves faculty, student and administrative needs, each of these areas accounting for about one-third of the hardware usage. Consulting services are available to faculty and student users of the systems. Grants from the National Science Foundation were received in 1962 and again in 1968 to aid the College in providing computing services.

## **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 Dean for Research and Grants, who directs this 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 Information*

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. Should enrollment capacity be reached at any time before the application deadlines, the College may be forced to defer admissions until a later term or to select from among remaining applicants those students most likely to succeed.

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 fulfill its obligation for an appropriate atmosphere which will provide participation and representation for students in those matters with which they are directly concerned. The College recognizes that the majority of students accept and fulfill their part of the agreement. Disciplinary action on the part of the College must be taken when it has been established that a student has violated this agreement.

### *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. However, 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 will then receive additional forms required by the cluster college (see chapters 5, 6 and 7 of this catalog for more detailed information about the cluster colleges and their admission requirements).

### *Application Deadlines*

Applications and credentials for the Fall Quarter are accepted after December 1 and not later than September 1; application by April 1 is desirable. Completed applications must 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 he has satisfied all admission requirements as set forth here.

### *Accepting An Offer of Admission*

Each student who is admitted will be asked to confirm his intention to enroll by submitting a nonrefundable payment on tuition and fees. This payment should not be made until requested by the College when notification of admission is sent. Additional procedural instructions are then sent to those students who confirm their intention to enroll by submitting the advanced payment.

### *Health Examination*

A health examination is required of all entering students

prior to registration. Necessary forms are sent to each student who accepts an offer of admission. The form must be completed and returned to the College by a licensed physician. The report is to be based on an examination made within 90 days of enrollment.

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 Entrance Examinations*

#### *A. Freshmen*

The Washington Pre-College Test is required of all entering freshmen who are graduates of Washington high schools and it should be completed by all interested students during the junior year of high school when it is given throughout the State of Washington. Students unable to take the test while still enrolled in high school will do so during orientation.

*Nonresident* candidates for freshman admission must take the Scholastic Aptitude Test of the College Entrance Examination Board or the American College Test. 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*

All undergraduate transfer students must present results on the Washington Pre-College Test or complete the School College Abilities Test during orientation.

### *Specific Admission Requirements by Class*

The admissions standards described below for freshman and transfer students 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).

### *Freshman Students*

*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) rank in the upper half of the graduating class. Students who fail to 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. If space permits, the College may grant admission to a limited number of students who, in spite of inability to satisfy the normal standards, appear to have the ability and maturity 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.

*Non-graduates of high school* may be considered for admission if they are over 21 years of age. Such persons must contact the Director of Admissions for an interview and will normally be expected to complete appropriate examinations, such as the GED or SAT. Experience in other than formal educational institutions is also considered.

*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. Precise instructions for application are included on the form.

### *Transfer Students*

Students are granted advanced standing for college-level work (except sectarian religious study) completed at other accredited institutions. Students contemplating transfer are urged to study carefully the academic program of the college or department of their choice in the succeeding sections of this catalog in order to plan

carefully for appropriate course selection. Guides to parallel courses or appropriate substitutions have been supplied to advisement officers at the community colleges in Washington.

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

A transfer student who is in good standing at the last institution attended is ordinarily admitted if he: (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 admissions purposes is struck by counting all grades earned in transferable courses.

Exceptions to these standards are made only when extenuating circumstances are the cause of low academic achievement, and when evidence of academic aptitude can be furnished. A personal interview may be required.

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 must submit this form in advance of the deadlines published above, under *Time of Application* 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.

### *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.

### *Foreign 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, as 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.

### *Special Students and Auditors*

A limited number of persons who have not been admitted to the College as degree candidates may be allowed to enroll as special students or auditors. Permission for such enrollment must be obtained from the Director of Admissions in advance of the application deadlines. Ordinarily, permission to enroll as a special student or auditor will be granted only to persons who satisfy normal admission requirements, but who do not plan programs leading to a degree. Only the Admissions Committee may authorize enrollment of persons who do not meet normal 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 Returning*

All students who leave the College for one or more quarters (except summer quarter) must apply for readmission well in advance of the "Time of Application" indicated under "General Admission Requirements." Application forms are available upon request from the Office of Admissions. Students whose applications are received two weeks prior to advance registration may advance register with their class.

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 has undertaken studies at other colleges or universities since leaving WWSC his cumulative grade average for all such study must be at least 2.00 (C) and he 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.

## REGISTRATION

The first day of each quarter is normally reserved to complete registration procedures. A special schedule for advisement and program planning is provided in the fall 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 week 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*

Changes in registration, such as withdrawal from a course, or from the College, are covered in the chapter 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*                |

*\*Fees listed here are subject to modification as a result of state legislative action.*

|   |         |
|---|---------|
| Resident <sup>1</sup> , General . . . . .         | 165.00* |
| Non-Resident, General . . . . .                   | 453.00* |
| Resident <sup>1</sup> , Graduate Degree . . . . . | 185.00* |
| Non-Resident, Graduate Degree . . . . .           | 473.00* |

**Quarterly Charges – Part-time Students**  
(Students enrolling for a maximum of six credits)

For each credit:

|                                   |          |
|-----------------------------------|----------|
| General . . . . .                 | \$ 23.00 |
| Graduate Degree . . . . .         | 26.00    |
| Southeast Asian Veteran . . . . . | 15.00    |

(The minimum fee is \$46.00, \$52.00, \$30.00 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**

|   |          |
|---|----------|
| Courses taken by off-campus extension<br>or in home study, per credit . . . . . | \$ 15.00 |
| Courses taken on-campus and day class—<br>extended, per credit . . . . .        | \$ 23.00 |

<sup>1</sup>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.

**\*\*Description of Tuition and Fees:**

| Tuition  | Service and<br>Activities Fee | Operations<br>Fee |
|----------|-------------------------------|-------------------|
| \$ 24.00 | \$ 47.00                      | \$ 49.00          |
| 25.00    | 48.50                         | 91.50             |
| 96.00    | 48.50                         | 308.50            |
| 25.00    | 48.50                         | 111.50            |
| 96.00    | 48.50                         | 328.50            |

**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.

**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 registration period.

**Entrance Test Fees:** Freshmen who have not submitted appropriate examination results will complete the Washington Pre-College Test at a fee of \$7. 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.

\*Estimated at time of printing.

*Graduation Fee:* A fee of \$8 is payable for the receipt of a baccalaureate degree. This fee covers initial registration at the Placement Offices. There is a \$5 fee for the master's degree.

*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.

### *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.

### *Off-Campus Study*

(a) Matriculated students doing part-time or independent study entirely off campus (6 credits or less during a quarter) will not be required to register or pay fees (other than those charged for Continuing Studies courses), but may receive credit for such study in a subsequent fall quarter. (b) Students who pursue off campus work and/or travel study with departmental or college approval involving 7 or more credits shall register for the quarter and pay appropriate fees. (c) College support for instructional cost of independent off campus

study involving 7 or more credits per quarter shall not be available for recompensing cost of travel or living expenses off campus.

### *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 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.

### *Change in Student Status*

Students who have paid part-time fees 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 . . . . .       | \$2,100 |
| If living in off-campus apartments . . . . .        | 2,100   |
| If living at home or working for room & board . . . | 1,200   |

## 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 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)*

To be considered for a National Direct Student Loan, a student must be enrolled full-time (12 quarter hours or

more). The size of the loan granted will depend on the student's financial need and on the funds available.

### *Basic Grants (BEOG)*

The Federal Higher Education Amendments of 1972 established the Basic Educational Opportunity Grant Program which, if fully funded, would provide grants of up to \$1,400 for undergraduate students who demonstrate sufficient financial need. Anticipated funding delays may defer the BEOG program until the 1974-75 academic year.

### *Supplemental Educational Opportunity Grants (SEOG)*

Grants are available to a limited number of students who demonstrate exceptional need as established by the Parents' Confidential Statement. Grants are awarded as "gift aid" with repayment not required. The individual grants range from \$200 to \$1,000 and may not exceed more than one-half of the total assistance given the student. Grants must be matched with institutionally administered loans, scholarships, or guaranteed employment. To be considered, a student must be enrolled on a full-time basis (12 quarter hours or more) and be making normal progress toward a degree.

### *College Work—Study Program (CWSP)*

Students, particularly those from low income families, 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*

To be considered for financial aid, all appropriate application forms must be on file in the College Student Financial Aids Office by March 1. Applications should cover the academic year, October 1–June 15, or any quarter thereof. A new, complete application is required for each academic year.

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.

Applications completed by March 1 will be responded to prior to June 15. Late applications will be processed after July 15 if funds are available.

## *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. Entering freshmen may also apply, contingent upon admission to WWSC.

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 will 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 participating banks or credit unions, or 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 in good academic standing and 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.

### *Private Scholarships*

A limited number of private scholarships in specified areas of study are awarded to students. For specific 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 \$262.50. For information and application, see department chairmen.

A limited number of graduate assistantships in

departments of the College are available to qualified students. Stipends range from \$2,250 to \$2,700 yearly, depending upon the nature of the duties assigned. Upon re-application, a graduate assistantship may be extended to a total of two years. Graduate assistants may not be enrolled for more than 12 quarter hour credits but must be registered for at least one three credit course. 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 AND 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, creed or national origin.

The College does not list off campus housing accommodations unless the operators agree to the policy on non-discrimination.

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, 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.

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.

*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 deposit of \$50. Deadlines for the payments are July 1st for fall quarter, or two weeks after the assignment is made. The \$50 deposit will be retained by the College as a damage and/or reservation deposit.

Once the payment of 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 at 2901 College Parkway. 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 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 2401 College Parkway. Each standard unit has a living-dining-kitchen area, two large bedrooms and a bathroom. The lower floor of the building has a coffee shop and recreation area. Furnishings, utilities, telephone service, television cable and extra storage space is also provided.

### *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.

### *Living Costs*

Residence hall rates for the 1973-74 academic year have not yet been established. It is anticipated that if any increase in rates occurs it will be less than 10 per cent. The following rates were in effect during the 1972-73 year for multiple room and board:

|                           |           |
|---------------------------|-----------|
| Full Academic Year .....  | \$ 960.00 |
| Fall Quarter Only .....   | 490.00    |
| Winter Quarter Only ..... | 390.00    |
| Spring Quarter Only ..... | 220.00    |

Apartment rates for 1972-73 were:

#### *Single Apartments*

|                                       |                 |
|---------------------------------------|-----------------|
| Birnam Wood – Rent per student .....  | \$ 55 per month |
| Buchanan Towers – Rent per student .. | 50 per month    |

#### *Married Apartments*

|   |                  |
|---|------------------|
| Birnam Wood – Rent per 2-bedroom unit .....     | \$ 165 per month |
| Buchanan Towers – Rent per 2-bedroom unit ..... | \$ 150 per month |

### *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 inspection service, information on renters' insurance, model contracts, a guidebook for renters, mediation service and information on items such as tenants' rights, discrimination, etc.

### *For Information*

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

## STUDENT PERSONNEL SERVICES

Each student is recognized as a unique individual with his own pattern of abilities, circumstances, and needs. Through a broad spectrum of individual and group guidance and activities, the College endeavors to assist students toward better self-understanding and maximum self-realization. The College does not consider that its responsibility to students ceases with the provision of good instruction and instructional facilities. There is a keen awareness that all aspects of the student's college experience relate to his development as an increasingly effective person.

The Dean of Students has responsibility for co-ordinating the varied student services and extracurricular learning programs as well as developing an effective relationship between these services and programs. In addition, the Dean communicates students' needs and concerns to other college administrators, to various representative bodies and to the Board of Trustees.

### *Counseling and Advising Services*

Recognizing that people are subject to a wide variety of life problems and pressures, the student personnel staff provides students with both informal and clinical counseling resources.

### *Academic Advisement*

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 offices for specific academic concerns. Students should also be aware that an Academic Information Center is provided in Old Main, where a trained student staff is available 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.

*The Associate and Assistant Deans of Students* function as ombudsmen, attending to the general welfare of the College community. They provide academic counseling including administration of scholastic standing procedures, coordinate recruitment and support services for the educationally disadvantaged, counsel students with individualized problems, and facilitate college judicial procedures. 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.

*The Student 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.

*The Office of Residence Hall Programs* co-ordinates the selection and training of a staff to assist resident students with their community and individual problems. Undergraduate Resident Aides team with a Resident Director in each hall to comprise an active resource living with students. In larger buildings there may be an Assistant Director, and college apartments have a Resident Manager. These people are an important source of information about housing and other college matters in addition to assisting in case of personal problems or crises.

*Services for handicapped students* are provided through elevators and other physical facilities conforming with State Codes. Additional services are provided, so that handicapped students needing assistance with regard to housing, tutoring, reading or other problems may contact the Associate Deans of Students, Old Main 213.

A room is equipped with a tape recorder, and arrangements are made for reading and securing of tapes and records for blind students.

Individuals desiring special instruction in swimming or physical exercises may contact the physical education department for assistance.

### *Child Care Services for Students*

Information on day-care facilities in Bellingham and at the College can be obtained from the Associate Dean of Students, Old Main 214.

The College Cooperative Day Care Center is a student/parent cooperative operated in buildings 11 and 12 of Fairhaven College. 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 one to five years of age may be enrolled. Fees are charged on a sliding scale depending on income of the parents. Preference is given to low-income families. Parents and volunteers contribute work time to the center.

## **HEALTH SERVICES**

Good health is one of the essentials 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 measures and health education. Students are encouraged to use these services.

### *Location and Staff*

The Health Service is located in the lower level of Edens Hall. Its staff consists of physicians, registered nurses and receptionists. The director is a medical doctor.

### *Scope of Care Provided*

Diagnosis and treatment of medical office type problems. (No charge for office visits at the Health Service for students paying full tuition fee.)

- Diagnosis and referral of the patient with more complicated conditions 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 health care advice, e.g. diets, weight control, preventive health advice.

### *Clinic Hours*

The Health Service is open weekdays from 8 to 11 a.m. and from 1 to 4 p.m. At other times between 8 and 5 o'clock urgent problems will be seen.

### *Emergencies Between 5 p.m. and 8 a.m. and Weekends*

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 engage this service must plan to use private, or health insurance, funds to cover any expense incurred. Students who do not have insurance coverage yet *should give extra attention to the group supplementary health care plan* offered to students of Western.

### *Health Insurance*

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 for \$13.85 per quarter. Careful consideration of this health care package is suggested for each enrolling student. (See brochure describing benefits.) Sign-up time is the first days at the beginning of each quarter. Participation in this plan for three consecutive quarters—fall, winter and spring—automatically provides coverage for the following summer months.

## Health Forms

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.*

The health inventory form must be on file at the Health Service before the student will receive registration privileges.

The Health Service strongly encourages a complete physical examination by your physician if this has not been done recently. This is *not* mandatory, however.

## Confidentiality of Records

"The relation between a physician and his patient is an extremely confidential one" is one of the recognized tenets of medical practice. It is upheld by the Student Health Service.

## Absence for Health Reasons

Any student requiring verification of absence from class because of illness *must be seen at the Health Service at the time of illness.* Those who have had medical leave of absence must check back with the Health Service before resuming classes.

## Making An Appointment

Any student who feels he needs 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.*

The Health Service telephone number is 676-3400.

## STUDENT ACTIVITIES

The program of student activities at the College 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 phase of the total range of experiences aimed at helping students become well integrated, effective persons.

Student activities and organizations are administered by the students themselves with faculty and staff advisement. The student handbook, *Navigator: A Guide to Western*, outlines in detail the frame of reference within which student organizations and activities operate.

The Viking Union is the community center of the College. Offices for the Associated Students' government, services, publications and activities, as well as the Viking Union/Student Activities administrative offices, are located in the Union. Meeting rooms, lounges, offices, shops and work areas, together with the organization and program, represent a well-considered plan for co-curricular activities of the College.

Living group organizations provide an important opportunity for personal growth. The residence halls are semi-autonomous, organized for self-government and sponsoring activities within their individual buildings.

Student interest groups provide an educational and social experience not always available to students in the ordinary classroom situation. These organizations sponsor programs and activities common to the interests of the membership. Although a few student organizations are open only to students with a particular departmental affiliation or skill, most are open to any interested student. Students are encouraged to become involved in some aspect of the out-of-class activity program. A list of all student organizations is published in *Navigator: A Guide to Western*. Publications include a bi-weekly newspaper—*The Western Front*, a college magazine—the *Klipsun*, and a literary journal—*Jeopardy*.



Intercollegiate athletics play an important part in the College's program. Students interested, either as spectators or participants, in intercollegiate sports can choose from football, basketball, baseball, track, cross country, swimming, tennis, golf, wrestling and crew. The College is a member of the Evergreen Conference.

The comprehensive intramural schedule includes practically all group and individual sports. Students are encouraged to participate and reap the benefits of healthful recreation, co-operative group effort and increased skills for leisure-time activities.

The Club Sports Program of the Associated Students, located in the Viking Union Outdoor Program Center, provides an opportunity for all members of the community to compete in intercollegiate soccer, rugby, skiing, sailing, and parachuting. The number of teams competing in each sport is determined by the number of people interested in participating. Instruction is offered in most sports. Persons interested in organizing intercollegiate competition in sports not yet enjoyed by members of the community are encouraged to do so within the Club Sports Program.

The Outdoor Program is an unorganized group of people involved in a variety of outdoor experiences. Activities include mountaineering, canoeing, ski-touring, hiking, kayaking, sailing, scuba diving, conservation, learning and enjoyment. It enables people of varying degrees of outdoor experience to come together for the mutual benefit and enjoyment of all concerned. The Outdoor Program Center in the Viking Union is a focal point where Western outdoorsmen can find others with whom to enjoy the Pacific Northwest outdoors.

Debate and drama offer broad opportunities for the development of new interests and skills. Debate is a field in which opportunities exist for frequent participation in tournament competition. With the facilities of a theater-size stage, students have an excellent opportunity for both acting and production.

Music organizations include band, orchestra, choir, various quartets, string ensembles and other performance groups.

Recreational facilities operated by the College include Viqueen Lodge, a thirteen-acre tract on Sinclair Island maintained by the Women's Recreational Association, and Lakewood, a nine-acre tract on Lake Whatcom owned by the Associated Students. Kulshan Cabin, a lodge at Mt. Baker, is maintained jointly by the College and the Mt. Baker Club of Bellingham.

For more complete information, please refer to *Navigator: A Guide to Western*, available through the Admissions Office.

## 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 the world of work.

### *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 with 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*

Degrees are offered at Western as follows:

Accounting: BA; American studies: BA; anthropology: BA; art, BA, BA Ed, MEd; art history: BA; biology, BA, BS, MA, MS; biology/math: BS; business administration: BA; business education: BA Ed; chemistry: BA, BS, MS, BA Ed; chemistry/math: BA Ed; child development and family relationships: BA, BA Ed; computer science: BA.

Dance: BA, BA Ed; earth science: BA Ed; economics, BA, MA; education (including specialized graduate programs for administration, counseling and curriculum specialists): BA Ed, MEd; English: BA, MA, BA Ed, MEd; environmental geology: BS; family and community service: BA; foreign languages: BA, BA Ed.

General science: BA Ed; geography: BA, MA, MS, BA Ed; geography/social studies: BA Ed; geology: BA, BS, MS, BA Ed, MEd; geology/math: BA; geophysics: BS; history: BA, MA, BA Ed, MEd; history/social studies: BA Ed; home economics: BA, BA Ed; industrial arts education: BS, MEd; industrial technology: BS, MEd.

Journalism: BA; liberal studies: BA; mathematics: BA, MA, MS, BA Ed, MEd; mathematics/computer science: BA; mathematics/economics: BA; music: BA, MA, BA Ed, MEd; natural science: MEd; philosophy: BA; physical education: BA Ed, MEd; physical geochemistry: BS; physical science: BA Ed; physics: BA, MA, MS, BA Ed; physics/math: BA; political science: BA, MA, public policy and administration: BA; psychology: BA, MA, MS, BA Ed, MEd.

Recreation: BA; self-designed interdisciplinary major: BA; social studies: BA Ed; sociology: BA, BS, MA, BA Ed; special education: BA Ed; speech: BA, MA, BA Ed, MEd; speech/English: BA Ed; speech pathology and audiology: BA, BA Ed, MEd; technology-industrial technology: BA, BS, MEd; theater: BA; urban and regional planning: BA; visual communications (VICOED): BS.

### *College of Ethnic Studies*

The College of Ethnic Studies offers BA and BA Ed degrees.

### *Fairhaven College*

Fairhaven College offers BA and BA Ed degrees.

### *Huxley College of Environmental Studies*

Huxley College offers BA and BS degrees as follows: ecosystems analysis, environmental education, environmental health, environmental monitoring, environmental planning, environmental simulation and modeling, human ecology, marine resources—BS; environmental studies—BA.

## PROFESSIONAL PROGRAMS

In addition to the academic majors listed above, the College offers a variety of professional programs. Some of these may be completed entirely on the Western campus. Others must be supplemented by additional training at appropriate professional schools and universities.



## 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 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 Office of College Relations Professional Transfer Program Coordinator, Mr. C. E. Mathews.

### *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 is generally suitable during the first two years at Western Washington State College.

|  | <i>Credits</i> |
|--|----------------|
| English 101 plus 6 credits of additional composition or journalism | 9              |
| Economics 201, 202   | 9              |
| Speech 100   | 3              |
| Social science elective <sup>1</sup>                               | 5-10           |
| Humanities elective <sup>1</sup>                                   | 5-10           |
| Chemistry 121, 122, 123  | 10             |
| Appropriate mathematics <sup>2</sup>                               | 5-10           |
| Biology 101  | 4              |
| Biology 220, 221 and 222, 224 or 223, 225 <sup>3</sup>             | 12             |
| Electives in accordance with interest                              | 13-28          |
|  | -----          |
| Total  | 90             |

Faculty Adviser: B. E. Omev, Admissions Office

### *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 page 78 of the 1972-73 Washington State University Bulletin.

Faculty Adviser: Miss Ione Foss, Department of Art

<sup>1</sup> Take courses that will satisfy the general requirements of the transfer institution.

<sup>2</sup> Mathematics should be studied through at least Math 121 at Western.

<sup>3</sup> Students interested in the plant sciences should take Biology 222 and 224. Students interested in the animal sciences should take Biology 223 and 225.

## 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. Any other work in the communications area will be accepted as communications "x" credit in the elective category.

*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), the social sciences (12 semester hours), and English composition (6 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 of Communications reserves the right to require courses without credit where the student's competency may not meet departmental standards. The communications major at WSU consists of 30-40 semester hours, 10 of which are often completed as a field internship.

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. For students choosing a baccalaureate degree program at the University of Washington, two years of pre-major preparation are available at Western. Specific course recommendations can be found on page 258 of the 1972-74 University of Washington General Catalog. Early consultation with the faculty adviser is encouraged.

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, 127, 128, 351, 352, 353, 354, 355
- Biology 120, 121, 223, 345
- Biochemistry 371<sup>4</sup>
- 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

<sup>4</sup>Students remaining more than two years should take Biochemistry 471 which has a Chemistry 353 prerequisite.

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

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 122<sup>5</sup>, Math 222, 223
- Physics 231, 331, 332
- Chem 121, 122, 123, 127, 128
- Electives<sup>6</sup>

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—Department of Physics

### *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 encouraged.

- English 101, 201 or 202
- Chem 121<sup>7</sup>, 122<sup>7</sup>, 123, 127, 128
- Math 121, 122, 240
- Biology 120, 121
- Electives

The second year may be completed with individual advisement.

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

<sup>5</sup>Students not qualified to take Math 122 should consult the program adviser.

<sup>6</sup>Electives chosen from English 101, English 201, Technology 201.

<sup>7</sup>Chemistry 124 may be substituted for Chemistry 121 and 122 by those students who are qualified.

## *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, 121
- 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. 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/Anthropology 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/Anthropology 202

Additional courses may be added for Washington State University: Home Economics 101, 224; Biology 101; Sociology/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 210, 250, 310, 315, 410, 411, 412, 488

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 four times annually on this campus.

Faculty Advisers: Dr. Manfred Vernon and Dr. Gerard Rutan, Department of Political Science

### *Medical Technology*

Medical technology at the University of Washington is a four-year program leading to the Bachelor of Science in medical technology. Students may complete two years of study at Western, concentrating on the following recommended science courses and selecting additional courses which parallel 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.

- English 101, 201 or 202
- Chem 121, 122, 123, 127, 128
- Biology 101, 223, 225
- Math 121
- Electives

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 and 123, 127, 128, 333, 351, 352, 353, 354
- Physics 131, 132, 133
- Biology 120, 121, 223, 225
- Math 121, 122 or 220
- Electives

Faculty Adviser: Dr. Herbert A. Brown, 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 common of which is the University of Washington. Course recommendations which follow are designed for admission to the school of nursing which is required at the sophomore level.

- English 101 and 201 or 202
- Chemistry 115 and 251
- 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 2.5, and completion of all University admissions requirements.

Students transferring to Washington State University may complete two years of work prior to transfer.

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

Faculty Adviser: C. E. Mathews, Office of College Relations

## *Occupational Therapy*

Students wishing to earn a Bachelor of Science in occupational therapy at the University of Washington may complete two years of pre-professional courses, earning a minimum of 2.50 GPA. Proficiency, distribution and specific requirements are normally completed prior to admission to the Division of Physical Therapy. Students are encouraged to review the program description found on page 278 of the 1972-74

University of Washington catalog, and have early consultation with the faculty adviser. 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).

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

## *Oceanography*

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: biological oceanography\* Dr. G. F. Kraft, Department of Biology; chemical oceanography—Dr. H. William Wilson, Department of Chemistry; geological oceanography—Dr. D. J. Easterbrook, Department of Geology

\*Students interested in biological oceanography should enroll in the regular degree program for biological science.

## *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 121, 122, 222
- Physics 131 or 231, 132 or 232, 133 or 233
- 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, 127 and 128, 351, 352 and 354, 353 and 355
- Math 121, 122 or 220
- Biology 101, 220, 221, 223, 225
- Physics 131, 132, 133
- Electives

The following electives are recommended for pre-pharmacy students: Econ 201; Psych 201; Soc/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. Lowell P. Eddy, Chemistry Department

## *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 411
- 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

## *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, 127, 128, 333, 351, 352, 354, 371
- Biology 120, 121, 220, 221, 223, 225, 345
- Physics 131, 132, 133
- Math 121
- Electives

Faculty Adviser: Dr. Herbert A. Brown, Department of Biology



# ACADEMIC REGULATIONS

## GENERAL REQUIREMENTS FOR BACHELOR'S DEGREES

The following requirements are common to all undergraduate divisions of Western Washington State College.

- 180 quarter hours of credit; not less than 60 credits in upper division study
- Residence study: one full year (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

*Correspondence and extension 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.*

## 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 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. They 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 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.

## SCHOLARSHIP STANDARDS

The following scholarship standards apply to each college division of Western Washington State College,

except Fairhaven. Students should note that transfer between academic divisions is restricted in cases of low scholarship.

*Enrollment is terminated* at the end of the third quarter of college attendance (including quarters at any other colleges) or any subsequent quarter

- (a) if a student's cumulative grade average and his grade average for the quarter just completed both fall below 2.0;
- (b) if a freshman student receives grades of NP in two courses amounting to at least 5 credits;
- (c) if after three quarters of attendance at this College a student has not successfully completed a cumulative 80 per cent of the total credits for which he was registered as of the sixth day of each quarter. However, a student will not be terminated if he successfully completed 80 per cent of the credits for the quarter immediately preceding. (Grades not considered to be successful would be "F," "NP," "U," "W" and an unconverted "K.")

Students whose enrollment is terminated may normally petition the Scholastic Standing Committee of their college for reinstatement unless they are on final probation (see below). Students dropped for low scholarship from one of the colleges and who wish admission to another of the divisions, must follow normal procedures for admission.

In computing grade point average, only work taken at Western Washington State College (with the exception of courses in which grades of P, NP, or S are received) is taken into account.

*Warning is given* to students who are not dropped under the above regulations but who receive less than a 2.0 grade average during any given quarter, or to freshman students who receive an NP grade in either of their first two quarters; they are notified of the faculty's concern and encouraged to take advantage of all available assistance. Such warning becomes a matter of permanent record.

*Academic probation* is the status assigned to (1) a freshman who fails to achieve a grade average of 2.0 in each of his first two quarters (at the end of his first quarter he is sent a warning notice if his average is below

2.0 and he is required to consult his faculty sponsor during the first week of the ensuing quarter); (2) students other than first or second quarter freshmen when subject to scholastic warning for two consecutive quarters or when admitted or readmitted to the College by action of the Scholastic Standing Committee.

A student placed on *final probation* by the Scholastic Standing Committee must thereafter meet minimum scholarship standards and may not petition for reinstatement if he fails to do so.

*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 at any conference or as a member of any team or organization.

Probationary status is terminated when a cumulative grade point average of 2.0 has been attained. This applies also to those on final academic probation, except that in the event of subsequent failure to maintain this standard the student may not petition for reinstatement.

## MATHEMATICS PROFICIENCY

Proficiency in mathematics is expected of entering students. It is prerequisite to all college level mathematics courses. They 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 prior to fall quarter and at the close of each quarter. The Center for Continuing Studies offers a non-credit review course in mathematics for those who need additional preparation for a re-test.

Transfer students with credit in any college level mathematics course are considered to have satisfied this entrance 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      |

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. Work of D caliber is not acceptable as passing in the pass-fail grading system.

The grades of "S" and "U" are used in certain courses which the department and Academic 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. See "Scholarship Standards" regarding the receipt of more than one NP grade.

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 indicates that work is satisfactory as far as completed. The grade of K is given only in cases of illness or other extenuating circumstances which make it impossible to complete all work by the close of the quarter. The work should be completed the following quarter; however, the student has one calendar year to remove the "K." After this time has passed (whether continuously enrolled or not), the student must reregister for the course in order to receive a grade. A

"K," if not made up by the end of the second quarter, will count with the cumulated credits which have not been successfully completed (see "Scholarship Standards") and may jeopardize a student's retention.

*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, admission to teacher education, student teaching, and graduation, the grade average takes into account only work completed at Western Washington State College.

*Students may repeat courses* in which a withdrawn, failing or low passing ("D") grade has been received. When courses are repeated, the original grade and credit hours are ignored in computing grade averages and total credits. This regulation became effective in fall quarter 1969; it is not retroactive to courses repeated prior to that quarter.

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 education may not be taken pass-fail.
2. The student at the time of registration must designate the courses for which he wishes to receive a pass-fail grade; he 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. A student's enrollment is terminated for low scholarship if, as a freshman, he receives grades of NP in two courses amounting to at least 5 credits, or, if after three quarters of attendance at this College a student has not successfully completed a cumulative 80 per cent of the total credits for which he was registered as of the sixth day of each quarter. However, a student will not be terminated if he successfully completed 80 per cent of the credits for the quarter immediately preceding. (Grades not considered to be successful would be "F," "NP," "U," "W" and an unconverted "K.")
6. Courses applying to a major (including supporting courses) or minor normally must be taken on the standard grade system. Should a student change his 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.

*Students should be aware that some graduate schools are presently requiring that 90 per cent of all courses taken at the undergraduate level be recorded in letter grades other than pass-fail. Admission to graduate study at these institutions is jeopardized by excessive use of pass-fail grading.*

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, for emergency reasons, a student is unable to appear at a final examination at the scheduled time, he may arrange 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.

## 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. Students may withdraw from a course during the first five days of instruction in any quarter with no penalty attached other than the loss of credit. After the add/drop period of five days, all drops will be carried as "W" on the transcript. During the first six weeks of the quarter, a student may at his request receive a grade of "W" (withdrawal) for any course in which he is registered; after six weeks the grade of "W" is assigned at the instructor's discretion. Exceptions to this regulation may be made if such withdrawal is requested by the College, in cases of serious illness, or other highly extenuating circumstances.

*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. After the sixth week of instruction withdrawal from the College will normally result in grades of "F" as provided above.

### *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.
3. Either party may appeal the decision to a committee composed of the department chairman, one other faculty member in the department chosen by the instructor involved, and a third person chosen by the student involved. This third member may be a student who is a major in the department, or another faculty member. This committee should review the evidence and if necessary, hold a hearing. The results are reported in writing to the concerned parties.
  4. If any of the above steps do not result in a decision being rendered within two weeks of the date the complaint is made at that step, the student shall be free to initiate the next step without prejudicing his appeal.

Academic complaints not resolved by the departmental procedures outline above may in rare instances be referred to the Dean of the college concerned for final decision.

## 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 department chairman. Complaints related to grades will follow these steps to the extent necessary to achieve agreement:

1. The student appeals to the instructor presenting any relative evidence.
2. Appeal is made to the department arbiter, a faculty member appointed for the case at hand by the department chairman, who attempts reconciliation and reports the results in writing to the instructor, the student, and the department chairman.

## 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, in the judgment of the College Examiner, in consultation with the department concerned, the challenge procedure is inappropriate.

## 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.

### *Doctor of Philosophy in Education*

The 1969 Legislature authorized the College to begin to offer programs leading to the Ph.D. in education. Plans for the implementation of this authorization have been modified by a moratorium on new degree programs declared by the Council on Higher Education.

## GENERAL REQUIREMENTS FOR TEACHER CERTIFICATION

For complete information regarding admission, programs and special requirements for teacher certification and "Fifth Year" programs, students are directed to the section on "Education" in the chapter "College of Arts and Sciences."

## 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;
- enhancement of capability to assess and deal with the great issues of politics and society in this era when life is swept on a roaring current of change;
- 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.

### *Study Abroad*

There are several ways a student may study abroad and receive credit.

1. Individual department's programs.
2. Northwest Interinstitutional Council on Study Abroad (the college co-sponsors resident centers at several locations in Europe).
3. Registration through other accredited colleges' programs.
4. Guided study credit through conference courses.

For information concerning any of the above, contact Office of Summer Sessions, Old Main 216.

## 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 authorization from the last college attended. This should be done well in advance of the quarter for which he 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*

Credit for military service to a maximum of 30 undergraduate quarter hours is allowed 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.

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

*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.

*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 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

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

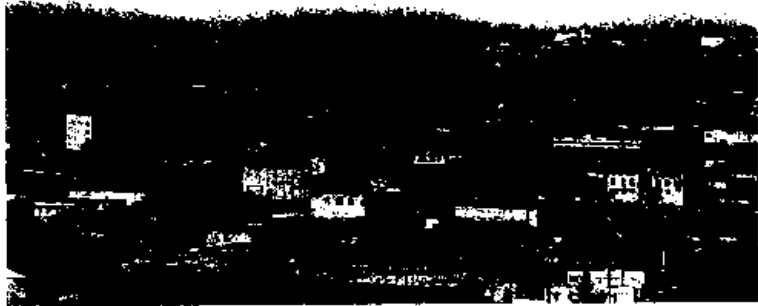
which the staff has no basis for comments such as punctuality, attendance and character traits—the response is to be omitted and the reason indicated.

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**

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 page 327 of this catalog.



# COLLEGE OF ARTS & SCIENCES

*A Cluster College of 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 (Office of Summer Sessions) are acceptable as resident credit to a maximum of 45 credits

*\* 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.*

- 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, or in English composition. Admission to, and continuation in, the teacher education curriculum requires a minimum average of 2.5
- General Education: approximately 55 credits, depending upon options chosen
- 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

## THE GENERAL EDUCATION PROGRAM

### *Aims of the General Education Program*

- (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 Education Requirements*

General Education courses are required of all undergraduate candidates, except where the student has demonstrated proficiency through an acceptable college level examination or through challenge procedure (see page 39). Some requirements may be satisfied with high school work as indicated below. An A.A. degree from



certain community colleges will fulfill all General Education requirements. Two options as outline below are provided to satisfy the General Education requirements. The student may elect to do all or part of his work in either option so long as he does not duplicate courses meeting the same requirement. He may also have some requirements waived if he elects a more

advanced course in the departmental offerings.

The student should carefully study the requirements of his major and the course descriptions before planning his General Education program. For advice, he should confer with the chairman of the General Studies Department.

### *General Education Options*

#### **Option I**

#### **Option II**

#### *Communications*

*(Students may elect 2 of the 3 Communications areas under either option)*

- A. English 101 Language and Exposition (waived for students demonstrating high English competence on entrance tests)
- B. Speech 100 Fundamentals (waived for those electing one of the following courses: 204, 205, 206, 301, or 302 (206 to be taken for 3 credits); waived for those passing with a "B" or better, two semesters of speech at the 10-12 grade level. The requirement can also be fulfilled by teacher education students of sophomore standing or above who elect Speech 302.
- C. Foreign language courses numbered 101, 102, 103, or demonstration of equivalent proficiency on the foreign language placement examination

- A. English 131, 132, 133 Masterpieces of World Literature with Composition. Students who elect this option in Humanities (see below) also satisfy the composition requirement
- B. Speech 302 Speech for Teachers (open only to teacher education students of sophomore or above standing)
- C. Equivalent study of a foreign language in a Study Abroad Program

#### *Humanities*

General Studies 121

General Studies 122

General Studies 123

The following program of courses satisfies the General Studies 121, 122, 123 series in its entirety:

Two courses

from History 105, 106, 107

Two courses from English 281, 282, 283, Classical Studies 350 (if 350 is chosen, either 282 or 283 must be taken), or the series English 131, 132, 133 if elected for "A" above

One course from Philosophy 111, 113, 210, 220, 250, 330, 405

One course from Art 190 or Music 140

### *Social Sciences*

*These requirements include work in each of three areas. The student may elect either option for any or all of the areas.*

- |  |  |
|--|--|
| A. General Studies 105 Behavioral Science                  | A. Psych 201 and Soc/Anth 201 or 215   |
| B. General Studies 200 Economic and Political Institutions | B. One course from each of two fields:<br>Economics 201<br>Geography 201, 207, 470<br>Pol Sci 101, 250   |
| C. General Studies 321 Non-Western Cultures                | C. Two courses from:<br>Geography 315, 319, 415, 416<br>History 280, 385, 386, 480, 481, 482, 483,<br>484, 487a or b, 489<br>Pol Sci 305, 307<br>Economics 486<br>Soc/Anth 361 (or 462), 362 (or 463 or 464),<br>363, 364, 451 |

### *Mathematics-Logic*

Mathematics 151 (or any mathematics course numbered 121 or above) or Computer Science 101 (or any computer science course numbered 101 or above) or Philosophy 102, Logic.

*Note:* Mathematics-Logic requirement waived for students with four years of high school mathematics. Philosophy 102 option open only to students with three years high school mathematics.

### *Natural Sciences*

Four quarter sequence in natural sciences to be taken in entirety except for waivers on basis of high school science.

Sequence: A is prerequisite to B; A and B are prerequisite to C and D; C and D may be taken in either order.

- A. Physics 101 Elementary Physics (or one year high school physics)
- B. Chemistry 101 Chemical Concepts (or one year high school chemistry)
- C. Biology 101 General Biology (or two years high school biology)
- D. Geology 101 General Geology or Geography 101 Natural Environment (or one year high school geology)

Any *one* of the following sequences; open only to students with high school credit for one year of biology plus one year of physics or chemistry.

Physics 131, 132, 133; or 231, 232, 233

10 credits in chemistry other than Chem 101

Geology 211 plus one course from Geol 212, 310, 311 or Physics 105

Biology 101, 370, and one of: 220-221, 222, 223, 224, 225

Biology 101, 222, 224

Biology 101, 223, 225

Physics 105, 131, 205

## MAJORS AND MINORS

In addition to the general education 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. This orientation extends well into the quarter.

### *Freshman Counseling*

The ultimate aim of all counseling at Western Washington State College is to develop in the student himself the capacity and skills necessary for self-guidance. During his 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 his freshman year, consisting largely of prescribed general education courses, he is referred to the academic departments for continued personalized advisement in planning and selecting his 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 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.

## **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.



**ART**

*Western Washington State College*



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

- DAVID F. MARSH (1957) Chairman.  
Professor. BA, Central Washington State College; MS, University of Oregon.
- GEORGE BISHOP (1970) Assistant Professor. BFA, MFA, Wayne State University.
- \*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.
- PATRICK F. McCORMICK (1969) Assistant Professor. BFA, BA, University of Washington; MFA, Cranbrook Academy of Art.

\*On Leave 1973-74

\*\*On Leave Winter & Spring 1974

- MARY A. McINTYRE (1968) Assistant Professor. AB, MFA, Indiana University.
- THOMAS SCHLOTTERBACK (1965) Associate Professor. BFA, MFA, University of Kansas; PhD, The State University of Iowa.
- JAY L. STEELE (1970) Assistant Professor. AB, Stanford University; MS, MFA, University of Oregon.
- DAVID E. TEMPLETON (1969) Associate 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) Assistant Professor. AB, MA, University of Notre Dame, Ind.
- THOMAS O. VASSDAL (1967) Assistant Professor. BA in Ed, University of Nevada; MA, University of Iowa.
- 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

The student will elect from courses at the 200 level a basis for his subsequent work. He 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 his 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 or textiles, 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 eighteen 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 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 his 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 his faculty committee for completion of his 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 his 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 his 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 his faculty committee for completion of his major. Transfer students with more than 18 credits should do this prior to completion of

## Art

their second quarter at the College. Revisions and amendments may be made by the student and his faculty committee upon request.

### 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.

### GRADUATE STUDY

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

### COURSES IN ART

(See also *Art History*, page 56.)

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

- |     |  |      |   |
|-----|--|------|---|
| 101 | <b>DRAWING (3)</b><br>Not open to students with two years of high school art. Fundamental principles and techniques. | 230  | <b>SCULPTURE I (3)</b><br>Prerequisite: Art 101 or equivalent. Introduction to sculpture.   |
| 190 | <b>ART APPRECIATION (2)</b><br>Introduction to form and expression in the visual arts for the non-major.             | 240  | <b>CERAMICS (3)</b><br>Prerequisite: Art 101 or equivalent. Handbuilt clay construction. Introduction to glaze formulation, kiln loading and firing.  |
| 202 | <b>LIFE DRAWING (3)</b><br>Prerequisite: Art 101 or equivalent.  | 270  | <b>DESIGN AND COLOR (3)</b><br>Studies of form and structure in a variety of media; emphasis on two-dimensional design concepts, pattern and color.   |
| 210 | <b>PRINTMAKING I (3)</b><br>Prerequisite: Art 101 or equivalent. Introduction to intaglio processes.                 | 271  | <b>THREE-DIMENSIONAL DESIGN (3)</b><br>Exploration of construction in space employing a variety of media.   |
| 211 | <b>PRINTMAKING II (3)</b><br>Prerequisite: Art 101 or equivalent. Introduction to lithographic processes.            | 280  | <b>INTRODUCTION TO ART EDUCATION (2)</b><br>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.   |
| 220 | <b>PAINTING (3)</b><br>Prerequisite: Art 101 or equivalent. Introduction to contemporary painting.                   | 297a | <b>MASTER DRAWING (4)</b><br>Drawing in the environment of the old masters. (Restricted to students in summer art tour.)  |
|     |  | 300  | <b>SPECIAL PROBLEMS IN ART (1-5)</b><br>Prerequisite: permission of instructor.   |
|     |  | 301  | <b>CONTEMPORARY PRACTICE (3)</b><br>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  | <b>DRAWING WORKSHOP I (3 or 5)</b><br>Prerequisites: Art 202 or equivalent; repeatable to 15 credits. Drawing as a major medium.  |
|     |  | 311  | <b>PRINTMAKING — LITHOGRAPHY (3)</b><br>Prerequisites: Art 211, 301, or concurrent enrollment. Planographic processes; emphasis on lithography.   |
|     |  | 312  | <b>PRINTMAKING — INTAGLIO (3)</b><br>Prerequisites: Art 210, 301, or concurrent enrollment. Intaglio processes: etching, engraving, drypoint, aquatint.   |
|     |  | 313  | <b>PRINTMAKING WORKSHOP (3 or 5)</b><br>Prerequisite: Art 311 or 312; repeatable to 15 credits.   |
|     |  | 321  | <b>PAINTING WORKSHOP I (3 or 5)</b><br>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  | <b>WATER COLOR PAINTING (3 or 5)</b><br>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.
- 352 ENAMELING (3)  
Prerequisites: Art 271, 350.
- 360 FABRIC DESIGN I (3)  
Prerequisites: Art 101 or equivalent, Art 270 or permission, 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 or permission. Anatomy of letter forms, alphabets and calligraphy; problems in pen and brush lettering.
- 371 GRAPHIC DESIGN I (2)  
Prerequisites: Art 101 or equivalent, 370 or permission. Introduction to visual communication as related to graphic processes.
- 372 GRAPHIC DESIGN II (3 or 5)  
Prerequisite: Art 371 or permission; 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.
- 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.
- 421 PAINTING WORKSHOP I (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 or permission of instructor; 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.

## Art

- 493 **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.
- 481 **ADVANCED ART EDUCATION (3)**  
Prerequisites: previous work in art education; teaching experience. Lectures and studio work in art education as related to materials and evaluation of process, product and individual growth.
- 482 **ART EDUCATION WORKSHOP (2-5)**  
Prerequisite: teaching experience. Explorations in art media and their adaptation to use in the school; may be repeated with different topics.
- 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.
- 293 **SURVEY OF AFRICAN ART (3)**  
Not open to students with credit in Art History 410.
- 300 **SPECIAL PROBLEMS (2-5)**  
Individual problems in art historical methodology through special projects under supervision.
- 310 **PREHISTORIC AND PRIMITIVE ART I (3)**  
Prerequisites: Art History 220 or 230 or 240; permission of instructor; Soc/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 or permission of instructor. 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.
- 397a **SURVEY OF EUROPEAN ART HISTORY (5)**  
Survey of European art history utilizing the major museums of London, Paris, Venice, Florence and Rome. (Restricted to students in summer art tour.)
- 397b **HISTORY OF THE ART OF WOMEN (3)**  
Prerequisite: Art History 230 or 240. A survey of the art of women from 1600 to 1950.
- 400 **SPECIAL PROBLEMS (2-5)**  
Prerequisites: senior status and permission of instructor. Individual instruction in special projects under supervision.
- 410 **PREHISTORIC AND PRIMITIVE ART II (3)**  
Prerequisites: Art History 220 or 230 or 240; permission of instructor; Soc/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 or permission of instructor. 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

*Western Washington State College*



Biology—the study of life—is a science which encompasses a very broad spectrum of subject areas. Bacteriology, botany, ecology, genetics, marine biology, physiology, science education and zoology are but a sample of the major divisions included in Western's Biology Department. Professional career opportunities are at least as diverse as the subject itself. Graduates move into medicine, veterinary medicine, medical technology, forestry or fisheries, and other professional areas which require special training beyond the bachelor's degree.

A high percentage of majors are preparing to teach in the public schools, but an increasing number are preparing for jobs in private industry or in governmental agencies. Many of the specialized areas of biology require study at the graduate level and those qualified may continue on to a master's degree program at Western or may transfer to a master's or doctoral program at another university. In general, those enrolled in a program which will lead into any of the areas of biology mentioned above are advised to fulfill requirements for our Bachelor of Science degree. This consists of a strong core of biology courses in supporting natural sciences (chemistry, physics, geology) and mathematics.

Recognizing that there are many who are deeply interested in biology but who do not plan a career in this field, the department has recently launched a new Bachelor of Arts degree program. Specific course requirements for the BA degree have been kept low in numbers to permit the student to select courses and study areas which will best meet his or her needs. Programs which one might design under this degree could include a major in biology with a second major (or a strong minor support) in one of several areas such as art, business administration, psychology, physical education, home economics, anthropology, technology, or one of the natural sciences. A special program is being offered to provide a joint biology - mathematics major.

The department maintains active teaching reference and research collections including an herbarium (with a particularly good assemblage of specimens from the alpine regions), marine invertebrates, insects, mammals and birds. Some of the facilities shared by the Biology Department and which contribute richly to Western's program include the Shannon Point Marine Center, the

Institute for Freshwater Studies, the Northwest Environmental Studies Center, Computer Center, Electron Microscope and Science Education Center. More than 16,000 square feet of teaching and research laboratory space are assigned to the department.

Biology at Western emphasizes "learning by doing" and open-ended lab studies. Students explore the Gulf Islands, California's Coastal Range and Sierras, Central Oregon's Malheur Game Refuge and the Grand Canyon on 10-day field work expeditions during summer and quarter breaks.

The 21 members of the biology faculty have been selected to represent as broadly as possible the diverse ramifications of the discipline. In order to help each student plan a course of study tailored to his or her individual needs, a system of advisement is in effect within the department. All students planning to major or minor in biology as well as any other students whose programs require a number of courses in the department should contact the Biology Department chairman for guidance and for assignment to a faculty adviser whose area of interest most closely parallels that of the student.

## BIOLOGY FACULTY

- CLYDE M. SENGER (1963) Chairman. Professor. BA, Reed College; MS, Purdue University; PhD, Utah State University.
- LeVON A. BALZER (1968) Associate Professor. BS, MNS, University of Oklahoma; PhD, The Ohio 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 of Zoology and President of the College. BS, Purdue University; MEd, EdD, University of Florida.
- RICHARD W. FONDA (1968) Associate Professor. BA, Duke University; MS, PhD, University of Illinois.
- RICHARD T. HAARD (1967) Assistant Professor. AAS, State University of New York; BS, University of Georgia; MS, PhD, Kansas State University.

- 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.
- BRUCE LIGHTHART (1969) Assistant Professor. BS, MS, San Diego State College; PhD, University of Washington.
- 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. BS, PhD, 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) Associate Professor. BA, Chico State College; MA, PhD, University of California, Davis.

Students desiring a major or minor in biology are urged to plan carefully with department advisers early in their college careers in order to assure proper sequences of courses selected. The supporting courses listed below are recommended for majors in meeting general education requirements in natural sciences and mathematics.

Transfer students must complete in residence in this college at least 11 credits of the major or 5 credits of the minor.

## BACHELOR OF ARTS

For liberal arts students. (See B.S. program following for teaching or professional work in biology.)

\*On Leave 1973-74

*Major* 50 credits plus Supporting Courses

- Biology 101 or 120
- Biology 121
- Biology 321-322 or 370
- Biology 325-326
- Electives to total 50 credits in biology
- Chemistry 115 and 251 or equivalent

(Supporting courses may apply where appropriate to a minor.)

## BACHELOR OF SCIENCE

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

*Major Concentration* 110 credits

- Biology 120, 121, 220-221, 222, 223, 224, 225, 321-322, 323-324 (or Chem 471, 472 and 473), 325-326, 340 (or CS 110 and Math 240), 385 (or Gen Sci 405)
- Physics 131, 132, 133 (or 231, 232, 233)
- Math 122 or 220
- Geology 211
- Chemistry 121, 122, 123, 251 (or Chem 351, 352 and 353)
- Biology 493 (teacher preparation only)
- Electives to be taken from biology, chemistry, computer science, geography, geology, mathematics, physics

Prospective graduate students should elect a strong minor in a natural science or mathematics.

## COMBINED MAJOR -- BIOLOGY AND MATHEMATICS

*Major Concentration* 110 credits

- Biology 120, 121, 220, 221, 222, 223, 224, 225, 321-322, 323-324, 325-326
- Mathematics 122, 222, 223, 241, 301, 331, 335 (or Physics 233), 341, 342; Computer Science 210, 211, 438

## Biology

- Chemistry 115, 251
- Physics 231, 232, 233 (or Math 335)

## MINOR PROGRAMS

*Minor* 25 credits

- Biology 121

Student advised to consult major department for remainder of credits.

*Extended Minor* 40-49 credits

Minimum requirements for certification for teaching competence.

- Biology 120, 121 or 101
- Biology 220-221, 222, 223, 224, 225
- Biology 321-322, 325-326
- Biology 323-324 or Biology 348-349 or 379
- Biology 493

## PREPARATION OF SECONDARY TEACHERS

The education of a person who intends to teach biology requires at least as much commitment to biology and related sciences as does the preparation of biologists who will not teach. Therefore, no separate, reduced major program leading to the B.A. in Education degree is offered in Biology. Prospective biology teachers will enroll in the Bachelor of Science program. The professional education courses may be included as electives in addition to the Bachelor of Science program and/or in a post baccalaureate year, part of which may be applied toward the fifth year for a standard certificate. Biology 493 should be added to the major.

Students are urged to consult an adviser in the department.

Biology teachers desiring to enlarge their recommended competencies in other sciences should consult the departments concerned for proper course sequences.

Students planning to teach at the elementary or junior high school level should take the General Science major which includes biology.

## 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 396 a, b, c and 496 a, 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

*Majors in biology are expected to attain certain levels of competence before specializing. These are: Level I (freshman) Biol 120, 121; Level II (sophomore) Biol 220, 221, 222, 223, 224, 225; Level III (junior) Biol 321, 322, 323, 324, 325, 326.*

*The following courses are courses which would be of special interest to persons not intending to major in biology: Biol 101, 201, 202, 203, 204, 205, 208, 307, 370, 445b.*

### 101 PRINCIPLES OF GENERAL BIOLOGY (4)

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

### 120, 121 THE SCIENCE OF BIOLOGY (4 ea)

Prerequisite: one quarter college chemistry; to be taken in consecutive quarters. Nature of science and biology, biology and society, organizational levels, major unifying and interrelated concepts; principles of inquiry.

### 201-205 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.

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



- 208 FOREIGN CHEMICALS AND NATURAL SYSTEMS (3)  
Prerequisites: Biol 101 and Chem 101 or permission. 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).
- 220 LOWER ORGANISMS (3)  
Prerequisite: Biol 121. The nature, interrelationships, and importance of lower organisms.
- 221 LOWER ORGANISMS LABORATORY (3)  
Prerequisite: must be taken concurrently or following Biol 220. Laboratory study of bacteria, protists, algae and fungi; including collection, identification, culture and experimentation.
- 222 HIGHER PLANTS I (3)  
Prerequisite: Biol 121. Bryophytes and vascular plants. Basic physiological principles; evolutionary trends in structural development and in reproductive systems of major groups.
- 223 HIGHER ANIMALS I (3)  
Prerequisite: Biol 121. Organismal biology and evolution of Deuterostomes (Echinoderm-Chordate line), particularly Chordates, emphasizing functional anatomy and organismal adaptation.
- 224 HIGHER PLANTS II (3)  
Prerequisite: Biol 121; Biol 220-221 and 222 or permission of the instructor. Reproductive, structural and physiological adaptations relating to geographical and ecological distribution of representative vascular plants; field survey of the plant kingdom, collection and identification.
- 225 HIGHER ANIMALS II (3)  
Prerequisite: Biol 121. Organismal biology of Cnidaria and protostomes (Arthropod line) emphasizing functional adaptations and evolutionary relationships.
- 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.
- 321, 322 HEREDITARY BIOLOGY; HEREDITARY BIOLOGY LABORATORY (3, 2)  
Prerequisite: 14 credits in biology; concurrent enrollment required. Basic problems, theories and principles of genetics; laboratory experiments with *Drosophila*. (322 has S/U grading only.)
- 323, 324\* CELL, MOLECULAR AND DEVELOPMENTAL BIOLOGY; CELL, MOLECULAR AND DEVELOPMENTAL BIOLOGY LABORATORY (3, 2)  
Prerequisites: 14 credits in biology; Chem 251 or 351, 352, or permission of instructor; concurrent enrollment required. Cell organelle structure and function, water relationships, membrane phenomena, energy utilization and production, cellular biosynthesis, control of cellular activities, developmental processes at the cellular level. (324 has S/U grading only.)
- 325, 326 ECOLOGY; ECOLOGY LABORATORY (3, 2)  
Prerequisite: 14 credits in biology; chemistry and physics recommended; concurrent enrollment required. Community energetics and organismal-environmental relationships in marine, fresh water and terrestrial habitats.
- 340 BIOMETRICS (5)  
Prerequisite: Math 121 or equivalent. 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 or 124, and 251; 10 credits in botany or zoology, or permission of instructor. Comparative morphology, taxonomy, physiology and relationship of microbes; bacteria, yeasts, molds, and viruses.
- 348, 349 HUMAN ANATOMY AND PHYSIOLOGY (5 ea)  
Prerequisite: Biol 101 or permission of instructor; 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 224. Historical survey of classification systems; use of taxonomic keys, and evolutionary development of flowering plants; recognition of common plants.
- 366 COMPARATIVE VERTEBRATE ANATOMY (5)  
Prerequisite: Biol 223. Morphology and evolution of organic systems of major vertebrate groups.
- 368 GENERAL VERTEBRATE EMBRYOLOGY (5)  
Prerequisite: Biol 223. 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 or 371.
- \*Students planning to take Biol 345 and 323-324 should take 345 first.

## Biology

- 379 PLANT PHYSIOLOGY (5)  
Prerequisite: Biol 222. Mineral nutrition, water economy, soils, auxins, and other items of special importance to plant growth.
- 383 BIOLOGICAL SCIENCE FOR THE INTERMEDIATE SCHODL (3)  
Prerequisites: Sci Ed 390; general education requirements in science or mathematics or permission of instructor. Philosophy, concepts, learning experiences, and materials for the biological sciences suitable to the intermediate grades.
- 385 DEVELOPMENT OF MODERN IDEAS IN BIOLOGY (5)  
Prerequisite: 20 credits in biology or physical sciences. Evaluation of theories and explanations in biological sciences; concepts and logical relationships characterizing living systems.
- 396a,b,c HONORS TUTORIAL (2-5 ea)
- 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.
- 401 MICROBIAL ECOLOGY (5)  
Prerequisites: Biol 325-326, Biol 345 or equivalent, or permission. Distribution and survival factors affecting microorganisms; emphasizing the aquatic decomposers. Field studies, computer simulation and student projects.
- 402 LIMNOLOGY (5)  
Prerequisites: Biol 325-326. Physical and chemical characteristics of fresh water in relation to biotic communities; field trips.
- 403 PHYSIOLOGICAL ECOLOGY (5)  
Prerequisite: Biol 325-326 and permission of instructor. Field laboratory studies concerning physiological responses of marine animals to environmental factors; methods for design and analysis of experiments.
- 404 PLANT COMMUNITIES (4)  
Prerequisite: Biol 325-326; Biol 224 recommended. Ecology of plant communities with special emphasis on analysis, description, succession, and distribution. Weekend field trips included.
- 405 FIELD ECOLOGY (3)  
Prerequisites: Biol 325 or 326 and permission of instructor; Biol 352 and 404 recommended. Intersession field trip to Southwest desert areas; analysis and investigation of desert plant communities.
- 406 GENERAL OCEANOGRAPHY (5)  
Prerequisites: Physics 131, 132; Chem 121, 122, or permission of instructor. Geological, physical, chemical, and biological aspects of oceanography, reinforced with oceanographic field exercises.
- 407 CURRENT ENVIRONMENT (3)  
Prerequisites: Biol 325-326, and senior status or permission of instructor. Current literature on environment, focusing on pollution and overpopulation. Not recommended for those with credit in Biol 307.
- 408 MOLECULAR ECOLOGY (3)  
Prerequisites: Biol 323-324 (or Chem 471), Chem 251 (or equivalent) or permission of instructor. Biol 301 or 325-326 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.
- 424 ENTOMOLOGY (3)  
Prerequisite: Biol 225. Insects: their morphology, physiology, metamorphoses, classification, and economic importance.
- 428 ENTOMOLOGY LABORATORY (2)  
Prerequisite or concurrent: Biol 424. Anatomy, physiology, and identification of insects.
- 445b CURRENT TRENDS IN ECOLOGY: POLLUTION CONTROL (3)  
Prerequisite: completion of Gen Ed natural science requirements, or permission of major adviser. Credit not applicable to majors or minors in biology. Not open to students in Biol 397/Chem 397, nor Biol 307. Sources, effects, and the measurement of air and water pollution, solid wastes, and noise. Formulation and enforcement of regulations at the federal, state and local levels. Description of processes and equipment for pollution control. Emphasis on the problems of the Puget Sound Basin.
- 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 (4)  
Prerequisites: Biol 223, 225; two quarters of college chemistry. Representative animal parasites with emphasis on structural and physiological adaptations of parasite and host.

- 452 PHYLOGENY OF FLOWERING PLANTS (4)**  
Prerequisite: permission of instructor. The study and application of chemical, structural, and cytogenetical characteristics in the determination of phylogeny among flowering plants.
- 453 MONTANE BIOLOGY (3-5)**  
Prerequisites: Biol 325-326. Flora and fauna of the Cascade Mountains; their variety, distribution and interactions with the environment. Summer only.
- 454 MYCOLOGY (5)**  
Prerequisite: Biol 221. 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 221. Collection, culture, identification, classification, distribution, and economic importance of marine and fresh water algae.
- 458 BRYOPHYTES (5)**  
Prerequisite: 10 credits in biology. Collection, identification, distribution, and evolution of mosses and liverworts.
- 461 MARINE INVERTEBRATE ZOOLOGY (5)**  
Prerequisites: Biol 325-325. Laboratory and field study of local marine invertebrates.
- 463 ORNITHOLOGY (5)**  
Prerequisites: Biol 120, 121 or 101. Evolution of morphological adaptations of birds, classification, distribution; annual cycle including migration, breeding and population dynamics; laboratory study, field trips.
- 465 MAMMALOLOGY (5)**  
Prerequisite: Biol 223. Structural and physiological adaptations, population dynamics, distribution and classification of mammals with laboratory emphasis on local species.
- 471 PHYSIOLOGICAL GENETICS (5)**  
Prerequisites: Biol 321-322 and 323-324. 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 222. A study of plant organs and their tissues from the standpoint of origin, differentiation, growth, and maturation.
- 478 CELLULAR PHYSIOLOGY (5)**  
Prerequisites: Biol 323-324 or permission of instructor. Structure and function of cells; hormonal regulation of cellular metabolism; exchange of materials across membranes; bioelectricity, excitability, contractility.
- 481 PHYSIOLOGICAL RESPONSES OF PLANTS TO ENVIRONMENT (5)**  
Prerequisites: Biol 325-326, 379; 224 recommended. Changes induced in plants by variations in water, light, temperature, etc.
- 490 PRINCIPLES OF ORGANIC EVOLUTION (4)**  
Prerequisites: Biol 321-322, Level II, or permission. 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.
- 496a,b,c HONORS TUTORIAL (2-5 ea)**
- 497a FIELD BIOLOGY (3)**  
Prerequisite: Biol 404, or course in biogeography; and permission of instructor. A field trip to California to study vegetation patterns and environmental relationships.
- 497b,c ELECTRON MICROSCOPY; ELECTRON MICROSCOPE LABORATORY (2, 4)**  
Prerequisites: Physics 133 and 30 credits in biology and permission of instructor. Theory, techniques and application of electron microscopy to basic problems of ultrastructure in biology.
- 500 SPECIAL PROJECTS IN BIOLOGY (2-5)**  
Prerequisite: permission of instructor. May be repeated for credit.
- 503 ADVANCED TOPICS IN ECOLOGY (4)**  
Prerequisites: Biol 325-326 and permission of instructor. Analysis of current literature on fundamental properties of ecosystems, communities, populations, species, and characteristic environments.
- 504 BIOLOGICAL INSTRUMENTATION (3)**  
Prerequisites: Biol 325-326, Math 240, and permission of instructor. Theory, design and operation of environmental monitoring devices; laboratory experience in practical electronics and transducing and recording elements.
- 524 AQUATIC ENTOMOLOGY (3)**  
Prerequisite: Biol 424 and 325-326. Classification and ecological interrelationships of insects in streams and lakes.
- 588 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.

## *Biology*

- 571 **ADVANCED TOPICS IN GENETICS (4)**  
Prerequisites: Biol 321-322 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 323-324 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)**  
Prerequisites: Biol 323-324 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 **ENZYMOLGY LABORATORY (3)**  
Prerequisite: Biol 323-324 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 323-324, 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 hours total credit.
- 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**

*Western Washington State College*



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
- One quarter of analytical chemistry
- One year of organic chemistry
- One year of physical chemistry
- One year of college level calculus
- One year of college physics

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 requirements as possible prior to transfer in order to avoid delays in degree work completion:

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

*The Bachelor of Arts 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 17 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.

## 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 Northwest 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.

## CHEMISTRY FACULTY

- JOSEPH R. CROOK (1970) Chairman.  
Associate Professor. BS, University of Nevada; PhD, Illinois Institute of Technology.
- MARION BESSERMAN (1952) Associate Professor. BS, University of Washington; MS, Purdue University; PhD, University of Washington.
- 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.
- DONALD M. KING (1966) Associate Professor. BS, Washington State University; PhD, California Institute of Technology.
- FRED W. KNAPMAN (1942) Professor. BA in Ed, Western Washington State College; MS, University of Washington; EdD, Teachers College, Columbia University.
- GEORGE S. KRITZ, 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.
- PATRICK J. McINTYRE (1970) Assistant Professor. B Chem Eng, The Catholic University of America; MS, Polytechnic Institute of Brooklyn.
- 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) Assistant Professor. AB, Reed College; MS, PhD, Yale.

- SALVATORE RUSSO (1968) Associate Professor of Biochemistry. 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) Associate Professor. BSc, University of Alberta; PhD, University of Washington.

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, 127, 128, 333
- Chemistry 351, 352, 353, 354, 461, 462, 463
- Phys Sci 492
- Supporting courses: one year college physics and Math 121, 122, 222

*Major Concentration*—Chemistry-Mathematics

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, 127, 128 and 461, 462, 463 or 361, 362, 363
- 9-11 credits in chemistry to include a minimum of 5 credits in organic chemistry under departmental advisement

\*On Leave 1973-74

## Chemistry

- Phys Sci 492
- 40 credits in mathematics to include methods courses under departmental advisement
- Supporting courses: one year college physics

**Major Concentration** –Chemistry-Physics  
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, 127, 128
- Chemistry 461, 462, 463 or 361, 362, 363
- 9-11 credits in chemistry including 5 credits in organic chemistry under departmental advisement
- Physics 225 or 355, 231, 232, 233, 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, 127, 128, 461, 462, 463 (or 361, 362, 363), 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, 127, 128, 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, 127, 128
- 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 361, 362, 363), 482, 483

## BACHELOR OF SCIENCE DEGREE

**Major Concentration** 110 credits

(Satisfies both the major and minor.)

- Chemistry 121\*, 122, 123, 127, 128, 333
- Chemistry 351, 352, 353, 354, 355, and 302 or 399
- Chemistry 434, 441, 461, 462, 463, 464, 465
- Supporting courses: Physics 231, 232, 233; 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,

*\*5-10 credits less of required courses if student begins sequence with Chem 124 and Math 122.*



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).

## 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)**  
Prerequisite: Physics 101 or one year high school physics. Scientific method and its use in the development of such concepts as structure, states, and reactions of matter. Restricted to students without high school chemistry.
- 115 **GENERAL CHEMISTRY (5)**  
Principles and laws of chemistry developed from the properties, structure, and reactions of matter; an abbreviated course in general chemistry for students not requiring Chem 121, 122 in their programs.
- 121 **GENERAL CHEMISTRY (4)**  
Prerequisite: Math 100 (may be taken concurrently) or one and one-half years of high school algebra. Methods of chemistry; nature of matter, atoms, molecules, and chemical bonding; stoichiometry, states of matter. Elementary algebra used to express chemical concepts.
- 122 **GENERAL CHEMISTRY (4)**  
Prerequisite: Chem 121; concurrent enrollment in Chem 123 recommended. Changes of state; solutions, colloids, chemical kinetics, chemical equilibrium; equilibrium in aqueous solutions; acid-base concepts.
- 123 **GENERAL CHEMISTRY LABORATORY (2)**  
Prerequisite or concurrent: Chem 122 or 124. Laboratory experiments illustrative of principles and practices in general chemistry.
- 124 **PRINCIPLES OF CHEMISTRY (4)**  
Prerequisites: strong background in high school chemistry and/or mathematics; permission of department; concurrent enrollment in Chem 123 required. An accelerated course in general chemistry which in one quarter covers the topics of both Chem 121 and Chem 122.
- 127 **GENERAL CHEMISTRY (3)**  
Prerequisite: Chem 122 or 124. Solution equilibria, electrochemistry, elementary chemical thermodynamics and coordination compounds.
- 128 **ELEMENTARY QUANTITATIVE CHEMISTRY (2)**  
Prerequisite: Chem 123 or one year of general chemistry. Experiments in quantitative chemistry.
- 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.
- 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 including Chem 126. Theory and practice of separation methods including precipitation, extraction, and chromatography; optical and potentiometric methods of determination.
- 351, 352, 353 **ORGANIC CHEMISTRY (3 ea)**  
Prerequisite: Chem 122 or 124; each course prerequisite to the next. Chemistry of carbon compounds with emphasis on structural theory, reactions, and mechanisms.

## Chemistry

- 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 (3)  
Prerequisites: Chem 354 and 353 or concurrent. Techniques of organic chemistry: reactions, separations; syntheses and introduction to practical spectroscopy.
- 361 ELEMENTARY PHYSICAL CHEMISTRY (4)  
Prerequisites: one year of college chemistry, one year of college physics, Math 122 or 220. Classical thermodynamics including first, second and third laws of thermodynamics; thermochemistry and equilibria. Three hours of lecture material will be supplemented with problem solving, mathematical review sessions, and several laboratory experiments related to lecture material.
- 362 ELEMENTARY PHYSICAL CHEMISTRY (4)  
Prerequisites: one year of college chemistry, one year of college physics, and Math 122 or 220. Chemical equilibria, the phase rule of solutions, colligative properties, and kinetics. Problem solving sessions and laboratory work will be separate from lectures.
- 363 ELEMENTARY PHYSICAL CHEMISTRY (4)  
Prerequisites: one year college chemistry, one year college physics, Math 122 or 220. Concepts of molecular bonding and structure: gases, liquid, solids, electrochemistry; miscellaneous short topics. Three hours of lecture material will be supplemented with problem solving and mathematical review sections, and some simple physical chemistry experiments and/or techniques.
- 364 ELEMENTARY PHYSICAL CHEMISTRY LAB (2)  
Prerequisite or concurrent: Chem 361, 362, or 363. Experiments designed to illustrate some concepts and techniques of elementary physical chemistry; formal report writing is also emphasized.
- 365 ELEMENTARY PHYSICAL CHEMISTRY LAB (2)  
Prerequisites: Chem 361, 362, 363; Chem 365 may be taken concurrently with Chem 363; Chem 364 is *not* prerequisite to Chem 365. Experiments designed to illustrate some concepts and techniques of elementary physical chemistry; formal report writing is also emphasized.
- 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 122-123, 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 and permission of instructor. 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.
- 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 128, 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, or permission of instructor; 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 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 127, Chem 353 and Biol 101. 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 128, Chem 354 and Chem 472 or concurrent. Analysis of carbohydrates, amino acids by means of current techniques; isolation and purification of enzymes and measurement of enzyme kinetics.
- 482 **NUCLEAR CHEMISTRY (3)**  
Prerequisites: Chem 123 and Physics 233, or permission of instructor. Theoretical and applied nuclear and radio-chemistry.
- 483 **NUCLEONICS LABORATORY (2)**  
Prerequisite: Chem 482 or concurrent, or permission of instructor. 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.
- 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 363 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 363 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.
- 595 **SEMINAR (1)**  
Presentation of contemporary subjects in chemistry. Satisfactory/Unsatisfactory grading used in this course.
- 698 **RESEARCH (3)**  
Research in chemistry under faculty direction terminating in a master's thesis. Satisfactory/Unsatisfactory grading used in this course.





# ECONOMICS / BUSINESS

*Western Washington State College*



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 Accounting (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 work with figures and who likes to study financial 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. However, the desired skills most frequently stressed by businessmen are those of *writing*, *speaking* and *mathematics*. It is recommended, therefore, 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

Most employment opportunities and most goods and services available in our society are provided by private business organizations. Government and non-profit organizations both influence and respond to changes in private business. As citizens, it is important that we understand the influence of social, political and economic forces upon the business organizations which are vital to our continued economic progress. As prospective employees, it is important that we prepare to contribute to the viability of the business organizations which we seek to join. As consumers, it is important that we develop reasonable expectations concerning the products and services provided by business and the means by which they are supplied. The business administration program at Western is structured to meet these needs by providing students with opportunities to develop their knowledge and understanding of business.

Students majoring in business administration devote most of their freshman and sophomore years to course work in the liberal arts and sciences. This work, which includes mathematics and oral and written communication, provides background and tools for junior and senior level coursework where the major emphasis is on business and its functional areas.

The curriculum in business administration is broad and offers students opportunity for specialization. Courses available in economics, computer science, political science, psychology, sociology and speech provide substantial opportunities for students to pursue elective coursework according to their individual interests and abilities. A carefully designed program of elective coursework which complements requirements for the business administration major may contribute both to obtaining desired employment and to improved initial performance on the job.

Students majoring in other areas may pursue selective coursework or may choose to minor in business administration. Requirements for majors and minors follow. Individual student advisement by business administration faculty is available.

## **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.

## *Economics & Business*

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.

## **BUSINESS EDUCATION**

The business education program at Western is concerned with the development of student competencies in several areas. The primary objective is to provide a program that will prepare students to be competent teachers in business education for secondary and post-secondary schools. Instructional programs are also provided for non-majors, secretarial students, administrative assistants and others who need or desire a business education background.

The demand is growing for persons with highly developed skills in business education. The fact that secondary school teachers in the business education area are expected to be competent in numerous and diverse subjects—such as accounting, general business, office practices, typewriting, shorthand, transcription and economics—indicates the necessity for major field breadth. Developments in recent years place even greater responsibilities on business education teachers and point to the need for adjustments in the training program. The developments include the growing realization that a distressingly large number of citizens are both uninformed and misinformed about the structure and role of the American system of private enterprise and about the basic economic processes upon which our system depends; the adoption of automated processes to both office and industry; the increasing number of women entering the nation's work force; and the increased attention being paid to the school drop-out problem. Western aims to prepare the "all around" business teacher with a strong background in business administration and economics plus the skills usually taught in Washington high schools. The business teacher who is thus prepared is better equipped to understand the total business education program.

School administrators consider the comprehensive business education teacher a distinct advantage in that

course scheduling is easier. A comprehensive business teacher is less likely to get into a rut because of the variety of the subjects he teaches, and he will be a happier teacher because of the change in his routine. He has the knowledge that he is prepared in all phases of business education; and by this fact, he may be a better teacher.

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

The major consists of 50 hours in business education which includes courses in typewriting, shorthand, transcription, office machines and business correspondence. Included in the major are two five-hour courses—introduction to business and introduction to economics. Also included in the 50 hours are four professional courses—business education in the secondary school, methods of teaching typewriting, methods of teaching shorthand, and methods of teaching bookkeeping and general business. This professional sequence must be completed before the student is assigned to his student teaching.

The minor, usually begun in the sophomore year, consists of two required courses in principles of accounting and business law, plus electives to be selected from advanced accounting courses, money and banking, personnel management, economics of labor, marketing, or management, to total 25 hours.

Skill course requirements are geared to the needs of incoming students whether they enroll as freshmen in the department or transfer with advanced standing. All students are expected to have some skill in typewriting. Those with one year or less will enter intermediate classes; while those with more than one year will enter advanced work. Beginning shorthand is offered in the department, but those with more than a year of instruction will register for intermediate or advanced work. Other courses without prerequisites should be scheduled with departmental advisement.

Many schools require vocationally certified teachers for special programs in their districts. Prospective teachers in business education must be aware of these requirements. Most graduates from Western have met state requirements for vocational certification.

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



## 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 Economics & Business. BA, MBA, University of Washington; CPA, State of Washington.
- JOHN T. DUFF (1970) Assistant Professor of Business Administration. AB, Oberlin College; MBA, Miami University (Ohio); CPA, State of Ohio.
- JEFFREY M. FANG (1968) Assistant Professor of Economics & Business. BA, National Taiwan University; MA, PhD, University of Washington.
- 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 Business Administration. 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.
- RICHARD C. McALLISTER (1961) Assistant Professor of Business Administration. BA, MA, University of Washington; CPA, State of Washington.
- ROGER A. McCAIN, III (1969) Assistant Professor of Economics. BS, MS, PhD, Louisiana State University.
- 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; 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, JDLaw, University of Colorado; CPA, State of Colorado.
- HAROLD O. PALMER (1956) Professor of Business Education. BA, College of Emporia, Kansas; EdM, University of Oregon; EdD, Oregon State University.
- ROBERT T. PATTON (1970) Associate Professor of Business Administration. BSME, University of Michigan; MBA, University of Minnesota; DBA, University of Washington.
- 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).
- HOWARD A. TEASLEY (1969) Assistant Professor of Economics and Huxley College. BSEE, Purdue University; MA, University of Oregon.

\*On Leave 1973-74

- HUBERT N. THORESON (1971) Assistant 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.

Students beginning a major in accounting, business administration or economics in fall, 1972, or later, should take the Math 297a, 297b, 297c sequence in place of Math 220, 240 and Computer Science 110.

## BACHELOR OF ARTS

*Major--Accounting* 89 credits

- BA 251, 252, 350, 271, 301, 302, 311, 330, 351, 352, 353, 375, 455, 457
- Econ 201, 202, 302, 311
- Math 220, 240
- Computer Science 110 or 210

BA 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* 85 credits

- BA 251, 252, 350, 271, 301, 302, 308, 311, 322, 330, 375, 408, 495
- Econ 201, 202, 302, 311
- Math 220, 240
- Computer Science 110 or 210

## *Economics & Business*

### *Major—Economics*

85 credits (including courses specified from other areas)

- Econ 201, 202, 301, 302, 403, 404, 405
- One course from Econ 381 (or Hist 360), Econ 385
- One course from Econ 311, 401
- Math 220 or 122, 240, Computer Science 110 or 210
- BA 375
- Geog 207
- Choose one of the following:
  - (a) BA 251, 252, or
  - (b) 8 credits from mathematics (other than Math 100, 121, 122, 151, 220, 240) and computer science (other than Computer Science 110, 210), or
  - (c) 8 credits from philosophy (other than Phil 111)
- Elective credits in economics under advisement, not otherwise required. This may include no more than two courses from Huxley 383, 480, 483

### *Minor—Business Administration* 25 credits

- BA 251, 252
- Additional courses under departmental advisement of which at least 10 credits must be at the upper division level. (Students who elect the Economics major above may not include more than 5 of the credits required for the Economics major to satisfy the requirements of the Business Administration minor.)

### *Minor—Business Education* 25 credits

- Courses in typing, shorthand, secretarial accounting, and secretarial practice 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
- BA 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 210 or 110
- Eight credits under advisement in 400 level mathematics courses

## **BACHELOR OF ARTS IN EDUCATION**

### *Major—Business Education*

Secondary 49 credits

- Economics 201, BA 101
- Business Education 116, 117 or 215, 120, 121, 122, 201, 223, 241 or 242, 319, 321, 322, 323
- Electives under departmental advisement

Those with previous instruction in typing and/or shorthand are placed as high in the sequence as their backgrounds permit.

This major must be accompanied by the Economics and Business Administration minor which follows.

### *Minor—Economics and Business Administration*

25 credits

(To accompany above Business Education major)

- BA 251, 252, 271
- Twelve credits from Economics 202, 311, 325, BA 322, 330, 350, 408

*Minor—Business Education* 25 credits

- Business Education 319, 322 and 323
- 16 credits in typing, shorthand, and secretarial practice as advised by department

*Minor—Economics* 23-25 credits

(For other than Business Education majors)

- Economics 201, 202
- BA 101 or 251
- 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 ECONOMICS**

- 201 **PRINCIPLES OF ECONOMICS I. INTRODUCTION TO MACRO-ECONOMICS** (5)  
 No prerequisites, but not recommended for freshmen. The rise and operation of the modern market economy, and its successes and failures.

- 202 **PRINCIPLES OF ECONOMICS II. INTRODUCTION TO MICRO-ECONOMICS** (4)  
 Operation of economic units through choice, conflict, cost, price and value.
- 301 **NATIONAL INCOME ANALYSIS** (4)  
 Prerequisites: Econ 201, 202; Math 220 recommended. Determinants of the level of income, employment and output in the economic system.
- 302 **INTERMEDIATE ECONOMIC THEORY** (4)  
 Prerequisites: Econ 202; Math 230. The theory of price under conditions of competition and monopolistic competition; relation of prices and costs, and functional distribution of income.
- 311 **MONEY AND BANKING** (4)  
 Prerequisites: Econ 201, 202, or permission. 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 a major.
- 381 **AMERICAN ECONOMIC HISTORY** (5)  
 Prerequisites: Econ 201, 202. American economic development from seventeenth century to present; emphasis on resource endowment and evolving social and economic institutions; role of government in this development.
- 385 **THE RISE OF CAPITALISM** (4)  
 Prerequisites: Econ 201, 202. 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 and permission of instructor. 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** (2-6 ea)
- 400 **SPECIAL PROBLEMS IN ECONOMICS** (1-5)  
 Prerequisites: 20 credits in economics and business administration and prior consultation with instructor.

## *Economics & Business*

- 401 **THEORY AND PRACTICE OF ECONOMIC POLICY (4)**  
Prerequisite: Econ 301 or permission of instructor. 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, 202 or senior standing and permission of instructor. Development of economic thought with emphasis on period following Adam Smith.
- 404 **SENIOR RESEARCH (2)**  
Prerequisites: Econ 301, 302, BA 375. Application of economic analysis; an exercise in gathering and manipulating data and presentation of results; along with a consideration of the methodology of economics.
- 405 **SENIOR SEMINAR (3)**  
Prerequisite: Econ 404 or permission. 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 202 or permission of instructor. 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 Math 240, or permission of instructor. 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 or permission of instructor. 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: Econ 385
- 425 **LABOR MOVEMENTS IN THE UNITED STATES (3)**  
Prerequisite: Econ 201. The development of labor movements in the United States from 1800.
- 442 **GOVERNMENT AND BUSINESS (5)**  
Prerequisite: Econ 202 or permission of instructor. Public policy and business enterprise.
- 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 TRADE THEORY AND POLICY (3)**  
Prerequisites: Econ 201, 202. Theories of international trade and commercial policy, international factor movements, economic integration, and trade problems of developing countries.
- 462 **INTERNATIONAL MONETARY RELATIONS (3)**  
Prerequisites: Econ 201, 202. Foreign exchange, balance of payments, adjustment mechanisms and international monetary system.
- 471 **MATHEMATICAL METHODS IN ECONOMIC STATICS (4)**  
Prerequisite: Math 122 or 220. Applications of calculus and linear algebra to economic statics. Optimum and equilibrium.
- 472 **ECONOMIC DYNAMICS (4)**  
Prerequisites: Econ 301, 302; Math 122 or 220. Optimization, stability, equilibrium. Stocks and flows. Periodic and continuous models of stable growth, cycles and dynamic adjustments.
- 475 **ECONOMETRICS (4)**  
Prerequisite: BA 375. Simple and multiple regression analysis, methods and problems of single equation and simultaneous equation estimation.
- 482 **REGIONAL ECONOMICS (4)**  
Prerequisites: Econ 201 and Geog 207, or permission of instructor. Problems, resource endowment, and principal policy issues related to economic growth of a region.
- 485 **COMPARATIVE ECONOMIC SYSTEMS (4)**  
Prerequisite: Econ 201 or permission of instructor. Economic systems of leading nations of the world.
- 486 **ECONOMIC DEVELOPMENT (4)**  
Prerequisites: Econ 201 and 202 or permission of instructor. Conditions necessary for and progress of economic development in underdeveloped countries.
- 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)

The development and demonstration of economic research methods and methodology and the design of overall strategies of research, culminating in a research paper in a selected research area.

699 THESIS (4-9)

## COURSES IN BUSINESS ADMINISTRATION

101 INTRODUCTION TO BUSINESS (5)

Not required for business administration and accounting majors. Elementary business organization, various types of ownership, location of business plants, labor problems, marketing problems, long and short term financing, and managerial controls.

251 PRINCIPLES OF ACCOUNTING (4)

Introduction to the theory and practice of accounting, including financial statements.

252 PRINCIPLES OF ACCOUNTING (4)

Prerequisite: BA 251. Emphasis on partnership and corporation accounting.

271 LAW AND THE BUSINESS ENVIRONMENT (5)

Historical development of legal institutions; impact of law on individual and business decisions; law of contracts underlying business agreements.

297b MANAGEMENT PLANNING (4)

Emphasis is placed on the elements of management planning, i.e. the development of objectives, policies, procedures, methods, schedules, and budgets. Consideration is given to the interaction between planning elements and management control systems.

297c MANAGEMENT CASE STUDY ANALYSIS (1)

The analysis of actual Lummi management trainee experience within the Lummi organization will be analyzed to provide applied management skill building opportunities for class participants. Emphasis placed on skills associated with planning, organizing, directing, and controlling.

297d APPLICATIONS OF ACCOUNTING IN DECISION MAKING (4)

To develop competence in preparation and use of budgets, bookkeeping systems, fiscal reports, etc., for planning and decision making purposes.

297e APPLICATIONS OF BUSINESS ADMINISTRATION CONCEPTS (1)

To develop skills in applying basic concepts of management through on-the-job experiences and evaluation.

297f APPLIED CONCEPTS IN MARKETING (4)

To develop skills in applying a broad range of marketing concepts and to become familiar with national and international systems and institutions which are used by the marketing function.

## Economics & Business

*Business Administration majors should have completed BA 252, Econ 201, 202, Math 220, 240, CS 110, or be completing them by concurrent enrollment before enrolling in upper division Business Administration courses, with the exception of BA 350.*

- 301 INTRODUCTION TO MANAGEMENT (4)**  
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: BA 301, 350, 375, or permission of instructor. Fundamentals of operations management, including tools for analyzing, designing and controlling operating systems.
- 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: BA 301, 350, 375 or permission of instructor. 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 MANAGEMENT (4)**  
Prerequisite: BA 301 or permission of instructor; familiarity with descriptive statistics and correlation-regression terminology would be useful. The recruitment, selection, utilization, and development of human resources, with special emphasis on union-management relations and relevant behavioral science research.
- 330 PRINCIPLES OF MARKETING (5)**  
Prerequisite: BA 301, or permission of instructor. Institutions, functions, problems and policies in the distribution of industrial and consumer goods; pricing, costs, and governmental regulations.
- 331 ADVERTISING (4)**  
Prerequisite: BA 330 or permission of instructor. 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.
- 350 ACCOUNTING ANALYSIS AND CONTROL (5)**  
Prerequisite: BA 252 or permission of instructor. 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: BA 350. Historical factory job and process cost systems, distribution costs systems, fixed and flexible budgeting and other controls over business operations available from accounting records.
- 352 INTERMEDIATE ACCOUNTING THEORY AND PRACTICE I (4)**  
Prerequisite: BA 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.
- 353 INTERMEDIATE ACCOUNTING THEORY AND PRACTICE II (4)**  
Prerequisite: BA 352. Continuation of BA 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 TAX ACCOUNTING I (4)**  
Prerequisite: BA 251 or permission of instructor. General income tax requirements; special problems relating to individual tax returns.
- 356 MUNICIPAL AND GOVERNMENTAL ACCOUNTING (3)**  
Prerequisite: BA 252 or permission of instructor. Fund and budgetary accounting as applied to municipalities, governmental units, and non-profit organizations.
- 359 AUTOMATIC DATA PROCESSING IN ACCOUNTING (3)**  
Prerequisites: BA 350 or equivalent and familiarity with electronic data processing systems, or permission of instructor. Problems in adaptation of accounting principles to automatic data processing systems.
- 371 LAW OF COMMERCIAL TRANSACTIONS (5)**  
Prerequisite: BA 271. Legal principles underlying the law of agency, negotiable instruments, sales, partnerships, and corporations.
- 375 QUANTITATIVE METHODS I (4)**  
Prerequisites: Econ 202, Math 220, 240, CS 110. 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 220, 240, CS 110. (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)**  
Prerequisites: 20 credits in business administration and economics and prior consultation with instructor.
- 401 **ORGANIZATION BEHAVIOR (4)**  
Prerequisite: BA 301 or permission of instructor. Analysis of individual and group behavior in the organizational setting with special emphasis on assessing and improving organizational effectiveness.
- 402 **SEMINAR IN ORGANIZATION THEORY (4)**  
Prerequisite: BA 301 or permission of instructor. 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, or permission of instructor. Analysis of the decision process and the information requirements of decision-makers. Surveys the application of computers to contemporary business, education, and government 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 (4)**  
Prerequisite: BA 308. Development of American capitalism and its legal, philosophical, and ethical foundations.
- 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.
- 414 **FINANCIAL MARKETS (4)**  
Prerequisite: BA 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.
- 417 **SPECIAL INTEREST SEMINARS IN BUSINESS ADMINISTRATION**  
417a Marketing Management (4)  
Prerequisite: BA 330.  
417b Financial Management (4)  
Prerequisite: BA 311.  
417c Risk and Insurance (3)  
Prerequisite: written permission of instructor.
- 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 or permission of instructor. 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 or permission of instructor. Seminar dealing with the analysis of current problems in policy and practice used in personnel and industrial relations administration.
- 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.
- 451 **ADVANCED COST ACCOUNTING AND CONTROLLERSHIP (4)**  
Prerequisite: BA 351. Critical examination of controls available to management from cost and other accounting records.
- 453 **SCHOOL AND FINANCIAL ACCOUNTING CONCEPTS (3)**  
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.

## *Economics & Business*

- 454 INCOME TAX ACCOUNTING II (4)  
Prerequisites: BA 252, 354. Special problems of partnerships, corporations, and trusts; introduction to tax research.
- 455 ADVANCED ACCOUNTING THEORY AND PRACTICE I (3)  
Prerequisite: BA 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 (4)  
Prerequisite: BA 455. Major emphasis is special in-depth analysis of consolidated financial statements of corporations and accounting for fiduciaries.
- 457 AUDITING (5)  
Prerequisite: BA 455, or permission of instructor. Generally accepted auditing standards and principles; applications in public and internal auditing.
- 459 ADVANCED ACCOUNTING THEORY (3)  
Prerequisite: BA 353. Theory of accounting related to income measurement, assets, and equities; uses and limitations of general purpose financial statements.
- 464 ADVANCED TOPICS IN TAXATION (3)  
Prerequisites: BA 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.
- 495 BUSINESS POLICY (4)  
Prerequisites: 25 upper division business administration credits, including BA 302, 311, 330, or permission of the instructor. (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.
- 497a EDUCATION ENTERPRISE - BUSINESS PLANNING (3)  
The first business course of the Enterprise 72 innovative project involves the development of business objectives, selection of product areas of interest, completion of market research activity and development of a business plan.
- 497b EDUCATION ENTERPRISE - BUSINESS ORGANIZATION (3)  
The second business course of the Enterprise 72 innovative project involves the establishment of an organization structure, legal structure and financial structures; their staffing and funding these structures while developing all necessary policies and procedures required to maintain an orderly business process. The marketing and distribution approach will also be developed during this second quarter.

- 497c EDUCATION ENTERPRISE - BUSINESS OPERATIONS (3)  
The final business course of the Enterprise 72 innovative project involves development and application of appropriate control systems to ensure a successful business operation. In the final stages of this quarter, the business enterprise will be liquidated, sold, or transferred according to a plan developed by the students.

## 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.
- 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 SECRETARIAL PRACTICE (3)  
Development of transcription skills, office techniques, and the duties and problems of the secretary.

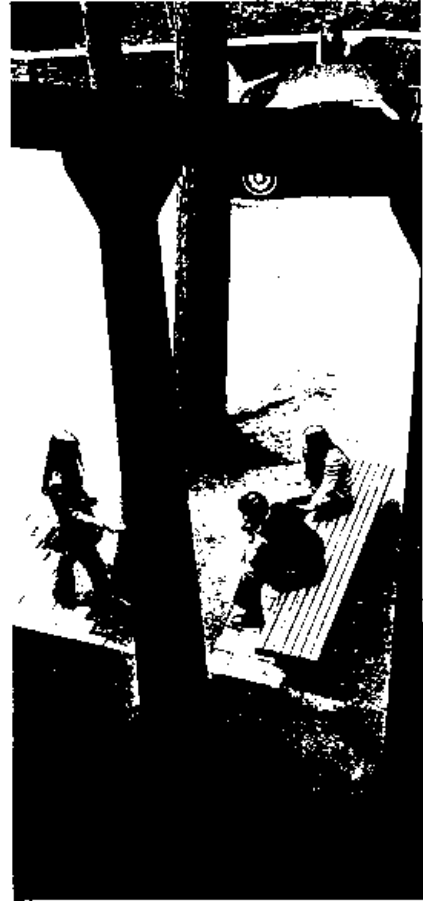


## *Economics & Business*

- 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.
- 319 **BUSINESS EDUCATION IN THE SECONDARY SCHOOL (3)**  
Curriculum planning with consideration of philosophy, scope, and objectives.
- 321 **TEACHING BOOKKEEPING AND BASIC BUSINESS SUBJECTS (4)**  
Objectives, materials, and methods of presentation.
- 322 **METHODS OF TEACHING TYPEWRITING (4)**  
Use of newest instructional aids and equipment.
- 323 **METHODS OF TEACHING SHORTHAND AND TRANSCRIPTION (4)**  
Lesson planning, grading, demonstrations, and dictation techniques.
- 400 **DIRECTED STUDY IN BUSINESS EDUCATION (2-3)**  
Prerequisites: senior standing and permission of instructor. Individual instruction.
- 445 **CURRENT TRENDS IN BUSINESS EDUCATION**  
445a Recent Developments in Business Education—Shorthand (1)
- 471 **CURRENT TRENDS IN THE TEACHING OF TYPEWRITING (3)**  
Trends in methods, materials, audio-visual devices. Summer only.
- 472 **IMPROVEMENT OF INSTRUCTION IN THE TEACHING OF BOOKKEEPING (3)**  
Prerequisite: permission of department. Critical evaluation of content materials, methods, and practices used in teaching bookkeeping. Summer only.
- 473 **ECONOMIC AND CONSUMER EDUCATION IN THE SCHOOLS (3)**  
Organization and integration of economic and consumer education courses in school programs.
- 474 **OFFICE AUTOMATION FOR BUSINESS TEACHERS (3)**  
Prerequisite: business teaching experience. Data processing instruction in the high school business curriculum; unit record and electronic data processing in the modern office; materials, equipment, and terminology.
- 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 SECRETARIAL STUDIES (3)**  
Prerequisite: permission of department. Modern methods of teaching typing, shorthand, transcription, and office practice, with special concern for the psychology of skill building and teaching techniques. Summer only.
- 503 **PROBLEMS AND ISSUES IN BUSINESS EDUCATION (3)**  
Prerequisites: graduate standing and teaching experience. Trends in business programs of secondary schools. Summer only.







**ENGLISH**

*Western Washington State College*



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. The flexibility of the major allows students to include in it auxiliary work in drama, reading, linguistics, speech, journalism, or work in subjects that are similarly related to English language and literature.

## ENGLISH FACULTY

- \*\*\*ROBERT F. McDONNELL (1967) Chairman, Professor. BA, St. John's University; MA, PhD, University of Minnesota.
- GEORGE J. BECKER (1970) Professor. BA, MA, 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) Associate Professor. BA, Central Missouri State College; MALS, University of Michigan; MA, Michigan State University; PhD, University of Washington.
- MARJORIE J. DONKER (1967) Associate Professor. BA, Western Washington State College; MA, PhD, University of Washington.
- RICHARD L. FRANCIS (1969) Associate Professor. AB, Kenyon College; MA, Duke University; PhD, Yale University.

- EUGENE K. GARBER (1968) Associate Professor. BA, Tulane University; MA, PhD, University of Iowa.
- ROBERT E. HUFF (1964) Professor. AB, MA, Wayne State University.
- KENNETH B. INNIS (1966) Associate Professor. AB, AM, Indiana University; PhD, University of Kansas.
- \*ELLWOOD G. JOHNSON (1963) Associate Professor. BA, MA, PhD, University of Washington.
- WILLIAM C. KEEP (1966) Associate Professor. BA, PhD, University of Washington.
- GOLDEN L. LARSEN (1958) Associate Professor. BS, MS, Utah State University; 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) Assistant 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.
- TERENCE D. MOSHER (1972) Assistant Professor. AB, Middlebury College; MA, PhD, University of Michigan.
- GEORGE M. MULDRON (1960) Professor. BJ, MA, University of Missouri; PhD, Stanford University.
- JAMES H. O'BRIEN (1946) Professor. BA, Seattle University; MA, PhD, University of Washington.
- C. LEE ODELL (1970) Assistant Professor. BA, Maryville College; MAT, University of North Carolina; PhD, University of Michigan.
- J. EVELYN ODOM (1936) Associate Professor. AB, Winthrop College; MA, Teachers College, Columbia University.
- ROBERT A. PETERS (1964) Professor of English and Linguistics. BA, Ohio State University; MA, Western Reserve University; PhD, University of Pennsylvania.
- MARJORIE RYAN (1961) Associate Professor. AB, MA, University of Michigan; PhD, University of Minnesota.
- 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 Leave 1973-74*

*\*\*On Leave Winter & Spring 1974*

*\*\*\*On Leave Fall 1973*

**BACHELOR OF ARTS***Major* 70 credits

- English 301, 302, 303
- Two courses in English literature before 1800 and one course in American literature before 1900 or English 311a, b, and c
- Electives under departmental advisement; 12-credit maximum allowed from courses other than English

*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 credits*A. English*

- English 301 or 302
- English 303
- Elective courses within the department under advisement

*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 320 or 420 series

- English 354
- Electives under departmental advisement†

*D. Creative Writing*

- Two courses from English 301, 302, 303
- Four creative writing courses in at least two genres
- Electives under departmental advisement

*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)

**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; 9 credit maximum allowed from courses other than English\*

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

## English

### Major Secondary 55 credits

- English 301, 302, 303
- Two courses in English literature before 1800 and one course in American literature before 1900
- One course from English 446-449
- Electives under departmental advisement\*

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

### 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 320 or 420 series
- English 354
- Electives under departmental advisement†

†Especially recommended are *Transformational Grammar; Soc/Anth 448, Language and Culture in Society; Speech 205, Argumentation and Debate; 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

\*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.

#### 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, 423
- At least two courses are to be selected from list (a)

#### E. English Minor (for Elementary Education Majors)

- English 301 or 302
- English 303
- One course from English 441
- Departmental electives under advisement

### Interdisciplinary Major Concentration 80 credits

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

#### English 40 credits

- English 301, 302
- Two courses from English 312a-f
- Two courses from English 317a,b,c
- English 314f, 321, 370, 325a or 425a, 446a
- Electives in English under departmental advisement

#### Speech 40 credits

- Speech 130, 202, 205 (or 4 credits in 206 or 486)
- Speech 235, 319, 332, 337
- Speech 340 (or Journalism 340 or 406), 350
- Speech 405 (or 204 or 307), 485
- One course from Speech 402, 407, 480, 481, 483, 490, 491
- One course from Speech 424, 425, 426, 427a,b,c

#### Teaching Competence

Recommendation for teaching competence normally requires completion of the major or major 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 (\*).

### 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 English literature before 1800
- One course in American literature before 1900
- Elective courses within the department under advisement

### 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 numbered higher than 30 according to approach taken in each course as follows:*

*I. 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) 338a, 362, 461b, 461e, 461h, 461j*

*II. 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*

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

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

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

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

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

*VII. Studies in Literature Combined Approaches: 361a,b, 362, 461a, 461b, 461c, 461d, 461e, 461h, 461j, 461k, 463*

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

#### 101 LANGUAGE AND EXPOSITION (3)

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 second-year writing course that emphasizes the reading of non-fiction prose and practice in effective, expository writing. Unlike English 202, it does not focus exclusively upon argumentation.

#### 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 arising from the social and pure sciences but affecting humanity at large.

#### 234 INTRODUCTION TO BLACK LITERATURE (3)

Writing of Black writers in America in the 20th century.

#### 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.

## English

### 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

### 314 MAJOR BRITISH AUTHORS (3 ea)

- 314a Blake
- 314b (349f) Donne
- 314c (349e) Keats
- 314d (349t) Joyce, O'Faolain, O'Connor, O'Flaherty
- 314e (349i) Malory
- 314f (313b) Shakespeare (also offered as Speech 320)
- 314g (349g) Shelley
- 314h (349b) Swift
- 314j-z Other writers of eminence will be treated from year to year in this series.

*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.*

### 316 SURVEY OF AMERICAN LITERATURE (5)

This course satisfies the requirement of one course in American literature before 1900.

### 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

### 318 (359) MAJOR AMERICAN WRITERS (3 ea)

- 318a (359n) Dos Passos/Steinbeck
- 318b Edwards/Emerson/William James
- 318c Norris/Dreiser
- 318d (318e) Stephen Crane/London/Hemingway/Kesey
- 318e Stevens/Williams/Cummings/MacLeish
- 318f Wharton/Cather/Glasgow
- 318g-z Other writers of eminence will be treated from year to year in this series.

### 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) Women in Literature (3)  
Prerequisite: Eng 101. Studies in major women writers.

*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.)
- 352 INTRODUCTION TO DRAMATIC WRITING (3)**  
An introductory course in dramatic writing for stage, film, television or radio. Open to students who have not previously taken a college course in dramatic writing. (Note: this course is not a prerequisite for 452a,b,c.)
- 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.)

- 354 INTRODUCTION TO THE WRITING OF NON-FICTION PROSE (3)**

Prerequisite: permission of instructor or 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.

*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

*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.
- 397b WOMEN'S STUDIES (4)**  
Prerequisites: Soc/Anth 397; English 301, or permission of instructor. Images of women in contemporary literature.
- 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.

*STUDIES IN LITERARY HISTORY—BRITISH. General prerequisite: see notice regarding 301, 302, 303 requirement; 15 credits in literature or permission of instructor. 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 ea)**  
Different literary periods and movements will be treated from year to year.

## English

- 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
- 414 STUDIES IN MAJOR BRITISH AUTHORS (3 ea)**  
414a Austen and the Brontës  
414b Browning and Tennyson  
414c (313a) Chaucer  
414d (349L) Coleridge  
414e (349m) Conrad  
414f Dickens  
414g (349h) Fielding  
414h Forster and Woolf  
414j (349o) Greene  
414k (349r) Hardy  
414m (349t) Joyce  
414n (349j) Lawrence  
414p (349c) Milton  
414q (349v) Pope and Swift  
414r (411a) Shakespeare (also offered as Speech 420)  
414s Wilson, Amis, Wain and Murdoch  
414t (349a) Wordsworth  
414u Yeats and Eliot  
414v-z Other writers of eminence will be treated from year to year in this series.
- 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 or permission of instructor. 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.
- 418 STUDIES IN MAJOR AMERICAN WRITERS (3 ea)**  
418a Adams  
418b Cooper/Hawthorne  
418c Dickinson/Stevens  
418d (359d) Eliot  
418e (359) Emerson/Thoreau  
418f (359f) Faulkner  
418g Hawthorne/Melville  
418h (359c) Hemingway  
418j (359h) James  
418k (318b) Mark Twain  
418m (359j) Melville  
418n (318c) Nabokov  
418p (359m) Robinson/Frost  
418q Whitman/Hart/Crane  
418r (318a) Wolfe/Fitzgerald  
418s-z Other writers of eminence will be treated from year to year in this series.
- 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 or permission of instructor. The series 420a-z 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 or permission of instructor. 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 or permission.  
 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 Shanty to Giles The Goat Boy and The Voyeur.
- 433 STUDIES IN FORMS OF SHORT PROSE FICTION (3)  
 Prerequisite: 15 credits in literature or permission.  
 433a The Metaphysical Tale (3)  
 Tales by such writers as Hawthorne, Dinesen, Kafka, and Borges.
- 434 STUDIES IN FORMS OF PROSE NON-FICTION (3)  
 Prerequisite: 15 credits in literature or permission of instructor.
- 437 STUDIES IN FORMS OF SATIRE  
 Prerequisite: 15 credits in literature or permission of instructor.  
 437a Forms of Satiric Poetry (3)  
 Satiric poetry from formal verse satire to modern variations of and departures from classical and neo-classical satire.

*Literary Theme*

- 438 STUDIES IN LITERARY THEMES (3 ea)  
 Prerequisite: 15 credits in literature or permission of instructor.  
 438a The Greek Romance  
 Examples in various genres, periods, and languages of the romance form.

- 439 (410j) MAIN CURRENTS IN MODERN LITERATURE  
 Prerequisite: 15 credits in literature or permission of instructor.  
 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.

## English

### 446 STUDIES IN ENGLISH EDUCATION—SECONDARY

- 446a (496) English for the Secondary School (3)  
Prerequisite: Eng 370 or permission of instructor. 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.

#### 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.

#### 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.

### 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.

*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 or permission of instructor.

#### 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 or permission of instructor.

#### 461e THE POPULAR ARTS IN AMERICA—FILM AND DRAMA (3)

Prerequisite: Eng 101. Major themes and concerns in the popular arts of our time, with emphasis on the image of life in society projected by films, plays and television dramas.

#### 461f ENGLISH LITERATURE IN THE THIRD WORLD (See 420a)

#### 461g THE PICARESQUE SPIRIT IN 18th and 20th CENTURY LITERATURE (See 332b)

#### 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.

#### 461k CONTEMPORARY ISSUES IN LITERATURE: FICTION—FILM (3)

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.

#### 463 (483) SOCIAL CHANGE AND THE MORAL ORDER IN RECENT LITERATURE (4)

Also offered as Philosophy 483 and Sociology 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.

#### 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 BIBLIOGRAPHY AND METHODS OF GRADUATE STUDY IN ENGLISH (3)**

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 (3)**

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 (3)**

Prerequisite: English 502a or permission of instructor. Individual projects in the development of a finished manuscript.

**503a PLAYWRITING SEMINAR (3)**

Individual projects in dramatic writing will be submitted for group discussion.

**503b ADVANCED PLAYWRITING SEMINAR (3)**

Prerequisite: English 503a or permission of instructor. Individual projects in playwriting.

**504a POETRY WRITING SEMINAR (3)**

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 (3)**

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.

**520 SEMINAR IN ANGLO-SAXON LITERATURE (5)**

- 520a Beowulf
- 520b Old English Prose

**521 SEMINAR IN MEDIEVAL LITERATURE (5)**

- 521a The Pearl Poet, offered 1970-71
- 521b The Arthurian Cycle

**522 SEMINAR IN SIXTEENTH—SEVENTEENTH CENTURY LITERATURE (5)**

- 522a Spenser
- 522b Elizabethan Poetry
- 522c Non-Shakespearean Drama, offered 1970-71
- 522d Early 17th Century Poetry, offered 1972-73
- 522e Renaissance Prose

**523 SEMINAR IN EIGHTEENTH CENTURY LITERATURE (5)**

- 523a Swift
- 523b Pope
- 523c Fielding/Stearne, offered 1972-73
- 523d Eighteenth Century Satire, offered 1970-71
- 523e The Picaresque Novel, offered 1971-72
- 523f The Novel of Sensibility

**524 SEMINAR IN ROMANTIC LITERATURE (5)**

- 524a Wordsworth and Coleridge, offered 1971-72
- 524b Byron and Shelley
- 524c Blake and Keats, offered 1970-71
- 524d The Gothic Tradition in the Romantic Novel
- 524e The Pastoral Tradition in Romantic Poetry

**525 SEMINAR IN VICTORIAN LITERATURE (5)**

- 525a Tennyson, Browning, Arnold
- 525b Hardy, offered 1971-72
- 525c Conrad
- 525d Eliot/Thackeray, offered 1970-71
- 525e Dickens
- 525f The Anti-Victorians, offered 1971-72
- 525g The Victorian Novel, offered 1972-73

**526 SEMINAR IN MODERN LITERATURE (5)**

- 526a Auden, Spender, McNiece, Lewis, offered 1971-72
- 526b The Ironic Novel, offered 1970-71
- 526c Yeats/Joyce, offered 1970-71
- 526d The Irish Dramatic Movement, offered 1972-73
- 526e Eliot/Pound, offered 1971-72
- 526g The Modern British Novel, offered 1971-72
- 526h Modern British Poetry
- 526i The Modern American Novel, offered 1971-72

**531 SEMINAR IN AMERICAN LITERATURE: BEGINNINGS TO 1860 (5)**

- 531a The Transcendental Movement, offered 1970-71
- 531b Hawthorne/Melville
- 531c The West in American Literature, offered 1971-72
- 531d Emerson/Thoreau, offered 1971-72

## English

- 532 SEMINAR IN AMERICAN LITERATURE: 1860 TO PRESENT (5)
- 532a The American Sociological Novel, offered 1971-72
  - 532b The Whitman Tradition, offered 1971-72
  - 532c The Rise of Realism and Naturalism, offered 1972-73
  - 532d Twain/James
  - 532e Robinson/Frost
  - 532f The Protest Literature of the 1930's, offered 1972-73
  - 532g The Southern Renaissance in American Literature, offered 1972-73
- 541 SEMINAR IN CHAUCER (5)
- 543 SEMINAR IN SHAKESPEARE (5)
- 545 SEMINAR IN MILTON (5)
- 560 SEMINAR IN LITERARY FORM (5)
- 560a The Picaresque Novel
  - 560b The Personal Epic, offered 1971-72
  - 560c The Comic Novel, offered 1970-71
  - 560d The Pastoral Tradition
  - 560e The Informal Essay
  - 560f The Continental Lyric, offered 1970-71
- 587 SEMINAR IN LITERARY CRITICISM (5)
- 587a Principles and Problems of Literary Criticism with emphasis on Recent Criticism
  - 587b The Nineteenth Century Critics
  - 587c Theories of Comedy, offered 1971-72
  - 587d Theories of Tragedy, offered 1970-71
  - 587e The Eighteenth Century Critics
- 590 LINGUISTICS (5)
- 590a Seminar in Linguistic Science
  - 590c Contrastive English Morphology
  - 590d Contrastive Syntax
- 591 HISTORICAL LINGUISTICS (5)
- 591a Old English, offered 1970-71
  - 591b Middle English, offered 1971-72
  - 591c Early Modern English
- 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.
- 690 WRITING REQUIREMENT (6-7)
- 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 or permission of instructor. 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 or permission of instructor. 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 or permission of instructor. Newspaper copy desk operations: editing, headline writing; dummyming; page make-up; editorial writing.
- 211, 212, 218 **NEWSPAPER STAFF (2 ea)**  
Prerequisites: sophomore standing; Journ 104 or permission of instructor. 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 or permission of instructor. 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 or permission of instructor. 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 or permission of instructor. 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 or permission of instructor. 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.
- 397a **THE NEWS PROCESS: A CONSUMER APPROACH (3)**  
Designed to equip non-journalists, as news consumers, for critical analysis and evaluation of information obtained through the mass media. Comparative study of how news is gathered, sifted, organized, presented and assimilated; factors that influence news handling; the implications of current trends in the news process.
- 400 **SPECIAL PROBLEMS IN JOURNALISM (1-3)**  
Prerequisite: permission of instructor. Individual studies and projects exploring specialized aspects of journalism. S/U grading.
- 404 **FEATURE WRITING (3)**  
Prerequisite: Journ 304 or permission of instructor. 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 or permission of instructor. 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 or permission of instructor. 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.

## English

### 431, 432, 433 TELEVISION NEWS STAFF (2 ea)

Prerequisites: Journ 304, Speech 240, and/or instructor's permission. 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.

### 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 or permission of instructor. 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 or consent of instructor. 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.





# FOREIGN LANGUAGES & LITERATURES

*Western Washington State College*



## 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, radio, 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 our 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 our department may earn a Bachelor of Arts degree in French, German, Greek, Latin, Russian and Spanish.

Elementary courses in Portuguese are also offered. Chinese, Japanese and 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 in German for those whose main interest lies in speaking a foreign language.

## SPECIAL PROJECTS UNDERWAY 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. Presently there are over fifty Western and Fairhaven students living in the French, German, Russian and Spanish areas. Smaller interest groups in Chinese, Italian, Japanese and Portuguese also exist within the house. 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.  
Associate 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) Assistant Professor of French. BA, Upsala College; MA, University of Nebraska; PhD, University of Wisconsin.
- GUADALUPE GARCIA BARRAGAN (1965) Associate Professor of Spanish. MA, New Galicia; University of Guadalajara; PhD, Université De Paris III.
- HENRICH BROCKHAUS (1965) Associate Professor of German. BA, MA, University of British Columbia; PhD, University of Washington.
- WILLIAM H. BRYANT (1970) Assistant Professor of French. BA, University of Hawaii; PhD, University of Missouri.
- PETER A. EDDY (1970) Assistant 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.
- \*\*ELEANOR G. KING (1953) Associate Professor of German. BA, University of British Columbia; MA, University of Toronto; PhD, University of Wisconsin.
- 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 E. PARAM (1969) Associate Professor of Spanish. BA, Oklahoma State University; MA, PhD, University of Arizona.
- DANIEL RANGEL-GUERREIRO (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) Assistant Professor of German. BA, BA in Ed, Western Washington State College; MA, PhD, University of Colorado.

\*On Leave 1973-74

\*\*On Leave Winter Quarter 1974

## *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 Russian, 204 and 205
- 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
- 45 credits in courses numbered 201 and above in one modern language, plus supporting courses
- Course 340 in the selected language

## Foreign Languages & Literatures

### Major—A Modern Foreign Language 93-96 credits

- 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, planned under departmental advisement in other languages, history, geography, philosophy, English, linguistics, or speech.

### 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 German 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\*

*General Courses* - 310 (370), 420 (432)

*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)

*\*Previous course numbers listed in parenthesis.*

## Foreign Languages & Literatures

*Greek*—340 (301), 341 (302), 342 (303)

*Latin*—340 (301), 341 (302), 342 (303), 343 (305), 344 (306)

*Russian*—204 (210), 205 (211), 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)

### GENERAL COURSES

201 INTERMEDIATE ENGLISH AS A FOREIGN LANGUAGE (3)

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, grammar, aural comprehension, reading, and grammar. Only those languages for which established curricula materials are available will be offered.

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.

397a 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.

417a TEACHING CULTURE IN THE FOREIGN LANGUAGE CLASSROOM (1-4)

The course provides a review of literature concerning cultural enrichment in the foreign language classroom. In addition, language-specific primary materials will be adapted for use in secondary curriculum.

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.

460 PRONUNCIATION FOR MUSIC STUDENTS (3)

Prerequisites: major or minor in music, or permission of Department of Music or Foreign Languages. 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) and *French* 367, *German* 367, *Russian* 367, and *Spanish* 367.

### CHINESE

197x,y,z ELEMENTARY CHINESE (7 ea)

Each course prerequisite to the next. Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking. A self-instructional course.

### 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.

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 French 367, German 367, Russian 367, Spanish 367.

These courses are based on readings in foreign literature in English and no knowledge of foreign language is required for participation.

FRENCH

101, 102, 103 ELEMENTARY FRENCH (5 ea)

To be taken in sequence. Fundamentals of speaking, reading, writing, and understanding French.

104 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, 5, 3)

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 CONVERSATION (2)

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.

297a,b,c FRENCH CULTURE THROUGH FILMS AND TAPES (1-2 ea)

Cultural enrichment, listening and comprehension practice, using a variety of contemporary materials. Supplements second-year courses or may be elected by persons wishing to refresh their knowledge of French.

297d CORRECTIVE PRONUNCIATION (1)

A course designed to give intermediate French students an opportunity to work intensively on pronunciation of the language. Emphasis on mastering relation between oral and written language as well as correct pronunciation of French sounds.

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)

Topics in contemporary French life.

337 CONVERSATION (4)

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 or permission of department. French literature and civilization from 1100 to 1500.

342 THE RENAISSANCE (3)

Prerequisite: French 340 or permission of department. French literature and civilization from 1500 to 1630.

343 BAROQUE AND CLASSICISM (3)

Prerequisite: French 340 or permission of department. French literature and civilization from 1630 to 1715.

344 THE ENLIGHTENMENT (3)

Prerequisite: French 340 or permission of department. French literature and civilization from 1715 to 1802.

345 ROMANTICISM, REALISM, AND NATURALISM (3)

Prerequisite: French 340 or permission of department. French literature and civilization from 1802 to 1880.

346 SYMBOLISM, SURREALISM AND EXISTENTIALISM (3)

Prerequisite: French 340 or permission of department. French literature and civilization from 1880 to the present.

## Foreign Languages & Literatures

- 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.
- 396a,b,c HONORS TUTORIAL (2-5 ea)
- 397a,b,c FOREIGN LANGUAGE HOUSE ACTIVITIES (1-2 ea)  
Participation in the several organized activities of the Foreign Language House. Open only to residents of the Foreign Language House specializing in French.
- 397e BLACK FRENCH LITERATURE (3)  
Prerequisite: French 340 or permission of department. A survey of important black writers and poets in French of The Antilles, of French Guiana, and of a number of French-speaking countries of Africa which are predominately Black.
- 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.
- 437, 337, 237 FRENCH CONVERSATION (4 ea)  
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 as a part of the Study Abroad Program.
- 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)
- 497d SPECIAL GROUP ACTIVITIES: (A) CHORUS (B) PLAY PRODUCTION (1-2)  
Open to students with at least one year of college French or its equivalent. (a) Learning and singing French folk, popular, and classical songs in an informal atmosphere. (b) Producing and performing plays in French.
- 597a ADVANCED PRACTICE IN FRENCH (4)  
Advanced French syntax, vocabulary building. Written compositions and conversation sessions to further develop language facility.
- 597b WORKSHOP IN MATERIALS DEVELOPMENT (4)  
Individuals will work with materials they are presently using; development of "instructional packets" to aid in individualization of instruction.

## 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.
- 197a,b,c CONVERSATIONAL GERMAN (1-2 ea)  
An individualized course in spoken German designed to supplement the regular first-year sequence (German 101, 102, 103) or for students wishing to acquire practical knowledge of German for tourism.
- 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.
- 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.
- 297d GERMAN FOR READING KNOWLEDGE AND RESEARCH (4)  
Basic German for readings in chosen field of specialization for graduate students and others requiring access to German materials for research.
- 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.



## Foreign Languages & Literatures

- 314 **PHONETICS (3)**  
Prerequisite: German 203 or permission of department. 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)**  
Prerequisite: 13 credits of second year German or equivalent. Significant elements of German civilization presented through German texts.
- 332 **GERMAN CIVILIZATION TODAY (3)**  
Prerequisite: 13 credits of second year German or equivalent. Significant elements of German civilization.
- 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 or permission of department. Emphasis on the Romantic Movement.
- 342 **NINETEENTH CENTURY GERMAN LITERATURE II (3)**  
Prerequisite: German 340 or permission of department. Emphasis on realism.
- 343 **EIGHTEENTH CENTURY GERMAN LITERATURE (3)**  
Prerequisite: German 340 or permission of department. 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.
- 385a,b,c **GERMAN CULTURE AND CONVERSATION (1 ea)**  
Prerequisite: German 201 or permission of the department; 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.
- 396a,b,c **HONORS TUTORIAL (2-5 ea)**
- 397a,b,c **FOREIGN LANGUAGE HOUSE ACTIVITIES (1 ea)**  
German culture through film, song and talks. General discussions of Germany and its culture, especially in contrast to our own.
- 401, 402 **ADVANCED COMPOSITION AND GRAMMAR (3 ea)**  
Prerequisite: German 302 or permission of department. German 401 prerequisite to 402.
- 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.

## Foreign Languages & Literatures

- 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 (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.
- 121, 122, 123 INTRODUCTION TO MODERN GREEK (3 ea)  
Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking, with emphasis on conversational Greek.
- 197a,b NEW TESTAMENT GREEK (3 ea)  
See Greek 111, 112, 113 (new number).
- 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.
- 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 stage production.

## 342 GREEK HISTORIANS (3)

Prerequisite: Greek 203 or equivalent. Selections from Herodotus and Thucydides; development of historical writing in Greece.

## JAPANESE

### 197x,y,z ELEMENTARY JAPANESE (7 ea)

Each course prerequisite to the next. Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking. A self-instructional course.

## 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.

### 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.

## Foreign Languages & Literatures

### 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 (3 ea)  
Prerequisite: Russian 103 or two years high school Russian or equivalent; Russian 201 prerequisite to 202.
- 203 INTERMEDIATE RUSSIAN (3)  
Prerequisite: Russian 202. Review of the fundamentals, reading, aural comprehension, and speaking.
- 204, 205 SECOND YEAR CONVERSATION AND COMPOSITION (2 ea)  
Prerequisite: Russian 103 or two years high school Russian or equivalent. Russian 204 should be taken concurrently with 201; 205 with 202.
- 297a RUSSIAN FOR READING KNOWLEDGE AND RESEARCH (4)  
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.
- 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)  
Prerequisite: 9 credits of second year Russian 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 or permission of instructor. Introduction to Pushkin, Lermontov, Gogol, and Turgenev.
- 342 NINETEENTH CENTURY LITERATURE II (3)  
Prerequisite: Russian 340 or permission of instructor. Introduction to Dostoevsky, Tolstoy, Chekhov.
- 343 TWENTIETH CENTURY LITERATURE (3)  
Prerequisite: Russian 340 or permission of instructor. 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.

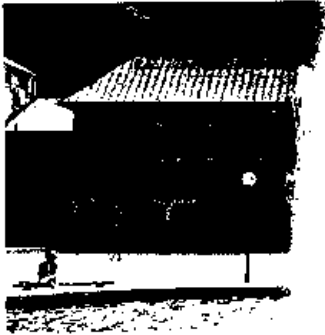
- 396a,b,c HONORS TUTORIAL (2-5 ea)
- 415 STRUCTURE OF RUSSIAN I (3)  
Prerequisite: three years of college Russian or permission of instructor. Principles of phonology and their application; phonetics as the basis of phonology.
- 416 STRUCTURE OF RUSSIAN II (3)  
Prerequisite: Russian 415 or permission of instructor. Morphology of the verb and noun.
- 496a,b,c HONORS TUTORIAL (2-5 ea)

### SPANISH

- 101, 102, 103 ELEMENTARY SPANISH (5 ea)  
To be taken in sequence. Fundamentals of speaking, reading, writing, and understanding.
- 201, 202, 203 INTERMEDIATE SPANISH (5, 5, 3)  
Prerequisite: Spanish 103 or equivalent; to be taken in sequence. Review of fundamentals: speaking, reading, writing, and understanding.
- 297b SPANISH CONVERSATION WORKSHOP (3)  
A thematic approach; the U.S. image in Latin America. Native speakers, and a "language house" opportunity.
- 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.
- 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 or permission of instructor. Literary development from beginnings to death of Garcilaso.
- 342 SIGLO DE ORO (3)  
Prerequisite: Spanish 341 or permission of instructor. Literary development in various genres during the Golden Age; special study of major works and writers.
- 343 MODERN SPANISH LITERATURE (3)  
Prerequisite: Spanish 342 or permission of instructor. Selected authors and works from 1680 to present.
- 344 SPANISH-AMERICAN LITERATURE: COLONIAL PERIOD TO END OF NINETEENTH CENTURY (3)  
Prerequisite: Spanish 340 or permission of instructor. Selected authors and works.

## Foreign Languages & Literatures

- 345 MODERN SPANISH—AMERICAN LITERATURE (3)  
Prerequisite: Spanish 344 or permission of instructor.  
Modernism and other literary trends.
- 346 CONTEMPORARY SPANISH—AMERICAN LITERATURE (3)  
Prerequisite: Spanish 345 or permission of instructor.  
Major authors and trends after modernism.
- 347 READINGS IN MODERN SPANISH DRAMA (3)  
Prerequisite: Spanish 343 or permission of instructor.  
Interpretation and discussion of selected readings.
- 348 TWENTIETH CENTURY SPANISH—AMERICAN NOVEL (3)  
Prerequisite: Spanish 346 or permission of instructor.  
Interpretation and discussion of selected readings.
- 349 GENERATION OF 1898 (3)  
Prerequisite: Spanish 343 or permission of instructor.  
Selected works of Unamuno and other principal authors of the movement.
- 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.
- 385a,b,c HISPANIC CULTURE AND CONVERSATION (1 ea)  
Prerequisite: Spanish 201 or permission of the department. 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)
- 397a CONTEMPORARY MEXICAN LITERATURE (3)  
Reading and discussion of selected major documents from the twentieth century Mexican literary canon.
- 397b MEXICAN CULTURE AND CIVILIZATION (3)  
Panoramic view of Mexican civilization and culture from pre-Columbian times to the present.
- 401, 402 ADVANCED COMPOSITION AND GRAMMAR (3 ea)  
Prerequisite: Spanish 302 or permission of department; Spanish 401 prerequisite to 402.
- 440 MEDIEVAL SPANISH LITERATURE (3)  
Prerequisite: 9 credits in upper division literature including Spanish 341, or permission of instructor.  
Masterpieces of the Middle Ages.
- 441 THEATRE OF THE SIGLO DE ORO (3)  
Prerequisite: 9 credits of upper division literature including Spanish 342, or permission of instructor. Lope de Vega, Calderon and their contemporaries.
- 442 SPANISH—AMERICAN POETRY SINCE MODERNISM (3)  
Prerequisite: 9 credits of upper division literature including Spanish 346, or permission of instructor.  
Careful analysis of major works.
- 443 SPANISH—AMERICAN SHORT STORY (3)  
Prerequisite: 9 credits of upper division literature including Spanish 346, or permission of instructor.  
Representative works from nineteenth century to present.
- 445 SPANISH LYRIC POETRY (3)  
Prerequisite: 9 credits of upper division literature or permission of instructor. Analysis of major works from the beginnings to the present.
- 450 STUDIES IN SPANISH LITERATURE (3)  
Prerequisite: 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, or permission of instructor.
- 597a ADVANCED PRACTICE IN SPANISH (4)  
Advanced Spanish syntax, vocabulary building. Written compositions and conversation sessions to further develop language facility.
- 597b WORKSHOP IN MATERIALS DEVELOPMENT (4)  
Individuals will work with materials they are presently using; development of instructional packets to aid in individualization of instruction.



# GENERAL STUDIES

*Western Washington State College*



The General Studies Department serves the Western Washington State College community in two ways:

1. The General Studies Department offers courses of an interdisciplinary nature that partially fulfill the WWSC General Education requirement. (See page 35 of this catalog for the complete General Education requirements and the various options for their fulfillment.)
2. The General Studies Department also offers the Western student 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.

## 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, PhD, Syracuse University.
- NITA CLOTHIER (1964) Assistant Professor. BA, MEd, Western Washington State College.
- BRIAN P. COPENHAVER (1971) Assistant Professor. AB, Loyola College; MA, Creighton University; PhD, University of Kansas.
- DAVID H. DAVIS (1968) Instructor. BA, University of Washington; MA, Claremont Graduate School.
- 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) Assistant 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.
- 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 College (North Carolina); MA, PhD, Ohio University.

## 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 Interdisciplinary Studies*

- General Studies 201
- General Studies 301
- General Studies 490
- General Studies 499

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 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 COURSES

- 105 **BEHAVIORAL SCIENCE (4)**  
 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 I, II, III (6 ea)**  
 (It is recommended that these be taken in sequence.)  
 Historical survey of Western culture in its great outlines and major modes: politics, philosophy, art, music, and literature; lectures, readings, discussions.
- 121 The Ancient and Medieval World; the Near East, Greece, Rome, Medieval and Renaissance Europe.
- 122 The Early Modern World; the Reformation, the Age of Reason, the Enlightenment, Revolutions, and early Romanticism.
- 123 The Modern Period; the 19th and 20th Centuries; Romanticism, Liberalism, Nationalism, and the Technological Revolution.
- 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.
- 297a **INTRODUCTION TO THE STUDY OF RELIGION (4)**  
 Examination of religious phenomena from a number of scholarly perspectives (e.g. theological, philosophical, historical, social-scientific); topics considered include concepts of salvation in Eastern and Western religions, mysticism, religious symbolism and ritual, and the recent interest in astrology and the occult. Reading, lectures, and discussion.
- 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.
- 321 **NON-WESTERN CULTURES (4)**  
 Prerequisite: junior status. Cultural, socio-economic, and historical survey of the societies of Africa and Asia, with emphasis upon the recent past and problems of the present.
- 397g **ART AND IDEOLOGY: THE EFFECTS OF IDEOLOGY UPON THE FINE ARTS IN MODERN AND EARLY MODERN EUROPE (3)**  
 An examination of the relationships that exist between the fine arts of a society and its major ideologies.
- 397h **TRADITIONS OF NONVIOLENCE IN AMERICA (3)**  
 Historical and sociological examination of nonviolence in America, emphasizing its theory and practice as a philosophical, theological, and/or political concern, related by a distinctly interdisciplinary methodology.
- 397j **MAGIC, ASTROLOGY, WITCHCRAFT, DEMONOLOGY: THE ACADEMIC STUDY OF OCCULTISM (3)**  
 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, practice, and readings in primary and secondary sources.
- 465 **CULTURE ON THE AMERICAN FRONTIER (3)**  
 A study of the motives and modes of cultural activity in the frontier community.
- 497f **SURVEY OF THE HISTORY OF SCIENCE (4)**  
 A topical survey of the history of science from its beginnings in ancient Mesopotamia to its present condition in the twentieth century. Special attention to science as a cultural phenomena. Lectures on physical sciences, life sciences, medicine, mathematics, and pseudo-sciences. Readings in primary and secondary sources.
- 497n **EXPERIMENTS IN MIXED MEDIA (4)**  
 An examination of the contemporary blending of music, theatre, literature, painting, the plastic arts, and dance as expressed in the work of such artists as Cage, Kaprow, Oldenberg and Warhol, with special emphasis on experimental student productions.
- 497p **CONTEMPORARY ART: TRADITION AND REVOLUTION (Part I) (4)**  
 Prerequisite: junior standing or permission of the instructor. Offered in conjunction with the 1973 winter/spring Symposium on Contemporary Art and as the first in a two-course sequence concluding with Gen St 497q. Study of problems in contemporary aesthetics especially as they reflect new verbal, visual, musical, choreographic, and theatrical forms.

## *General Studies*

**497q CONTEMPORARY ART: TRADITION AND REVOLUTION (Part II) (4)**

Prerequisite: Gen St 497p or permission of the instructor. Offered in conjunction with the 1973 winter/spring Symposium on Contemporary Art and as part two of a two-part sequence beginning with Gen St 497p. Individual creative projects or group performances reflecting new verbal, visual, musical, choreographic, and theatrical forms.

**497r THE ANGLO-SAXON MYTH IN AMERICA: A STUDY IN 19TH CENTURY RACIST THOUGHT (3)**

An analysis of a dominant idea of the 19th century and its impact upon the arts and sciences, national policies and legislation, and public education.

**497s WORKSHOP IN INTERDISCIPLINARY TEACHING (2)**

Prerequisite: teaching experience at the secondary level or permission of the department. Methods and materials for interdisciplinary teaching; focusing the interdisciplinary course; developing individuality and creativity; use of curricular materials including educational media; staffing and scheduling.

**499 SPECIAL PROBLEMS (3)**

Project designed to demonstrate the student's interdisciplinary focus.





# GEOGRAPHY

*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 12 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. One full teaching position is a visiting lectureship, which in the past few years has been filled by geographers from Australia, Eire, India, New Zealand, South Africa and the United Kingdom. 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*

An important facility of the department is its well-stocked map library, which contains some 75,000 sheet maps of many sorts together with aids to cartographic and photogrammetric research. The library is an official depository for all 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 full-time map curator is in charge of the collection. A well-equipped cartographic laboratory, the services of a full-time 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 100 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.

## GEOGRAPHY FACULTY

- HOWARD J. CRITCHFIELD (1951) Chairman.  
Professor. BA, MA, PhD, University of Washington.
- JANE H. EHEMANN (1973) Assistant Professor. BA, College of Wooster; MA, University of Pittsburgh.
- JOHN W. MAIRS (1972) Lecturer. BA, MA, San Jose State College.
- ROBERT L. MONAHAN (1955) Professor of Geography and Acting Dean of College of Arts and Sciences. BA, University of Washington; MA, University of Michigan; PhD, McGill University.
- DEBNATH MODKHERJEE (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.
- JAMES W. SCOTT (1966) Associate Professor. BA, MA, Cambridge University; PhD, Indiana University.
- RICHARD G. SMITH (1970) Associate Professor. BS, University of Alaska; MS, PhD, University of Wisconsin.
- M. ALAN STELLWAGEN (1970) Assistant Professor. BA, Stanford University; MA, PhD, University of Washington.
- ROBERT W. TESHARA (1965) Associate Professor. BA, BA in Ed, Western Washington State College; PhD, University of Washington.
- ROY A. WHITAKER (1972) Assistant Professor. BA, University of Exeter; MA, Pennsylvania State University; PhD, University of British Columbia.
- DAVID N. WILCOCK (1973) Visiting Lecturer. BA, University College, London; PhD, University of Liverpool.

## 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 during his undergraduate years. Departmental advisers should be consulted at an early date for assistance in program planning.

### *Major--Geography* 70 credits plus Supporting Courses

- Geography 201, 203, 207, 301, 351, 453 or 454, and 486
- Two courses from Geography 311, 314, 315, 316, 318, 319, 320, 401, 411, 415, 416, 485
- One course from Geography 331, 422, 423, 424, 426
- Two courses from Geography 341, 353, 407, 408, 409, 421, 430, 435, 440, 442, 452, 470
- Supporting course: Mathematics 240
- Electives under departmental advisement

### *Minor--Geography* 25 credits

- Geography 201
- Electives under departmental advisement

## *Major--Urban and Regional Planning*

See Urban and Regional Planning section directly following the geography course listings.

## BACHELOR OF ARTS IN EDUCATION

### *Major* Elementary 45 credits

- Geography 201, 203, 251, 401, 421, 460
- Five credits from Geography 311, 314, 315, 316, 318, 319, 320, 411, 415, 416, 485
- One course from Geography 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 311, 314, 315, 316, 318, 319, 320, 401, 411, 415, 416, 485
- One course from Geography 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

### *Minor* 25 credits

- Geography 201
- Geography 203 or 207
- 15 credits in upper division courses under departmental advisement

## Geography

### Extended Minor 35 credits

(Alternate minor for teaching competency recommendation.)

- Geography 201, 203 or 207, 251, 460
- 6 credits from Geography 311, 314, 315, 316, 318, 319, 320, 401, 411, 415, 416, 485
- 6 credits from Geography 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.
- 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)  
Prerequisite: Geog 201, 203, 207. Source materials and techniques of geographic writing; emphasis on the nature and development of geography.
- 311 THE UNITED STATES AND CANADA (5)  
Prerequisite: Geog 201 or permission. Environments, resources, settlement and economies of Canada and the United States.
- 314 LATIN AMERICA (5)  
Prerequisite: Geog 201 or permission. Peoples, resources, regions and economic and political development of South and Central America.
- 315 ASIA (5)  
Prerequisite: Geog 201 or permission. Asia's settlement, population, economic resources and activities, and associated problems.
- 316 EUROPE (5)  
Prerequisite: Geog 201 or permission. Peoples, resources, regions; the economic, social and political development of Europe.
- 318 THE PACIFIC (3)  
Prerequisite: Geog 201 or permission. Environments, resources, and settlement of the Pacific Islands, Australia, and New Zealand.
- 319 AFRICA (5)  
Prerequisite: Geog 201 or permission. Resources, peoples, regions; economic, social, and political development of Africa.
- 320 THE U.S.S.R. (3)  
Prerequisite: Geog 201 or permission. Environments, resources, industries, population, and settlement of the Soviet Union with emphasis on its role in world affairs.
- 331 CLIMATOLOGY (5)  
Prerequisite: Geog 101 or 203 or permission. 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.
- 353 AERIAL PHOTO AND MAP INTERPRETATION (3)  
Prerequisite: 4 credits in geography or permission. 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.
- 401 **THE PACIFIC NORTHWEST (3)**  
Prerequisite: Geog 201 or permission. Pacific Northwest resources and industries and problems in resource management.
- 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 or permission. Transportation as spatial interaction and diffusion; transportation systems and analysis of their geographic impact.
- 411 **ARCTIC ENVIRONMENT (3)**  
Prerequisite: Geog 201 or permission. Topical examination of physical environment, modern settlement and the development of resources in northern Canada and Alaska.
- 415 **INDIA, PAKISTAN AND BANGLADESH (3)**  
Prerequisite: Geog 201 or permission. Environments of India, Pakistan and Bangladesh; their resources, population, and economic activities; emphasis on contemporary problems.
- 416 **THE MIDDLE EAST (3)**  
Prerequisite: Geog 201 or permission. Environment, resources, culture, and problems of Southwest Asia and North Africa.
- 421 **CONSERVATION OF NATURAL RESOURCES (5)**  
Environmental, economic and institutional aspects of natural resource management and use.
- 422 **GEOGRAPHY OF WATER RESOURCES (5)**  
Prerequisite: Geog 101 or 203 or permission. Quantitative analysis of hydrologic processes; applications in water use and conservation practices.
- 423 **GEOGRAPHY OF SOILS (3)**  
Prerequisite: Geog 101 or 203 or permission. Properties, formation, classification, distribution and management of the world's soils. Field study of selected soils.
- 424 **BIOGEOGRAPHY (3)**  
Prerequisite: Geog 101 or 203 or permission. Origin, distribution, and adaptation of plant and animal associations; examination of representative plant and animal forms in relation to physical environment and to man.
- 426 **THE URBAN ENVIRONMENT (3)**  
Prerequisite: Geog 203 or permission. 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. Principles, problems and techniques of planning urban, suburban, and rural land use; theoretical and legal bases for functions of planning agencies.
- 436 **HISTORICAL GEOGRAPHY OF THE UNITED STATES AND CANADA (5)**  
Prerequisite: Geog 311 or American history. Techniques of historical geographical analysis, including sequent occupation and the reconstruction of past geographies of the United States and Canada.
- 440 **GEOGRAPHY OF POPULATION (3)**  
Prerequisite: Geog 201 or Soc 311 or permission. 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.
- 452 **ADVANCED CARTOGRAPHY (3-5)**  
Prerequisites: Geog 351 and permission of instructor. Advanced problems and laboratory projects in map and chart construction; computer mapping.
- 453 **FIELD METHODS IN GEOGRAPHY (3)**  
Prerequisite: Geog 351 or permission of instructor. 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.
- 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 or permission. 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.

## Geography

- 497e **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.
- 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
- 552 **PERSPECTIVES IN GEOGRAPHIC EDUCATION (1)**  
Prerequisite: Geog 460 or permission. Current trends in geographic instruction at all educational levels.
- 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 environ-

mental 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 on page 47 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 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.

### *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

## Geography

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 480, 313 or Technology 313
- Mathematics 240 or equivalent
- Political Science 250, 353 or 455, 421
- Sociology 202, 366, 375
- Technology 210, 313 or Huxley 313

### *Selective Requirements—One to be selected from each group*

- Geography 311 or 401
- Geography 421 or 426 or Huxley 401

### *Electives\*—From the alternate requirements above or from the following to complete 105 credits*

- Business Administration 408
- Computer Science 110

- Economics 410, 415
- English 351
- Geography 207, 331, 353, 372, 407, 408, 409, 422, 440, 442, 452, 453
- Health Education 447
- History 466
- Home Economics 175, 370
- Mathematics 220
- Political Science 320, 450, 455
- Sociology 311, 370, 430, 431, 441, 475
- Technology 240

It is recommended that the student concentrate his electives in either economics, geography, political science, or sociology/anthropology.

*\*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

*Western Washington State College*



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 160 geology undergraduate majors and approximately 35 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 microscope.

## 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, micropaleontology, 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 \$28,750 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. Five students are participating in both field and laboratory research.

### *Whatcom County Environmental Project*

This project is funded by a \$16,000 grant to Dr. Don J. Easterbrook for study of environmental geology as it pertains to various aspects of county planning. Included in the study are geologic mapping, ground water investigation, geologic hazards, earthquake response mapping and various other related topics. Six students are participating in field and laboratory work.

## 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) Associate 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) Associate 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) Associate Professor of Geology and Education. BS, MA, PhD, Columbia University.

ADA SWINEFORD (1966) Professor. SB, SM, University of Chicago; PhD, Pennsylvania State University.

- 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 205, 321; Biology 406

*Major—Earth Science*      Secondary 45 credits

- Geology 211, 212, 304 or 305, 306, 310, 390, 407
- Geography 331; Physics 105, 131
- Electives from Geology 214, 314, 316, 317, 319, 340, 352, 399, 400, 406, 410, 412, 414, 416, 418, 420, 426, 430, 440, 460; Geography 203, 353, one from 421, 422 or 423; Physics 205, 321

This major must be accompanied by a minor in physical science, chemistry, physics or biology; exceptions must be approved by the major department.

*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, 370, 400, 406, 414, 423, 424, 425, 426, 430, 436, 440, 444, 446, 453, 454, 455, 460, 461
- Supporting courses: Chem 121, 122, 123, 127, 128; Physics 231, 232, 233 (or 131, 132, 133); Math 121, 122, 222 (or 121, 220, 240; and Computer Science 110 or 210)
- 5 to 8 credits under advisement from chemistry, physics, math, computer science or biology to total 110 credits

## 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 105, 131

\*On Leave 1973-74

## Geology

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, 127
- Physics 131, 132, 133; or 231, 232, 233
- 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; core 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 370, 418, 420, 423, 424, 425, 444, 446, 460, 461  
Chemistry 128, 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  
Zoology 461  
Physics 301  
Huxley 321, 322, 323, 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, 232, 233, 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, 127, 128, 333, 361, 362, 363
- Math 121, 122, 222
- Physics 231, 232, 233
- 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, 370, 407, 410
- Math 121, 122, 201, 202, 222, 223, 331, 335, 341, 342, 375, 435; Computer Science 110 or 210

- Chemistry 121
- Physics 231, 232, 233
- 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, 370, 400, 406, 410, 412, 414, 416, 423, 424, 425, 426, 430, 436, 440, 444, 446, 453, 454, 455, 460, 461
- Supporting courses: Chemistry 121, 122, 123; 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 or permission of department. 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)

Prerequisite: 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.

### 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 or permission of department. 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.

## Geology

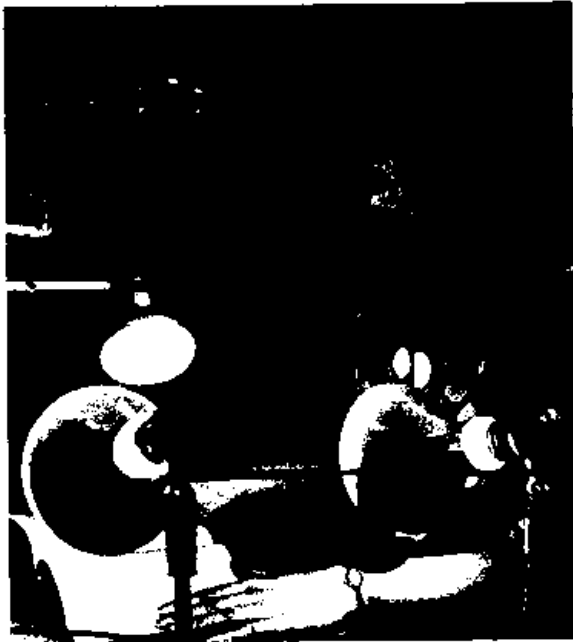
- 314 **GEOMORPHOLOGY OF WESTERN UNITED STATES (3)**  
Prerequisite: Geol 101 or 211. Geological forces and processes that have shaped the landscape of the West; origin of scenic geological features in the national parks.
- 316 **PRINCIPLES OF PALEONTOLOGY (5)**  
Prerequisites: Geol 212 or permission of department. 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 (4)**  
Prerequisite: Geol 306 or 311. Economic minerals and ore deposits, their genesis and occurrence.
- 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 PETROLEUM (3)**  
Prerequisite: Geol 212 or permission of instructor. Origin and accumulation of petroleum; methods of locating petroleum resources.
- 370 **QUANTITATIVE METHODS IN GEOLOGY (3)**  
Prerequisites: Math 121 and 15 credits in geology. Acquisition, processing, and analysis of geologic data. Sampling techniques, computer programs, and statistical analysis.
- 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 intermediate grades.
- 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 ea)**
- 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 or permission of department. 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 **MICROPALAEONTOLOGY (4)**  
Prerequisite: Geol 316. Structure, phylogeny, and geological distribution of micro-fossils with emphasis on evolution, paleoecological significance, and stratigraphic application.
- 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.
- 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, 123, and permission of department. Basic analytical techniques with x-ray equipment.
- 445a **CONCEPTS IN PHYSICAL GEOLOGY (4)**  
Prerequisite: physical or general geology and permission of Institute Director. Concepts and principles of physical geology as they relate to problems which may be investigated in the field.
- 445b **PRACTICUM IN FIELD STUDIES (4)**  
Prerequisites: Geol 445a and 412S and permission of Institute Director. Practice involving students from the local secondary schools in conducting earth science field trips and individual field investigations which are relevant to the interests of the secondary school student.
- 445c,d **ELECTRON MICROSCOPY (2, 4)**  
Prerequisites: Physics 133 and 30 credits in geology and permission of department. Techniques and application of electron microscopy to basic problems of ultrastructure in geology.
- 446 **CLAY MINERALOGY (4)**  
Prerequisite: Geol 444. Classification, identification, structure, and genesis of clay minerals.
- 453 **GEOTECTONICS (4)**  
Prerequisite: Geol 352 or permission of department. 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)**
- 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.

## *Geology*

- 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.
- 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.
- 597a **ADVANCED PHYSICAL GEOLOGY (4)**  
Prerequisites: Geol 101 or 211 or 30 credits in science courses.
- 597b **FIELD INVESTIGATIONS AS TEACHING TOOLS (4)**  
Prerequisite: concurrent enrollment in Geol 597a.
- 597c **PRACTICUM IN FIELD STUDIES (4)**  
Prerequisites: completion of 597a and 597b. (See Geol 445b.)
- 690 **THESIS (May be registered for in units of 3.)**  
Independent research.





# HISTORY

*Western Washington State College*



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 of History and Dean of College of Arts and Sciences and Acting Provost. AB, PhD, University of California, Los Angeles.
- DAVID L. DAVIS (1972) Lecturer. BA, University of California; MA, University of Chicago.
- LEROY JOSEPH DRESBECK (1969) Assistant Professor. BS, Loyola University, Los Angeles; PhD, University of California, Los Angeles.
- DONALD D. EKLUND (1968) Assistant Professor. BA, University of New Mexico; MA, Colorado State College; PhD, University of Colorado.
- \*BARRY M. GOUGH (1968) Associate Professor. BEd, University of British Columbia; MA, University of Montana; PhD, University of London.
- 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. 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) Assistant 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 RAY RITTER, JR. (1969) Assistant 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) Assistant 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:*

It is recommended that students in these programs enroll in two courses from History 105, 106, 107 toward fulfillment of the General Education requirement in humanities. Credit toward the major will be allowed for *one* course in the sequence if all three courses are taken.

It is recommended that students in these programs enroll in Option II of the General Education non-western requirement.

It is recommended that students in these programs

*\*On Leave 1973-74*

## History

should consider Option II of the General Education economic and political institutions requirement.

Only five credit hours from the U.S. History sequence 203-204 may be counted toward fulfillment of the major or major concentration.

A minimum grade point average in history of 2.5 is required for graduation and certification for teaching competence.

**Major** Junior and Senior High School 60 credits

History credits should be distributed under advisement as follows:

- United States History 3 courses
- European History 2 courses
- Two courses from these areas:
  - East and South Asia
  - Africa and Middle East
  - Western Hemisphere (outside U.S.)
- History 391, 499, Social Studies Education 426 3 courses
- 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 203, 204
- Two courses from History 425 through History 448 (except 445b)
- One course from 410 through 420 (except 417)
- 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 203, 204
- Electives, including one upper division course, under advisement

### Minor—East Asian Studies

This may be added to the major for a major concentration. 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

If History 105, 106 and 107 are taken, one course in the sequence may be counted toward the minor.

If history courses are taken to satisfy the General Education non-western requirement, only *one* course may be counted toward the minor.

Only 5 credit hours from the U.S. History sequence 203-204 may be counted toward the minor.

A minimum grade point average in history of 2.5 is required for graduation and certification of teaching competence.

## History

### *Extended Minor* 33-35 credits

For English majors desiring a combined recommendation appropriate for junior high or middle school.

- History 203, 204
- One Modern European course from 425 through 448 (except 445b)
- 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.

## BACHELOR OF ARTS

### *Major* 70 credits plus Supporting Courses

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:

- Six courses in one of the above fields
- Four courses in a second field
- Three courses in a third field
- History 499
- Electives under advisement

Students planning to pursue graduate study are strongly advised to select a minor from among the following fields: art history, biology, chemistry, economics, foreign languages, geography, mathematics, philosophy, physics, political science, sociology/anthropology.

The minor should be selected under advisement to complement some key aspect of the major program.

It is recommended that majors enroll in two courses from History 105, 106, 107 toward fulfillment of the General Education requirement in humanities. Credit toward the major will be allowed for *one* course in the sequence if all three courses are taken.

It is recommended that students enroll in Option II of the General Education non-western requirement.

Only five credits from U.S. History sequence 203-204 may be counted toward the major.

It is strongly recommended that majors who elect a six-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 six-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

If the three courses History 105, 106, 107 are taken, *one* course will be allowed toward fulfillment of the minor requirement.

Only five credits from the United States history sequence 203-204 may be counted toward fulfillment of the minor.

A minimum grade point average in history of 2.5 is required for graduation.

### *Minor—East Asian Studies*

This may be added to the major for a major concentration. 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

#### 105, 106, 107 HISTORY OF WESTERN CIVILIZATION (4 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.

#### 197a 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.

#### 203 AMERICAN HISTORY TO 1865 (5)

American history from the European background to the end of the Civil War.

#### 204 AMERICAN HISTORY SINCE 1865 (5)

American history from the end of the Civil War to the present.

#### 270 THE WESTERN HEMISPHERE (5)

A history of the western hemisphere from the European discovery to the present with special emphasis upon the interrelationship and institutional comparison between the United States, Latin America and Canada.

#### 273 LATIN AMERICA (5)

From the period of early Spanish and Portuguese colonization to the present.

#### 280 INTRODUCTION TO EAST ASIAN HISTORY (5)

The origins and evolution of civilization in East Asia to the present.

#### 287 INTRODUCTION TO ISLAMIC CIVILIZATION (4)

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.

#### 297f TELECOURSE — HISTORY OF WHATCOM COUNTY (2)

Survey of the history of Whatcom County, with emphasis upon the interrelated local, regional, and national factors involved in the development of the community.

#### 333 SURVEY OF MODERN RUSSIAN HISTORY (5)

Developments in Russia since Peter the Great.

#### 336 COMPARATIVE IMPERIALISMS: SELECT CASE STUDIES (3)

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.

## History

- 342 **POLITICAL MOVEMENTS IN EUROPE SINCE 1789 (5)**  
Major political movements such as Liberalism, Fascism and Communism and their impact upon European society.
- 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.
- 365 **GREAT PERSONALITIES IN AMERICAN HISTORY (3)**  
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 **THE COURSE OF CANADIAN HISTORY (3)**  
French and English colonization; beaver skins and felt hats; the British imperial relationship; Canadian Confederation; the Quebec question; Pierre Elliott Trudeau.
- 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.
- 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.
- 400 **SPECIAL PROBLEMS (1-5)**  
Prerequisite: permission of department.
- 401 **CHINA, RUSSIA AND THE UNITED STATES IN THE CONTEMPORARY WORLD (6)**  
A team-taught lecture course; examines the background and development of the conflict of the three great powers and its impact upon contemporary world politics.
- 402 **DISCUSSION SEMINAR ON CHINA, RUSSIA AND THE U.S. IN THE CONTEMPORARY WORLD (3)**  
Prerequisite: concurrent enrollment in History 401. Discussion of material being presented in History 401 and of additional reading assigned specifically for this course. Will involve all three area specialists from History 401.
- 403 **RESOURCES AND TECHNIQUES FOR CLASSROOM PRESENTATIONS ON CHINA, RUSSIA AND THE U.S. IN THE CONTEMPORARY WORLD (3)**  
Prerequisite: concurrent enrollment in History 401 and 402. Introduction to resource materials on the subject and suggested techniques of presentation suitable for classroom use.
- 404 **PREPARATION OF INSTRUCTIONAL UNIT ON CHINA, RUSSIA AND THE U.S. IN THE CONTEMPORARY WORLD (3)**  
Prerequisite: History 401, 402 and 403. Independent studies course, available in the final three weeks of the summer session. Involves the preparation of detailed instructional unit lesson plans.
- 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, Arameans, 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)
- 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  
Age of Scholasticism to the waning of the Middle Ages.
- 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.
- 435 THE AMERICAN — SOVIET RIVALRY SINCE 1939 (5)  
An historical examination of the positions of the USA and USSR on the world scene from the outbreak of World War II to the present. The domestic problems in each nation will also be examined for their impact upon the position taken in foreign policy.
- 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, 1688-1815 (5)  
Political, social, economic, and diplomatic history of England from the Glorious Revolution to end of Napoleonic Wars; constitutional developments of the period.
- 438 ENGLAND, 1815-1906 (5)  
Political, social, economic, and diplomatic history of England from Waterloo to the Liberal Government of 1906; development of parliamentary institutions.

## History

- 439 ENGLAND SINCE 1906 (5)  
Role of England in the World Wars of the twentieth century; impact of these wars on English 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.
- 444 ITALY, 1789-1922 (5)  
Political, social, and economic development from Napoleon to Mussolini.
- 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.
- 450 AMERICAN COLONIAL HISTORY (5)  
The colonial period from the discovery of America to the beginning of the Revolution.
- 451 THE AMERICAN REVOLUTION AND CONFEDERATION PERIOD (5)  
Colonial reaction to British imperial policies within the colonies; military and diplomatic aspects of the Revolutionary War; political, economic, and social aspects of the Confederation period to the adoption of the Constitution.
- 452 THE EARLY NATIONAL PERIOD: FEDERALISTS AND JEFFERSONIANS (5)  
Establishment of the federal government and origin of the party system; partisan conflict over constitutional interpretations; economic issues; foreign policy from the Constitutional Convention to 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 203 or equivalent. Constitutional development from the Revolutionary era to the present.
- 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. AND REGIONAL 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.
- 478 THE MAKING OF THE CANADIAN WEST AND FAR WEST (3)  
A survey of the history of the Canadian prairies and British Columbia from the period of French and English exploration to the present.



- 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.
- 486 THE COMMUNIST MOVEMENT IN CHINA (3)  
Prerequisite: History 280. The Communist Movement in China prior to 1949.
- 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.
- 490 SEMINARS (1-5 ea)  
Prerequisite: permission of instructor. Concentrated study on topics of special interest in small discussion groups. Not restricted to seniors.  
490a Latin America  
490b Modern American Society and Thought  
490c American Economic and Business History  
490d The American Impact on Canada  
490e Russia  
490f Twentieth Century America  
490g China  
490h The South in American History  
490i The Age of Jackson  
490k European Socialism  
490m Middle Ages  
A maximum of two seminars may be counted toward a history major, or one toward a minor.
- 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.
- 497a ORAL HISTORY — FIELD WORK — PACIFIC NORTHWEST INDIANS (1-6)  
A course designed to extend the knowledge of Northwest Indian culture and history, with emphasis on interviewing and research procedures. The recording of individual and group memory and reminiscences.
- 497m SPORT IN THE ANCIENT WORLD (1-2)  
Sports and athletics of the ancient world placed in a socio-political and historic context.
- 497n RELIGIOUS ORTHODOXY AND DISSENT IN THE MIDDLE AGES (1-2)  
A study of the role of religious orthodoxy and dissent from the 12th to the 16th centuries. The study is important for understanding the advent of the closed society in the late middle ages that saw rise of the Albigensian crusade and the inquisition.
- 497p WORKSHOP IN MUSEUM DOCUMENTATION (2)  
A week-long workshop dealing with the problems of museum work, with particular emphasis on historical documentation.
- 497q SEMINAR IN U.S. MARITIME HISTORY (4)  
Selected research topics in U.S. maritime and naval history: national, regional, local.
- 499 HISTORICAL RESEARCH (3)  
Introduction to historical research methods; analysis of an historical field; an assigned special project.
- Admission to graduate status and to graduate courses requires completion of an undergraduate major in history of 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.

## History

### 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

### 598a,b,c GRADUATE INTERNSHIP IN MUSEUM AND ARCHIVAL TECHNIQUES (5-10)

Prerequisite: approval of the department and instructor, and satisfaction of the requirements of the federal work/study program. 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)

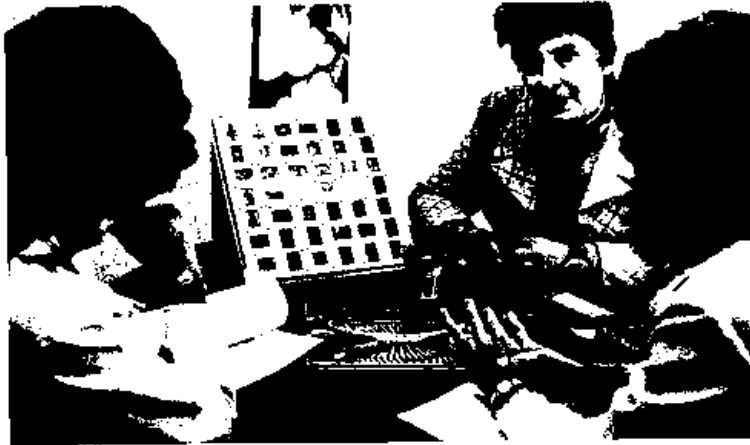
Introduction to research, the use of primary source materials, auxiliary sciences, problems of interpretation, textual criticism and the use of bibliographic aides. A knowledge of foreign languages or the use of statistics or computer programming may be required depending upon the topic of research.

### 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

*Western Washington State College*



## 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 education 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.

## Home Economics

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 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.
- MARY JO AEGERTER (1968) Lecturer. BS, Iowa State University.
- LUCILLE E. BARRON (1945) Assistant Professor. BA, Washington State University; MA, University of Washington.
- BARBARA A. BIELER (1965) Assistant Professor of Home Economics and Education. BS, MHEc, Oregon State University.
- DONNA C. FRICK (1967) Lecturer. BA, University of Utah.
- \*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.
- KATHLEEN D. RHEA (1972) Lecturer. BA, Western Washington State College.
- JANE E. ROBERTS (1966) Associate Professor. BS, MS, PhD, University of Wisconsin.
- MARION J. SOUTHCOTT (1972) Lecturer. BFA, The Maryland Institute, College of Art.
- DUANE W. STEWART (1970) Associate Professor. BS, MS, PhD, Brigham Young University.
- ELIZABETH W. WYSKIEL (1972) Lecturer. BS, New York State College of Home Economics; MS, Cornell University.

\*On Leave 1973-74

## BACHELOR OF ARTS IN EDUCATION

*Major Concentration* 110 credits  
(70 credits in Home Economics plus Supporting Courses)

(Satisfies both major and minor)

- Home Econ 100, 101, 120, 150, 151, 164, 175
- Home Econ 210, 224, 230, 253, 260, 272, 461
- Home Econ 310, 320, 321, 334, 338, 353, 370, 375
- Home Econ 410, 420, 424, 432, 441, 442
- Supporting course: Economics 201

It is recommended that Chemistry 115 be taken in meeting the general education chemistry requirement.

*Major: Child Development and Family Relationships* 45 credits

(To be combined with Elementary Education minor)

*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

*Elective Requirements* chosen from the following:  
15-18 credits

- Home Econ 100, 164, 166, 175, 210, 230, 334, 338, 350, 351, 362, 370, 425, 426, 450, 470 and others as developed

*Supporting Courses* which may be used as electives:

- Education 331, 431, 433, 360; Art 380; Health Ed 350, 450; Library Science 305, 309; Linguistics 201; Music 350; PE 306, 311, 326; Speech 331, 354, 355, 373, 430; Technology 350

*Minor* 25 credits

- Courses selected under departmental advisement. Preliminary consultation is essential before undertaking a minor.

## Home Economics

### Minor: Child Development and Family Relationships 21 credits

(To be combined with Elementary Education major)

#### Core Requirements: 21 credits

- Home Econ 120, 150
- Home Econ 224
- Home Econ 320
- Home Econ 420, 422, 423, 424

#### Elective Requirements chosen from the following:

4 credits

- Home Econ 100, 164, 175, 210, 334, 338, 350, 351, 362, 370, 425, 426, 450, 461, 470

Supporting Courses which may be used as electives are listed under the Child Development and Family Relationships major above.

#### 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.

## 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 to be planned with departmental advisory committee to meet student's proposed career objectives
- Supporting courses: Econ 201, Psych 201 and 351, Soc/Anth 201 and 366, 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, 476 (34 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.

## Home Economics

### COURSES IN HOME ECONOMICS

- 100 INTRODUCTION TO HOME ECONOMICS (1)  
Restricted to home economics majors or minors or admission by permission of department. 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 101, 102, or 103. 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)  
Identification and evaluation of textiles for clothing and household purposes.
- 166 CLOTHING DESIGN AND SELECTION (2)  
Prerequisites: Home Econ 101 or Art 101 or 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. 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: 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 SELECTION AND CONSTRUCTION (5)  
Prerequisites: Home Econ 164, Home Econ 101 or Art 270, and permission of department; open only to home economics teacher education majors. Selection of clothing from the aesthetic and consumer aspects; new construction techniques and methods.
- 272 HOUSEHOLD EQUIPMENT I (3)  
Evaluation of household equipment; application to the family's management.
- 273 HOUSEHOLD EQUIPMENT II (2)  
Prerequisite: Home Econ 272. Non-electrical and electrical appliances in relation to food preparation and 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. 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)  
Prerequisites: Home Econ 320 and Psych 351, or equivalents. Development of the adolescent; implications for guidance in the family and group situations.
- 327 FIELD STUDIES IN CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS (2-5)  
Prerequisites: concurrent enrollment in Home Econ 224 or 320 or 321; permission of department. Supervised field work with programs or agencies dealing with children or families; or work with individual children or families. S/U grading only.
- 334 CONSUMER ECONOMICS (2)  
Prerequisites: Gen St 105, Econ 201. The consumer in the economic world; his responsibilities and protections. Formerly offered as 338.
- 338 FAMILY FINANCE (3)  
Prerequisites: Home Econ 334, Gen St 105, Econ 201. Management of family income and expenditures in the changing family cycle.
- 350 NUTRITION: ASPECTS OF HUMAN GROWTH (2)  
Prerequisite: Home Econ 250. Nutritional needs during pregnancy, lactation, growth, and old age; indices of nutritional status.



## Home Economics

- 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. New developments and techniques applied to methods of teaching clothing.
- 362 FAMILY CLOTHING (2)  
Prerequisite: Home Econ 260 or 361, or permission of department. Selection and construction of clothing for the family.
- 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 NEW FABRICS AND FINISHES (2)  
Prerequisite: Home Econ 164 recommended. New developments in fabrics and finishes.
- 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, upholstery 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 (2-3)  
Prerequisites: student teaching or teaching experience; conference course permit required from instructor before registering. The development of home economics concepts and skills for the elementary school curriculum.
- 418 DESIGN CENTER RESEARCH PROJECT (3)  
Prerequisite: Tech 214 or Home Econ 101 or permission of department. 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 320 and Psych 351 or equivalent; permission of department; a tuberculosis test required in compliance with state law; Home Econ 422 and Ed 331 recommended. Observation and participation in nursery school laboratory. S/U grading only.
- 421 DEVELOPMENTAL ASPECTS OF ADULTHOOD AND AGING (3)  
Prerequisite: Home Econ 321 or 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 or permission of department. Development of curriculum for nursery school age children emphasizing experiences that develop language and physical coordination, inquiry and creativity. (Also offered as Ed 432.)

## Home Economics

- 423 SEMINAR IN ADVANCED CHILD DEVELOPMENT (3)  
Prerequisites: Home Econ 320 and permission of department. Critical analysis of aspects of child development, recent development of theories; supervised individual projects.
- 424 FAMILY RELATIONSHIPS (3)  
Prerequisites: Home Econ 120 and 224 or equivalent; Soc 351 recommended. 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.
- 426 PARENT-CHILD INTERACTION (3)  
Prerequisites: Home Econ 320 and 424 or equivalent. Emphasizes child-rearing practices, parent effectiveness and training.
- 427 FIELD STUDIES IN CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS (2-5)  
Prerequisites: concurrent enrollment in one of the following: Home Econ 420, 421, 422, 423, 424, 425 or 426; permission of department. Supervised field work with programs or agencies dealing with children or families; or work with individual children or families. S/U grading only.
- 428 FAMILY DYNAMICS (2)  
Prerequisites: student teaching or teaching experience, and permission of department. Case analysis of marriage and family interaction as it related 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 standpoint.
- 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 EDUCATION (3)  
Prerequisites: Psych 371, senior status, and 36 credits in prescribed home economics; to be taken immediately preceding student teaching. Philosophy and curriculum, emphasizing current concepts in home economics programs of the junior and senior high school.
- 442 CURRICULUM IN HOME ECONOMICS EDUCATION (3)  
Prerequisite: Home Econ 441 and student teaching or teaching experience. Development of a functional home economics program for junior and senior high and adult education through analysis and synthesis of concepts with emphasis on courses of study, scope and sequence, department management and planning department facilities.
- 443 ADULT AND VOCATIONAL EDUCATION (3)  
Principles of adult and vocational education, development of home economics programs for adult and vocational education, evolving 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.
- 448 EVALUATION IN HOME ECONOMICS (2)  
Prerequisite: Home Econ 441 or equivalent, supervised teaching in home economics or graduate status. Application of current concepts in evaluation to home economics.
- 450 CHILD NUTRITION (3)  
Prerequisites: Home Econ 250 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)  
Prerequisite: Home Econ 353; Soc/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 stages of life cycle, development of self, and the phenomenon of fashion.
- 470 HOUSING AND SOCIETY (3)  
Prerequisite: Soc 366. 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 475. Supervised experience in a professional interior design studio or retail interiors business. S/U grading only.

**497a SEX EDUCATION WORKSHOP (2)**

Prerequisite: teaching experience or student teaching experience (Home Econ 420 is acceptable), and permission of department. Aspects of human sexuality and sex education; exploration of human and technological teaching resources. Participants will choose and design a curriculum for teaching sex education at appropriate teaching level, i.e. preschool children, elementary school children, middle school students, high school students, and young adults.

**497b GOURMET FOODS (2)**

Prerequisite: permission of department. Limited enrollment. Special fee. Introduction to the art of gourmet cooking; development of cosmopolitan menus; laboratory experience, lectures and demonstration.

**497c HOUSING AND HOME ENVIRONMENT (2)**

Prerequisite: teaching experience or housing/home furnishings major; permission of department. Behavioral and economic problems involved in housing low-income and minority groups. Consideration of life styles and types of housing. Approaches for teaching housing and housing environment or working with low-income and minority groups on housing problems. Development of scope and sequence for the teacher's own classroom.

**497q EXPERIMENTAL TEXTILES AND CLOTHING (2)**

Prerequisite: home economics teaching experience and permission of department. Designed for returning home economics teachers (or undergraduates who have completed their student teaching), this one-week workshop offers an opportunity to up-date a knowledge of textiles and experiment with clothing construction techniques on a wide range of new fabrics.

**497u NEW DIRECTIONS FOR HOME ECONOMICS (2)**

Prerequisites: home economics student teaching or home economics teaching, and permission of department. Human ecology and environmental concepts applied to home economics programs. Opportunity for independent study relating materials to classroom use.

**497w CONTEMPORARY ISSUES IN FAMILY RELATIONSHIPS (3)**

Prerequisite: Home Econ 424 or equivalent. Exploration of contemporary issues in family relationships.

**497x SPECIAL PROBLEMS IN HOME FURNISHINGS FOR TEACHERS (2)**

Prerequisites: home economics teaching experience or home economics student teaching, and permission of department. Special problems in home furnishings relating to the teacher's own teaching level. Opportunity to explore resources and to develop teaching materials.

**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.)





# MATHEMATICS / COMPUTER SCIENCE

*Western Washington State College*



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 interesting 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 is also a limited facility for interactive computing. WWSC is the only college or university in Western Washington that offers a bachelor's degree in computer science.

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 in his chosen field of endeavor. 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

### *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 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,

## *Mathematics & Computer Science*

- (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

- ALBERT J. FRODERBERG (1968) Chairman, Associate Professor. BS, MS, PhD, University of Washington.
- WILLIAM R. ABEL (1962) Professor. BA, Morningside College; MA, University of South Dakota; PhD, University of Missouri.
- GAIL H. ATNEOSEN (1968) Associate Professor. AB, MA, Indiana University; PhD, Michigan State University.
- DONALD R. CHALICE (1967) Associate Professor. BA, University of Wisconsin; MA, PhD, Northwestern University.
- ROBIN W. CHANEY (1969) Professor. BA, PhD, Ohio State University.
- KEITH CRASWELL (1966) Associate Professor. BS, MS, PhD, University of Washington.
- JAMES E. DUEMMEL (1966) Associate Professor. BA, MA, PhD, Ohio State University.
- 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.
- KENNETH C. LARSON (1973) Assistant Professor. BA, MA, Sonoma State College.
- 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) Assistant 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.
- DEAN WEBB (1969) Assistant Professor. BS, MS, 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.

## BACHELOR OF ARTS IN EDUCATION

*Major* Elementary 45 credits

- Math 121, 122, 222
- Math 281, 481
- Not less than 12 credits numbered 300 or above
- Electives under departmental advisement

\*On Leave 1973-74  
 \*\*On Leave Fall Quarter 1973

*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 Chemistry Department section for Mathematics-Chemistry Combination

### 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 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.

## BACHELOR OF ARTS

*Major* 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

## *Mathematics & Computer Science*

- Supporting courses: one of the following completed sequences-
  - Physics 231, 232, 233
  - Econ 201, 202, 301, 302
  - Psych 306, 307, 413
  - Computer Science 310, 311, 312
  - Chem 121 and 122 or 124; 123, 127
- Language competency in French, German or Russian strongly recommended

### *Minor* 25 credits

- Math 122, 222, and 223
- Either Math 201 and Math 202 or Math 301
- Electives under departmental advisement

### *Major—Computer Science*

64-66 credits plus Supporting Courses

- Computer Science 210, 211, 301, 310, 311, 312, 335, 375, 410, 440
- 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
- 11 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. These concentrations satisfy both the major and the minor for an Arts and Sciences degree.

*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*--80 credits plus Supporting Courses (Satisfies both a major and a minor)

- Math 122, 222, 223; either 201 and 202 or 301; 331, 332 or 430, 312, 401
- Computer Science 110 or 210, 310, 311, 335, 375, 475, 476
- 21 additional credits in computer science and mathematics as advised
- Supporting courses: Physics 231, 232, 233 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

(See also *Computer Science courses listed below.*)

- 100 ALGEBRA (5)  
Prerequisites: clearance of mathematics entrance test; one year of high school algebra. For students who do not have sufficient preparation for college level mathematics. Credit not allowed for students with 3 years high school mathematics.
- 105 TRIGONOMETRY (3)  
Prerequisites: clearance of mathematics entrance test; one and one-half years high school algebra or Math 100 and one year high school geometry. Angles and angle measurement, logarithms, trigonometric functions, identities, conditional equations, inverse functions, solution of plane triangles, complex numbers.
- 121 INTRODUCTION TO COLLEGE MATHEMATICS (5)  
Prerequisites: clearance of mathematics entrance test; one and one-half years of algebra, one-half year of trigonometry. Mathematical logic, sets, the real number system, equations, inequalities, and functions and their graphs.

- 122 ANALYTICAL GEOMETRY AND CALCULUS (5)  
Prerequisite: Math 121 or equivalent. Coordinate geometry of the plane; limits, the derivative, differentiation, the differential, and 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.
- 197 WORKSHOP FOR HIGH SCHOOL JUNIORS (5)  
Prerequisites: completion of junior year of high school and recommendation of high school counselor or a 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 the first four weeks of the summer session. Intended for, but not restricted to, students who have completed the junior year but not the senior year of high school. Not open to students with college level credit in mathematics. Satisfactory/Unsatisfactory grading.
- 201, 202 INTRODUCTION TO LINEAR ALGEBRA (3 ea)  
Prerequisite: Math 121 or 220; 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, economics, psychology, and other social sciences. Not open to students who have credit in Math 122.
- 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.

## Mathematics & Computer Science

- 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 321. Systems of numeration, sets, relations and number systems, and integration of these concepts.
- 297a ALGEBRA WITH ECONOMICS — BUSINESS APPLICATIONS (4)**  
Prerequisite: Math 100 or qualifying examination to be given on the first day of class. Absolute value, linear and quadratic functions, inequalities, the factor theorem, systems of equations, matrices and determinants, logarithm and exponential functions, arithmetic and geometric progressions, introduction to limits, introduction to probability theory.
- 297b CALCULUS WITH ECONOMICS — BUSINESS APPLICATIONS (5)**  
Prerequisite: Math 297a. Limits, continuity, derivatives, tangents, maxima and minima, exponential growth, the integral graphing in two and three variables, partial derivatives, extremal problems, least squares. Many examples and exercises with economics-business application.
- 297c PROGRAMMING AND STATISTICS WITH ECONOMICS — BUSINESS APPLICATIONS (5)**  
Prerequisite: Math 297b. Descriptive statistics, distribution of  $X$  and central limit theorem, hypothesis testing, estimation, confidence intervals, least squares, linear regression, multiple regression, analysis of variance. Computer programming will be taught and used throughout the course.
- 301 VECTORS AND MATRIX ALGEBRA (4)**  
Prerequisite: Math 222 or permission of instructor. 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 or permission of instructor. 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, 305, or permission of instructor. 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 APPLIED ANALYSIS (4)**  
Prerequisite: Math 223 and corequisites either Math 202 or 301. Sequences and series, improper integrals, absolute convergence, uniform convergence, power series and Taylor's series, the gamma function, Fourier series and orthogonality, nonlinear differential equations.
- 332 APPLIED ANALYSIS (4)**  
Prerequisite: Math 331. General existence theorems, systems of equations, phase space, differential inequalities, linear differential equations and the Laplace transform, the Dirac distribution, series solutions, Legendre functions, Bessel's equation, Green's function.
- 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, or permission of instructor. 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.

## Mathematics & Computer Science

- 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.
- 461 MODERN GEOMETRY (4)  
Prerequisite: Math 401. Bilinear functions, orthogonal groups, general symmetries.
- 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 1973-74.
- 481 MATHEMATICS IN GRADES 1 THROUGH 8 (4)  
Prerequisite: Math 281 or permission of instructor. 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.
- 496a,b,c HONORS TUTORIAL (2 ea)  
Prerequisite: permission of department.
- 497a FOUNDATIONS OF THE SECONDARY MATHEMATICS CURRICULUM (3)  
Prerequisite: Math 202 and 222. The secondary mathematics curriculum will be examined in detail. The student will be provided with a sound basis from which to understand and teach the current curriculum in algebra and geometry.
- 497b PRACTICUM IN SECONDARY EDUCATION (3)  
Prerequisite: Math 497a or 483. The student will be given classroom experience in the local high schools. Use of current materials and methods will be emphasized.
- 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.

## Mathematics & Computer Science

- 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.
- 561 MODERN GEOMETRY (4)  
Prerequisite: graduate status or permission of instructor. Modern geometry approached from the standpoint of linear algebra and convex sets.
- 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.

## 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 or permission. Linear and quadratic programming; applications to game theory and to allocation and transportation problems.
- 375 NUMERICAL METHODS (4)  
Prerequisites: Computer Science 210 or 211 or permission; 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.

## COURSES IN COMPUTER SCIENCE\*

- 101 INTRODUCTION TO COMPUTERS (3)  
Prerequisite: clearance of mathematics entrance test. Basic notion of what a computer is and how it is used.

*\*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.*

## Mathematics & Computer Science

### 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 (3)

Prerequisite: Math 122 or Math 220 or permission. 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 (2)

Prerequisite: Computer Science 210 or "B" or "A" in Computer Science 110 or permission. 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.

### 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 or permission. 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, multiprocessing, 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 411, or 15 upper division credits in mathematics and/or computer science. Basic concepts of dynamic modeling and system simulation, design and methodology of simulation models, model validation, simulation languages, application to decision making.

### 440 DATA STRUCTURES (4)

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

*Western Washington State College*



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 with the emphasis always on dealing directly with the art through performance, composition and analysis.

Two undergraduate 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 Arts and Sciences graduates 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 Singers, College Choir, Concert Choir, Chamber Choirs, Symphonic Band, Wind Ensemble, Workshop Bands, 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.
- JACOB HAMM (1967) Associate Professor. Teacher's Certificate, London Teachers' College; BM, John Brown University; MM, Eastman School of Music; DMA, West Virginia University.
- EDWIN M. LaBOUNTY (1968) Associate Professor. AB, Yankton College; BM, MM, MusD, University of Indiana.
- ROBERT JOHN McINTYRE (1969) Associate Professor. ARCT, Artist Diploma, University of Toronto; MM, Boston University.
- CHARLES M. NORTH (1966) Professor. BS, Northwestern University; BM, Chicago Musical College; MM, DMA, Eastman School of Music, University of Rochester.
- BERNARD W. REGIER (1945) Professor. BSM, Kansas State Teachers College; MMus, University of Michigan; DMA, University of Southern California.
- 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.

DON C. WALTER (1947) Associate Professor. BA, Wartburg College; MA, Colorado State College; EdD, University of Oregon.

EVELYN HINDS WELLMAN (1960) Assistant Professor. BA in Ed, MEd, Western Washington State College.

EUGENE S. ZORO (1969) Assistant Professor. BM, MM, Eastman School of Music of the University of Rochester.

## 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 Arts and Science program may, under advisement, substitute up to 6 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. All music majors (except Elementary) are expected to study privately during each quarter in residence except during the student teaching quarter. 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.

**DOUBLE BASS**—Simandl, *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.

## Music

### UPPER DIVISION APPLIED MUSIC

Students wishing to take upper division applied music (Music 311-315, 411-415) 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.

### THEORY AND MUSIC HISTORY

#### PLACEMENT EXAMINATION—TRANSFERS

Placement examinations are required for all incoming transfer music students to determine their correct status in the theory and music history programs. These examinations will be given to all transfers prior to the opening of the quarter in which they enroll. Transfers 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 and all others enrolled in first year theory courses 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

*Major* 70 credits plus Performance Requirement

- Theory: Music 131, 132, 133, 231, 232, 233, 331, 332, 333
- History: Music 341, 342, 343; Music 443 (one course in the series)
- Conducting: Music 309, 310, or Music 307, 308
- Applied Music: major performing instrument or voice, each quarter of residence, three of which must be in courses numbered 411-415
- Additional study in major applied instrument or voice, or all or part in a secondary instrument or voice, 6 credits
- Music 326 or 327, 3 credits
- Major performing group as stated above for all majors
- Approved Senior Recital
- Concert attendance and piano competency requirements as stated above

*Minor* 25 credits

- Theory: Music 131, 132, 133, 231, 232
- History: one from Music 341, 342, 343, under advisement
- Applied Music: major performing instrument or voice, 4 credits
- Piano competency requirement as stated above for all majors and minors

## BACHELOR OF ARTS IN EDUCATION

*Major Concentration* 64 credits  
plus Performance Requirement

This Specialist in Music Education concentration satisfies requirements for both a major and a minor.

- Theory: Music 131, 132, 133, 231, 232, 233
- History: Music 341, 342, 343
- Conducting: Music 309, 310, or Music 307, 308 Music 351
- Music 451, 452 (Elementary emphasis), or Music 462, 464 (Secondary emphasis)
- Methods: Music 105, 106, 204, 205, 301, 302 plus two courses selected from Music 107, 206, 207, 303. Those with voice as major instrument, replace Music 105, 106, 107 with equal credits in music electives
- Applied Music: major performing instrument or voice, minimum of 11 credits, with a minimum of 5 credits numbered 311-315 or above
- Major performing group as stated above for all majors
- Concert attendance and piano competency requirements as stated above

*Major* Elementary  
39 credits plus Performance Requirement

- Theory: Music 131, 132, 133, 231, 232
- History: Music 341, 342, 343
- 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 311-315 or above
- Major performing group as stated above for all majors
- Concert attendance, piano competency requirements as stated above
- Music 233 recommended as an elective as it is prerequisite to graduate study

*Minor* 25 credits

- Theory: Music 131, 132, 133, 231, 232
- History: one from Music 341, 342, 343
- Methods: Music 105
- Applied Music: major performing instrument or voice, 3 credits in courses numbered 211-215 or above
- Piano competency as stated above

### *Applied Music Challenge*

A student transferring without credit in applied music may challenge any level below that on which he is entering as a student (e.g. students entering as juniors could challenge 200 level courses).

### *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 64 credit major will complete a 16 credit supervised teaching assignment in secondary or elementary music; those enrolling in the 39 credit elementary major will complete supervised teaching in elementary music and in a general elementary assignment.

## GRADUATE STUDY

For concentrations in music leading to the Master of Arts and Master of Education degrees, see the *Graduate Bulletin*.

## COURSES IN MUSIC

### 101, 102, 103 BEGINNING CLASS PIANO (1 ea)

Functional techniques for utilizing the piano as a tool for musical study and preparation for competency examinations. Each course prerequisite to the next.

## Music

- 105, 106, 107 CLASS VOICE AND PEDAGOGY (1 ea)  
Prerequisite: open to music majors and minors only; each course prerequisite to the next. Tone production, song repertoire, interpretation and pedagogy.
- 121 COLLEGE SINGERS (1)  
Open to all interested students having the ability to sing mixed part-songs.
- 130 FUNDAMENTALS OF MUSIC (2)  
Basic components of music notation: rhythm and melody; major and minor scales, intervals, chords, and keys.
- 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 103 or permission of instructor; each course prerequisite to the next. Continuation of Music 101, 102, 103. 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.
- 211-215 INDIVIDUAL INSTRUCTION (1 ea)  
Prerequisite: open to music majors and minors only; Minimum Applied Performance Placement audition (see above). One half hour private lesson per week.
- 211 Organ  
212 Piano  
213 Strings  
214 Winds and Percussion  
215 Voice
- 221 COLLEGE CHOIR (1)  
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 (1)  
Open to all students with band experience.
- 229 WORKSHOP BAND (1)  
Prerequisite: permission of instructor. Performance and interpretation of contemporary jazz in an ensemble situation; recent developments in the idiom; performance of student compositions and arrangements.
- 231, 232, 233 MUSICIANSHIP II (3 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, techniques 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 techniques, 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.
- 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, 308 INSTRUMENTAL CONDUCTING (3 ea)  
Prerequisite: Music 233. Music 307 prerequisite to 308. Instrumental conducting techniques, score reading, and interpretative analysis.

309. 310 CHORAL CONDUCTING (3 ea)  
Prerequisite: Music 233. Music 309 or 308 prerequisite to 310. Choral conducting techniques, score reading, and interpretative analysis.
- 311-315a,b INDIVIDUAL INSTRUCTION (1-2 ea)  
Prerequisite: open to music majors and minors only; upper division examination. One half hour private instruction per week for "a" courses, one credit; one hour per week for "b" courses, two credits. ("b" courses require permission of area coordinator.) See Upper Division Applied Music statement on page 170.
- 311a,b Organ
  - 312a,b Piano
  - 313a,b Strings
  - 314a,b Winds and Percussion
  - 315a,b Voice
- 321 CONCERT CHOIR (1)  
Prerequisite: permission of instructor. Selected group experience, vocal ability, reading skill, musicianship, and interest in serious choral music considered for membership.
- 322 COLLEGE SYMPHONY ORCHESTRA (1)  
Prerequisite: permission of instructor; open to all students who qualify.
- 323 WIND ENSEMBLE (1)  
Prerequisite: permission of instructor.
- 326 CHAMBER MUSIC (1)  
Prerequisite: permission of instructor; conference course permit required. Participation in small string and wind ensembles; string trio, quartet, brass and woodwind.
- 327 CHAMBER CHOIR (1)  
Prerequisite: permission of instructor. Trios, quartets, and madrigal groups.
- 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.
- 338 BRASS-WIND INSTRUMENT TECHNOLOGY (3)  
History, maintenance and repair of brass-wind instruments especially oriented to the needs of public school 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.
- 340a MUSIC OF OUR TIME (3)  
A course without prerequisite which deals with all contemporary music styles and media. Students will participate in music making, however no previous performance experience is required.
- 340b UNDERSTANDING MUSICAL SOUNDS AND STYLES BY EAR (3)  
A course without prerequisite musical knowledge that will investigate how musical instruments operate and the sounds 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.
- 341 HISTORY OF MUSIC TO 1600 (3)  
Prerequisite: Music 232 or permission of instructor. Music styles, forms and composers up to 1600; performance of representative composition.
- 342 HISTORY OF MUSIC FROM 1600-1800 (3)  
Prerequisites: Music 232, 341 or permission of instructor. Main styles, forms and composers in 17th-18th centuries; performance of representative compositions.
- 343 HISTORY OF MUSIC 1800 TO PRESENT (3)  
Prerequisites: Music 232, 342 or permission of instructor. Main styles, forms and composers from 1800 to present; performance of representative compositions.
- 344 MUSIC HISTORY PERSPECTIVES (3)  
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.
- 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.
- 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.

## Music

- 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.
- 411a,b-415a,b INDIVIDUAL INSTRUCTION (1-2 ea)  
Prerequisite: open to music majors and minors only; upper division examination. One half hour private instruction per week for "a" courses, one credit; one hour per week for "b" courses, two credits ("b" courses require permission of area coordinator). See Upper Division Applied Music statement on page 170.
- 411a,b Organ
  - 412a,b Piano
  - 413a,b Strings
  - 414a,b Winds and Percussion
  - 415a,b Voice
- 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.
- 424 OPERA PRODUCTION (1)  
Admission by audition. Preparation of opera scenes or a major musical production to include a public performance each quarter.
- 426 APPLIED CHAMBER MUSIC (1)  
Open to string, woodwind, piano, and voice performers by permission of instructor.
- 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.
- 440 COLLEGIUM MUSICUM (1)  
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.
- 445a CURRENT TRENDS IN MUSIC: COMMERCIAL MUSIC
- 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.



- 445d **CURRENT TRENDS: ELECTRONICS FOR THE MUSICIAN**
- 446 **PIANO MUSIC OF RAVEL AND DEBUSSY (3)**  
A study of similarities and differences in their piano music, and the emergence of "impressionism." Summers only.
- 451 **MUSIC LISTENING AND LITERATURE FOR ELEMENTARY SCHOOLS (3)**  
Literature, activities, and teaching techniques; correlation with other classroom studies; out-of-classroom activities and programs.
- 452 **CONTEMPORARY MUSIC TEACHING METHODS FOR ELEMENTARY SCHOOLS (3)**  
Introduction to Kodaly method as used in elementary and middle schools.
- 454 **STRING TECHNIQUES AND MATERIALS (2)**  
Summers only.
- 455 **BRASS AND PERCUSSION TECHNIQUES AND MATERIALS (2)**
- 456 **WOODWIND TECHNIQUES AND MATERIALS (2)**
- 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 **THE PUBLIC SCHOOL INSTRUMENTAL PROGRAM (3)**  
Problems, organization, techniques, and materials of an elementary and secondary program in instrumental 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.
- 464 **THE PUBLIC SCHOOL CHORAL PROGRAM (3)**  
Problems, organization, techniques, and materials of the secondary program in choral music.
- 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 nationally recognized performers as well as by members of Western's faculty. 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.

## Music

- 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.
- 546 **SEMINAR IN THE MUSIC OF BARTOK (3)**  
A systematic historical and analytical investigation of the music of Bartok with research in related areas. May substitute for musical media courses or Music 432 in graduate programs. Summers only.
- 547 **SHOSTAKOVICH, PROKOFIEF AND THE MUSIC OF MODERN RUSSIA (3)**  
A survey of the total output of the Russians of the 20th century plus in-depth study of single works from Shostakovich and Prokofief. Concentrated study in areas of special interest will be provided the individual student. Performances from the chamber and piano literature will be integrated with class work. Summers only.
- 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

*Western Washington State College*



What students do with philosophy is so varied that philosophy students are urged to contact members of the department for information.

## 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.
- GEORGE R. LANDRUM (1969) Assistant Professor. BA, University of Michigan; MA, PhD, Wayne State University.
- PHILLIP MONTAGUE (1966) Associate Professor. BS, Loyola University; PhD, Stanford University.
- FRANK A. MORROW (1966) Assistant Professor. AB, DePauw University; AM, PhD, University of Michigan; JD, University of Washington.
- RICHARD L. PURTILL (1962) Professor. BA, MA, PhD, University of Chicago.

## BACHELOR OF ARTS

*Major* 50 credits

- Philosophy 111 or 113
- Philosophy 102, 202, 220, 303, 310
- Philosophy 304, 306
- One course from Philosophy 305, 307, 308
- Philosophy 404, 410, 420, 425
- Electives under departmental advisement

*Minor* 25 credits

- Philosophy 102, 111 or 113, 202, 220, 303, 310
- Electives under departmental advisement

## TEACHER EDUCATION

*Minor* 25 credits

- Philosophy 102, 111 or 113, 202, 220, 303, 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.

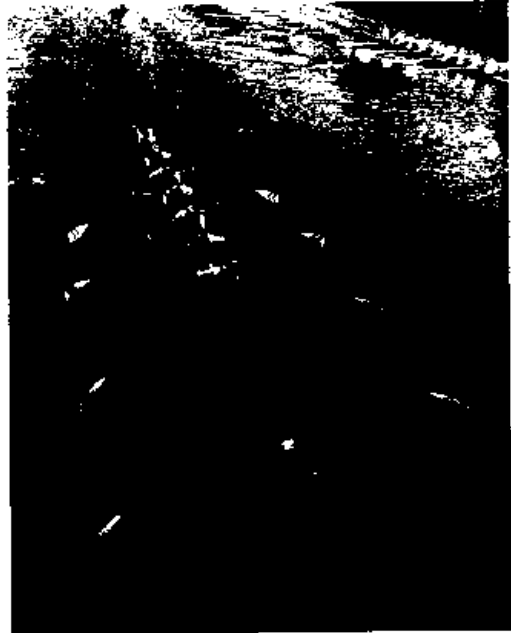
## COURSES IN PHILOSOPHY

- 102 INTRODUCTION TO LOGIC (3)  
Introduction to the techniques of formal reasoning. Acceptable general education alternative to Math 151 for students with 3 years high school mathematics.
- 111 INTRODUCTION TO PHILOSOPHY (3)  
Great recurrent philosophical problems and some of the answers which have been developed; reading and discussion of selected writings.
- 113 INTRODUCTION TO CONTEMPORARY PHILOSOPHY (3)  
Philosophical problems and answers in the 20th century, excluding existentialism.
- 202 INTERMEDIATE LOGIC (4)  
Prerequisite: Phil 102, or permission of instructor. Systems of logic and their application to philosophical problems.
- 210 PHILOSOPHY AND PERSONAL VALUES (3)  
Philosophical and critical exploration of personal values; the literature of personal values.
- 215 INTRODUCTION TO EXISTENTIALISM (3)  
Prerequisites: Phil 111, 113, or permission of instructor. Major philosophers of the existentialist school, philosophical problems and answers as seen by existentialism.
- 220 INTRODUCTION TO THE PROBLEMS OF ETHICS (3)  
Nature of moral problems and judgments; emphasis upon meaning of such concepts as "goodness," "rightness," "evil," "duty," and "happiness."

## Philosophy

- 250 **PROBLEMS IN THE 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.
- 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, or permission of instructor. 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, or permission of instructor. 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, or permission of instructor. 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, or permission of instructor. 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, or permission of instructor. 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 **SOCIAL AND POLITICAL PHILOSOPHY (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.
- 360 **ORIENTAL PHILOSOPHY AND RELIGION (3)**  
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.
- 405 **AESTHETICS (3)**  
Philosophical study of beauty and of the creation, appreciation, and criticism of works of art.
- 407 **CONTEMPORARY PHILOSOPHY (4)**  
Prerequisite: permission of instructor. Critical discussion of the "analytic" and "linguistic" trends; such figures as Moore, Wittgenstein, and J. L. Austin.
- 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 inter-relations 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 220 or permission of instructor. 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, or permission of instructor. 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 or permission of instructor. 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 483 and Soc/Anth 483.
- 515 **PHILOSOPHY OF EDUCATION (3)**  
Critical analysis of theoretical positions in educational philosophy; emphasis on modern and contemporary discussions of educational theory. Also offered as Ed 515.





**PHYSICAL EDUCATION/  
HEALTH EDUCATION**

*Western Washington State College*



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.

## 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; BS, University of California; MS, Washington State University; PhD, University of Maryland.
- M. CHAPPELLE ARNETT (1960) Associate Professor. BS, Centenary College; MS, Purdue University; EdD, University of Missouri.
- RICHARD L. BARTSCH (1972) Assistant Professor. BS, Springfield College; MA, Michigan State University.
- JUDITH S. COHEN (1971) Instructor. BS, University of Minnesota; MS, University of Wisconsin.
- PATRICIA A. FRIEDLAND (1972) Assistant Professor. BS, Oregon State College; MS, University of Oregon.
- 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.
- CHARLES F. LAPPENBUSCH (1933) Professor. BS, MA, University of Washington.
- 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.

- DONALD W. PETERSON (1971) Associate Professor. BS, University of South Dakota; MS, Springfield College; PhD, University of Oregon.
- CHARLES R. RANDALL, JR. (1962) Associate Professor. BA, Eastern Washington State College; MA, Washington State University.
- 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*

The physical education major programs have been combined for men and women students. These options offer a variety of opportunities to students to prepare for secondary, elementary, or for K-12 programs. In addition, the dance/gymnastics option is available especially for women 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 to be 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 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.



## Physical Education

### 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, women 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, 238, 241, 242m or w, 244m or w, 245m or w, 247, 250, 151m or 252w, 254, 256m or w
- Option I: 14 credits (women: adv. prof., 2 credits)
- Option II: 14 credits (women: adv. prof., 2 credits)
- Option III: 8 credits

#### 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 selected activities
- Activity and Technique Classes: PE 123, 153, 191w, 346w, and 2 credits from 220, 221, 222
- PE 201, 202, 302, 303, 307, 313 or 401
- PE 225, 226, 322, 325, 424, 425
- Supporting course: Biology 348

All entering women majors will take beginning knowledge and skill tests in badminton, basketball, folk and square dance, rhythms, softball, swimming, tennis and volleyball. 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.

#### 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 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--Athletic Coaching 25 credits

- 8 credits from PE 380, 381, 382, 383, 384
- PE 301, 304, 406, 441
- 3-6 electives under advisement

#### 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, 225, 226
- PE 220, 322, 324, 326, 425
- PE 424
- Electives under advisement

Minors must plan, under departmental advisement, to take additional course work to attain teaching competency.

## Physical Education

### 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)
- 108m Weight Training  
(repeatable to a maximum of 3 credits)

#### 110-119 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)  
(The student pays cost of basic equipment.)

#### 120-129 DANCE (1 ea)

- 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.

### BACHELOR OF ARTS (MEN AND WOMEN)

#### Major—Dance 85 credits

- PE 122, 126, 128, 225, 226, 227, 322, 323, 324, 325, 326, 424, 425
- 4 credits in PE 220, 221, 222
- Supporting courses: Biol 348-349; PE 302; Art 190; six credits from Art History 220, 230, 240; Music 140; Phil 405; three credits from Phil 111, 113; Soc 201; Psych 201; five credits from Soc 361, 362, 363, 364; Speech 130

#### Minor—Dance 25 credits

- PE 122, 126, 128, 225, 226, 322, 324, 325, 425
- 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

See Interdepartmental Programs, page 257, for detailed requirements.

#### Minor—Recreation

See Interdepartmental Programs, page 257, for detailed requirements.

### GRADUATE STUDY

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

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

150-166 INDIVIDUAL SPORTS (1 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
- 165 Bait and Fly Casting
- 166 Ice Skating

The student enrolling in 157, 158, 159, 160, 161, 162, 163, 164, 166 pays cost of transportation and individual instruction. Students in 157, 158, 159, 161, 165, 166 also furnish own equipment.

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

197a SPORTS CLINIC FOR WOMEN: BASKETBALL, GYMNASTICS, TENNIS OR VOLLEYBALL (2)

PROFESSIONAL COURSES

201 BIOMECHANICS I (2)

Prerequisites: physical education 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.

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 (1)
- 209 Recreational Dance (2)
- 211 Educational Gymnastics (2)
- 223 Modern Dance (1)
- 232 Badminton (1)
- 234 Fencing (1)
- 236 Tennis (1)
- 238m Wrestling (1)
- 241 Field Hockey (1)
- 242m Basketball (1)
- 242w Basketball (1)
- 244m Soccer (1)
- 244w Soccer and Speedball (1)
- 245m Volleyball (1)
- 245w Volleyball (1)
- 247 Football Techniques (1)
- 250 Archery (1)
- 251m Gymnastics (2)
- 251w Gymnastics (2)
- 254 Golf (1)
- 256m Track and Field (2)
- 256w Track and Field (1)

211 EDUCATIONAL GYMNASTICS (1)

Experience in gymnastics using apparatus on a non-competitive basis.

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 aquatic skills; instruction leading to qualification as an American Red Cross Water Safety Instructor.

220, 221, 222 CONTEMPORARY DANCE TECHNIQUE (2)

Prerequisites: PE 125, 223w or permission of instructor; each course prerequisite to the next. Development and practice of skills to enhance the body as an instrument of dance; emphasis on control, discipline and refinement of movement technique.

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.

## Physical Education

- 226 FUNDAMENTALS OF RHYTHM (2)  
Prerequisite: PE 125 or equivalent. Inherent factors of rhythm as applied to the forms of nature, art, and movement; emphasis on metric rhythms, musical forms, percussion and accompaniment as related to creative movement.
- 227 LABANOTATION (3)  
Prerequisite: PE 126, 225, or equivalent. Labanotation—a system of reading and notating bodily movements emphasizing the elements of direction, level, leg and arm movements.
- 280 SPORTS CONDITIONING (1)  
A program of conditioning established in consultation with the instructor to meet specific athletic needs of the student.
- 301m SCIENTIFIC FOUNDATIONS FOR ATHLETIC COACHING (5)  
Not open to students with credit in Zool 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 (4)  
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. Neuro-physiological theories of learning, individual differences, retention of skills, transfer of training, reinforcement, visual and kinesthetic perception, motivation; methods of instruction.
- 311 MOVEMENT DISCOVERY FOR CHILDREN (3)  
Prerequisites: PE 211, Psych 352, or permission of instructor. 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.
- 322 ELEMENTARY DANCE COMPOSITION (3)  
Prerequisite: PE 126 and 226. Fundamentals of composition emphasizing theme and development; form or design; time, force and spacial aspects in solo and duet studies.
- 323 ADVANCED DANCE COMPOSITION (3)  
Prerequisite: PE 322. Composition in pre-classic and modern forms.
- 324 THEORY AND PRACTICE OF CONTEMPORARY DANCE (2)  
Prerequisite: PE 126 or equivalent. Backgrounds for various dance styles provided by professional schools of modern dance.
- 325 CONCERT DANCE (1)  
Prerequisite: permission of instructor. Group and individual experience in dance as a theatre art; participation in the dance concert.
- 326 DANCE FOR CHILDREN (3)  
Creative dance, basic rhythms, simple folk and square dance for children.
- 341w, 342w, 343w, 345w, 346w OFFICIATING IN WOMEN'S SPORTS (1 ea)  
Officiating techniques in field hockey, basketball, tennis and track and field, volleyball, and gymnastics.
- 343m OFFICIATING IN TEAM SPORTS (3)  
Techniques and practice of officiating in team sports for men.
- 380 COACHING FOOTBALL (3)  
Theory of football, with methods and materials of organization.
- 381 COACHING BASKETBALL (3)  
Theory of basketball with methods and materials of organization.
- 382 COACHING BASEBALL (2)  
Theory of coaching baseball with methods and materials of organization.
- 383 COACHING TRACK (2)  
Theory of track and field events and organization and administration of a track meet.
- 384 COACHING WRESTLING (2)  
Practical and theoretical aspects of teaching wrestling with special consideration to wrestling skills, methodology, class organization, equipment and officiating.

## Physical Education

- 400 SPECIAL PROJECTS IN PHYSICAL EDUCATION (2-5)  
Prerequisites: senior status and permission of instructor. Individual instruction in special projects under supervision.
- 401 METHODS SEMINAR AND PROFESSIONAL PRACTICUM (5)  
Prerequisite: junior status and completion of 20 hours in the major program or permission of the instructor. Seminar, observation, and practical experience in teaching physical education in secondary schools.
- 402 CORRECTIVE PHYSICAL EDUCATION (3)  
Prerequisites: Biol 348-349 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 or permission of instructor. 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 or permission of instructor. 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 consent 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.
- 424 DANCE PRODUCTION (2)  
Prerequisite: PE 225. Lighting, costuming and make-up; formulating, developing, and presenting various types of dance programs.
- 425 HISTORY AND PHILOSOPHY OF THE DANCE (3)  
Prerequisite: PE 225. Historical and philosophical development of the dance from primitive man through the contemporary period.
- 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 (3-5)  
445a Physical Education for the Elementary School (3)  
445f Coaching Clinic for Women (2)  
Prerequisite: senior or graduate status.  
445k Current Developments in Offensive and Defensive Football (3)
- 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)  
Prerequisite: Psych 371 or permission of instructor. Application of measurement theory to physical education; selection and administration of appropriate tests and interpretation of results.
- 491m FIELD EXPERIENCE IN AFTER-SCHOOL ACTIVITIES (3)  
Prerequisites: senior standing and permission of department. Practical experience in local public schools in conducting activity programs.
- 495 PHYSICAL EDUCATION FOR THE MENTALLY RETARDED (4)  
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.
- 497d OFFICIATING TECHNIQUES IN WOMEN'S GYMNASTICS (2)  
Prerequisite: experience in teaching or coaching women's gymnastics. Officiating and judging techniques in competitive gymnastics.
- 497f CREATIVE DANCE FOR CHILDREN (2)  
Prerequisite: teaching experience. A workshop for teachers—elementary classroom, pre-school teachers, physical educators—in developing a variety of techniques, ideas in creative movement experiences for children. Integration of movement with poetry, language, art, and music will be incorporated.
- 497g WORKSHOP: INSIGHTS ON IMAGE STRUCTURING THROUGH ATHLETICS (2)  
Prerequisite: senior or graduate status. A workshop in developing a new philosophy of coaching through goal setting as applied to both team and individual sports.

## Physical Education

- 497h **CURRENT TRENDS: INDIVIDUALIZING INSTRUCTION IN PHYSICAL EDUCATION FOR GRADES 6-12 (2)**  
 Prerequisite: senior level or teaching experience. A workshop designed for teachers, administrators, consultants, who wish to re-orient physical education programs to a student-centered, individualized, self-pacing program for school children. A basic curricular model will be presented as well as development of behavioral objectives, learning packets, multi-media techniques, and evaluative instruments.
- 498 **STRAIGHT LINE PHILOSOPHY (3)**  
 A philosophical approach to game strategies. Not limited to those with athletic experience.
- 499 **PHYSICAL FITNESS AND THE PUBLIC SCHOOL (3)**  
 Prerequisite: senior or graduate status. Organization and development of physical fitness programs in the public schools.
- 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 (2)**  
 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.

690 THESIS (1-6)  
Prerequisite: formal advancement to candidacy for the master's degree in physical education.

402 HEALTH PROBLEMS OF COLLEGE STUDENTS (1-5)  
Prerequisite: permission of instructor. College students with special physical handicaps investigate their own problems; seminars arranged with medical specialists to discuss related factors.

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.

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.

500 PROBLEMS IN HEALTH EDUCATION (2-5)  
For the graduate student concerned with a special problem in the field.

## COURSES IN HEALTH EDUCATION

150 CONSUMER HEALTH (1)  
Analysis, selection, and evaluation of health products and services; appraisal of health information, misconceptions, superstitions; consumer protection agencies.

151 SOCIETY AND DRUGS (2)  
Psychopharmacology, classification; use and misuse of drugs; research; public law.

152 SOCIETY AND SEX (1)  
Sociological, psychological, and biological aspects of human sexuality.

252 FIRST AID (2)  
First aid for common injuries and illnesses based on the American Red Cross Standard and Advanced First Aid courses. The student qualifies for the American Red Cross Certificate.

350 CURRENT INFORMATION IN HEALTH SCIENCE (3)  
Topics covered are human sexuality, family life education, drug education, consumer health, chronic, degenerative and behavioral diseases. (Not available to those who have taken H Ed 150, 151, and 152.)

352 THE FIRST AID INSTRUCTOR (1)  
Prerequisite: current advanced American Red Cross First Aid Certificate; instruction leading to qualification for the American Red Cross First Aid Instructor Certificate.

400 SPECIAL PROJECTS IN HEALTH SCIENCE (2-5)  
Prerequisite: senior status and permission of instructor. Special problems for individual students.







# PHYSICS

*Western Washington State College*



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. 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 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) Associate Professor. BSc, MSc, Panjab University; PhD, University of British Columbia.
- LESLIE E. SPANEL (1968) Assistant 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) Assistant 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* Secondary 45 credits plus Supporting Courses

- Physics 231 to meet the general education requirement
  - 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

*Minor* 25 credits plus Supporting Courses

- Physics 231 (or 131) to meet the general education requirement
- 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 to meet the general education requirement
- 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

**BACHELOR OF ARTS**

*Major* 53 credits plus Supporting Courses

- Physics 231 to meet the general education requirement
- 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* 25 credits plus Supporting Courses

- Physics 231 for general education requirement
- 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

*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 for general education requirements
- 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 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

## Physics

- 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 to meet the general education requirement
- 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 **ELEMENTARY PHYSICS (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.
- 102 **MODERN PHYSICS FOR NON SCIENTISTS (3)**  
Prerequisite: Physics 101 and clearance of mathematics entrance exam. Selected topics in modern physics using Physics 101 as a foundation; not available for credit to science majors.
- 103 **ELEMENTARY ASTRONOMY (4)**  
Prerequisite: one and one-half years of high school algebra, or Math 100, or permission of instructor. Not open to those who have completed or intend to take Physics 131. Not normally approved as a substitute for 101. A survey of astronomy including the solar system, stellar evolution, galactic structure, and cosmology. Intended for the general student.
- 105 **INTRODUCTION TO SOLAR SYSTEM ASTRONOMY (3)**  
Prerequisites: mathematics equivalent of one and one-half years high school algebra; high school physics or chemistry recommended. The real and apparent positions and motion of stars and planets; determining position on earth; the solar system's physical characteristics and the processes by which such information is deduced; theories of origin of the solar system.
- 131 **PRINCIPLES OF PHYSICS (4)**  
Prerequisites: high school algebra and geometry or equivalent; concurrent enrollment in college level algebra recommended. Classical mechanics.
- 132 **PRINCIPLES OF PHYSICS (5)**  
Prerequisite: Physics 131. Electricity and magnetism.
- 133 **PRINCIPLES OF PHYSICS (5)**  
Prerequisite: Physics 132. Introduction to relativity, quantum theory 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, 202, 203 **MATHEMATICAL METHODS IN THE PHYSICAL SCIENCES (2 ea)**  
Prerequisite: Math 121 or permission; Physics 201 prerequisite to 202, 203. (Math 122 recommended concurrent with 201.) Application to solution of physical problems; use of differential equations, linear algebra, and matrices; vector integration; elementary computer methods and applications.
- 205 **INTRODUCTION TO STELLAR ASTRONOMY (3)**  
Prerequisites: one and one-half years high school algebra and 3 credits in college physics. Physical characteristics of stars, nebulae and galaxies studied through inferential methods.

- 225 **INTRODUCTION TO OPTICS (3)**  
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 222, or permission of instructor. 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.
- 311 **RADIATION BIOPHYSICS (3)**  
Prerequisites: Physics 133 and Math 121 or permission of instructor. 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.
- 341 **ANALYTICAL MECHANICS (4)**  
Prerequisites: Physics 332 and Math 222. Vector treatment of the laws of motion; Lagrange's equations. Offered summers only, recommended for returning physics teachers.
- 355 **FUNDAMENTALS OF ELECTRONICS (3)**  
Prerequisite: Physics 332 or permission of instructor. 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 or permission of instructor. Multistage amplifiers, feedback and feedback oscillators, modulation and demodulation; laboratory.
- 361 **THERMODYNAMICS (3)**  
Prerequisites: Physics 332 and Math 223 or permission of the instructor. 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.
- 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.
- 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.
- 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.

## Physics

- 401 SENIOR LABORATORY (2-3)  
Prerequisite or concurrent: Physics 332. Experiments in mechanics.
- 402 SENIOR LABORATORY (2-3)  
Prerequisite: Physics 431. Experimental work in x-ray diffraction; magnetic resonance; thin film properties; electron-positron annihilation in solids.
- 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 or permission of instructor. 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: 30 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 or permission of instructor. 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 or permission of instructor. 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 (3-9)

Prerequisite: permission of instructor and department chairman. Investigation of an original problem in physics under supervision.









# POLITICAL SCIENCE

*Western Washington State College*



## 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 sciences 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

- GERARD F. RUTAN (1969) Chairman. Associate Professor. BA, MA, University of Montana; PhD, University of North Carolina at Chapel Hill.
- ALFRED S. ARKLEY (1970) Assistant Professor. AB, Harvard University; 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.
- EVERETT W. CHARD (1968) Assistant Professor. BA, Miami University, Ohio; MA, PhD, University of California, Berkeley.
- DAVID E. CLARKE (1969) 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) Assistant 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.
- RALPH E. MINER (April 1970) Associate Professor. BA, San Jose State College; MA, PhD, University of Oregon.
- HENRY G. SCHWARZ (1969) Professor of Political Science and History. BA, MA, PhD, University of Wisconsin.
- MANFRED C. VERNON (1964) Professor. LLB, University of Cologne; JD, University of Berlin; PhD, Stanford University.
- 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 High Street Hall, room 25, 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 101, 250, 489
- 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, 454, 475

*Politics and Government:* Political Science 340, 343, 345, 346, 353, 417a, 423, 426, 427, 429, 440, 441, 442, 443, 450, 454, 455, 480, 481

*Public Policy and Administration:* Political Science 320, 346, 353, 417e, 417g, 420, 421, 422, 423, 424, 426, 427, 428, 429, 444a,b, 454, 481

*Public Law:* Political Science 210, 310, 315, 410, 411, 412, 428, 488

*Political Theory:* Political Science 360, 365, 366, 417f, 424, 442, 460, 461, 462, 463, 465, 480, 481

*International Relations:* Political Science 270, 375, 376, 411, 417a, 417b, 417c, 417d, 470, 474, 475, 476

*Minor* 25 credits

- Political Science 101
- Political Science 250
- Remaining credits from at least 2 areas

*Minor—Canadian and Canadian American Studies*  
30 credits

See Interdepartmental Programs, page 253, for specifications.

*Minor—East Asian Studies* 30 credits

This may be added to the major for a Major Concentration.

See Interdepartmental Programs, page 253, for specifications.

*Major-Minor Concentration—  
Public Policy and Administration* 104 credits,  
minimum

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 104-119 credits, depending upon course options selected, satisfies both a major and a minor in political science.

The courses indicated by one asterisk (\*) also satisfy the Communications, Option 1, Social Science, Options 2A, 2B, and Mathematics-Logic portions of the College General Education requirements (see catalog page 47).

- English 101\* (subject to waiver, see catalog page 47), and 201 or 202
- Speech 204\* or 497c
- Sociology 201\*
- Psychology 201\*, and 320 or 340
- Economics 201\*
- Mathematics 297a\* (Math 100 or qualifying exam a prerequisite)
- Business Administration 251, 252, 356
- Political Science 101\*, 250\*, 210 or 315, 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, 454, or Huxley 482, or one course from the College of Ethnic Studies
  - (4) Political Science 417e, 426, 428, 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 297b and 297c 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:

**\*\*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.**

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 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, 210, 250, 270, 291, 320, 481, 482; political science electives under advisement to total 15 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 28 credits

- Political Science 101, 250, 270, 481, 482
- Electives under departmental advisement to total 5 credits

### Minor—East Asian Studies 30 credits

See Interdepartmental Programs, page 253, for specifications.

## Political Science

### Minor—Canadian and Canadian American Studies 30 credits

See Interdepartmental Programs, page 253, for specifications.

## 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.

## INTERSHIPS

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.

197a DYNAMICS OF COMMUNITY ORGANIZATION (5)  
(New Careers Program.)

197b PRACTICAL PUBLIC ADMINISTRATION (3)  
(New Careers Program.)

197c INTRODUCTION TO ADMINISTRATIVE THEORY (3)  
(New Careers Program.)

210 INTRODUCTION TO CONSTITUTIONAL LAW (5)  
Introduction to the general role of Judicial Review in U.S. Constitutional Democracy in the past with some emphasis on the most relevant contemporary developments in Constitutional Law.

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 291 or permission of instructor. Introduction to Parliamentary political systems; analysis of selected structures; examination and comparison of selected parliamentary politics.

302 WESTERN EUROPE (5)  
Prerequisite: Pol Sci 101 or 291 or permission of instructor. Governments and politics of selected western European states.

303 SOVIET UNION AND EASTERN EUROPE (5)  
Prerequisite: Pol Sci 101 or 291 or permission of instructor. The political system of the Soviet Union and other communist states in Eastern Europe.

304 LATIN AMERICA (5)  
Prerequisite: Pol Sci 101 or 291 or permission of instructor. Political, socio-economic and cultural problems of Latin America.

305 THE MIDDLE EAST (3)  
Prerequisite: Pol Sci 101 or 291 or permission of instructor. Political, cultural, and governmental problems of the Middle East.

- 306 **CENTRAL EUROPE (5)**  
Prerequisite: Pol Sci 101 or 291 or permission of instructor. Governments and politics of selected central European states.
- 307 **EAST ASIA (5)**  
Prerequisite: Pol Sci 101 or 291 or permission of instructor. 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 or permission of instructor. 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 or permission of instructor. Selected political systems.
- 310 **AMERICAN CONSTITUTIONAL LAW (5)**  
Prerequisite: Pol Sci 210. Significant Supreme Court decisions interpreting major parts of the Constitution in practice. Emphasis on Separation of Powers and Federal Division of Powers.
- 315 **LAW AND SOCIETY (3)**  
Prerequisite: Pol Sci 250 or permission of instructor. A comparative study and analysis of public policy on outstanding contemporary socio-political issues.
- 320 **PUBLIC ADMINISTRATION (5)**  
Prerequisite: Pol Sci 250, or one course from Psych 201 or 340, Econ 201, or BA 101, or permission of instructor. Consideration of contemporary concepts of organizational structure and behavior, administrative processes and procedures, and individual behavior in complex public organizations.
- 340 **POLITICAL PARTIES (5)**  
Prerequisites: Pol Sci 101 and 250, or permission of instructor. Political parties and party systems in the West.
- 343 **POLITICAL COMMUNICATION (3)**  
Prerequisite: Pol Sci 101 or 250 or 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 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 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 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)**  
Prerequisites: Pol Sci 101 and 250, or permission of instructor. Origin and evolution of major concepts of political theory.
- 365 **POLITICAL INQUIRY (5)**  
Prerequisite: Pol Sci 101 or 250 or 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 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 or permission of instructor. Background organization of American foreign policy; the conduct of diplomatic relations with other states; current issues and problems in foreign affairs.
- 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 101 or 291 or permission of instructor. Canadian social and political systems; governmental structures and functions; social, political, economic problems and foreign relations.
- 410 **THE SUPREME COURT AND CIVIL RIGHTS (3)**  
Prerequisites: Pol Sci 210, 250 and 310. Leading decisions regarding First Amendment freedoms, procedural rights in trials. Fourteenth Amendment liberties, due process of law, and equal protection of the laws.
- 411 **INTERNATIONAL LAW (5)**  
Prerequisite: Pol Sci 270 or permission of the instructor. Origin, principles, and problems.

## Political Science

- 412 **THE WARREN COURT (3)**  
Prerequisites: Pol Sci 210 and 250. Case method approach to revolutionary and unique era of the U.S. Supreme Court under Chief Justice Earl Warren; primary emphasis on constitutional law and civil rights not covered in Pol Sci 310 and 410.
- 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 or permission of instructor.
- 417e **The Budgetary Process**  
Prerequisite: Pol Sci 320 or permission of instructor.
- 417f **Political and Social Simulations**
- 417g **Modern Bureaucratic Politics**  
Prerequisite: Pol Sci 320 or permission of instructor.
- 417h **Contemporary Canadian Politics**
- 420 **ENVIRONMENTAL POLITICS AND ADMINISTRATION (5)**  
Prerequisite: Pol Sci 320 or permission of instructor. Problems in air and water pollution, forest policies, food supply, minerals, recreation and wilderness areas, and power.
- 421 **METROPOLITAN AREA GOVERNMENT (5)**  
Prerequisite: Pol Sci 353 or permission of instructor. 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 (3)**  
Prerequisite: Pol Sci 320 or permission of instructor. 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.
- 423 **THE AMERICAN EXECUTIVE (3)**  
Prerequisite: Pol Sci 250 or permission of instructor. The executive branch, its organization and problems.
- 424 **ADMINISTRATIVE THEORY (3)**  
Prerequisite: Pol Sci 320 or permission of instructor. Organizational theory relevant to public administrative settings.
- 426 **POLITICS AND PUBLIC FINANCE (5)**  
Prerequisite: Pol Sci 250. 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. 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.
- 428 **THE REGULATORY PROCESS (3)**  
Prerequisite: Pol Sci 320 or permission of instructor. Administrative regulation in relation to the political process.
- 429 **ADMINISTRATION AND DEMOCRACY (5)**  
Prerequisite: Pol Sci 320 or permission of instructor. 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 or permission of instructor. Governments and political movements in the twentieth century.
- 431 **MODERN JAPANESE POLITICS (5)**  
Prerequisite: Pol Sci 291 or 307 or permission of instructor. 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 or permission of instructor. 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.
- 440 **THE LEGISLATIVE PROCESS: THE STATE LEGISLATURE (5)**  
Prerequisite: Pol Sci 353, or permission of instructor. 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. Field research in Olympia.
- 441 **THE LEGISLATIVE PROCESS: THE NATIONAL CONGRESS (3)**  
Prerequisites: Pol Sci 101, 250. The politics and policies of the National Congress in the internal organization of the U.S. Senate and House of Representatives and in their external relations with the President, the Bureaucracy, Interest Groups, and the Voters.



- 442 POLITICAL BEHAVIOR (5)  
Prerequisite: Pol Sci 366 and 340 or permission of instructor. Human action in political settings, with emphasis on social class analysis, voting, and legislative behavior.
- 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 equivalent or permission of instructor. 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.
- 450 POLITICS, CAMPAIGNS AND ELECTIONS (5)  
Prerequisite: Pol Sci 340 or permission of instructor. Voters and voting behavior; candidates and campaign strategy; the resources of politics—workers, money, and mass media.
- 454 COMPARATIVE SUB-NATIONAL POLITICAL SYSTEMS (3)  
Prerequisite: Pol Sci 353 or permission of instructor. Sub-national political systems with emphasis on decision-making structures and selected problems, primarily in North America and Europe.
- 455 COMMUNITY POLITICAL SYSTEMS (5)  
Prerequisite: Pol Sci 353 or permission of instructor. Interrelation of formal and informal decision-making structures at metropolitan and regional levels and below; power structure and "elite" literature.
- 460 POLITICAL THEORY: ANCIENT AND MEDIEVAL (3)  
Prerequisite: Gen St 121 or Pol Sci 360 or permission of instructor. Origin and evolution of major concepts in Western political thought from Pericles to Machiavelli.
- 461 POLITICAL THEORY: RENAISSANCE AND MODERN (3)  
Prerequisite: Gen St 122 or Pol Sci 360 or permission of instructor. Origin and evolution of major concepts in Western political thought from Machiavelli to Edmund Burke.
- 462 POLITICAL THEORY: CONTEMPORARY IDEOLOGIES (3)  
Prerequisite: Gen St 123 or Hist 107 or Pol Sci 360 or permission of instructor. Origin and evolution of major concepts in Western political thought from Edmund Burke to the present; development of modern conservatism, liberalism, Marxism, and Fascism or National Socialism.
- 463 AMERICAN POLITICAL THOUGHT (5)  
Prerequisites: History 203, 204, or equivalent, or Pol Sci 101 and/or 250. Major concepts in American political thought from the Colonial period to the present.
- 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.
- 470 WAR AND PEACE (5)  
Prerequisite: Pol Sci 270. Causes of war and proposals for preventing it; special attention to arms races, disarmament, negotiation.
- 474 INTERNATIONAL ORGANIZATION (3)  
Prerequisite: Pol Sci 270 or permission of instructor. Development, organization, and activities of various types of international institutions, including the United Nations.
- 475 AUTHORITARIAN AND TOTALITARIAN CIVIC CULTURES (3)  
Prerequisite: Pol Sci 101 or permission of instructor. An examination and analysis of the political-social structures of selected authoritarian/totalitarian polities.
- 476 CHINA, JAPAN AND THE U.S.: WAR AND PEACE IN EAST ASIA (5)  
Prerequisite: Pol Sci 270 or 307 or permission of instructor. 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.
- 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 (3)**  
Prerequisite: 15 credit hours in political science and Social Science Ed 425 or 426 or teaching experience or permission of instructor. 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.
- 488 PRE-LAW AND CRIMINAL JUSTICE (3)**  
Prerequisite: permission of instructor. Introduction to and examination of the academic study of jurisprudence and the practice of law; examination of non-law school options in graduate programs in jurisprudence; introduction to legal training and to criminal justice programs and vocational opportunities (corrections, probation, parole, rehabilitation, police, etc.); study of the criminal justice system in the United States.
- 489 THE DISCIPLINE OF POLITICAL SCIENCE (5)**  
Prerequisite: 30 credit hours in political science. Consideration of the study of political phenomena; scope and methods of the discipline; role of political science as an academic discipline and in the community.
- 496a,b,c HONORS TUTORIAL (2-5 ea)**
- 497q SIMULATION AND GAMES WORKSHOP (2)**  
An introduction to games and simulations of political, economic and social processes that are used at the middle and high school levels.
- 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)**
- 505 SEMINAR IN COMPARATIVE GOVERNMENT AND POLITICS (3)**  
Principles of government and politics in existing and developing states.
- 510 SEMINAR IN AMERICAN PUBLIC LAW (3)**  
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 ADMINISTRATION (3)**  
Organizational theory and practice in public settings; comparative aspects.
- 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 (3)**  
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

*Western Washington State College*



"Many are the wonders, but none is more wondrous than man."

— Sophocles

For much of the recorded history of serious inquiry about the nature of things, scholars have repeatedly called for the study of mankind 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.

Professionally, 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. However, elaborating these into specific jobs, 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 as guidance counselors, 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 40 men and women the department offers two formal majors, one in general psychology and one in child development. Since the number of required courses is small, students can complete their major from electives in a large number of areas such as abnormal psychology, animal behavior, clinical and counseling psychology, cross-cultural psychology, educational psychology, human learning and memory, human population problems, humanistic psychology, industrial psychology, motivation, perceptual and sensory processes, personality, physiological psychology, psychological tests and measurements, school counseling, school psychology, social psychology, and thinking and language.

Having sound evidence that active learning experiences are superior to more passive involvement, the department encourages students to become involved personally in projects of their own making or one of those that is of ongoing interest in the department. Examples of research and demonstration projects that are currently underway are:

The effects of alcohol on behavior; the enhancement or inhibition of curiosity in children; field experiences in mental hospitals and mental health clinics; an on-the-job training program for public school teachers and counselors; studies of decision-making processes in family planning; studies of exploratory behavior in animals; research on aggression and conflict; projects involved with the improvement of school and college experience for American ethnic groups; studies of personal space and social distance; the publication of an interdisciplinary and international research periodical, the *Journal of Cross-Cultural Psychology*, which is sent to more than 80 countries; and research on population control in Asia and America.

Details of these projects along with many others can be obtained from the departmental office in Miller Hall and also by consulting the department's booklet, "Undergraduate Study of Psychology at Western."

## PSYCHOLOGY FACULTY

- PETER J. ELICH (1961) Chairman. Professor. BA, University of Washington; MEd, Western Washington State College; PhD, University of Oregon.
- FRANCES E. ABOUD (1973) Lecturer. BA, University of Toronto; MA, McGill University.
- HENRY L. ADAMS (1957) Professor. BA, MA, University of Kentucky; PhD, University of Illinois.
- DOUGLAS A. BERNSTEIN (1973) Associate Professor. BS, University of Pittsburgh; MA, PhD, Northwestern University.
- DON F. BLOOD (1951) 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) Associate 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) Associate 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) Associate Professor. BA, Stanford University; MA, PhD, Michigan State University.
- MARCIA Z. LIPPMAN (1969) Assistant Professor. BA, MA, Michigan State University; PhD, University of British Columbia.
- WALTER J. LONNER (1968) Associate 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) Assistant 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.
- 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.
- JOHN R. SAUER (1971) Assistant Professor. BA, Portland State University; PhD, University of California.
- RONALD W. SHAFFER (1970) Assistant Professor. BA, California State College, Los Angeles; MA, PhD, University of New Mexico.
- SANDRA S. SMILEY (1969) Assistant 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.
- 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* 40 credits plus Supporting Courses

- Psychology 201, 306, 307 (305 recommended)
- Two courses from Psych 402, 403, 406, 407, 408, 409
- One course from Psych 421, 422, 423
- 12 credits in psychology under advisement

## Psychology

- Supporting courses: Phil 102, or one of the following: 111, 113, 202, 302, 310, or 411 and 15 hours (above 101 survey courses) in *one* of the following: chemistry, physics, math, computer science, zoology or biology

Recommended additional electives: one year of a foreign language, upper division mathematics or science courses.

Students planning master's degree work in psychology should consult the *Graduate Bulletin* for prerequisite courses.

### Minor 24 credits

- Psychology 201
- Two courses from Psych 306, 307, 313, 320, 340, 341, 352, 402, 403, 407, 408, 409, 413
- Electives under advisement

(Psych 341, 343, 403, 407, 409, 410 are recommended for biology majors; Psych 320 for economics majors)

### Major Child Development 55 credits\*

Dr. Fred Grote, Student Adviser

- Psychology 201, 306, 307, 352
- One course from Psych 402, 403, 404, 406, 407, 408, 409
- Three courses from Psych 457, 458, 459, 460, 461
- Electives: recommended courses include: Psych 305, 313, 340, 341, 353, 402, 403, 406, 407, 408, 409, 410, 411, 413, 421, 422, 423, 455, Biology 370

Students planning to pursue graduate study are advised to take one of the supporting sequences of chemistry, physics, math, or biology listed above.

\*Prospective teachers electing concentration in Child Development are advised to take Psych 408 or 461 in lieu of Psych 351.

## 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

Students with an Elementary Education major minoring in psychology are advised to elect course work beyond the required 20 credits. A minimum of 25 credits is suggested.

## DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a psychology major who wishes to graduate "with honors" will work out a program of studies with the departmental honors adviser, complete Psychology 401 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 351, 371, 372, 352, 353, 491, 492, 497e, 497h, 497j, 497n, 497a. With the exception of Psych 352 and 353, these courses are not applicable to the arts and science major or minor.*

## Psychology

- 201 GENERAL 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. Extended examination of selected topics in general psychology.
- 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.
- 313 PERSONALITY (5)**  
Prerequisite: Psych 201. Theoretical approaches to personality; major philosophical assumptions, historical position, and experimental data considered in evaluating personality theories.
- 315 ABNORMAL PSYCHOLOGY (3)**  
Prerequisite: Psych 313. Psychoses, neuroses, and other forms of behavior deviation; conceptions regarding these conditions. (Formerly Psych 411.)
- 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.
- 340 SOCIAL PSYCHOLOGY (5)**  
Prerequisite: Psych 201. The human as a social animal.
- 341 PHYSIOLOGICAL PSYCHOLOGY (5)**  
Prerequisite: Psych 201. 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.)
- 343 COMPARATIVE PSYCHOLOGY (5)**  
Prerequisite: Psych 201. Phylogenetic comparison of animal behavior, learning, motivation, and sensory processes in selected species of animals.
- 351 PSYCHOLOGY OF HUMAN LEARNING AND INSTRUCTION (3)**  
Prerequisite: Gen St 105 or Psych 201; not open to those with credit in 408. Application of psychological principles of learning to classroom teaching.
- 352 CHILD PSYCHOLOGY (5)**  
Prerequisites: Psych 351 or 201. Basic principles of development with special attention to the preschool and elementary school age child; implications for educational practices.
- 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)**
- 397e 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.
- 397f HUMAN SEXUALITY (3)**  
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.
- 397g PERCEPTION OF MEANING AND ORGANIZATION (3)**  
Recognition of verbal and nonverbal information in speech, music, drama, film, writing, visual design, architecture, and other forms of display and communication.
- 397h CULTURE AND HUMAN BEHAVIOR (3)**  
Prerequisite: Psych 201. Material for this course will be drawn from a variety of sources, methods, and cultures showing that traditional Euro-American psychological theories and methods cannot be construed as universal psychological "givens." Concepts and research areas such as intelligence, personality, psycholinguistics, developmental processes, psychopathology, motivation, sexuality and sex roles, and childrearing practices will be examined in terms of the cultural context in which they occur.

## Psychology

- 397k **PERSONALITY THEORIES AND WOMEN (4)**  
Prerequisites: Soc/Anth 397, Psych 201 and 313, or permission of instructor. The course will critically examine the major personality theories and their views of women. It will deal with philosophical assumptions, historical position, and experimental data relating to the personality of women. Individual and/or group research projects investigating the personality of women will be required.
- 400 **ADVANCED PSYCHOLOGICAL RESEARCH PROBLEMS (3)**  
Prerequisite: Psych 307 and permission of instructor. Individual project in psychology based on empirical research.
- 401 **HONORS SEMINAR (3)**  
Prerequisite: permission of instructor. Intensive examination of selected problems in psychology.
- 402 **MOTIVATION (5)**  
Prerequisite: Psych 306. Experimental findings, and theoretical interpretations of the biological and psychological aspects of motivation; lectures and laboratory.
- 403 **ANIMAL BEHAVIOR (5)**  
Prerequisites: Psych 306, 343. Bases of animal behavior, phylogenetic differences, modification and parameters of behavior, lectures and laboratory.
- 404 **SENSORY FUNCTIONS (5)**  
Prerequisites: Psych 306, 341. Sensory receptors and the central nervous system transformation of operant activity in relation to psychophysical evidence and to adaptive significance of behavior; lectures and laboratory.
- 406 **EXPERIMENTAL SOCIAL PSYCHOLOGY (5)**  
Prerequisites: Psych 306 and 340. Psychological problems of man in a social setting. Lectures and laboratory.
- 407 **PERCEPTION (5)**  
Prerequisite: Psych 306. Sensory processes and stimuli necessary to perception; perceptual theory, classical and contemporary; lectures and laboratory.
- 408 **LEARNING (5)**  
Prerequisite: Psych 306. Students with credits in Psych 351 admitted by department approval only. Major principles of learning, empirical evidence underlying them, and their theoretical interpretation; lectures and laboratory.
- 409 **PSYCHOPHYSIOLOGY (5)**  
Prerequisite: Psych 306. Interrelationships between physiological and psychological aspects of behavior with special reference to human subjects. Lecture and laboratory.
- 410 **SUBHUMAN PRIMATE BEHAVIOR (3)**  
Prerequisite: Psych 306. Variations in patterns of behavior in experimental settings; field studies in major groups of subhuman primates.
- 413 **FOUNDATIONS OF PSYCHOLOGICAL MEASUREMENT (3)**  
Prerequisite: Psych 306. Theory basic to construction and other application of psychological tests and scaling techniques.
- 420 **ADVANCED INDUSTRIAL PSYCHOLOGY (5)**  
Prerequisites: Psych 306, and 320 or permission of instructor. Psychological theories, methodology and findings related to the problems of business and industry, lectures, and laboratory.
- 421 **SEMINAR IN HISTORY AND SYSTEMS OF PSYCHOLOGY (3)**  
Prerequisites: graduate or senior status, Psych 307; conference course permit required from instructor before registering. Historical development of the systematic viewpoints of psychology.
- 422 **SEMINAR IN PSYCHOLOGICAL THEORY (3)**  
Prerequisites: senior status, Psych 307; conference course permit required from instructor before registering. The logic of theory development in psychology and special problems of psychology as an independent discipline.
- 423 **SEMINAR IN RECENT PSYCHOLOGICAL LITERATURE (3)**  
Prerequisites: senior status, Psych 307; conference course permit required from instructor before registering. Selected topics which vary from year to year.
- 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.
- 440 **HUMAN CONFLICT AND UNDERSTANDING (3)**  
Prerequisites: Psych 306, 340. Recent empirical and theoretical work on human conflict, aggression and competition.
- 441 **CROSS-CULTURAL PSYCHOLOGY (3)**  
Prerequisite: Psych 306. Theories, methodology and research data related to psychological phenomena as conditioned by culture.
- 442 **SOCIAL BEHAVIOR IN ANIMALS (3)**  
Prerequisite: Psych 306 or permission of instructor. Comparison of social organization and behavior patterns in various species; aggression, population control, communication systems; evolution of behavior.
- 445 **CURRENT TRENDS IN PSYCHOLOGY**  
445a **Advanced Human Learning (3)**  
Prerequisite: Psych 351 or equivalent. Major concepts; recent developments in learning theory as related to the teaching-learning process.



- 449 **FIELD EXPERIENCES IN PSYCHOLOGY (5)**  
Prerequisite: 20 credits in psychology or permission of instructor. Topics included are mental health, child development, behavior problems of adolescence, and other relevant topics. Field work combined with readings and seminars.
- 453 **INDIVIDUAL DIFFERENCES (3)**  
Behavioral differences among individuals.
- 455 **ADVANCED CHILD PSYCHOLOGY (3)**  
Prerequisite: Psych 352 or equivalent. Research and theory in child development and behavior.
- 457 **DEVELOPMENTAL PSYCHOLINGUISTICS (5)**  
Prerequisite: Psych 306 or permission of instructor. 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)**  
Prerequisite: Psych 306 or permission of instructor. Historical, theoretical, and empirical aspects of cognitive development of children; critical analysis of research and methodology.
- 459 **EARLY EXPERIENCE (5)**  
Prerequisite: Psych 306 or permission of instructor. Effects of early experience upon behavior of the organism at different stages of development.
- 460 **SOCIAL DEVELOPMENT (5)**  
Prerequisite: Psych 306 or permission of instructor. Development of social behavior from infancy to adulthood.
- 461 **CHILD LEARNING (5)**  
Prerequisites: Psych 305, 306. Early learning considered from a developmental viewpoint. Emphasis upon experimental factors affecting early growth and maturation.
- 466 **THE BRIGHT AND GIFTED CHILD (3)**  
Prerequisite: teaching experience, permission of instructor, or 11 credits in psychology. Identification procedures, curriculum, and teaching methods suited to children with superior and special abilities.
- 471 **STANDARDIZED TESTS (3)**  
Prerequisite: Psych 371 or 413, or permission of instructor. Standardized group tests commonly used in the public schools; selection and administration of tests; interpretation of norms.
- 480 **OPERANT CONDITIONING (3)**  
Prerequisite: Psych 306. Free-operant behavior, schedules of reinforcement; application to problem areas; lecture and laboratory.
- 481 **BEHAVIORAL MODIFICATION OF CHILDREN (3)**  
Application of behavior principles to academic and social problems of children; lecture and laboratory.
- 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 ea)**
- 497e **MOTIVATION IN THE CLASSROOM (3)**  
Motivation as it can affect learning in the school situation. Empirical research from curiosity motivation as it relates specifically to the classroom situation. An analysis of the origins and maintenance of achievement motivation will form a large portion of the material covered. The role of anxiety as a motivator will be considered along with frustration theory. An attempt will be made to create a program whereby the teacher can structure the school setting to take advantage of the child's developing motivational systems. (Not applicable to major or minor.)
- 497f **CHILD PSYCHOLOGY AND SOCIAL ISSUES (3)**  
Research and theoretical literature in child psychology which has a direct bearing on questions of social policy. Topics to be covered include: 1) effects of TV on children's aggressive behavior, 2) malnutrition and intellectual development, 3) use and abuse of intelligence testing, 4) issues in compensatory education, 5) effects of group care on children's social and intellectual development, 6) implications of recent advances in genetics and treatment of genetic diseases.
- 497g **CULTURAL VARIATIONS IN ABNORMAL BEHAVIOR (3)**  
Using cultural and subcultural data on psychopathology, this course will examine such questions as 1) when is "traditionally" defined abnormal behavior really normal? 2) when is "traditionally" defined normal behavior really abnormal? 3) how do parents in various cultures influence the mental health of their children? 4) what are the roles of psychiatrists, clinical psychologists, and other mental health workers, and how do their roles differ from those of witchdoctors and shamans? and 5) what are the advantages to educators of studying cultural and subcultural patterns of mental illness and mental health?
- 497h **PSYCHOLOGY OF ADJUSTMENT (3)**  
Prerequisite: teaching experience or permission of instructor. Utilizing information from the fields of personality development and psychopathology the course will focus on human relation problems in the classroom; among school personnel, students and parents, and the problems associated with changing value systems in the community at large. (Not applicable to major or minor.)

## Psychology

- 497j SOCIAL PSYCHOLOGY OF THE CLASSROOM (3)**  
Applying the concepts and findings of social psychology to the understanding and management of educational situations. Specifically, areas such as role theory, small group dynamics, conflict and aggression, and person perception will be examined. Evaluations of the importance of this work in bringing about desirable educational goals of creativity, problem solving and general learning will be made. (Not applicable to major or minor.)
- 497k HEREDITY, ENVIRONMENT AND INTELLIGENCE (3)**  
Research and theories on the factors affecting intelligence. Particular emphasis will be placed on examining problems of apparent intellectual differences as they occur in everyday situations (the classroom). While the course content deals with general issues, it is the purpose of the course to develop working concepts which will be useful to the student in dealing with practical problems. Course topics include: the varying concepts of intelligence; cross-cultural comparisons of intellectual development, poverty and intelligence, language and intelligence, intelligence and western education.
- 497m THE PSYCHOLOGY OF CONSCIOUSNESS (3)**  
Investigation of historical, empirical, and theoretical aspects of subjective awareness. Course content includes some of the following topics: intuitive and analytic modes of decision making; the perception of causality; bio-feedback research; research on sleep and dreaming; cross-cultural research, ecological psychology, research on time perspective; research on alienation.
- 497n WDRKSHOP: WORKING WITH CHILDREN AND YOUTH IN SCHOOL, HOME, AND COMMUNITY (10)**  
Application of behavioral and clinical strategies to a broad range of problems faced by young people today in home, school and community. Lecture and field work. It is recommended that students make this course their full-time commitment and take no other courses. (Not applicable to major or minor.)
- 497p COMMUNITY PSYCHOLOGY (3)**  
Prerequisites: Psych 201 and 313, Psych 411 recommended. Survey and analysis of community problems and resources as they effect the psychology welfare of the individual, particularly the school age pupil. A selective review of current approaches and techniques in community mental health, as well as on-site trips to a broad range of social agencies.
- 497q CHILD REARING AND THE DEVELOPMENT OF PERSONALITY (3)**  
Focuses on several critical features of the development of personality and the ways in which a basic understanding of psychology can help parents and teachers guide personality development. Several simple techniques for dealing with personality characteristics of young children will be presented. Each participant will attempt to systematically apply one of the techniques to a characteristic of a child of their own (or a relative or a neighbor's child). The emphasis throughout is on simplicity: 1) that a simplified view of how children's personality develops can often aid the parent or teacher even though such a view would not encompass the "whole personality" and 2) that several simple techniques that come from the study of psychology can often make the parent or teacher's job easier. The course is designed for those who are interested in a more systematic approach to dealing with their children's personalities. (Not applicable to major or minor.)
- 500 SPECIAL PROBLEMS (1-3)**  
Prerequisite: permission of instructor. S/U grading only.
- 501a-i PRO-SEMINAR IN PSYCHOLOGICAL FOUNDATIONS (2 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.
- 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 (2)  
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.
- 580 SEMINAR IN COLLEGE TEACHING OF PSYCHOLOGY (3)

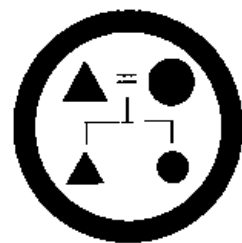
## *Psychology*

- 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.
- 690 THESIS (1-6)  
S/U grading only.



# **SOCIOLOGY / ANTHROPOLOGY**

*Western Washington State College*



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

- GARLAND F. GRABERT (1967) Chairman.  
Associate Professor of Anthropology. BA, MA, PhD,  
University of Washington.
- EDWIN JOSEPH ALLEN, JR. (1969) Assistant Professor of  
Anthropology. BA, Yale College; MA, Columbia University.
- ANGELO ANASTASIO (1955) Professor of Anthropology and  
Sociology. 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) Assistant Professor of Sociology. BA, University of Puget Sound; MA, PhD, University of Washington.
- HOWARD HARRIS (1966) Associate Professor of Anthropology. BA, University of Iowa; MA, University of Missouri; BD, Hartford Theological Seminary.
- EDWARD J. JACOBS (1969) Lecturer in Sociology. MA, Southern Methodist University.
- JOHN MacGREGOR (1972) Associate Professor of Sociology. BA, University of Maine; PhD, Cornell University.
- ELDON R. MAHONEY (1970) Lecturer in Sociology and Anthropology. BA, Chico State College.
- \*D. PETER MAZUR (1960) Professor of Sociology and Demography. BA, Stetson University; MA, University of Colorado; PhD, University of Washington.
- DOUGLAS S. MOSER (1971) Assistant Professor of Anthropology. BA, Western Washington State College; MA, University of British Columbia.
- INGEBORG L. E. PAULUS (1971) Assistant Professor of Sociology. BA, MA, University of British Columbia; PhD, University of London.
- G. EDWARD STEPHAN (1970) Associate Professor of Sociology. BA, San Francisco State College; MA, PhD, University of Oregon.
- HERBERT C. TAYLOR, JR. (1951) Professor of Anthropology and Dean for Research and Grants. 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

- Soc/Anth 201 and 202
- Soc/Anth 210 or 215
- Soc/Anth 301 or 302
- Soc/Anth 350
- Two courses from: Soc/Anth 361, 362, 363, 364, 451, 462, 463

\*On Leave Fall Quarter 1973

- 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 Soc/Anth 201, 202, 215
- Electives under departmental advisement

## BACHELOR OF ARTS

*Major—Anthropology* 70 credits

- Soc/Anth 201, 202, 210, 215
- Soc/Anth 301 and 375
- Soc/Anth 448
- Two courses from Soc/Anth 361, 362, 363, 364, 451, 462, 463 (or 464)
- Electives under departmental advisement

*Major—Sociology* 70 credits

- Soc/Anth 201, 202
- Soc/Anth 302 and 375
- Soc/Anth 350 and 370
- Soc/Anth 311
- Electives under departmental advisement

*Minor—Sociology/Anthropology* 25 credits

- Two courses from Soc/Anth 201, 202, 215
- Electives under departmental advisement

*Minor—Linguistics* 25 credits

- Linguistics 201, 301, 302, 303
- Soc/Anth 448
- Electives under departmental advisement

## Sociology/Anthropology

### BACHELOR OF SCIENCE

Major 90 credits

- Math 121, 220, 241, 341, 342\*
- Computer Science 110, 211
- Soc/Anth 202, 302, 311, 350, 370, 402, 411, 441, 475
- 25 additional credits under advisement in mathematics, computer science, sociology or cognate areas, of which at least 15 credits must be in upper-division sociology courses

### DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a sociology/anthropology major who wishes to graduate "with honors" must demonstrate a reading knowledge of a foreign language and submit a senior thesis.

### COURSES IN SOCIOLOGY/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.
- 202 PRINCIPLES OF SOCIOLOGY (5)  
Introduction to the analytical study of social phenomena.
- 209 FIELD COURSE IN ARCHEOLOGY (10)  
Prerequisites: Soc/Anth 201 or 215 or equivalent; permission of instructor. On-site training in methods and techniques of archeological survey and analysis.

*\*Math 341 and 342 effectively meet the prerequisite for Soc/Anth 475; students in this program will be exempt, therefore, from Soc/Anth 375.*

- 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.
- 217 FIELD EXPERIENCES IN HUMAN SERVICE: NEW CAREERS (1-3)  
An on-the-job training program to be part of each quarter of the two-year New Careers program designed to develop job competence through field experience and seminars.
- 297f FOLKLORE (5)  
An introduction to the study of folktales, myths, legends, proverbs, riddles, and other forms of oral literature of the peoples of the world. Concepts, theories, and research methods in the study of folklore.
- 300 SPECIAL PROJECTS (1-3)  
Prerequisites: 10 credits in sociology/anthropology and Conference Course Permit from instructor required before registering. Supervised reading and/or research in selected areas.
- 301 DEVELOPMENT OF ANTHROPOLOGY (5)  
Prerequisite: Soc/Anth 201 or 202. The development of anthropology with emphasis on the period beginning with H. L. Morgan and E. B. Tylor.
- 302 DEVELOPMENT OF SOCIOLOGY (5)  
Prerequisite: Soc/Anth 201 or 202. The development of social thought in Europe and America with major emphasis upon the period following August Comte.
- 309 CURATORIAL METHODS IN ANTHROPOLOGY (5)  
Prerequisites: Soc/Anth 201 and 210. 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: Soc/Anth 201, 215 or permission of instructor. 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 WORLD DEMOGRAPHY (5)  
Prerequisite: Soc/Anth 201 or 202; Math 240. Growth, distribution and composition of human population; elementary demographic techniques essential to understanding the components of population change.



*Sociology/Anthropology*

- 312 **HUMAN ECOLOGY (3)**  
Prerequisite: Soc/Anth 201 or 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.
- 315 **PRIMATE EVOLUTION (5)**  
Prerequisite: Soc/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 ORGANIZATION (5)**  
Prerequisite: Soc/Anth 201 or 202. Economic behavior and its relationship to the wider social context in selected areas (societies) of the world.
- 330 **SOCIOLOGY OF RELIGION (5)**  
Prerequisite: Soc/Anth 201 or 202. Comparative study of religious thought, belief, and behavior; relationship of religious experience and institutions to other aspects of culture and society.
- 341 **ECOLOGY AND INTERGROUP RELATIONS (5)**  
Prerequisite: Soc/Anth 201 or 202. Adjustment of groups to the natural environment and to each other in selected areas. Mechanisms of interaction including social, political and economic factors.
- 342 **POLITICAL SOCIOLOGY (5)**  
Prerequisite: Soc/Anth 201 or 202. Sociological aspects of political phenomena, with emphasis on power and authority, conflict and change.
- 347 **RACIAL AND CULTURAL MINORITIES (3)**  
Prerequisite: Soc/Anth 201 or 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.
- 350 **INTERPERSONAL BEHAVIOR (5)**  
Prerequisite: Soc/Anth 201 or 202, or Psych 201. Patterns and processes of socialization and socialization in individual and group performance.
- 351 **FAMILY AND KINSHIP ORGANIZATION (5)**  
Prerequisite: Soc/Anth 201 or 202. Cross-cultural study of family types, and the definition of social roles through kinship organization.
- 352 **SOCIOLOGY OF THE FAMILY (5)**  
Prerequisite: Soc/Anth 201 or 202. Analysis of the family as an institution and network of relationships in American life.
- 353 **CROSS-CULTURAL PERSPECTIVES ON WOMEN'S ROLES (4)**  
Prerequisite: Soc/Anth 201 or 202. 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.
- 354 **SOCIOLOGY OF OEVIANT BEHAVIOR (5)**  
Prerequisite: Soc/Anth 201 or 202. The collective aspects of non-normative or non-conforming behavior as a product of the social system.
- 361 **INDIANS OF NORTH AMERICA (5)**  
Prerequisite: Soc/Anth 201 or 202. Ethnographic survey of the peoples and cultures.
- 362 **PEOPLES OF ASIA (5)**  
Prerequisite: Soc/Anth 201 or 202. Ethnographic survey of the peoples and cultures.
- 363 **PEOPLES OF AFRICA (5)**  
Prerequisite: Soc/Anth 201 or 202. Ethnographic survey of the peoples and cultures of Africa south of the Sahara.
- 364 **PEOPLES OF THE PACIFIC (5)**  
Prerequisite: Soc/Anth 201 or 202. Ethnographic survey of the peoples and cultures of the Pacific area.
- 366 **COMMUNITY ORGANIZATION (5)**  
Prerequisite: Soc/Anth 201 or 202. The nature of "community" analyzed in terms of changing demographic, institutional, and interpersonal patterns.
- 370 **INTRODUCTION TO RESEARCH METHODS (5)**  
Prerequisite: Soc/Anth 201 or 202. The nature of scientific theory; the development of social research; the basic methods and techniques of data gathering, processing, and analysis.
- 375 **SOCIAL STATISTICS (3)**  
Prerequisites: Soc/Anth 201 or 202, Math 240 or equivalent. Critical evaluation of descriptive statistical methods applied to research problems, with emphasis on measures of variability and association.
- 380 **SOCIOLOGY OF ORGANIZATIONS (5)**  
Prerequisite: Soc/Anth 201 or 202. 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.
- 392 **THEORY CONSTRUCTION (5)**  
Prerequisite: 15 credits in sociology/anthropology or permission of instructor. Problems of concept formation, operationization and selection of indices based upon philosophy of science and logic of inquiry.

## Sociology/Anthropology

396a,b,c HONORS TUTORIAL (3-5 ea)

397f WOMEN'S STUDIES (4)

Prerequisite: Soc/Anth 201 or 202 or permission of instructor. Women's roles and status are described in the process of socialization, in the family unit, in institutional religion, under the law, in education, community organizations, the labor market and among the aged.

400 SPECIAL PROJECTS (1-3)

Prerequisites: 25 credits in sociology/anthropology and Conference Course Permit from instructor required before registering. Supervised reading and/or research in selected areas.

402 CONTEMPORARY PERSPECTIVES IN SOCIOLOGY (3)

Prerequisite: Soc/Anth 302. Major contemporary theories of society and social organization.

409 ARCHEOLOGICAL FIELD METHODS (3)

Prerequisite: 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)

Prerequisite: Soc/Anth 409 or permission of the instructor. Archeological laboratory methods; artifact identification, classification, measurement; map reproduction, soil and feature profiles, use of photographs and other graphic methods.

411 DEMOGRAPHIC ANALYSIS (3)

Prerequisites: Soc/Anth 311, 375, or equivalents. Theory and method of population analysis; measures of mortality, fertility and migration; population forecasting techniques.

412 SEMINAR IN HUMAN ECOLOGY (3)

Prerequisite: Soc/Anth 312. Review of contemporary research in human ecology.

415 HUMAN VARIATIONS AND RACE FORMATION (3)

Prerequisites: Soc/Anth 315 and 375; Biol 370. Studies of natural selection in hominid populations with emphasis on those criteria by which generic, specific, and racial distinctions are made.

416 MEDICAL ANTHROPOLOGY (3)

Prerequisite: Soc/Anth 350. A cross-cultural analysis of medical systems. Studies of the structural and attitudinal components of medical practitioners and patient populations.

417 SEMINARS (3)

Prerequisite: Conference Course Permit from instructor required before registering.

417c Population Problems  
417d Social Interaction and Group Dynamics  
417e Sociology of Education  
417f Mental Institutions

417g Archeology of the Northwest

417n Contemporary Social Issues

417p New World Archeology

417t Drug Dependence

417w Cross Cultural Perspectives on Warfare

425 CULTURE AND PERSONALITY (5)

Prerequisite: 15 credits in sociology/anthropology or permission of the instructor. A study of the ways in which appropriate personality characteristics are learned and expressed in various cultures. How personality is related to cultural values, social structure, and role performance requirements.

430 THEORIES OF SOCIAL CHANGE (3)

Prerequisite: 15 credits in sociology/anthropology or permission of instructor. Theories of change, including evolutionary, cultural, and historical; the empirical evidence on which theories are based and their utility in prediction.

431 SOCIAL CHANGE IN AMERICA (3)

Prerequisite: 10 credits in sociology/anthropology or permission of instructor. Social change in the United States since 1900; contemporary theories of social change; problems in predicting change.

435 SOCIAL STRATIFICATION (5)

Prerequisites: Soc/Anth 370 and 375 or permission of instructor. Differentiation and evaluation of groups and individuals in society; the consequences for behavior in different spheres of society.

439 SOCIETY, CULTURE, AND ART (3)

Prerequisite: 15 credits in sociology/anthropology or permission of instructor. Relationship of folk and classical arts to larger social and cultural context in selected cultures.

441 PUBLIC OPINION (3)

Prerequisite: Soc/Anth 202 or permission of instructor. Factors involved in the formation of public opinion; the role of mass media of communication and propaganda in a contemporary society.

442 SOCIOLOGY OF LAW (5)

Prerequisites: Soc/Anth 201 or 202, Soc/Anth 354 or 446 are recommended. A systematic sociological study of the legal order, including law-making, law breaking, law enforcing, and law confirming.

445a SEMINAR IN DRUG EDUCATION (3)

Seminar on drug usage in society; effects on the individual in pharmacological, medical, psychological and sociological areas. Review of legal and economic aspects and political-community action possible.

446 CRIME AND DELINQUENCY (5)

Prerequisite: Soc/Anth 202 or permission of instructor. Definition and distribution of crime and delinquency; socio-psychological, micro-social and macro-social factors; theoretical attempts to deal with the data.

- 448 LANGUAGE IN CULTURE AND SOCIETY (5)  
Prerequisites: Soc/Anth 201 or permission of instructor. Language as related to semantics and world view; speech communities, processes of change in language.
- 450 THEORY OF SMALL GROUPS (3)  
Prerequisites: Soc/Anth 202 and 350. 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.
- 451 LATIN AMERICAN SOCIETY (5)  
Prerequisites: Soc/Anth 201, 202 or permission of instructor. 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.
- 452 SOCIAL MOVEMENTS (3)  
Prerequisite: Soc/Anth 202. 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.
- 454 SEMINAR: BALANCE AND EXCHANGE IN SOCIAL INTERACTION (3)  
Prerequisite: Soc/Anth 350. An overview of the principal theories of cognitive balance and inter-personal exchange in social psychology, with an emphasis on comparisons, contrasts, and possible theoretical rapprochement between these two leading schools of thought.
- 461 NORTH AMERICAN INDIAN ACCULTURATION (3)  
Prerequisite: Soc/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: Soc/Anth 201 or 202. 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: Soc/Anth 201 or 202. Ethnographic survey of the peoples and cultures: Pakistan to the Philippines.
- 464 PEOPLES AND INSTITUTIONS OF EAST ASIA (3)  
Prerequisite: Soc/Anth 201 or 202. Ethnographic survey of the peoples and cultures.
- 470 RESEARCH (3-5)  
Prerequisite: permission of instructor. Investigation of a problem through field or library research.
- 471 FIELD EXPERIENCE PRACTICUM (15)  
Prerequisites: junior status; completion of Soc/Anth 301 or 302, 350, 370; permission of sociology/anthropology department advising committee. Participant observation in research and applications in human services agencies and organizations.
- 475 ADVANCED QUANTITATIVE METHODS (3)  
Prerequisite: Soc/Anth 375 or equivalent. Experimentation and tests of significance applied to research problems.
- 481 THE CHILD IN SOCIETY (3)  
Prerequisite: 15 credits in sociology/anthropology or permission of instructor. The nature of childhood viewed from a cross-cultural perspective.
- 482 SOCIOLOGY OF ADOLESCENCE (3)  
Prerequisites: junior status and permission of instructor. Adolescence viewed as a socio-cultural phenomenon, through the concepts of "Adolescent Society" and "Youth Culture," with emphasis on recent research findings.
- 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 Sociology
  - 485 Cultural Anthropology
  - 486 Archeology
  - 487 Demography
  - 488 Linguistics
  - 489 Physical Anthropology
- 491 SEMINAR IN ANTHROPOLOGICAL THEORY (3)  
Prerequisite: permission of instructor. Selected problems in anthropological theory.
- 492 SEMINAR IN SOCIOLOGICAL THEORY (3)  
Prerequisite: Soc/Anth 402 or permission of the instructor. Selected problems in sociological theory.
- 494 TEACHING-LEARNING PROCESSES IN INTRODUCTORY SOCIOLOGY (3)  
Prerequisites: 25 credits in sociology/anthropology and Conference Course Permit from instructor required before registering. Practicum as discussion leaders in Soc/Anth 202.
- 495 TEACHING-LEARNING PROCESSES IN INTRODUCTORY ANTHROPOLOGY (3)  
Prerequisite: 25 credits in sociology/anthropology and Conference Course Permit from instructor required before registering. Practicum as discussion leaders in Soc/Anth 201 or 215.
- 496a,b,c HONORS TUTORIAL (3-5 ea)

## *Sociology/Anthropology*

- 501a,b,c PRO SEMINAR IN SOCIOLOGY (2 ea)  
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.
- 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: Soc/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.
- 510 SEMINAR: MACROTHEORY IN SOCIOLOGY (3)  
Review and evaluation of major historical and contemporary theories of social organization and change.
- 511 SEMINAR: DEMOGRAPHY (3)  
Prerequisites: Soc/Anth 311 or equivalent, Soc/Anth 375 or equivalent, or permission of instructor. Critical review of demographic theory, methods and applications in the light of contemporary world population problems.
- 515 SEMINAR: SOCIAL INTERACTION (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.
- 517 SEMINAR: SOCIAL CONTROL AND DEVIANCE (3)  
Critical review of theories and concepts of deviance: analytic and philosophic problems of attempts at programmed social control.
- 520 APPROACHES TO THE STUDY OF HUMAN EVOLUTION (3)  
Prerequisites: Biol 101, 370; Soc/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: Soc/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: Soc/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.
- 531 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.
- 532 COMPARATIVE SOCIAL ORGANIZATION (3)  
Prerequisites: minimum of 15 credits of sociology/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 sociology/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 306 and Soc/Anth 448 and permission of instructor. 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.

556 STUDENTS AND THE COLLEGE ENVIRONMENT (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.

575 SEMINAR IN METHODOLOGY (3)

Prerequisite: Soc/Anth 475 or equivalent. Analysis and evaluation of the procedures, assumptions and modes of explanation employed in sociological research.

690 THESIS RESEARCH (3)

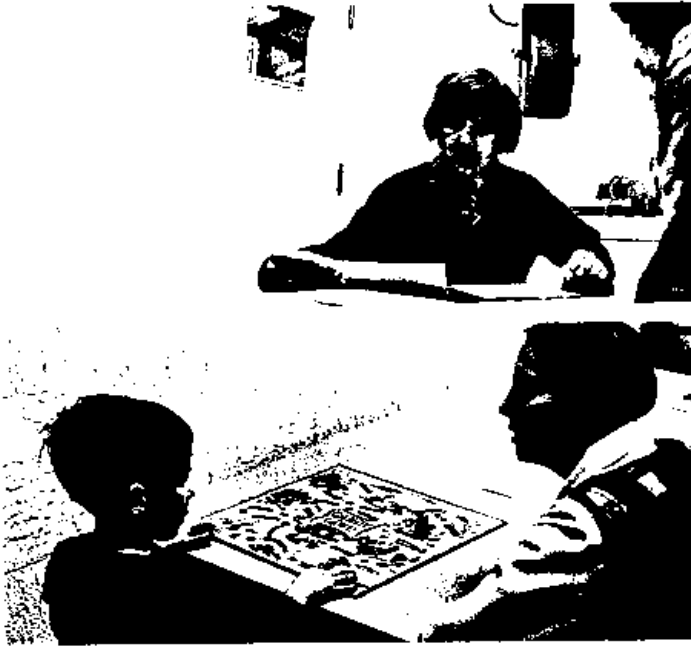
Prerequisite: formal advancement to candidacy for the M.A. in sociology or anthropology.

691 THESIS (3)

Prerequisite: formal advancement to candidacy for the M.A. in sociology or anthropology.







# SPEECH

*Western Washington State College*



The Department of Speech offers majors in 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

A concentration in speech communication at the bachelor level is useful as a basis 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 general speech program to accompany an elementary major or minor.

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 production classes where students participate in a regular series of radio broadcasts and work with closed circuit television equipment. In addition, a limited number of work-study programs in radio 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 specific programs for the student preparing for teaching or for a career in the professional or community theatre world.

Beginning with the Introduction to the Theatre course, sequences are available in acting, directing, dramatic literature and theatrical production (e.g. costuming, lighting, make-up). Western also offers a wide variety of theatrical experiences. Each quarter at least two major productions are presented, ranging from classic Greek drama to recent Broadway plays. In addition, some 30 to 40 student-directed productions are presented every year in connection with directing 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.

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.

- 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) Assistant Professor. AB, Harvard College; MS, PhD, University of Wisconsin, Madison.
- THOMAS H. NAPIECINSKI (1965) Associate Professor. BA, MA, PhD, University of Wisconsin.
- 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.
- LARRY S. RICHARDSON (1970) Assistant Professor. BA in Ed, MEd, Western Washington State College; MA, Washington State University.
- ERHART A. SCHINSKE (1957) Professor. BA, Hamline University; MA, PhD, University of Minnesota.
- MICHAEL T. SEILO (1970) Assistant 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) Assistant 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. BS, University of California, Berkeley; MA, University of Redlands; PhD, University of Washington.

## BACHELOR OF ARTS IN EDUCATION

*Major-General Classroom* Elementary 45 credits

- Speech 130, 203, 319, 330, 331 or 430
- Speech 351, 354, 357, 373, 430, 484
- Electives under departmental advisement

*Minor-General Classroom* Elementary 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

## Speech

### Major—Speech Pathology & Audiology 45 credits

- Speech 351, 352, 353, 354, 356, 357, 361, 373, 452, 454, 455, 461
- Seven credits in clinical practice
- Electives under departmental advisement
- Directed teaching in the public schools under the supervision of a speech therapist

The American Speech and Hearing Association recommendation for certification of speech therapists includes a minimum of 90 quarter hours preparation. Such preparation would extend into the fifth year or graduate degree program. Consult the department for details.

### Major Secondary 45 credits

- Speech 130, 202, 205 or 486, 236, 236a, 304, 319
- Speech 332, 337, 350, 485
- Electives under departmental advisement

### Minor Secondary 25 credits

- Speech 130, 205 or 486, 236, 319, 337, 402, 485
- Electives under departmental advisement

### Interdisciplinary 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, 205 (or 4 credits in 206 or 486), 235, 319, 332, 337
- Speech 340 (or Journalism 340 or 406), 350
- Speech 405 (or 204 or 309), 485
- One course from: Speech 402, 407, 480, 481, 483, 490, 491
- One course from: Speech 424, 425, 426, 427a,b,c

#### English 40 credits

- English 301, 302
- Two courses from English 312a-f
- Two courses from English 317a,b,c
- English 314f, 321, 370, 325a or 425a, 446a
- Electives in English under departmental advisement

## BACHELOR OF ARTS

### Major 60 credits

- Speech 130, 340, 350
- Two courses from General Speech
- Specialization of 35 credits from one of the major areas:
  - Speech Communication
  - Speech Pathology and Audiology
  - Theatre and Dramatic Arts
- Electives under area advisement

### Minor 25 credits

- Speech 130, 340, 350
- Electives under advisement from the above three areas

### Major—Speech Communication 70 credits

- Speech 204, 205, 304, 309, 319, 340, 350
- 21 credits in general speech or speech communication under area advisement
- 24 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—Theatre 85 credits

- Speech 130, 203, 235, 236, 236a, 237, 339
- 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 departmental advisement: Music 121, 223; PE 126; Tech 210, 310

### Major -Speech Pathology & Audiology 50 credits

- Speech 351, 352, 353, 354, 356, 357
- Speech 373, 452, 454, 458, 459, 461
- Electives under departmental advisement

### 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:*

#### GENERAL EDUCATION—100, 301 and 302

GENERAL SPEECH—203, 319, 345, 346, 350, 373, 419, 478, 484, 485, 501, 502, 573, 585, 690, 691

SPEECH COMMUNICATION—202, 204, 205, 206, 240, 241, 300, 301, 304, 309, 340, 341, 342, 345, 346, 400, 401, 402, 404, 405, 406, 407, 409, 441, 442, 443, 445a, 480, 481, 482, 483, 486, 486s, 487, 488, 490, 491, 497f, 497g, 500, 501, 502, 505, 507, 540, 541, 588, 595, 690, 691, 693, 694

SPEECH PATHOLOGY AND AUDIOLOGY—300, 351, 352, 353, 354, 356, 357, 361, 400, 452, 454, 455, 456, 458, 459, 460, 461, 462, 463, 464, 465, 466, 468, 469, 470, 497n, 498, 499, 500, 501, 502, 550, 551, 552, 553, 554, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 568abc, 574, 575, 690, 691, 696

THEATRE AND DRAMATIC ARTS—130, 230, 231, 232, 235, 236, 236a, 237, 300, 310, 320, 325, 330, 331, 332, 333, 335, 336, 337, 338, 339, 400, 410, 420, 421, 422, 423, 424, 425, 426, 427abc, 428, 430, 431, 432, 433, 435, 436, 437, 438, 439, 440, 497p, 500, 501, 502, 511, 527abc, 530, 535, 537, 538, 690, 691, 695

#### 100 FUNDAMENTALS OF SPEECH (3)

Functional approach to effective communication; application of principles to practical problems of speech. Teacher education sophomores (or above) needing the general education requirement are advised to take Speech 302.

#### 130 INTRODUCTION TO THE THEATRE (3)

Appreciation and overview of the art of theatre.

#### 202 PARLIAMENTARY LAW (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.)

#### 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 (1-3)

Debate, extemporaneous, and impromptu speaking, and interpretive reading and other phases of forensics. A maximum of 6 credits may be earned.

#### 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.

#### 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.

## Speech

- 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. Theory and practice, when applicable, in discussion, oral interpretation, public speaking, speech science, theatre.
- 304 **PUBLIC SPEAKING (3)**  
Prerequisite: Speech 100, 301 or 302, or permission of instructor. 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.
- 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 313b.
- 325 **REPRESENTATIVE PLAYS (5)**  
Introductory survey of historically significant and stageworthy plays from all periods.
- 330 **INTRODUCTION TO CHILD DRAMA (3)**  
Prerequisite: Speech 130, or permission of instructor. 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: Speech 330 or permission of instructor. 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 or permission of instructor. 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.
- 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 or permission. 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, or permission of instructor. 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 or the Director of VIUOED. Theory and technique of basic television production. Laboratory practice utilizing instructional media facilities. Also offered as Tech 342.
- 345 **THE ART OF FILM (3)**  
Film as distinguished from but related to other art forms; film aesthetics; technology.

- 346 **FILM GENRE (3)**  
Prerequisite: Speech 345. Distinctive elements of melodrama, comedy, serious drama, documentary, 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 (1)**  
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 **DELAYED SPEECH AND LANGUAGE (3)**  
Prerequisites: 354, 355, 357. Etiologies of delayed speech and language syndrome; diagnosis and treatment procedures.
- 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 100 or 301 or 304. Manuscript preparation for selected audiences; theory and practice.
- 402 **ADVANCED PUBLIC SPEAKING (3)**  
Prerequisite: Speech 304. Practical application of communication theory to contemporary issues.
- 404 **SMALL GROUP LEADERSHIP (4)**  
Prerequisite: Speech 204 or permission. 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 (1-3)**  
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 Speech 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.
- 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.
- 417a **APPROACHES TO COMMUNICATION A (3)**  
(For EPDA Fellows only.) Study of language forms known as "primitive, deprived, or subcultural." Methods of delivery such as written, video, and verbal. Patterns will be studied from a historical point of view.
- 417b **APPROACHES TO COMMUNICATION B (3)**  
(For EPDA Fellows only.) Practical application of learnings developed in Section A. A classroom and field project providing the student with a wide range of experiences.
- 419 **ADVANCED ORAL INTERPRETATION (3)**  
Prerequisite: Speech 319. Readings in the scholarship of oral interpretation and related literature in aesthetics and literary criticism; laboratory work in Readers Theatre.
- 420 **STUDIES IN SHAKESPEARE (3)**  
Prerequisite: English 313b or Speech 320. Seminar in selected plays. Also offered as English 411a.

## Speech

- 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. (Also offered as English 415d.)
- 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.
- 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.
- 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 or permission of instructor. 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, 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 240, 342 or Speech 342, and written permission of the Speech Communication Area adviser or the Director of VICOED. Advanced theory and technique of television production. Laboratory experience utilizing instructional media facilities.
- 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. (Extension)
- 452 DIAGNOSTIC METHODS IN SPEECH AND LANGUAGE DEVELOPMENT (4)  
Prerequisite: Speech 359 or concurrent. Methods, procedures, techniques, and instruments; supervised practice; planning therapy.

- 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)**  
Prerequisites: Speech 358. Symptomatology, etiology, and therapy for cerebral palsy, cleft palate, aphasia, dysarthria, and laryngectomy.
- 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 **AUDIDMETRIC 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.
- 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.
- 478 **SEMANTICS (3)**  
Functions of language; ways in which language is used; its relationship to thought and action.
- 480 **THE 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, or permission of instructor. Materials and methods useful in teaching drama, interpretation, and public address.
- 486 **DIRECTING THE FDRENSIC PROGRAM (4)**  
Directing a forensics program, including a tournament; criticizing debates, orations, etc.; budgeting funds.
- 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 or argumentation, debate and forensics. Purpose is improvement of instruction.
- 487 **DISCUSSION TECHNIQUES FOR TEACHERS AND ADMINISTRATORS (3)**  
Cultivation of attitudes and skills to aid teachers and administrators to engage in and lead discussions with greater competency. (Summer only.)
- 488 **BUSINESS, PROFESSIONAL AND GOVERNMENTAL SPEECH (3)**  
For students not majoring in speech or education. 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.

## Speech

- 491 **RHETORICAL THEORY AND PRACTICE—MEDIEVAL THROUGH MODERN** (4)  
Rhetorical principles and practices from the sixth to the twentieth centuries.
- 497f **PRODUCING AND MODERATING TELEVISION DISCUSSION** (3)  
Theory and practice in planning and leading on-camera discussion. Topic determination, discussion outline preparation, panelist selection, pre-airing briefing, group management, and facilitation of participation. Presentations will be video-taped for playback and criticism. Performances will occur in studios comparable to those used by the broadcasting industry.
- 497n **METHODS IN SPEECH THERAPY** (3)  
Prerequisite: Speech 356. Operant, traditional and play therapy with special application to the articulatory and language defective child.
- 497p **SEMINAR IN DIRECTING THE EDUCATIONAL THEATRE PRODUCTION PROGRAM** (3)  
Prerequisite: Speech 337. Consideration of the special administrative, artistic, and practical production problems involved in directing a theatre production program in the secondary school or college situation. Observation and analysis of the WWSC Summer Stock Program.
- 497q **ANALYSIS OF PUBLIC POLICY ISSUES** (4)  
Prerequisite: permission of instructor. Offered jointly with departments appropriate to the subject matter of the current national debate resolution. Application of models from argumentation theory and field or fields pertaining to the national resolution.
- 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.
- 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 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-Classical 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.
- 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-Weiningen 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.
- 541 **EDUCATIONAL BROADCASTING** (3)  
Prerequisite: permission of instructor. Educational use of radio and television.
- 550 **VOICE DISORDERS AND THERAPY** (3)  
Prerequisite: Speech 352, 351. 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.
- 556 **APHASIA AND KINDRED DISORDERS (3)**  
Prerequisites: Speech 354, 361, 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: graduate status, Speech 463. Research in the training of the hearing handicapped.
- 564 **CLINICAL PRACTICE IN AURAL REHABILITATION (2)**  
Prerequisites: Speech 358, 463. 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.



## Speech

- 568a,b,c **ADVANCED CLINICAL PRACTICUM IN AUDIOLOGY (1 ea)**  
Prerequisites: Speech 461, 462, 468; to be taken in sequence. Advanced clinical practicum in audiology.
- 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.
- 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: graduate status and Speech 501. Literature of rhetorical criticism and the application of rhetorical theory so gleaned in the criticism of significant speeches.
- 690 **THESIS (6-9)**
- 691 **WRITING SEMINAR: THE RESEARCH MONOGRAPH IN SPEECH (3)**  
Prerequisite: Speech 501 or 502. The planning of a scholarly article based on research and suitable in subject, content, method, form and style for submission to one of the journals in the field of speech.
- 693 **INTERNSHIP IN RHETORIC AND PUBLIC ADDRESS (3)**  
Prerequisite: permission of instructor. Supervised teaching of courses and/or units within courses in the area of rhetoric and public address and, where appropriate, assistance in the co-curricular programs of this area. A Field Project Report will be required of those taking the course to fulfill the M.A., Option II requirement.
- 694 **FIELD INTERNSHIP IN PUBLIC INFORMATION/ MASS COMMUNICATION (6-16)**  
Prerequisite: permission of instructor. On-the-job experience in public information/mass communication work in an agency of government, educational institution, public service organization, or broadcasting station or other private enterprise as approved by the Speech Department Graduate Committee. A Field Project Report will be required. This report may be applied in partial fulfillment of the M.A., Option II requirement.
- 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 of those taking the course to fulfill the M.A., Option II requirement.
- 696 **INTERNSHIP IN SPEECH PATHOLOGY AND/OR AUDIOLOGY THERAPY (3)**  
Prerequisites: 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 of those taking the course to fulfill the M.A., Option II requirement.



**TECHNOLOGY**

*Western Washington State College*



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, 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, 325, 326, 328, 331, 333, 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, 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, 315, 316, 317, 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.

*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, 350, 391, 394, 400, 417, 459, 491, 492, 493, 495, 496, 497, 590, 591, 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.

### *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 instilling 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 Technology*

This program is for those who wish to enter supervisory and management levels of technical industries. 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 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 on page 262 of the 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

## Technology

correspondence with various governmental, charitable and similar non-profit agencies in order to seek out design problems which can be structured into assignments for the design students of home economics and technology. These assignments, then, become on-the-job situations and involve students in actual work with design clients.

Students interested in Design Center projects should consult the WDC personnel in home economics and technology.

## TECHNOLOGY FACULTY

- SAM R. PORTER (1962) Chairman.  
Professor. BA, Iowa State Teachers College; MA, Teachers College, Columbia University; EdD, University of Missouri.
- MICHAEL P. BJUR (1971) Assistant Professor. BA, Central Washington State College; MEd, Wayne State University.
- JOSEPH E. BLACK (1967) Associate Professor. BS, Lehigh University; BME, Cooper Union, New York; MME, New York University; PhD, Lehigh University.
- 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.
- CARL H. HANOVER, JR. (1973) Assistant Professor. BS, Central Connecticut State College; MA, Ball State University.
- CLAUDE E. HILL (1967) Assistant Professor. BA, MA, University of Washington.
- WESLEY D. MARTINSEN (1967) Instructor. BA in Ed, BA, MEd, Western Washington State College.
- WILLIAM H. McPHERSON (1972) Assistant Professor. BS, Central Connecticut State College; MA, Columbia University; EdD, University of Maryland.
- DONALD E. MOON (1966) Associate Professor. BS in Ed, California State College, California, Pa.; MA, Teachers College, Columbia University; EdD, Oregon State University.
- FRED A. OLSEN (1961) Associate Professor. BA, University of Washington; MS, Stout State University; PhD, The Ohio State University.
- RAY A. SCHWALM (1949) Professor of Technology and Director, Visual Communication Education. BS, Millersville State College; MS, EdD, Oregon State University.
- MICHAEL SEAL (1968) Associate Professor. BEd, University of British Columbia; MEd, Western Washington State College; EdO, Texas A. & M. University.

- MARVIN A. SOUTHCOTT (1969) Associate Professor. BA, University of Washington; MFA, Maryland Institute.
- ROLF W. VALUM (1971) Instructor. BA in Ed, MEd, Western Washington State College.
- RICHARD F. VOGEL (1971) Associate Professor. BA, MAT, Washington State University; DEd, Texas A. & M. University.

## 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 page 269). Note: the department recommends Option B 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, 123; (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, page 262, for specifications.

**GRADUATE STUDY**For 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, 362, 383, 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, 325, 326, 328, 331, 333, 417a,c, 420, 422, 425, 428, 429, 433, 434, 439*Mechanical and Electrical Technology*—270, 280, 281, 370, 371, 372, 375, 379, 381, 382, 477, 478, 479, 489*Industrial Design*—214, 215, 315, 316, 317, 416, 418*Driver Education*—480, 481, 482, 483*General and Professional Courses*—101, 201, 301, 304, 350, 391, 394, 400, 417b, 450, 459, 491, 492, 493, 494, 495, 496, 497k, 497m, 590, 591, 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)**

Experience in expressing ideas through visual communication utilizing the principles and techniques of industrial graphics; technical freehand sketching, multiview projections, supplemental views, and pictorial representations.

**211 INDUSTRIAL GRAPHICS (3)**

Prerequisite: Tech 210. Continuation of drafting techniques, emphasizing working drawings of machine parts, double auxiliary views, fasteners, developments, pictorial representations, and duplication methods.

**212 GRAPHIC ANALYSIS (3)**

Prerequisite: Tech 210. Relationship of points, lines, and planes in space with application to vector, motion, and mechanical analysis.

**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.

## Technology

- 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 **STRENGTH OF MATERIALS (3)**  
Prerequisite: general education physics and mathematics, or equivalent. Elementary statics, stress and strain in members, and statically determinate beams.
- 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 or permission of instructor. 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.
- 303 **FINISH PRINCIPLES AND PRACTICE (3)**  
Introduction to modern finishing materials and processes.
- 310 **TECHNICAL ILLUSTRATION (3)**  
Prerequisite: Tech 210. Translation of orthographic drawing into three-dimensional drawings through the use of isometric, dimetric, trimetric, perspective and schematic drafting techniques.
- 312 **ADVANCED DRAFTING (3)**  
Prerequisite: Tech 211. Problems in machine and pattern drafting, pictorials and architecture.
- 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.
- 320 **PRODUCTION METAL PROCESSES (3)**  
Prerequisites: Tech 222, 223. Concepts of metalworking processes as applied to production; selection of processes based upon design and economic considerations; automation.
- 324 **MECHANICS OF MATERIALS (3)**  
Prerequisite: Math 122 or 220 or equivalent. The response of engineering members to force.
- 325, 326 **GENERAL METALLURGY (3, 3)**  
Prerequisites: Chem 115 or 121, Math 220 or 122. Tech 325 prerequisite to 326. Structure of metals, phase diagrams and heat treatments.
- 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.
- 340 **GENERAL GRAPHIC ARTS I (3)**  
Prerequisite: Tech 240 or permission of instructor. Graphic arts technology as related to reproduction of graphic design techniques.
- 341 **GENERAL GRAPHIC ARTS II (5)**  
Prerequisite: Tech 340 or permission of instructor. 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 Speech Communication Area adviser or the Director of VICOED. Theory and technique of basic television production. Laboratory practice utilizing instructional media facilities. Also offered as Speech 342.
- 350 **TECHNDLOGY IN THE ELEMENTARY SCHOOLS (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.
- 362 **VISUAL COMMUNICATION PHOTOGRAPHY (3)**  
Prerequisite: Tech 260 or permission of instructor. Function of photography in visual communication; application of theory and techniques to projects.
- 363 **COLOR PHOTOGRAPHY (3)**  
Prerequisite: Tech 260 or permission of instructor. Fundamentals of color theory; techniques of producing color transparencies and prints.
- 370 **ELECTRON TUBE CIRCUITRY (4)**  
Prerequisite: Tech 270 or Physics 155 or permission of instructor. Theory and application of electron tubes in basic electronic circuits.
- 371 **SEMI-CONDUCTDRS (4)**  
Prerequisite: Tech 370 or permission of instructor. Characteristics of semi-conductor devices and circuits.
- 372 **INDUSTRIAL ELECTRONICS (4)**  
Prerequisite: Tech 371 or permission of instructor. Industrial uses of electronics; electron tubes, control devices, relays, and closed loop systems.
- 375 **MOTORS AND GENERATORS (3)**  
Prerequisite: Tech 270 or permission of instructor. Theory and characteristics of motors and generators.
- 379 **VISUAL COMMUNICATION ELECTRONICS (3)**  
Prerequisite: Tech 341 or permission of instructor. Principles and applications of instrumentation, electronic systems and computer graphics technology in the communication industry.
- 380 **ADVANCED POWER MECHANICS (3)**  
Prerequisite: Tech 280 or permission of instructor. Efficiency determinants, power measurement, development of concepts introduced in Tech 280.
- 381 **ADVANCED POWER TRANSMISSION (3)**  
Prerequisite: Tech 281 or permission of instructor. Practical application of hydraulic and fluidic theory; development of concepts introduced in Tech 281.
- 382 **AUTOMOTIVE ELECTRICITY (2)**  
Prerequisite: Tech 270 or 280 or permission of instructor. 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.
- 394 **INDUSTRIAL TOURS (3)**  
Visitation to selected industries of the Pacific Northwest to acquire first-hand understanding of regional industry; analysis of process, product design, and personnel problems. Summers only.
- 400 **SPECIAL PRDBLEMS (1-5)**  
Prerequisite: permission of instructor; open only to technology majors. Specialized advanced study through individual instruction.
- 413 **ARCHITECTURAL PROBLEMS (3)**  
Prerequisite: Tech 313. Advanced residential planning, cost estimating; FHA standards, building codes; individual and group research.
- 416 **STRUCTURAL-AESTHETIC FACTORS IN INDUSTRIAL DESIGN (5)**  
Prerequisite: Tech 316 or permission of instructor. 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.
- 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 or permission of instructor.

## Technology

- 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 or permission of instructor. 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 or permission of instructor. Research problem in drafting or design conducted under supervision.
- 420 PHYSICAL METALLURGY (3)  
Prerequisite: Tech 326. Metals and alloys, physical characteristics, phase diagrams, relation of physical properties to microstructure.
- 425 MATERIALS SCIENCE (3)  
Prerequisites: Math 122 or 220, Chem 115 or 121 or equivalent. Properties and utilization of metals and non-metals. Relationship between properties of interest and fundamental atomic arrangements.
- 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, or permission of instructor. 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; advanced application of thermo-forming and molding processes; plastic tooling.
- 434 REINFORCED PLASTICS (3)  
Prerequisite: Tech 333. Resin and reinforcement systems; mold design and development; manufacturing processes with reinforced plastics.
- 439 DIRECTED RESEARCH IN WOODS (1-3)  
Prerequisites: Tech 231, 331, or permission of instructor. Selection, development, and research, under supervision, within one of the areas of wood technology.
- 440 GRAPHIC DESIGN (5)  
Prerequisites: Tech 341 and 362, or permission of instructor. Principles and application of effective visual communication, design, and reproduction.
- 441 VISUAL COMMUNICATION SERVICES MANAGEMENT (5)  
Prerequisite: Tech 341 or permission of instructor. 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 Speech Communication Area adviser or 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 or permission of instructor. 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 or permission of instructor. 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)  
Prerequisite: Tech 240, 340, or permission of instructor. Selected problems in graphic arts.
- 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)  
Prerequisites: Tech 350 or permission of instructor. Developing industrial arts content with emphasis on the relationship between industrial arts and the elementary school curriculum.
- 460 INDUSTRIAL PHOTOGRAPHY (3)  
Prerequisite: Tech 363 or permission of instructor. Application of photographic theory and techniques to selected problems.
- 469 DIRECTED RESEARCH IN PHOTOGRAPHY (1-3)  
Prerequisites: Tech 260 or permission of instructor. Research problems in photography chosen and conducted under supervision.

- 477 **THEORY AND OPERATION OF ELECTRONIC TEST EQUIPMENT (4)**  
Prerequisite: Tech 371 or permission of instructor. 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 or permission of instructor. Theory of radio and television transmitters and receivers.
- 479 **DIRECTED RESEARCH IN ELECTRICITY (1-3)**  
Prerequisite: Tech 371 or permission of instructor. Advanced study in problems chosen and conducted under supervision.
- DRIVER EDUCATION: Tech 480, 481, 482, plus one approved elective course 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.
- 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.
- 489 **DIRECTED RESEARCH IN POWER MECHANICS (1-3)**  
Prerequisite: Tech 280, 381, or permission of instructor. 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 or permission of instructor. Planning, development and utilization of industrial arts facilities.
- 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 **INDUSTRIAL ENGINEERING (3)**  
Prerequisites: senior status and Math 240, or permission of instructor. Organization of men and machines for work; work analysis, production control, quality control, and plant design.
- 497d **CAREER AWARENESS IN ELEMENTARY SCHOOLS (3)**  
(See new number, 450.)
- 497e **CAREER EDUCATION CONCEPTS (3)**  
(See new number, 494.)
- 497f **FOUNDRY PATTEKN DESIGN AND CONSTRUCTION (2)**  
Techniques of pattern design and construction; pattern materials, core boxes, gating systems, allowances and basic measurement.
- 497q **THOUGHT PROCESSES IN DESIGN AND DRAWING (3)**  
Course consists of projects, discussions and exercises designed to develop an understanding of design concepts, thought processes in relation to drawing for quick renditions of ideas, and problem solving for presentation of ideas to others. The course is intended to aid instructors and other supervisory persons in developing creativity in others where material manipulation is of prime concern.
- 500 **SPECIAL PROBLEMS (1-5)**  
Individual problems under supervision.
- 540 **VISUAL COMMUNICATIONS TECHNOLOGY (3)**  
Prerequisite: undergraduate concentration in the visual communications field, or permission of instructor. The technological changes in the visual communications industry and the responses.
- 541 **THEORIES OF COLOR SEPARATION (3)**  
Prerequisite: undergraduate concentration in visual communication, or permission of instructor. Newer concepts and techniques of color separation as applied to the graphic arts industry.

*\*Not applicable to undergraduate or graduate programs in Technology.*

## Technology

- 542 INFORMATION FORMS DESIGN AND PRODUCTION (3)  
Prerequisite: undergraduate concentration in visual communication, or permission of instructor. Differentiation and necessity for integrating information forms design into more productive systems.
- 543 PRINCIPLES OF COLOR AND QUALITY CONTROLS (3)  
Prerequisite: undergraduate concentration in visual communication, or permission of instructor. Principles and devices for maintaining control.
- 544 SEMINAR: CURRENT VISUAL COMMUNICATIONS TOPICS (3)  
Prerequisite: undergraduate concentration in the visual communications fields, or permission of instructor. Research and discussion concerning pertinent problems in the visual communications industry.
- 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.
- 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.



# INTERDEPARTMENTAL PROGRAMS

*Western Washington State College*



## 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 program offers both breadth and flexibility. 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).

Four different individualized courses of study are currently available—Northwest Studies, Religion in America, Science and Technology in America, and Myth and Folklore in America. The American Studies Committee believes that comparative study is important to an understanding of American culture, as an antidote to provincialism and as a means of illuminating the subject matter. Therefore, while each of these programs provides for specialized focus, each also requires a variety of supporting courses which involve complementary and/or contrasting methods of approach. The student's program also normally includes a concentration of work within a single department (equivalent to a minor) to provide additional intellectual depth, and flexibility in making future educational or professional decisions.

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, program director (English), E. Allen (Soc/Anth), R. Buckland (Gen St), R. DeLorme (History), K. Faulkner (Economics), W. Lobue (Gen St), K. Murray (History) or W. Stoever (Gen St).

### *Major* 90-95 credits

#### *General Requirements* (38 credits)

- Hist 203, 204, or equivalent (10 credits)
- Eng 316, or equivalent (5 credits)
- A basic course in the social sciences, selected under advisement from Soc/Anth 201 or 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.

Examples of areas of study are American Myth and Folklore, Northwest Studies, Religion in America, Science and Technology. Other program possibilities are also open.

The major in American Studies normally includes a concentration, approved by the American Studies faculty, from one of the departments participating in the program.

## CANADIAN AND CANADIAN-AMERICAN STUDIES

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.

- Geography 311; History 377; Political Science 406
- Remaining credits to be selected from: Education 414; Geography 411, 435; History 477, 490d; Political Science 301, 417h, 454; Speech 483; 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 401; Education 445a; Sociology/Anthropology 462; and recommended courses in the French language.

For advisement, consult the director, Dr. Gerard F. Rutan (Chairman of the Department of Political Science).

## 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 two 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.

### *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: history, political science and sociology/anthropology.

- History 280 and/or Pol Sci 307
- Remaining credits to be selected from:  
History 480, 481, 482, 483, 484, 485, 490g  
Pol Sci 417d, 430, 431, 432, 476  
Soc/Anth 464

## COURSES IN EAST ASIAN STUDIES

### 297x SURVEY OF EASTERN CENTRAL ASIA (3)

An introduction to the art, architecture, history, languages, literatures, philosophies, religions, and societies of Mongolia and Eastern Turkestan.

### 400 DIRECTED INDIVIDUAL STUDY (1-5)

**Prerequisite:** permission of instructor. Individual study of topics not normally covered in formal courses.

## Interdepartmental Studies

- 401 SURVEY OF EAST ASIA (3)  
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 Intermediate Chinese, Intermediate Japanese, and Elementary Korean.*

*Related courses are: Art 370, Art 470, Art 471, Chinese 197xyz, Ethnic Studies 205, Ethnic Studies 340, Ethnic Studies 352, Geography 315, Japanese 197xyz, and Sociology/Anthropology 362.*

*For further information and advisement, consult Dr. Henry G. Schwarz (High Street Hall 21), 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.

*Major Elementary 15 credits*

- Physics 131; 105 and/or Geog 331
- Chem 115 or 121; Geol 211, 212
- Biology 120, 121
- 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 105 and/or 321 or equivalent
- General Science 405 or equivalent
- Electives under advisement\*

## COURSES IN GENERAL SCIENCE

### 405 HISTORY OF SCIENCE (3)

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. 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.

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

There are a number of special colloquia and tutorials for honors students.

*\*Dr. John Whitmer, Chemistry Department, is the adviser for this major.*



## *Interdepartmental Studies*

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 to meet the goal of giving both students and faculty greater freedom. The revised program enabled students to prepare alternates to the general college requirements, to undertake more independent study, to develop contracts for graduation. It also gave departments more freedom in structuring honors work in particular majors and minors.

Students interested in this program are invited to consult the chairman of the Honors Board 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 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."

Honors students may offer colloquia dealing in an area of special interest to them. The class proposal must be approved by the Honors Board, and is offered on the same basis as the other colloquia. Student-run colloquia in the past have included: "Science Fiction: A Survey of Ideas," "The Lord of the Rings," and "Contemporary Education."

*Tutorial:* Usually 2 credits; consists of a person to person in-depth learning experience in which 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.

### *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.)

## Interdepartmental Studies

- 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)

*These courses are restricted to students enrolled in the Honors Program.*

|               |                                     |
|---------------|-------------------------------------|
| 151, 152, 153 | TUTORIAL (2 ea)                     |
| 161, 162, 163 | COLLOQUIUM (2 ea)                   |
| 251, 252, 253 | TUTORIAL (2 ea)                     |
| 261, 262, 263 | COLLOQUIUM (2 ea)                   |
| 290           | SUMMER READINGS (2)                 |
| 300           | INDEPENDENT STUDY (variable credit) |
| 361, 362, 363 | COLLOQUIUM (2 ea)                   |
| 390           | SUMMER READINGS (2)                 |
| 400           | INDEPENDENT STUDY (variable credit) |
| 461, 462, 463 | COLLOQUIUM (2 ea)                   |
| 490           | SUMMER READINGS (2)                 |

## 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 and education.

Contact Dr. Robert A. Peters, English Department, for further information.

### 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 and sociology/anthropology.

### Basic Courses

- Linguistics 201, 202, 301, 302, 303

*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 Soc/Anth 448 and 5 additional credits selected under departmental advisement

For advisement, consult Dr. Robert Peters (Humanities Building 307), Director of Interdepartmental Program in Linguistics.

## COURSES IN LINGUISTICS

- 201 INTRODUCTION TO LINGUISTICS SCIENCE (3)  
Survey of linguistic method and theory.
- 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.

- 303 SYNTAX (3)  
Prerequisite: Linguistics 201. Comparative survey of modern theories of grammar with special reference to syntax.
- 306 HISTORY OF LINGUISTICS (3)  
Prerequisite: Linguistics 201 or permission of instructor. Development of the science of modern linguistics.
- 401 LINGUISTIC THEORY (3)  
Prerequisite: Linguistics 201.
- 402 READINGS IN LINGUISTICS (3)  
Prerequisite: permission of instructor. Directed research on topic selected by student; may not be repeated.
- 403 FIELD LINGUISTICS (3)  
Prerequisite: 12 credits in linguistics. Methods for analysis and description of an unfamiliar language.
- 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

*Major* Secondary 45 credits

- General Science 405 or equivalent
- Chemistry 121, 122, 127 and 128, 251
- Physics 231, 232, 233 (or 131, 132, 133), 381
- Physical Science 492

*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 INTERMEDIATE SCHOOL (3)  
Prerequisites: Science Education 390b: science general education requirements or equivalent. Use of experiments, demonstrations, and reading to achieve selected objectives in teaching in intermediate grades.

- 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.

The major concentration of 97 credit hours satisfies both the major and minor requirements for the Bachelor of Arts degree.

*Major Concentration* 65 credits

- Basic Core:* RPM 171
- Phase I:* RPM 271, 272, 273, 274; Hux 302
- Phase II:* RPM 371, 372, 373, 374; Hux 303
- Phase III:* RPM 471
- Phase IV:* RPM 472, 473, 474; Hux 371

## Interdepartmental Studies

### 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 421, 454
- Soc/Anth 201, 202, 340, 347, 350, 354, 366, 370, 417a, 417d, 417n, 431, 446, 481, 482
- 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 301, 302, 303, 304, 311, 312, 320, 371, 377, 401, 411, 412, 413, 480, 483
- Biol 120, 121, 222, 223, 224, 225, 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, 450, 451, 452
- Math 110, 240
- Soc/Anth 370, 375
- Geog 341, 372, 430
- Hux 411, 412, 413
- Pol Sci 265

**Minor** 32 credits

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.

## Interdepartmental Studies

- 321 RECREATION RESOURCE POLICY (3)  
Prerequisite: Phase I. Policy formation and analysis of recreation resources in federal and state land management agencies.
- 322 RECREATION RESOURCE DEVELOPMENT (3)  
Prerequisite: Phase I. Analysis of recreation resources, agencies, and organizations, concepts of management, policies and problems, feasibility for development, planning and design considerations, and value determination.
- 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.
- 372 PARK MANAGEMENT (3)  
Prerequisite: Phase I. Management principles, practices and problems of parks and outdoor recreation areas and systems.
- 373 PRINCIPLES OF PROGRAMMING/LEADERSHIP (3)  
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.
- 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: Phase II. 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 II. Course critique and analysis of current leisure research methods.
- 451 CANADIAN AND U.S. LEGISLATION IN RECREATION (3)  
Prerequisite: Phase II. Identification, classification and interpretation of legislation affecting leisure and recreation. Emphasis on outdoor recreation.
- 452 LITERATURE REVIEW AND ANALYSIS (3)  
Prerequisite: Phase II or permission of instructor. 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)  
Prerequisite: Phase II. Summer workshop designed to study the impact of man on wilderness areas. Includes a six-week wilderness experience.
- 454 PROGRAMS FOR SPECIAL GROUPS (3)  
Prerequisite: Phase II. Techniques, materials and methodology for conducting recreation programs for the old, handicapped, mentally retarded and other special groups.
- 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.
- 473 FUTURE TRENDS (5)  
Prerequisite: Phase III. Seminar on the implications of contemporary and projected leisure trends for the future of society.
- 474 SUPERVISION (1)  
Prerequisite: Phase III. Course designed to aid student advisement. Seniors will be assigned to advise interested freshman and sophomore students about the profession and Western's program.

## 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 383 and 493, Geology 384 and 390, Physical Science 392 and 492, Education 423 and 429.

## COURSES IN SCIENCE EDUCATION

- 390a,b SCIENCE FOR THE ELEMENTARY GRADES (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.  
390a Primary Emphasis  
390b Intermediate Emphasis

## Interdepartmental Studies

- 391 SCIENCE FOR THE PRIMARY GRADES (3)  
Prerequisite: Sci Ed 390. Classroom-laboratory study of "new" curricula; observation and participation in public schools. Intended for students preparing to teach at the primary level.
- 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 391, Phys Sci 382, Biol 383 or Geol 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.
- 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.
- 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.
- 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: Physical Science 382 or Sci Ed 390 and 391 or equivalent. In-depth study of topics in the physical sciences most appropriate for instruction in the elementary school.
- 583 SPECIAL TOPICS IN THE BIOLOGICAL SCIENCES FOR ELEMENTARY SCHOOL TEACHERS (4)  
Prerequisite: Biol 383 or Sci Ed 390 and 391 or equivalent. In-depth study of topics in the biological sciences most appropriate for instruction in elementary school.
- 584 SPECIAL TOPICS IN THE EARTH SCIENCES FOR ELEMENTARY SCHOOL TEACHERS (4)  
Prerequisite: Geol 384 or Sci Ed 390 and 391 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.
- 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:*

Physical Science 382 Physical Science for the Intermediate School (3)

Biology 383 Biological Science for the Intermediate School (3)

Geology 384 Earth Science for the Intermediate School (3)

## SOCIAL STUDIES EDUCATION

The interdepartmental programs emphasizing history and the social sciences are designed to expose potential teachers to the several disciplines represented in typical

## Interdepartmental Studies

common school curricula. Through survey and in-depth work a student develops the academic competency to function effectively in the classroom.

For advisement or approval of these majors, students should consult Dr. Harry Jackson, director of social studies education.

### Major-Minor Concentration in History - Social Studies

History-Social Studies for junior and senior high school teachers 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 499
  - 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 page 121 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 45 credits

(For Elementary Education Minors only)

- History 203, 204; Geography 201, 311
- Sociology/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

(For Elementary Education Majors only)

- 20 credits from one of the social sciences
- 15 credits from two other social sciences
- 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.

## Interdepartmental Studies

### 425a,b SOCIAL SCIENCE FOR THE ELEMENTARY SCHOOL (3)

Prerequisites: Psych 352. The development of social science concepts and skills in the elementary program.

- 425a Primary Emphasis
- 425b Intermediate Emphasis

### 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.

### 497a TEACHING POLITICS AND GOVERNMENT IN THE SCHOOLS (3)

Prerequisite: teaching experience or permission of instructor. A survey of political science curricula for elementary and secondary schools.

### 500 PROJECTS, PROBLEMS AND RESEARCH (2-5)

Prerequisite: teaching experience and permission of instructor. Individually designed experiences to meet specific curricular and methodological situations.

## URBAN AND REGIONAL PLANNING

See Geography Department listing, page 124 of this catalog.

## 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

### Basic Core 67 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

### Supporting Courses 43 credits

- Chemistry 208, 209
- Business Administration 251, 330; Economics 338
- Math 122 or Computer Science 110
- Sociology/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.



## *Interdepartmental Studies*

### 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.

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.

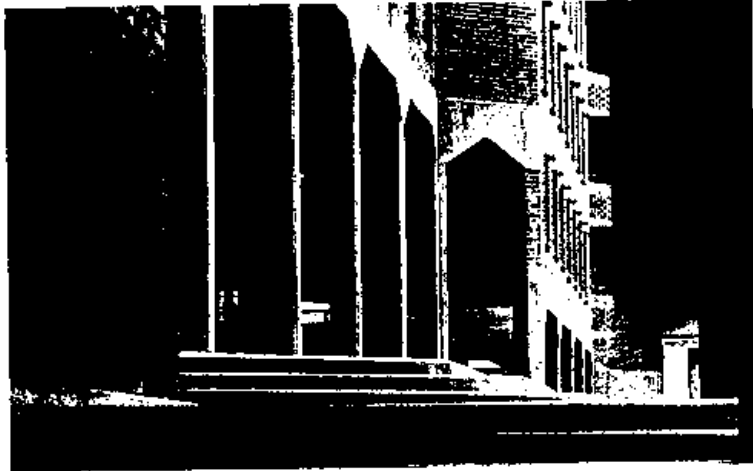
Dr. Meredith Cary, English Department, is the adviser for this minor.

*Minor* 30 credits

- Soc/Anth 397f Women's Studies (4)
- English 397b Women's Studies (4)
- Psychology 397k Personality Theories and Women (4)
- Electives under advisement







**EDUCATION**

*Western Washington State College*



In March, 1973, the Board of Trustees adopted a new administrative organization for teacher education at Western Washington State College. The administrative head of this new division is the Associate Dean of Teacher Education who is responsible for coordinating teacher education in its entirety for Western Washington State College.

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

The Department of Education and Library Science is directly responsible to the Associate Dean, but is associated closely with many of the departments in the College of Arts and Sciences and the other colleges of Western in the preparation of school personnel.

## EDUCATION FACULTY

- DONALD A. FERRIS (1947) Acting Chairman.  
Associate Professor of Education and Director of Teacher Education Advisement and Certification. BA, MA, University of Washington.
- DAVID G. ARMSTRONG (1972) Lecturer. AB, Stanford University; MA, University of Montana.
- HORACE O. BELDIN (1965) Professor. BS, MS, University of Oregon; PhD, Syracuse University.
- BARBARA A. BIELER (1965) Assistant Professor of Home Economics and Education. BS, MHEc, Oregon State 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.
- ELDEN A. BOND (1966) Professor. AB, University of Washington; MA, PhD, Teachers College, Columbia University.
- DON W. BROWN (1954) Associate Professor. BS, MA, University of Nebraska; EdD, Colorado State College.
- ROBERTA A. BOUVERAT (1970) Assistant Professor. BA, MEd, Western Washington State College; PhD., The Ohio State University.
- LARRY L. BUSSE (1972) Assistant 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) Assistant 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 U.
- 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 and Director, Continuing Studies. BS, University of Minnesota; EdD, University of California, Los Angeles.
- PAUL FORD (1970) Professor. BA, Dartmouth College; MEd, EdD, Harvard University.
- DONN D. GILBERT (1968) Associate Professor. BA, University of Arizona; MA, California State College at Los Angeles; EdD, University of California, Berkeley.
- STANLEY L. GOLDSTEIN (1972) Assistant Professor. BA, Washington College; MA, New Mexico State University; PhD, University of Texas.
- BURTON L. GROVER (1969) Associate Professor. BS, MA, PhD, University of Minnesota.
- WILLIAM D. HAMLIN (1972) Lecturer. BS, MEd, University of Maine.
- 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.
- ARTHUR L. HOISINGTON (1971) Associate Professor. BA in Ed, MEd, Western Washington State College; DEd, 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 (1948) 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) Associate 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.
- RUBY D. McINNES (1948) Associate Professor. BA, University of Washington; MA, Teachers College, Columbia University.
- \*STEPHEN C. MARGARITIS (1963) Associate Professor. BA, University of Athens; MA, PhD, University of Southern California.
- GRANT L. MARTIN (1971) Assistant Professor. BA, Westmont College; MS, University of Idaho, PhD, University of Washington.
- ANN R. MINGO (1972) Lecturer. BS, University of New Mexico; MEd, University of Arizona.
- 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.
- NEILL D. MULLEN (1966) Assistant Professor. BA in Ed, Western Washington State College; MA, Colorado State College of Education.
- KENNETH R. MURRAY (1972) Assistant Professor. BA, City University of New York; PhD, University of California, Berkeley.
- 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.
- TOM V. SAVAGE (1968) Assistant Professor. BA, Los Angeles Pacific College; PhD, University of Washington.
- LEONARD SAVITCH (1967) Associate Professor. BS, Pennsylvania State; MA, Teachers College, Columbia University; PhD, University of Washington.
- \*MAURICE L. SCHWARTZ (1968) Associate Professor of Geology and Education. BS, MA, PhD, Columbia University.
- SY SCHWARTZ (1967) Assistant Professor. BS, MS, EdD, Wayne State University.
- HENRY SIJOHN (1972) Lecturer. BS, University of Idaho; MS, Gonzaga University.
- DOROTHY S. SLATEN (1971) Lecturer. BS, Mt. Angel College; MEd, PhD, Washington 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) Assistant Professor. BS, MSE, Wisconsin State University; PhD, University of Minnesota.
- RALPH H. THOMPSON (1950) Professor. BA, Dickinson College; MA, University of Delaware; EdD, University of Illinois.
- 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.

## PREPARATION FOR TEACHING

A primary function of Western Washington State College is the preparation of teachers, administrators and other specialists for the schools of Washington and other states. Building upon the foundation of broad general education, students add concentrations in an academic discipline and professional studies dealing with the teaching/learning process. While the general demand for teachers has declined recently, teachers are still needed in many areas in which the College offers preparation.

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. These

\*On Leave 1973-74

## Education

awards were for the College's pioneering undergraduate programs which integrate students' professional course work with immediate application of that course work in off-campus residence centers. Both undergraduate and graduate preparation and research programs in education have received substantial federal grants; these grants, including stipends for students, 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.

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. The Department of Education is responsible for developing and offering professional studies and for coordinating the elementary major and minor concentrations; details are outlined below.

### REQUIREMENTS FOR CERTIFICATION

#### *Provisional Certificate (and the B.A. in Education Degree)*

The B.A. in Education program at Western Washington State College is designed to meet Washington State requirements for the provisional teaching certificate for all levels of the public schools. Requirements may be classified as

- (1) General education (same as for B.A. degree)
- (2) Professional sequence
- (3) Major concentrations
- (4) Minor concentration

Although a minor is not required for a degree, elementary teachers need both an academic and a professional concentration for certification.

The provisional certificate is valid for three years from the date of issuance, renewable for an additional three years after completing a portion of the fifth year. For the first year, it 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.

Candidates for Washington certificates recommended for secondary teaching in any social studies field or for general elementary teaching must complete History 391 Washington State History and Government.

In July 1971, the State Board of Education adopted new standards for the preparation and certification of school professional personnel. The new guidelines provide for emphasis on competencies and field experiences. The preparation of teachers and other professional personnel is a joint responsibility of the colleges, school districts, and professional associations. Consortia involving the three agencies as equal partners are currently being organized. These consortia will have the responsibility for developing, organizing, and operating programs in teacher education.

While organization of consortia under the new standards is in the formative stage, the 1961 standards continue to remain in effect concurrently. Therefore, teacher education programs outlined below are based upon the 1961 standards.

New programs in teacher education which combine either two or three quarters of professional course work and immediate application of that course work in an off-campus residence center are also available for interested students. Students should read the section below entitled "Field-Based Sequences" and, if interested, contact the Office of Field Services, Miller Hall 206.

### 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 the teacher education

program. The student is expected to make a systematic study of the role of a teacher and to undertake self-analysis in terms of the demands and opportunities of a teaching career. Those who decide upon such a career then make formal application for admission to the professional program. Application is normally made when enrolled in the first professional course.

The following standards apply to all teacher education programs except the Professional Concentration for Elementary Teachers (see page 275).

### *Admission Standards*

#### *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 teacher education students are urged to take Speech 100 or 302 or an alternative speech performance course in meeting general education requirements. A grade of "C" or better in such a course is deemed evidence of minimal competency in speech.

#### *Scholarship.*

A grade 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 may be referred to the Writing Workshop or the Speech Department for diagnosis and remedial work 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.

## PROFESSIONAL EDUCATION SEQUENCES

Elementary teachers electing the Professional Concentration (see page 275) will find this sequence included within the 85 credit concentration.

### *Campus-Based Sequence*

In the interests of meeting individual needs and goals, options are offered in professional courses. Students will elect (a) or (b) in meeting the requirements for introductory and foundations courses:

(a)

Ed 310 The Teacher and the Social Order  
Ed 411 Foundations of Education

(Ed 441, 479, or a similar course prescribed for the fifth year)

(b)

Ed 390 Professional Practicum and Seminar  
(Ed 131, or Ed 109 may be substituted for Ed 390)  
Ed 310 The Teacher and the Social Order

(Ed 411 or 512 or similar course prescribed for the fifth year)

In addition to (a) or (b) above, each candidate for the B.A. in Education and provisional certificate will complete one of the following:

(a) Elementary

Ed 385 Foundations of Reading Instruction  
Psych 351 Psychology of Human Learning and Instruction  
Psych 352 Child Psychology (Elementary)  
Psych 372 Evaluation in the Elementary School  
Ed 494 Supervised Teaching—Elementary

## Education

### (b) Secondary

- Ed 420 Instruction in Secondary Schools
- Psych 351 Psychology of Human Learning and Instruction
- Psych 353 Adolescent Psychology (Secondary)
- Psych 371 Evaluation in the Secondary School
- Ed 495 Supervised Teaching--Secondary

### Field-Based Sequences

Consistent with 1972 state certification guidelines, three alternative field-centered programs are available to students. Planning for a field program should begin early in the sophomore year. For advice, contact the Office of Field Services, Miller Hall 206.

#### Program I (Two-Quarter Clinical Program)

This program calls for full-time study in one of the resident centers (e.g., Seattle) at the elementary and/or secondary school level for two consecutive quarters and is intended for the late junior and/or senior year. It is recommended that students complete as much as possible of their major requirements and Education 310 and Psychology 352 or 353 before enrolling for this two-quarter sequence. Subject to available openings, students are given a choice as to which resident center they will be assigned. (See below, "Student Teaching Resident Centers.")

| First Quarter   |                     |
|---|---------------------|
| Elementary  | Secondary           |
| *Education 491—6 cr.  | Education 491—6 cr. |
| *Education 492—6 cr.  | Education 492—6 cr. |
| Education 421—5 cr.   | Education 390—3 cr. |
| (Education 421 may be applied to the elementary concentration or to the elementary minor) | or<br>Education 400 |

| Second Quarter                 |                               |
|--------------------------------|-------------------------------|
| Elementary                     | Secondary                     |
| Education 494—16 cr.           | Education 495—16 cr.          |
| Elementary Supervised Teaching | Secondary Supervised Teaching |

#### Program II

##### (Three-Quarter Clinical Program—Everett)

This program is for the undergraduate who wishes to spend three quarters in an elementary school setting in which he or she will complete 48 hours of professional preparation requisite to the provisional teaching certificate. In addition to the components of the two-quarter sequence outlined above, this program includes a substantial focus on language arts in the elementary school. It is offered only at the resident center at Garfield Elementary School in Everett, Washington. It is supervised by clinical professors from the college and teachers from the school district; it is open to juniors and transfer students.

#### First Quarter

- Education 390 Professional Practicum and Seminar 3 cr.
- \*Education 491 Laboratory in Preparation of Instructional Programs 6 cr.
- Education 493e Individualized Instruction in Reading - Language Arts 6 cr.

#### Second Quarter

- Education 421 Instruction in the Elementary School 5 cr.
- \*Education 492 Laboratory in Interaction and Evaluation 6 cr.
- Education 493f Individualized Instruction in Reading - Language Arts 6 cr.

#### Third Quarter

- Education 494 Elementary Supervised Teaching 16 cr.

#### Program III

##### (Three-Quarter Clinical Program—Bellingham)

This three-quarter program is designed to provide teacher trainees with early experience combining

*\*Education (or Psychology) 491-492 replace Education 385 or 420, Education 411, Psychology 351, and 371 or 372 in the professional sequence. Education 310 and Psychology 352 or 353 are to be taken outside the clinical program. Students who have taken some of the courses from the campus-based sequence, consult the Office of Teacher Education Advisement in regard to possible application of the excess credits.*



practical public school work with on-campus courses. College trainees participate daily throughout the school year in the classrooms of the Whatcom Middle School in Bellingham. College instructors visit and collaborate with teachers in helping students develop instructional projects often involving investigations in experimental education. In addition to students in the late junior or senior year, the program is open to transfer students and mature lower-division students who are planning on exploring education as a career in the upper elementary grades, middle school, or in some cases, secondary school. The following is a tentative program for 1973-74:

#### First Quarter

Education 390 Professional Practicum and Seminar 3 cr.  
 Sci Ed 390b Science for Elementary Grades – Intermediate 3 cr.  
 Education 493e Individualized Instruction in Reading - Language Arts in Elementary School (to be completed in second quarter) 6 cr.  
 \*Psychology 491 Laboratory in Preparation of Instructional Programs 6 cr.

#### Second Quarter

Sci Ed 391 (or other Science Education for Elementary Schools) 3 cr.  
 Soc Studies Ed 425b Social Science for Elementary School 3 cr.  
 Education 493e (continued from first quarter; see above)  
 \*Psychology 492 Laboratory in Interaction and Evaluation 6 cr.

*\*Education (or Psychology) 491-492 replace Education 385 or 420, Education 411, Psychology 351, and 371 or 372 in the professional sequence. Education 310 and Psychology 352 or 353 are to be taken outside the clinical program. Students who have taken some of the courses from the campus-based sequence, consult the Office of Teacher Education Advisement in regard to possible application of the excess credits.*

#### Third Quarter

Library Science 305 Books for Elementary Schools 3 cr.  
 Education 494 Supervised Teaching (elective) 8 cr.  
 Psychology 352 Child Psychology 5 cr.  
 or  
 Education 494 (By advisement, for upper-division students completing Professional Education sequence) 16 cr.

#### Requirement for Supervised Teaching

The requirement in supervised teaching for the provisional certificate is generally 16 credits, inclusive of associated seminars. Both campus-based and field-based sequences normally conclude with some form of supervised teaching. (Education 494 for elementary, 495 for secondary and 498 for special education.) 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.

Course challenge of the above requirement is considered by the Department of Education, with or without credit, on the basis of recency, type and effectiveness of previous public school teaching experience.

#### Prerequisites for Supervised Teaching

- a. Admission and continued good standing in the professional education program. Students should also be aware of the departmental grade requirement for the teaching major, and have reasonable expectations of meeting it before undertaking student teaching in the field.

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- b. Satisfactory completion of Education 385 (elementary) or Education 420 (secondary), Psychology 351, and either Psychology 352, 353, 371 or 372. In the alternate program, Education 491-492 satisfies this prerequisite. Students in the elementary concentration need to consult their advisers, since their electives may not coincide with the traditional sequence.
- c. Completion of 128 credits.
- d. For secondary supervised teaching, at least 30 credits in the major with grade average acceptable for departmental recommendation. A methods class in the major is strongly recommended.
- e. Students in the elementary concentration should complete at least the minimum required credits in areas 6 through 9; others should complete Mathematics 281 and three courses selected from Social Studies Education 425, Mathematics 481, Education 485, English 441a, a course in science education prior to supervised teaching.
- f. A chest x-ray in compliance with state law (also required for Ed 491, 492, 493).

## Application

Students will file an application for admission to a field-based program or to one-quarter supervised teaching in January preceding the academic year in which the student intends to do the work. Students will consult with departmental advisers before making such application. They will indicate a first, second and third choice as to geographic areas in which field programs and supervised teaching opportunities are available. Normally, students will be given their first choice as to area and to quarter, but it may be necessary to assign some to a second or third choice of one or both. In the latter event, the student will be consulted as to possible personal or academic hardships which may ensue. It is necessary that the students keep the student teaching office informed of any changes or cancellations so that the openings may be made available to other students.

Students planning to take Education 491-492 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

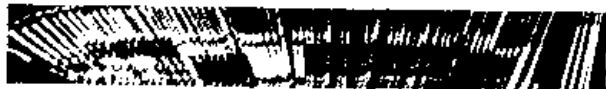
with the fall opening of the public school. Such students will register for Education 490 in addition to their other fall courses.

## Time Involvement

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

## Supervised Teaching Resident Centers

Supervised teaching opportunities are offered in resident centers (in residence while off campus) in Skagit and Whatcom counties, Everett, Edmonds, Shoreline, Bellevue, Seattle, Auburn, Federal Way, Tacoma, Olympic Peninsula area and Vancouver, B.C. Field-based programs are offered in Auburn, Kent, Seattle, Everett, Bellingham, Ferndale and Mount Baker school districts. Students are responsible for their own housing arrangements. If assistance is needed, the school district or college supervisor should be consulted.



## MAJOR-MINOR CONCENTRATIONS FOR TEACHER EDUCATION

Approved concentrations must be completed in fields specifically related to the curriculum of the public schools of the state. A choice is to be made among programs leading to recommendation for one or more of the three levels: elementary, junior high (middle school), senior high school. The following concentrations are those available in the College of Arts and Sciences; others may be offered by Fairhaven, Huxley, or the College of Ethnic Studies subject to approval by the Teacher Curricula and Certification Council.

### Secondary Teachers

(See departmental listings for specifications.)

#### Majors

|                        |                    |
|------------------------|--------------------|
| Art                    | Home Economics     |
| Business Education (S) | Industrial Arts    |
| Chemistry (S)          | Mathematics        |
| Earth Science          | Music Specialist   |
| English                | Physical Education |
| Foreign Language       | Physical Science   |
| General Science (J)    | Physics (S)        |
| Geography              | Speech             |
| History                |                    |

*{Courses followed by (S) are applicable to senior high school only; courses followed by (J) are applicable to junior high school (middle school) only. Others are acceptable at both levels.}*

Additional supporting courses are required for some majors.

Concentrations encompassing both a major and a minor are offered in art, general science, home economics, music, physical education, technology (industrial arts); combined major concentrations are also offered in chemistry-physics, chemistry-mathematics, English-speech, history-social studies, geography-social studies, political science-social studies, and physics-mathematics.

For teachers in the field of biology, a five-year program is offered. The student earns a degree in Arts and Sciences and then takes his professional education as a fifth year of study. To the extent that he has elective time, he may begin professional study prior to receiving his B.A. degree.

Although a minor is not required for secondary certification, it is strongly recommended that a student develop a second concentration in order to increase his employability.

### Elementary Teachers

There are several ways by which the student can prepare for elementary teaching, depending on his specific goal. In addition to the General Education requirements for a degree, and one of the professional sequences (see page 269), the student selects one of the options below.

- The Professional Concentration*, for one who wants to be a general classroom teacher. This concentration encompasses the professional sequence, what has been known as an elementary major, and provides for academic study in depth.
- Special Education Major*, for one who wants to be recommended for teaching the handicapped. This must be accompanied by an approved academic minor, and one of the professional sequences. An alternative is the elementary teaching minor with special education option and an academic major from the list below.
- Early Childhood Education*, for teachers planning to work with younger children. The elementary teaching minor contains an appropriate option. This minor must be coupled with an academic major. Attention is called to child development majors offered by psychology and by home economics.
- General Classroom*, with greater subject matter emphasis. The traditional elementary teaching minor coupled with an appropriate academic major is appropriate for this goal.

Majors offered include:

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

*(See departmental listings for detailed specifications.)*

## Education

### Special Education Major

Students majoring in special education will receive training emphasis in identification, diagnosis, and remediation of exceptional children and their learning problems. Classroom information and materials are provided for students to enable them to develop competence in these areas and then, through practicum experience, to apply this knowledge in the solution of classroom behavior and instructional problems. This emphasis on practicum experiences not only increases the amount of time students may work with children but also provides contact with school personnel and other professionals related to the education of exceptional children. The Associate Special Education Instructional Materials Center (ASEIMC) located at Western Washington State College and a chapter of the Council for Exceptional Children also provide professional opportunities for students. Currently, there is a demand for teachers trained in special education. This demand is expected to continue locally as well as nationally.

Students desiring a recommendation for teaching competence in special education will complete the following:

#### Major 47 credits

- Education 360, 461, 462, 465
- Education 361 or 400 or PE 495
- 23 credits—elementary basic core:
  - Education 485
  - English 441a or Ed 424
  - Mathematics 281, 481
  - Social Studies Ed 425
  - Science Ed 390, and one course from Science Ed 391, Biology 383, Geology 384 or Physical Science 382

Normally student teaching will be done in an elementary general classroom prior to student teaching in the special education program.

### Elementary Teaching Minor

#### Basic Core 23 credits

- Education 485
- English 441a
- Mathematics 281
- Mathematics 481
- Social Studies Ed 425
- Science Education 390, and one course from
  - Science Ed 391 (primary)
  - Biology 383
  - Geology 384
  - Physical Science 382

#### Additional Elementary Courses

To complete the minor, the student will elect twelve credits in one of the following options according to teaching interest, in addition to the basic core:

##### (a) General Classroom.

- Under advisement select from:
  - Art 380
  - \*Biology 383
  - 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
  - \*Phys Science 382
  - 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

\*If not elected in the Basic Core.

(c) *Special Education.*

- Ed 360, 361 or 461, 462, 465
- Additional courses under advisement
- Normally student teaching will be done in elementary general classroom as well as in special education.

### PROFESSIONAL CONCENTRATION FOR THE ELEMENTARY TEACHER (GENERAL CLASSROOM)

85 credits

This concentration includes what would normally be the Professional Sequence and an Elementary Education Major; it is adaptable to either campus-centered or field-based programs.

#### *Admission*

Students interested in becoming general elementary classroom teachers should ask the Department of Education for application for admission to the program. Normally, a student would make the request during his sophomore year.

The student will be given an application form, assigned to an adviser and given information about admission criteria and procedures. The application will request the following:

- Biographical data
- Proficiency data of achievement
  1. Scholastic achievement test scores
  2. Speech competence. Prospective teachers are urged to take Speech 100 or 302 or an alternative speech performance course in meeting general education requirements. A grade of "C" or better is normally deemed as evidence of minimal competency in speech.
  3. Informal test of reading and writing constructed by the Department of Education.
  4. Scholarship. A grade average of 2.5 is normally expected. This may be achieved as a cumulative average of all college work, or of the most recent year's work (at least one quarter of which is taken at Western) in cases of obvious improvement over a formerly poor average.

- A summary of work experiences, particularly those related to working with young people. The student is expected to have arranged for and completed a two-week period of observation and participation in an elementary school prior to enrolling in Ed 399.
- A statement of reasons for choosing to become a general elementary classroom teacher.
- Letters of reference (optional).

*Note: The applicant will follow the above instead of the general admission standards listed on page 269.*

#### *Program*

The professional concentration for the generalist or general elementary classroom teacher consists of 14 areas grouped into four blocks. Block A, areas 1-5, includes the professional foundations; Block B, areas 6-9, includes specific methods and content in language arts, social studies, mathematics and science; Block C, areas 10-13, includes methods and content in the expressive arts—physical education, art, music, and technology; Block D, area 14, includes student teaching and other field experiences.

In each block, the minimum number of credits required (subject to a one credit plus or minus adjustment in a few cases) and the maximum credits allowed toward the 85 hour professional concentration are specified. The minimum requirements can be met by selecting one or more courses listed under "Required Core." Additional courses beyond the minimum may be selected from courses listed under "Required Core" as well as from those listed under "Optional Courses." Additional optional courses can be selected from the catalog and substituted under advisement. The minimum and maximum credits for each area and/or block are as follows:

- Block A, areas 1-5.* Minimum 4 credits each in four out of five areas; maximum 30 credits.
- Block B, areas 6-9.* Minimum 5 credits each in four out of four areas; maximum 36 credits.
- Block C, areas 10-13.* Minimum 3 credits each in two out of four areas; maximum 20 credits.
- Block D, area 14.* Minimum 8 credits in this area (in exceptional cases); maximum 32 credits.

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| Area | I<br>Required Core<br>Select from Column I | II<br>Optional Courses*<br>Select from Column I &/or II |
|------|--|---|
|------|--|---|

*Block A, Areas 1-5, minimum of 4 credits in four of the areas; maximum 30 credits in the block.*

|                                    |   |  |
|------------------------------------|---|--|
| 1. Teaching as a Profession        | Ed 390, 399                                   | Ed 490   |
| 2. Human Relations                 | Ed 391, 399, Speech 407                       | Soc/Anth 350, 417d   |
| 3. Foundations of Education        | Ed 310, 399, 411                              | By advisement  |
| 4. Elementary Methods and Analysis | Ed 399, 421, 441                              | Ed 450, 451, 477, 478, 479                                   |
| 5. Child Development and Learning  | Ed 399, Home Econ 320,<br>Psych 351, 352, 372 | Home Econ 423, Soc/Anth<br>481, Psych 457-460, Speech<br>354 |

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.

*Block B, Areas 6-9, minimum of 5 credits in each area; maximum 36 credits in the block.*

|                                 |   |   |
|---------------------------------|---|---|
| 6. Language Arts                | Ed 385, 439, 485, 488, 493ef; Eng 441a or Ed 424;<br>Lib Sci 305            | Ed 445k, 480, 484, 486; Eng<br>370, 441b, 446b, 491, 492;<br>Lib Sci 306, 309; Ling 201;<br>Speech 319, 331, 430, 484   |
| 7. Social Studies—<br>Education | Hist 391; Soc St Ed 425ab   | Econ 201, 202, 311, 381,<br>486; Geog 201, 207,<br>311-320, 401, 435, 442, 470;<br>History 273, 280, 342, 347,<br>360, 365, 368, 371, 375,<br>429, 463, 465; Pol Sci 101,<br>210, 250, 270, 291, 320,<br>406, 417f, 445a, 481, 482;<br>Soc/Anth 201 or 202, 310 or<br>366, 320 or 330 or 340 or<br>351 or 354, 347, 425; Ethnic<br>Studies 201, 202, 203, 205,<br>300; General Studies 200,<br>421, 465 |
| 8. Mathematics—Education        | Math 281, 481   | By advisement   |
| 9. Science—Education            | Sci Ed 390a or b, and Sci Ed 391 or Biol 383 or Geol<br>384 or Phys Sci 382 | Sci Ed 430, 445a or b, 480;<br>Biol 201-205, 208, 307, 348,<br>349, 370   |

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*Block C, Areas 10-13, Expressive Arts; minimum 3 credits in each of two areas; maximum 20 credits in block.*

|   |             |  |
|---|-------------|--|
| 10. Physical Education                              | PE 306a,b,c | PE 311, 313, 326, 403;<br>Health Ed 252, 350, 449      |
| 11. Art—Education                                   | Art 380     | Art 101, 190, 381                                      |
| 12. Music—Education                                 | Music 350   | Music 121, 140, 221, 451,<br>452                       |
| 13. Technology -<br>Industrial Arts --<br>Education | Tech 450    | Tech 350, 231, 240, 301,<br>333, 459 and by advisement |

*Block D, Area 14, minimum 8 credits; maximum 32 credits.*

|  |             |                         |
|--|-------------|-------------------------|
| 14. Student Teaching and<br>Field Experience | Ed 399, 494 | Ed 491, 492, 493ef, 494 |
|--|-------------|-------------------------|

### *Academic Study In Depth for the Elementary Teacher*

*(Required for Washington certification in addition to the professional concentration outlined above.)*

The candidate will develop an academic concentration of at least 40 credits by extending one area or two related areas (from areas 6-13) in consultation with the elementary adviser and the appropriate departments. Broad areas of concentration are more appropriate than narrow specializations for the general elementary classroom teacher. Overlap of courses with those selected for the 85 credit professional concentration is permitted within the limits of credit specified for each block.

*\*Additional optional courses can be selected from the catalog and substituted under advisement*

## Education

### FIFTH YEAR OF STUDY FOR TEACHERS

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 Teacher Education Advisement.

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:

Total credit: 45 quarter hours of approved study in addition to the bachelor's degree.

Extension study is limited to 12 credits.

At least one-half of the credits must be in upper division or graduate courses.

At least one-half of the credits must be earned in residence in the recommending or an approved out-of-state institution; courses taken in the latter require prior approval of the pre-service (undergraduate) institution.

A limited amount of approved fifth year study may be completed prior to a year of teaching experience, subject to the approval of the recommending institution.

Evidence must be presented of two years teaching experience which, judged as a whole, are successful. Recent teaching experience is of particular concern.

*See page 287 for a fifth year program for learning resources specialists.*

### DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a student who wishes to graduate with departmental honors must complete Education 336e,f,g, 336h, 337h, 436e,f,g, for a total of 20 credits of honors work in education; earn 3 or 4 credits of honors work in student teaching; satisfactorily perform on a comprehensive examination in education.

### 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.
- 197a CASE STUDY IN PROBLEM SOLVING TECHNIQUES (3)  
Identification and analysis of problems arising in state human services agencies; training in problem solving skills; production of case study materials.
- 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.
- 320 TEACHING LISTENING IN THE ELEMENTARY SCHOOL (3)  
Analysis and practice of methods of direct instruction of specific listening skills needed for comprehension, critical and appreciative learning.
- 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.
- 336e,f,g HONORS TUTORIAL (2-5)
- 336h SUMMER READINGS (2-5)
- 337h SEMINAR IN RESEARCH (2)
- 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 RECREATIONAL COUNSELING WITH HANDICAPPED CHILDREN (4)  
Prerequisite: permission of department. Outdoor camp program for handicapped children and adults; planning and carrying out a program of hiking, boating, fishing, swimming, and working with craft materials.
- 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.
- 391 HUMAN RELATIONS (1-4)  
Prerequisite: admission to Elementary Concentration. A study and practicum in interpersonal relationships as they affect teacher-student interaction.
- 399 SEMINAR IN ELEMENTARY EDUCATION (1)  
Prerequisite: restricted to elementary concentration majors. 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.
- 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 teacher education; Psych 351, 352 or 353. Recommended for quarter immediately preceding student teaching; examination and laboratory practice of major methods; videotaping of simulated and micro-teaching experience; observation in schools.

## Education

- 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.
- 423 AEROSPACE EDUCATION WORKSHOP (2-5)  
Prerequisite: teaching experience or permission of instructor. A non-technical examination of current programs in aviation and space exploration for elementary and secondary teachers; may be repeated.
- 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: student teaching, teaching experience, or permission of department. Historical and analytical study of the curriculum of the secondary school; application of theory to instructional practices.
- 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 that develop language and physical coordination, inquiry and creativity. (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.
- 434e CHILD AND YOUTH STUDY (3)  
Prerequisite: permission of department. Observation of one pupil for a school year; systematic examination of those observations in bi-weekly seminars. The study may be extended for a second year as Ed 434f.
- 436e,f,g HONORS TUTORIAL (2-5)
- 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 Dis-functional 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.
- 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.
- 457 **PROGRAMMED LEARNING (3)**  
Prerequisite: Psych 351. Programmed learning as application of theories of learning; practice in developing specific behavioral objectives; writing short programs in field of interest.
- 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**
- 461 **OBSERVATION AND PARTICIPATION IN SPECIAL EDUCATION (3)**  
Prerequisite: Ed 360 or permission of department. Guided observation and limited participation in selected programs for exceptional children.
- 462 **THE EXCEPTIONAL CHILD IN THE CLASSROOM (4)**  
Prerequisite: Ed 360. 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.
- 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.
- 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.

## Education

- 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 351, 352. 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 **BASAL READING INSTRUCTION (3)**  
Prerequisite: Ed 385. Basal 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.
- 487a,b,c,d **IMPROVEMENT OF INSTRUCTION IN READING (3)**  
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
- 488 **INDIVIDUALIZED READING INSTRUCTION (3)**  
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 page 272 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.
- 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.
- 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.
- 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.
- 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.
- 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.

497q RADICAL NEW THEORIES OF HUMAN BEHAVIOR (4)

A course intended to acquaint teachers and administrators with the new theories of human behavior, the presuppositions which underpin the theories and some of the implications for schools, given the validity of the theories.

497r STUDIES IN HUMANISTIC EDUCATION FOR SECONDARY SCHOOLS (3)

A survey of recent developments in humanistic education featuring opportunities to explore and/or experience in depth those approaches which prove to be of particular interest.

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.

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)

Prerequisite: 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.

517 HISTORY OF EDUCATIONAL THOUGHT (3)

Prerequisites: Ed 413 or equivalent, and permission of instructor. Development of ideals, theories, institutional structures and practices.

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.

521a,b SEMINARS IN ELEMENTARY CURRICULUM (4 ea)

Prerequisites: teaching experience and Ed 422 or permission of department. Planning and developing curriculum; advanced study of curriculum design and materials; independent research. Letters indicate grade level of emphasis in various sections of the course:

- (a) Primary
- (b) Intermediate

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 591. Critical analysis of programs of early childhood education emphasizing interpersonal relations, role of agencies, and instructional procedures and materials.

## Education

- 532 SEMINAR IN ELEMENTARY EDUCATION**  
Prerequisites: Ed 501, 512, 422, or permission of department. Current issues in curriculum, methods, and organization.
- 532a Teaching and Learning of Elementary School Subjects (4)**  
Prerequisite: teaching experience. Advanced study of research findings and theoretical developments affecting the teaching of various basic elementary school subjects which teachers are responsible for. Individualized research and study in particular areas of interest will be encouraged.
- 532b Seminar: The Elementary School Child (4)**  
Prerequisites: background in elementary education and permission of instructor. Critical review of current life in elementary school classrooms in relation to individual differences and general growth patterns of children, ages 5-12, research findings in the 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.
- 533 SEMINAR: PROBLEMS IN EARLY CHILDHOOD EDUCATION (3)**  
Prerequisites: Ed 531, 591. Specific problems will be drawn from the field and content organized according to student need.
- 541a THEORY IN EDUCATIONAL ADMINISTRATION (3)**  
Prerequisite: graduate status. Major administrative theories and models.
- 541b PUBLIC SCHOOL ORGANIZATION AND ADMINISTRATION (3)**  
Problems related to administration of school personnel, plant, and program; structure and organization of the school system.
- 541c SCHOOL LAW (3)**  
Prerequisite: Ed 541a. Legal principles underlying statutes and court decisions related to the schools.
- 541d INTERGOVERNMENTAL RELATIONS IN EDUCATION (3)**  
Prerequisite: Ed 541a. Formal and informal mechanisms at state and federal level which influence decision-making and program development at the local level.
- 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 (3)**  
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 (3)**  
Prerequisite: Ed 541a. Professional relationships among certified employees and other school personnel; development and implementation of policies.
- 544a SYSTEMS APPROACH AND EDUCATIONAL MANAGEMENT (3)**  
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.
- 545a ECONOMIC FOUNDATIONS OF PUBLIC SCHOOL FINANCE (3)**  
Prerequisites: Ed 541a and 541b, or permission of instructor. Fiscal arrangements for obtaining private sector funds to support formal educational services of public school districts; alternative approaches for evaluating efficiency and effectiveness of expenditure of such funds.
- 545b SEMINAR IN PUBLIC SCHOOL FINANCE (3)**  
Prerequisite: Ed 541a or 541b, or permission of instructor. 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.
- 548a,b,c FIELD EXPERIENCE IN ADMINISTRATION FOR THE PRINCIPAL (2-6)**  
Prerequisite: permission of department. For applicants for a Washington State Administrative Credential.
- 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.

- 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 (5 ea)  
Prerequisites: Ed 556 and concurrent substantial employment in a college student personnel position. Intensive examination of the 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.
- 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 DESCRIPTION, IDENTIFICATION AND CLASSROOM MANAGEMENT OF MALADJUSTED CHILDREN (4)  
Prerequisites: Ed 360 or equivalent, Ed 463. 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.
- 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: EA 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.
- 584 MEASUREMENT AND DESIGN IN READING RESEARCH (3)  
To be taken prior to or concurrent with Ed 501. Validation of standardized tests; application of research designs.
- 585 SEMINAR IN READING EDUCATION (2-3)  
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.
- 586 SEMINAR FOR READING SPECIALISTS (3)  
Prerequisite: permission of instructor. Development and execution of a research design in reading.
- 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.
- 591 SUPERVISED LABORATORY EXPERIENCE IN EARLY CHILDHOOD EDUCATION (5)  
Prerequisite: permission of department; Ed 531 concurrent. Experience in administration of early childhood units.
- 592a 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.

## Education

### 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.

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.

### 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.

### 597 SEMINAR IN COMMUNITY EDUCATION (4)

Prerequisite: graduate status or permission of instructor. Analysis of the planning, organizing, budgeting and developmental aspects of community-based education programs; identifying the needs, problems and wants of the community; methods for development of facilities, programs, staff and leadership in community schools.

### 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 must be presented to faculty adviser.

### 642a,b,c,d FIELD PROJECT IN EDUCATIONAL ADMINISTRATION (4)

Prerequisites: master's degree, permission of 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 credits.

### 644a,b,c SEMINARS IN EDUCATIONAL MANAGEMENT: ADVANCED SYSTEMS THEORY (5 ea)

Prerequisites: Ed 544a and master's degree.

644a Advanced Educational Systems Analysis  
In depth study of systems theory, modeling, flow charting, PERT, and other systems tools and concepts.

644b Operations Research and Educational Decision-Making  
Application of queuing theory, monte carlo simulation, game theory, markov chain analysis and inventory models to educational decision-making and management.

644c Allocation of Resources  
Application of linear programming to the allocation of education resources.

### 647a,b,c,d SEMINARS FOR SCHOOL PRINCIPALS (4 ea)

Prerequisites: 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.

### 648a,b,c FIELD EXPERIENCE IN ADMINISTRATION FOR THE PRINCIPAL (2-6)

Prerequisites: master's degree and permission of department. For applicants for a Washington State administrative credential.

### 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.

### 697a PROFESSIONAL SEMINAR IN TEACHING COMMUNICATIONS SKILLS IN THE COMMUNITY COLLEGE (8)

Prerequisite: completion of two terms of internship experience in teaching basic communications skills in the community college.

## 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.

The courses offered by the department provide minimum qualifications for recommendation for a school library assignment. Students interested in a career in librarianship should plan for a graduate degree program in one of the more than 50 graduate library schools (e.g., University of Washington).

Consult members of the library science faculty for advisement regarding appropriate preprofessional courses for admission to library schools.



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

## COURSES IN LIBRARY SCIENCE

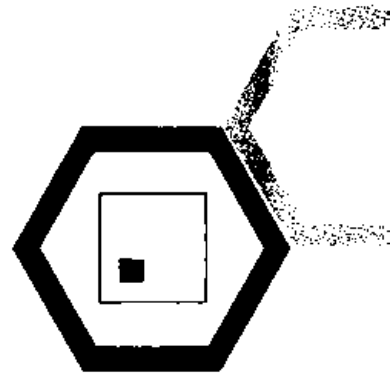
- 125 **LIBRARY ORIENTATION (1)**  
 Introduction to books and libraries, and to the Wilson Library in particular, with emphasis on effective use of standard reference tools.
- 305 **BOOKS FOR ELEMENTARY SCHOOLS (3)**  
 Examination, reading, and discussion of books most generally useful in work with 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)**





# COLLEGE OF ETHNIC STUDIES

*A Cluster College of Western Washington State College*



The College of Ethnic Studies (CES), established by the Board of Trustees of Western Washington State College on October 9, 1969, has two major goals: to provide an academic setting in which minority cultures and histories are studied and to enable the student to assume a greater responsibility for the direction of his studies.

The program in the College of Ethnic Studies is based on the socio-cultural experiences of Chicanos, American Indians, Asian Americans, and Blacks.

While the program emphasizes the American experience as the basic context, historical and cultural forces which may not be American or even Western will be traced and explored for their cross-cultural influences.

American education needs an intellectual discipline which explores the act of ethnic, racial and national self-definition as it has taken place in America. Ethnic studies is that discipline which seeks to re-define the American experience in terms of the cultural and ethnic pluralism of this country.

Ethnic studies programs must establish a structure which will encourage students to know and to come to terms with the inclusive nature of their culture and their society, including its conflicts, adaptations and possible resolutions.

Ethnic studies courses are recommended to students who intend to pursue careers in education, social work, and urban studies programs. The program in ethnic studies is particularly complementary to careers in nursing, law and law enforcement, public administration and personnel; in fact, those careers in which public service is stressed.

## ETHNIC STUDIES OBJECTIVES

- To provide a learning situation which encourages direct contact between students and faculty.
- To give students increasing responsibility for the emphasis and direction of their learning.
- To build maximum opportunity for incidental learning into the formal and informal learning situation.

- To continually appraise the student's learning, and to reduce confusions and misunderstandings that accompany all learning processes.
- To provide those educational experiences which help create a critical and imaginative intellect.
- To provide students with work-related experiences wherever possible.

## 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 HIRAKKA (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) Visiting Associate Professor. BA, 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) Assistant Professor. BA, Hankuk University for Foreign Studies; BA, MA, EdD, George Peabody College.
- PAMELA J. SMITH (1972) Instructor. BA, Seattle Pacific College; MA, Western Washington State College.
- MARTHA I. SYMES (1972) Assistant Professor. BA, MA, University of Florida.
- \*JEFFREY D. WILNER (1971) Assistant Professor. BA, Roosevelt University; MA, University of Washington.

*\*On Leave 1973-74*

## THE PROGRAM

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.

### *Honors Program* Total of 90 credits

#### *Required:*

- Introductory courses (15 credits)
- Comparative ethnic courses (15 credits)

#### *Optional:*

- 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)

#### *Optional:*

- 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; a committee of two faculty members and the Dean will be responsible for the evaluation.

### *Ethnic Studies Minor* Total of 30 credits

#### *Required:*

- Introductory courses (5 credits) or ES 300 for non-majors

#### *Optional:*

- 25 credits selected by student in Black, Chicano, Native American Indian, Asian American, or comparative ethnic courses

## GENERAL EDUCATION REQUIREMENTS

General education requirements in the areas of humanities and social sciences will be met by courses within the College of Ethnic Studies program. Students, however, must meet the general education 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.

## College of Ethnic Studies

### 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 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.

### 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.

For additional information regarding the College of Ethnic Studies, write to Office of Admissions, College of Ethnic Studies, Bellingham, Washington 98225, and request a copy of the College's brochure and list of courses.

### 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 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 INTRODUCTION TO ETHNIC STUDIES (5)  
Recommended for non-majors, no prerequisite; open to all students at WWSC. 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.

*NATIVE AMERICAN STUDIES (each course generally offers 5 credits):*

- 312 INDIAN - WHITE RELATIONS  
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 NATIVE AMERICANS  
371 COMPARATIVE AMERICAN INDIAN CULTURES

*College of Ethnic Studies*

*BLACK STUDIES (each course generally offers 5 credits):*

- 337 SOCIAL PROTEST
- 351 SOCIOLOGY OF THE BLACK COMMUNITY
- 354 BLACK EXPERIENCE IN LITERATURE
- 363 OLD GHANA, MELLE AND SONGHAY: A HISTORY OF THE LOST EMPIRES OF WEST AFRICA
- 366 AFRICAN CULTURE: A PERSPECTIVE
- 372 HISTORY OF BLACK CULTURE
- 376 HISTORY OF THE SOUTH: FROM COLONIAL SETTLEMENT TO THE CIVIL WAR
- 378 BLACK CURRICULUM

*CHICANO STUDIES (each course generally offers 5 credits):*

- 324 CONTEMPORARY MEXICAN AMERICAN LITERATURE
- 343 MEXICAN AMERICAN THOUGHT IN CONTEMPORARY LITERATURE
- 344 MEXICAN AMERICAN NOVEL
- 362 PREHISTORY AND CULTURE IN MEXICO
- 374 SEMINAR IN THE CHICANO COMMUNITY
- 377 SEMINAR IN CHICANO EXPRESSIVE CULTURE

*ASIAN AND ASIAN AMERICAN STUDIES (each course generally offers 5 credits):*

- 340 INTRODUCTION TO JAPANESE LITERATURE
- 352 RADICAL PERSPECTIVES IN ASIAN LITERATURE
- 353 SOCIOLOGY OF ASIAN AMERICANS
- 402 HISTORY OF ASIANS IN THE WEST COAST
- 403 JAPANESE INTERNMENT: ITS SOCIAL AND POLITICAL IMPLICATION

*COMPARATIVE CULTURE STUDIES (each course generally offers 5 credits):*

- 302 PRE-COLUMBIAN PEOPLES OF THE NEW WORLD
- 320 CIVILIZATION IN THE NEW WORLD

- 338 WOMEN: TRADITIONAL ROLES AND MODERN MOVEMENTS
- 339 COMPARATIVE CULTURE RESEARCH METHODS
- 368 CULTURES AND POVERTY
- 369 MAN'S ENTRY INTO THE NEW WORLD
- 370 COMPARATIVE ETHNIC RELATIONS
- 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

*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

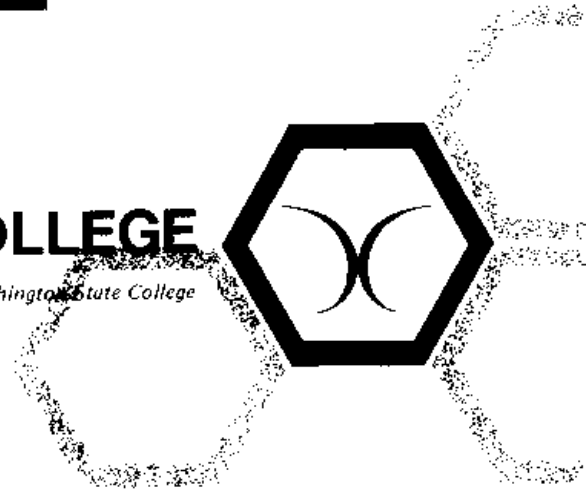






# FAIRHAVEN COLLEGE

*A Cluster College of Western Washington State 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

- KENNETH D. FREEMAN (1971) Professor and Dean of Fairhaven College.  
AA, Mars Hill Jr. College; BA, Wake Forest University; MA, Emory University; PhD, Columbia University.
- 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) Assistant 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.
- HARVEY M. GELDER (1948) Professor. BA, Colorado State College; MA, University of Missouri.
- PAUL C. GLENN (1969) Assistant Professor. BA, University of Washington; MA, Stanford University.
- WILLIAM H. HEID (1968) Assistant Professor. BA, Denison University; MS, PhD, University of Washington.
- ANNIS J. HOVDÉ (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) Associate 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) Assistant 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) Assistant 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 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.

When the applicant is admitted to Western, he is sent forms which are of help to the Fairhaven Admissions Committee in reaching a decision. Two of these forms will enable the applicant to request letters of recommendation. The third form seeks a response from the applicant himself. The applicant may include materials which give insight into creative abilities or special talents.

### *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, WWSC. 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

## *Fairhaven College*

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.

To insure that students have an experience of sufficient depth, Fairhaven proposes to offer courses that reflect the culture imperative of our heritage, to raise questions universal to mankind in general, and to acquaint them with the common language of a liberal education. Instead of requiring specific courses, Fairhaven makes general area requirements in humanities, sciences and social sciences (including education). These requirements may be met either by taking courses or through independent study.

The equivalent of 20 credits are required in humanities, while 12 credits are required in science and social science. In addition, there is a composition requirement of 3 credits which may be granted upon presentation of sufficient evidence of competence. The curriculum in these areas consists of courses that reflect our commitment to interdisciplinary study. Many Fairhaven courses will cover material in more than one area.

Because Fairhaven offers no set courses year after year, this catalog can only suggest what kind of courses might be offered for area credit in a particular quarter. For instance, a course on Mexican Society and Culture might be offered for those interested in spending a quarter in Mexico; the instructor would perhaps offer the course for five credits and give students the option to apply those credits either to social sciences or humanities. A course on Deviant Behavior might be given for social sciences credit, one on Shakespeare's tragedies for humanities, and one on Ecology and Pollution for science credit. A course on the Renaissance might approach that period from many vantage points—the arts, politics, literature, economics, science—but might

be given for humanities credit only. Or, if the same course focused on the dynamics of social interrelationships during the Renaissance, it could be given solely for social sciences credit.

### *Program of Independent Study— Travel Study—Work Study*

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.

Finally students have become increasingly attracted to the growing work-study file, which contains opportunities for off-campus experiences at the local, state and national levels.

### *Special Programs*

The Fairhaven curriculum is never static. Two major changes currently in process are the winter quarter intensive courses and the freshman program.

*Winter Quarter Intensive Courses:* In the fall of 1971, the community decided to alter the calendar during the winter term. Rather than take four courses throughout the quarter, it was decided to have five two-week periods in which faculty and students would study only one thing at a time. Courses ranged from living the Gandhian life for two weeks, two weeks in San Francisco studying

Chinese culture, to a two-week course in wilderness appreciation. The results of the experiments were positive and the winter quarter of 1973 was similarly organized.

*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 of 1972, tried a series of freshman seminars. The new student who opted into this program did not take any other course. Each seminar was limited to 12 to 15 students and the focus was upon developing the skills of an independent learner.

### *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.

## *Fairhaven College*

### *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*

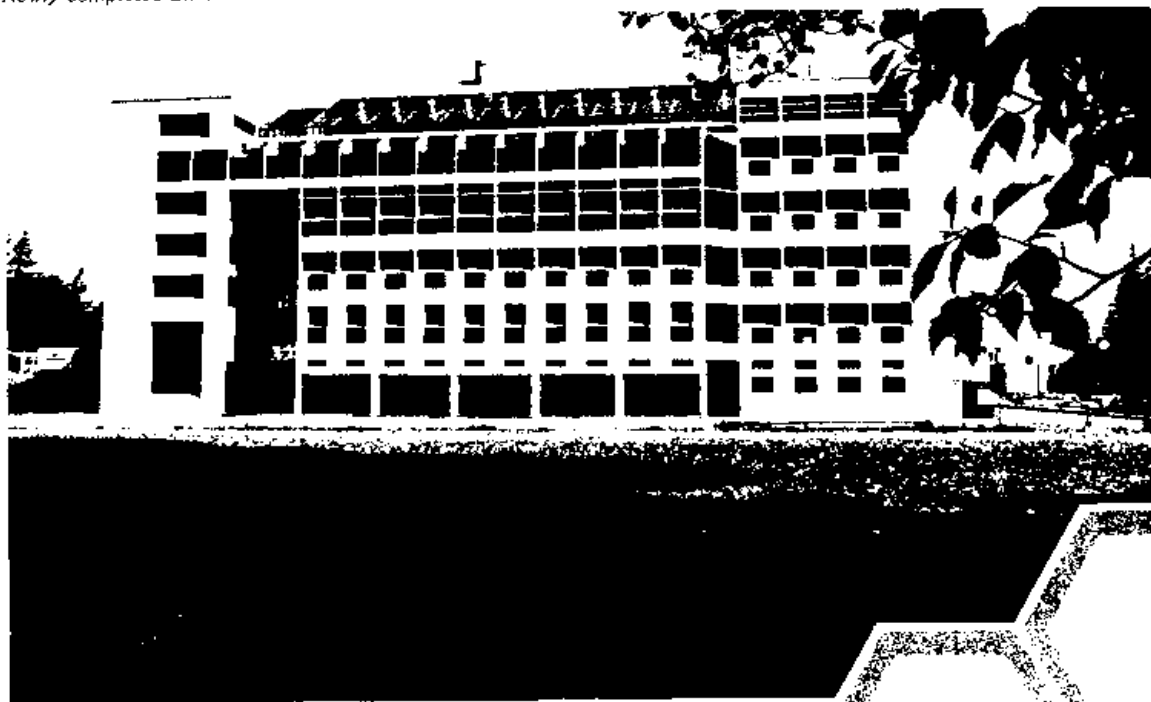
The goal of the Visitors' Program is to expose students to many more diverse viewpoints and personalities than exist on the campus and to do this in a way which is personal and direct. These guests meet with classes, join students for informal discussions and meals, live in the dormitories and offer 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.

*Newly completed Environmental Studies Center—Home of Huxley College*



# **HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES**

*A Cluster College of [www.wsu.edu](http://www.wsu.edu) Washington State 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.



### *Shannon Point Marine Center*

Shannon Point Marine Center, located on Fidalgo Island about 40 miles from the WWSC campus, is a laboratory and classroom facility geared to undergraduate studies for the use of students attending state-supported colleges in Washington. Huxley College marine resources students will use this facility for environmental problem study.

### *Institute for Freshwater Studies*

The Institute for Freshwater Studies was developed as a research and training facility for faculty and students at WWSC interested in limnology. It also serves the community by comprehensive studies on freshwater systems in the region and by its document holdings.

### *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 funds from the U.S. Office of Education.

## 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 multi-disciplinary 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 FACULTY

- GENE W. MILLER (1969) Professor and Dean of Huxley College. BS, MS, Utah State University; PhD, North Carolina State University.
- JAMES R. ALBERS (1971) Associate Professor of Environmental Systems and Simulations. 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.
- JACK M. EVERITT (1972) Lecturer in Environmental Education. BA, Emory University; MA, Georgia State University.
- ERNST L. GAYDEN (1971) Associate Professor of Environmental Planning. PhD, University of Chicago; MS, Illinois Institute of Technology.

## *Huxley College*

- JOHN C. MILES (1968) Assistant Professor of Environmental Education. BA, Dartmouth College; MA, University of Oregon.
- JAMES R. NEWMAN (1970) Assistant 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.
- HOWARD A. TEASLEY (1969) Assistant Professor of Economics and Huxley College. BSEE, Purdue University; MA, University of Oregon.
- MANFRED C. VERNON (1964) Professor of Political Science and Huxley College. LLB, University of Cologne; JD, University of Berlin; PhD, Stanford University.
- HERBERT H. WEBBER (1970) Associate Professor of Marine Resources. BSc, PhD, University of British Columbia.
- MING HO YU (1970) Assistant 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.

## ADMISSIONS

Huxley College is primarily an upper division college. However, freshmen and sophomores may be accepted to receive advisement, participate in seminars and to receive assistance in completing a general education program in preparation for a concentration area. Students interested in a specific concentration area should review the specific requirements for each of the concentrations.

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). At the time of registration students must indicate the grade or pass option for each course. (The one exception is seminars Huxley 399 and 499—where the instructor 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. Students and faculty will not have access to these grade records.

### *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 probably will include specializations in Environmental Planning through the Department of Geography, Environmental Education through the Department of Education, Human Ecology through the Department of Sociology/Anthropology, and Resource Ecology through the Department of Biology. 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*

- 180 quarter hours of credit, minimum (may vary, depending on concentration)
- General education program
- Huxley core, problem series, seminars, and a concentration

### *Requirements for Bachelor of Arts Degree*

- 180 quarter hours of credit, minimum
- General education program
- Huxley core, seminars, generalist requirement, structured electives

### *Requirements for a Minor in Environmental Studies*

- Huxley 301, or 302 and 303
- Five other Huxley courses

### *Requirement for a Minor in Environmental Education*

- Huxley 301, or 302 and 303
- Huxley 370, 371, 372, and one each of either Huxley 310/311, or Huxley 350/360

### *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.

#### *Option I – Huxley General Education Program*

##### Mathematics and Natural Sciences

- Biology 120 and 121 (equivalent to a two-quarter sequence 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 three-quarter sequence at the 100 or 200 level)
- Mathematics (a course other than Mathematics 100 or 151; equivalent to a course in calculus, statistics, or computer programming)

## Huxley College

### Humanities and Communication

- At least four courses, including:
- History (any course in history at any 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.

### Option III -- AA Degree

The completion of an AA degree program at a community college with which WWSC has a recognition agreement.

### Core Courses (18 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 (7)
- Huxley 305 Man, Society and Environment II (7)
- Senior participation as required (4)

### Problem Series (12 credit hours required in B.S. program)

Problem series is recommended for all students but is a requirement for those in a B.S. academic program.

Students at Huxley College are expected to be motivated to carry out independent study pertaining to their educational objectives. 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 or community experience. The investigation, observation and interpretation of the problem must be followed by the student's recorded statement (written, taped, filmed or graphically portrayed) demonstrating his process of situation analysis and interpretation, his prognosis and his proposed steps to action. Spring quarter all senior students are required to present their problem series work in special seminar sessions.

Problem series consists of Huxley 398a (4) and 398b (2), plus at least six 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 (68 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 310, 311, 330, 351, 350, 370, 383, 470 and 436 (36 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. The following concentrations are offered:

|                              |                                       |
|------------------------------|---------------------------------------|
| Environmental Planning       | Environmental Systems and Simulations |
| Human Ecology                | Ecosystems Analysis                   |
| Environmental Education      | Environmental Health                  |
| Environmental Administration |                                       |

*Environmental Planning* (68 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 Environmental Site Planning (4)
- Hux 412 Urban Environmental Planning (4)
- Hux 413 Regional Environmental Planning (4)

Related Environmental Problem Areas (12 credits)

- Hux 310 Introduction to Systems Analysis (4)
- Hux 350 Introduction to Environmental Pollution (4)
- Hux 470 Environmental Ethics (4)

Concentration Support Areas (36 credits)

- Environmental Structure:
  - Hux 330 Applied Ecology (4)
  - 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 (4)
  - Elective from social sciences: sociology/anthropology (4)
- Decision Processes:
  - Hux 436 Environmental Impact Statements (4)
  - Hux 480 Urban Economics (4)
  - Elective from social sciences: economics/political science (4)

*Human Ecology* (67 credits 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

## Huxley College

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.

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 (59 credits)

- Hux 311 Introduction to Environmental Planning (4)
- Hux 330 Applied Ecology (4)
- Hux 331 Population Dynamics I (4)
- Hux 335 Human Ecology (4)
- Hux 350 Introduction to Environmental Pollution (4)
- Hux 351 Food, Hunger and Malnutrition (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)
- Soc/Anth 351 Family and Kinship (5)
- Soc/Anth 417d Social Interaction and Group Dynamics (3)

Concentration Electives (8 credits, selected under advisement)

- Soc/Anth 375 Social Statistics (3)
- Geog 341 Urban Geography (5)
- Soc/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 301 Challenge of Survival (4)
- Hux 482 Environmental Law and Political Action (4)

## 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 views 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, James Swan.

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 470 Environmental Ethics (4)
  - Hux 471 The Physical and Social Educational Environment (4)
  - Hux 472 Environmental Education Curriculum (4)

#### Electives in Specialization

- To vary with option

#### Option A (87 credits)

1. Hux 370 Environmental Psychology (4)  
Hux 371 Education as an Environmental Process (4)  
Hux 377 Alternative Futures (4)  
Hux 470 Environmental Ethics (4)  
Hux 471 The Physical and Social Educational Environment (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 (minimum 87 credit hours)

#### Option B (73 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 (12 credit hours), or Hux 478, Internship (15 credit hours)

#### Option C (73 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 (12 credit hours), or Hux 478, Internship (15 credit hours)

#### 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.

## Huxley College

*Recommended preparation:* One year of accounting (BA 251, 252, 350); one year of mathematics (Math 297a,b,c); introductory social sciences (Econ 201, 202; Geog 207; and Pol Sci 250 or Soc/Anth 201); Eng 201 or 202; Geog 251 or 353.

### Concentration Requirements (59-62 credit hours)

- Fundamentals of Environmental Administration
  - Hux 310 Introduction to Systems Analysis (4)
  - 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 330 Applied Ecology (4), or Hux 335 Human Ecology (4)
  - Hux 350 Introduction to Environmental Pollution (4)
  - Hux 370 Environmental Psychology (4), or Hux 470 Environmental Ethics (4)
  - Hux 383 Environmental Economics (4), or Hux 482 Law and Politics of the Environment (4)

### Concentration Electives (8-12 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. The student approaches an understanding of environmental complexity by means of system simulation and model building. The primary purpose of the sequence is to provide a comprehensive understanding of subsystem interaction and recognition of parameter significance and sensitivity.

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 advisers:* James Albers, Richard Berg.

*Required preparation:* One year of biology, chemistry, physics and calculus, and a one-quarter course in computer programming are required. Students without these prerequisites will be considered, but the required preparation will have to be made up.

### Concentration Requirements (44 credit hours)

- Hux 310 Introduction to Systems Analysis (4)
- Hux 311 Introduction to Environmental Planning (4)
- Hux 335 Human Ecology (4)
- Hux 350 Introduction to Environmental Pollution (4)
- Hux 361 Water Pollution (4)
- Hux 362 Air Pollution (4)
- Hux 365 System Energetics (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 330 Applied Ecology (4)
  - Hux 456 Environmental Biochemistry (3)
  - Hux 483 Resource Economics (4)
  - Math 335 Introduction to Mathematical Programming (4)
  - Math 375 Numerical Methods (4)

### *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 statement 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 310 Introduction to Systems Analysis (4)
- Hux 330 Applied Ecology (4)
- Hux 331 Population Dynamics I (4)
- Hux 350 Introduction to Environmental Pollution (4)
- Hux 365 Energetics (4)
- Hux 422 Pollution and Marine Ecology (4)
- Hux 435 Ecological Systems Analysis (4)
- Hux 436 Environmental Impact Statements (4)
- Hux 465 Systems Analysis (4)
- Hux 483 Resource Economics (4)

**Electives (24 credit hours, under advisement)**

- Hux 311 Introduction to Environmental Planning (4)
- Hux 321 Oceanography and Marine Resources (4)
- Hux 322 Marine Resources (4)
- Hux 456 Environmental Biochemistry (3)

- Hux 361 Water Pollution (4)
- Hux 362 Air Pollution (4)
- Hux 423 Techniques of Marine Analysis (4)
- Hux 431 Population Dynamics II (4)
- Hux 451 Pollution and Human Health (3)
- Hux 452 Analysis of Environmental Pollutants (4)
- Hux 466 Modeling and Natural Systems (4)
- Hux 480 Urban Economics (4)
- Or a sequence of upper division courses in biology, mathematics, geography, geology or other departmental offerings.

***Environmental Health* (63 credit hours)**

Environmental health refers to that aspect of public health that is concerned with those forms of life, substances, forces and conditions in the surroundings that may exert an influence on man's health and well-being. Such topics as air and water pollution, food contamination, solid waste, overpopulation and pesticides and radiation exposure are considered. The concentration provides information for students interested in advancing their knowledge and integrating the chemical, physical, biological and social aspects of man-environmental health relationships.

Students will also have adequate background and training to be able to work as junior technicians assisting in a variety of programs, such as food quality control, nutrition, water supply, institutional health, general sanitation, air pollution and water pollution, and others.

Students will also have adequate background and training to be able to work as junior technicians assisting in a variety of programs, such as food quality control, nutrition, water supply, institutional health, general sanitation, air pollution and water pollution.

*Program advisers:* Ming-Ho Yu, Gene W. Miller.

*Recommended preparation:* One year each of biology and chemistry; Home Economics 150, Math 121, Physics 131.

## Huxley College

### Concentration Requirements:

- General Environmental Health Program (52 credit hours)
  - Hux 350 Introduction to Environmental Pollution (4)
  - Hux 351 Food, Hunger and Malnutrition (4)
  - Hux 361 Water Pollution (4)
  - Hux 362 Air Pollution (4)
  - Hux 451 Pollution and Human Health (3)
  - Hux 452 Analysis of Environmental Pollutants (2)
  - Hux 456 Environmental Biochemistry (3)
  - Hux 459 Internship in Environmental Health (2)
  - Biol 340 Biometrics (5)
  - Hux 365 Environmental Energetics (4)
  - Chem 351-3 Organic Chemistry (9)
  - Health Ed 447 Community Health (3)
  - Zool 348 Human Anatomy and Physiology (5)
- Nutrition Program (48 credit hours)
  - Hux 350 Introduction to Environmental Health (4)
  - Hux 351 Food, Hunger and Malnutrition (4)
  - Hux 450 Nutritional Chemistry (4)
  - Hux 451 Pollution and Human Health (3)
  - Hux 452 Analysis of Environmental Pollutants (2)
  - Hux 459 Internship in Environmental Health (2)
  - Biol 345 Fundamentals of Microbiology (5)
  - Chem 351-3 Organic Chemistry (9)
  - Health Ed 447 Community Health (3)
  - Zool 348-9 Human Anatomy and Physiology (5 ea)
  - Home Econ 250 Nutrition: Aspects of Human Growth (2)

### Concentration Electives (General Environmental Health, 7 credit hours; Nutrition Program, 15 credit hours)

- Hux 310 Introduction to Systems Analysis (4)
- Hux 311 Introduction to Environmental Planning (4)
- Hux 323 Pollution and Marine Ecology (4)
- Hux 331 Population Dynamics I (4)
- Hux 377 Alternative Futures (4)
- Hux 383 Environmental Economics (4)
- Hux 432 Cultural Ecology (4)
- Hux 471 Environmental Psychology (4)
- Hux 482 Environmental Law and Political Action (4)
- Hux 483 Resource Economics (4)
- Chem 354 Organic Chemistry Lab (2)

- Chem 371 Elementary Biochemistry (4), or Chem 471-3 Introductory Biochemistry (6-8)
- Zool 349 Human Anatomy and Physiology (5)

### Marine Resources (72 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, one year of chemistry in addition to the general education requirement.

### Concentration Requirements (65 credit hours)

- Hux 310 Introduction to Systems Analysis (4)
- Hux 311 Introduction to Environmental Planning (4)

- Hux 321 Oceanography and Marine Resources (4)
- Hux 322 Marine Bioresources (4)
- Hux 323 Structure of Marine Ecosystems (4)
- Hux 330 Applied Ecology (4)
- Hux 351 Food, Hunger and Malnutrition (4)
- Hux 350 Introduction to Environmental Pollution (4)
- Hux 361 Water Pollution (4)
- Hux 422 Marine Bioresources (4)
- 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 465 Invertebrate Zoology (5)

Concentration Electives (7 credit hours)

- Selected under advisement

## 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.
- 302 MAN AND HIS ENVIRONMENT I, F (4)**  
A course designed primarily for College of Arts and Sciences, College of Ethnic Studies, and Fairhaven students which gives an introduction to present environmental problems and some of their solutions. Course emphasis is to integrate a wide variety of information into a unified description of the present state of the environment. Problems of population, food supply, industrialization, resource use, pollution, and social and political factors will be examined.
- 303 MAN AND HIS ENVIRONMENT II, W (4)**  
This is a continuation of Huxley 302 and is primarily for students in the College of Arts and Sciences, the College of Ethnic Studies, and Fairhaven College. It deals with specific environmental problems and their solutions and considers possible alternative futures. Prerequisite: Hux 302 or permission of instructor.

- 304 MAN, SOCIETY AND ENVIRONMENT I, F (7)**  
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 (7)**  
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.
- 310 INTRODUCTION TO SYSTEMS ANALYSIS, S (4)**  
Techniques of problem identification; project organization for the application of systems principles; non-quantitative systems methodology; applied problems.
- 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.
- 321 OCEANOGRAPHY AND MARINE RESOURCES, F (4)**  
Principles of oceanography. Physical and biological resources from the oceans. Technological uses of the oceans. Prerequisite: introductory biology and chemistry or permission of instructor.
- 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.

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- 323 **STRUCTURE OF MARINE ECOSYSTEMS, F (4)**  
Natural history and ecology of the species important to the bioresources potential of the oceans. Prerequisite: Hux 321 or permission of instructor.
- 330 **APPLIED ECOLOGY, F (4)**  
Application of concepts and methods of ecological theory to environmental problems. Prerequisite: Biol 120, 121, or permission of instructor.
- 331 **POPULATION DYNAMICS I, S (4)**  
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, Hux 330, Psych 341, 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.
- 350 **INTRODUCTION TO ENVIRONMENTAL POLLUTION, F (4)**  
Overview of the interaction of man and his environment as it affects his physical and mental health and social well-being. An introduction to the problems of pollution in the environment. Air, water, noise, thermal and radioactivity pollution will be discussed. Prerequisite: Biol 120, Chem 115, or permission of instructor.
- 351 **FOOD, HUNGER AND MALNUTRITION, W (4)**  
Introductory survey to the disciplines of food and nutrition; the nature and effects of hunger and malnutrition. 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**  
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 **SYSTEM ENERGETICS, S (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: Hux 310 or 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 AND EDUCATION REFORM, POLICY AND PLANNING, 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.
- 398a **RESEARCH DESIGN AND PROBLEM SOLVING, W (4)**  
Methodologies for the development and presentation of a research proposal.
- 398b **PROBLEM SERIES, FWS (2)**  
Problem-solving experience in environmental problems. Conference course permit required. May be repeated for credit.
- 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 **ENVIRONMENTAL SITE PLANNING (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, insolation and orientation, topography and surficial geology, plant cover and landscaping.  
*Will not be offered 1973-74.*
- 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 or permission of the instructor.
- 413 **REGIONAL ENVIRONMENTAL PLANNING, S (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 412 or permission of instructor.
- 414 **OPEN SPACE PLANNING, F, 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.
- 415 **REGIONAL LANDSCAPE ANALYSIS, F, even-numbered years (4)**  
Application of selected regional landscape analysis methods. Emphasis on river basin and highway and recreational corridors. Prerequisite: Hux 413 or permission of instructor.
- 422 **POLLUTION AND MARINE ECOLOGY, W (4)**  
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.
- 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 the environment and selected human societies; the effect of modern technology on societies; and environmental ideologies of human societies.
- 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.
- 435 **ECOSYSTEMS ANALYSIS AND MODELING, F (4)**  
A workshop study of the dynamic interactions within and between natural and manipulated ecosystems, using computer techniques and simulation. Prerequisite: Hux 310.
- 436 **ENVIRONMENTAL IMPACT STUDIES, W (4)**  
An investigation of the environmental impact statement process, including requirements of the state and federal National Environmental Policy Acts, methods of preparation, review of E.I.S., and legal aspects and citizen participation. Survey of methods used by federal, state, and local agencies and private firms in the preparation of E.I.S.
- 450 **NUTRITIONAL CHEMISTRY, S (4)**  
Chemistry and function of essential nutrients: their digestion, absorption, and metabolism; quantitative analysis of various nutrients in food. Prerequisite: Hux 351; Chem 251 or equivalent.
- 451 **POLLUTANTS AND HEALTH, W (3)**  
Chemistry and chemical compounds involved in man's environment; biological effects of various pollutants on health. Prerequisite: Hux 350; Chem 251 or equivalent.
- 452 **POLLUTION ANALYSIS, W (2)**  
Quantitative analysis of environmental pollutants. Prerequisite: Chem 251. Hux 451 or 456 concurrent.
- 456 **ENVIRONMENTAL BIOCHEMISTRY, F (3)**  
Transformation of carbon, nitrogen, phosphorus, sulfur, and certain trace elements in soil, water, atmosphere and biological systems; beneficial and toxic effects on plants and animal life. Prerequisite: Chem 251.
- 459 **INTERNSHIP IN ENVIRONMENTAL HEALTH, FWS (2)**  
Field practice at local health agencies. Prerequisite: Hux 350.
- 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.

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- 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.
- 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. Prerequisite: Hux 371.
- 471 THE PHYSICAL AND SOCIAL EDUCATIONAL ENVIRONMENT, W (4)  
The educational setting is itself an environment, and this course examines the qualities of this environment. The individual and group as environment, the dynamics of groups, the psychological effects of the organization of physical objects, and proxemics are a few of the topics that are considered in the course. Prerequisite: Hux 371.
- 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.
- 478 INTERNSHIP IN ENVIRONMENTAL EDUCATION, FWS (15)  
Field study under supervision in the professional area in which the student wishes to concentrate. Supervision is provided by Huxley College faculty and a field supervisor. Field placement depends on interest of student, availability of suitable position and feasibility of supervision. Each interning student will prepare a report on his experience. Prerequisite: permission of instructor.
- 480 URBAN ECONOMICS, S (4)  
Economic analysis of urban problems, especially land use, transportation, municipal finance, poverty, and housing. Prerequisite: Econ 202, or Geog 207, or permission of instructor.
- 481 LAW OF THE SEA, S (4)  
Inquiry into the history, principles, and development of legal regulations pertaining to the sea. Discussion of modern problems.
- 482 LAW AND POLITICS OF THE ENVIRONMENT, F (4)  
Consideration of recent developments in environmental law involving pollution, conservation, etc. Methods for achieving appropriate political action in correcting environmental problems.
- 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 202.
- 485 RESOURCE MANAGEMENT, FWS (4)  
Cases and policy in managing natural resources. Prerequisite: permission of instructor.
- 498 PROBLEM SERIES, FWS (2-4)  
Problem solving experience in environmental problems. 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.

*This description of Huxley curriculum represents current planning. Changes may be made before fall, 1973.*

## COLLEGE PERSONNEL

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Controller Timothy H. Kao, B.S.  
Chief Accountant Harvey R. Ballough, B.A.

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Assistant to the Dean of Students Timothy B. Douglas, M.S.  
Associate Deans of Students  
Mary R. Robinson, M.A.  
Ray S. Romine, Ph.D.

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Assistant Director Wayne M. Sparks, M.Ed.

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Physician John Mumma, M.D.

#### Housing

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#### Instructional Services

Director W. Robert Lawyer, Ph.D.

#### Library

Director W. Robert Lawyer, Ph.D.

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Executive Secretary Mary Hopley

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Alumni Relations Officer Steven W. Inge, M.A.

#### Publications Officer

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Assistant Director, Student Activities-Programs  
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Assistant Director, Student Activities-Operations  
John J. Smith, M.A.

#### Student Publications

Acting Adviser R. E. Stannard, M.A.

## EMERITUS FACULTY

#### WILLIAM WADE HAGGARD

President Emeritus of the College, B.A., Maryville College; M.A., University of Michigan; Ph.D., University of Chicago; Ed.D. (Honorary), Maryville College.

#### WILLIAM BENDER

Professor Emeritus of Physics, B.A., M.S., University of Colorado; Ph.D., Yale University.

#### MIRA E. BOOTH

Assistant Professor Emeritus of Music, B.A., University of Washington; M.A., Teachers College, Columbia University; University of Southern California.

#### HAZEL BREAKEY

Assistant Professor Emeritus of Art, B.S., graduate work, Teachers College, Columbia University; graduate of California College of Arts and Crafts, Oakland; Carnegie Scholarship University of Oregon.

#### DOROTHY D. BUTTON

Assistant Professor Emeritus of Education, B.A., University of California; University of Washington; M.Ed., Western Washington State College.

#### KATHERINE M. CASANOVA

Associate Professor Emeritus of Education, B.S., M.A., Teachers College, Columbia University.

#### MOYLE F. CEDERSTROM

Professor Emeritus of English, B.A., M.A., University of Minnesota; Ph.D., University of Washington.

#### EDNA E. CHANNER

Associate Professor Emeritus of Technology, B.A., University of Washington; M.A., University of Iowa.

#### EDWIN R. CLAPP

Professor Emeritus of English, A.B., Stanford University; M.A., Ph.D., Harvard University.

#### LINDA COUNTRYMAN

Associate Professor Emerita of Home Economics, B.S., Milwaukee-Downer College; M.A., Teachers College, Columbia University; University of Chicago.

#### NORA B. CUMMINS

Professor Emeritus of Political Science and History, B.A., University of Minnesota; M.A., Columbia University; Northern Normal and Industrial School.

#### IRENE ELLIOTT

Assistant Professor Emeritus of Education, B.S., M.A., Columbia University.



**GEORGIA P. GRAGG**

Instructor Emeritus of Commercial Studies and Handwriting,  
Western Washington State College; A.N., Palmer School of  
Penmanship.

**IRWIN A. HAMMER**

Professor Emeritus of Education, University of Toulouse,  
Toulouse, France; B.A., Park College; M.A., University of  
Colorado; University of Minnesota; University of Chicago; Ed.D.,  
Teachers College, Columbia University.

**RAYMOND F. HAWK**

Professor Emeritus of Education, B.A., DePauw University;  
M.A., Stanford University; Ph.D., Washington State University.

**MILDRED HERRICK**

Associate Professor and Librarian Emeritus, B.A., Michigan State  
Normal College; B.A. in L.S., M.A. in L.S., University of  
Michigan.

**ARTHUR C. HICKS**

Professor Emeritus of English, B.A., M.S., University of Oregon;  
Ph.D., Stanford University.

**VIVIAN H. JOHNSON**

Associate Professor Emeritus of Education, B.A., M.A.,  
University of Washington.

**J. RUTH KELSEY**

Associate Professor Emeritus of Art, B.A., Washington State  
University; M.A., University of California, Berkeley.

**PRISCILLA KINSMAN**

Assistant Professor Emeritus of Education, Ph.B., University of  
Chicago; M.A., Teachers College, Columbia University;  
University of Washington.

**FLORENCE J. KIRKPATRICK**

Associate Professor Emeritus of Biology, B.S., University of  
Washington; M.A., Mills College.

**MERLE S. KUDER**

Professor Emeritus of Education and Psychology, B.A.,  
University of Arizona; M.A., Ph.D., Teachers College, Columbia  
University.

**MIRIAM S. MATHES**

Associate Professor Emeritus of Library Science, B.A., New  
York College for Teachers; M.A., Teachers College, Columbia  
University; B.L.S., M.L.S., School of Library Science, Columbia  
University.

**SYNVA K. NICOL**

Associate Professor Emeritus of Education, B.A., Fresno State  
College; M.A., Teachers College, Columbia University.

**J. EVELYN ODOM**

Associate Professor Emeritus of English, A.B., Winthrop College;  
M.A., Teachers College, Columbia University.

**MIRIAM L. PECK**

Associate Professor Emeritus of Art, B.A., M.A., M.F.A.,  
University of Washington.

**RUTH PLATT**

Associate Professor Emeritus of Zoology, B.S., M.S., University  
of Washington; University of California.

**HAZEL JEAN PLYMPTON**

Associate Professor Emeritus of Art, Ph.B., University of  
Chicago; M.A., Teachers College, Columbia University; Reed  
College; Portland School of Art.

**LORRAINE POWERS**

Emeritus Dean of Women, B.A., University of Wisconsin; M.A.,  
University of Iowa.

**FRANK N. PUNCHES**

Associate Professor Emeritus of Education, B.A., University of  
Washington; M.A., Washington State University.

**CHARLES M. RICE**

Associate Professor Emeritus of Industrial Arts, B.F.A., M.A.,  
Washington State University; University of Washington;  
University of Oregon; Carnegie A.I.A. Art Sessions; Ed.D.,  
Oregon State University.

**BEARNICE S. SKEEN**

Professor Emeritus of Education, B.S., M.S., University of  
Oregon; Ed.D., Washington State University.

**LEONA M. SUNDQUIST**

Distinguished Service Professor Emeritus of the College, B.A.,  
M.S., University of Washington; Teachers College, Columbia  
University.

**RUTH WEYTHMAN VAN WICKLE**

Professor Emeritus of Physical Education, B.S., University of  
Washington; M.A., Teachers College, Columbia University;  
University of California, Berkeley; University of Tennessee.



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 Aboud, Frances E. / Psychology  
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 Ager, Philip / Music  
 Aitken, Margaret H. / Physical Education  
 Albers, James R. / Huxley  
 Alexander, Marian L. / Library  
 Allen, Edwin Joseph, Jr. / Sociology/Anthropology  
 Ames, Evelyn E. / Physical Education  
 Amundsen, Darrel W. / Foreign Languages  
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 Anderson, Kathryn L. / Fairhaven  
 Arellano, Raul / Ethnic Studies  
 Arkley, Alfred S. / Political Science  
 Armstrong, David G. / Education  
 Arnett, M. Chappelle / Physical Education  
 Aslanian, Paul J. / Economics and Business  
 Atneosen, Gail H. / Mathematics  
 Atneosen, Richard A. / Physics  
 Ayers, John J. B. / Psychology
- Babcock, Randall S. / Geology  
 Baird, Herbert LeRoy Jr. / Foreign Languages  
 Balas, Robert S. / Foreign Languages  
 Balzer, Le Von A. / Biology  
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 Barragan, Guadalupe Garcia / Foreign Languages  
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 Barron, Lucille E. / Home Economics  
 Bartsch, Richard L. / Physical Education  
 Beamer, Elbert M. / General Studies  
 Beck, Myrl E., Jr. / Geology  
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 Beldin, Horace O. / Education  
 Berg, Richard H. / Huxley  
 Bernstein, Douglas A. / Psychology  
 Besserman, Marion / Chemistry  
 Biasini, Americole / Music  
 Bisler, Barbara A. / Home Economics, Education  
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 Bishop, George / Art  
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 Black, Joseph E. / Technology  
 Blackwell, Leslie / Education  
 Blood, Don F. / Psychology  
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 Bouverat, Roberta A. / Education  
 Bowman, Elizabeth / English  
 Boylan, Bernard L. / History  
 Brewster, Laurence W. / Speech  
 Broad, A. Carter / Biology  
 Brockhaus, Henrich / Foreign Languages  
 Brown, Don W. / Education  
 Brown, Edwin H. / Geology
- Brown, Herbert A. / Biology  
 Brown, Robert D. / English  
 Brown, Willard A. / Physics  
 Bryant, William H. / Foreign Languages  
 Buckland, Roscoe L. / General Studies  
 Budd, William C. / Psychology  
 Bultmann, William A. / History  
 Burnett, Michael J. / Fairhaven  
 Busse, Larry L. / Education  
 Butler, Reginald D. / Ethnic Studies  
 Byeman, Gerrit / Technology
- Call, Donald J. / Sociology/Anthropology  
 Carlile, Sene R. / Speech  
 Carmean, Stephen L. / Psychology  
 Carroll, Katherine M. / Education  
 Cary, Meredith B. / English  
 Catrell, Dennis E. / Speech  
 Chalice, Donald R. / Mathematics  
 Chaney, Robin W. / Mathematics  
 Chard, Everett W. / Political Science  
 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  
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 Crow, Lowell T. / Psychology  
 Cvetkovich, George T. / Psychology
- Dallas, Lee A. / Education  
 Darrow, Helen F. / Education  
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 Davidson, Melvin / Physics  
 Davis, David H. / General Studies  
 Davis, David L. / History  
 DeLorme, Roland L. / History  
 Diers, Carol J. / Psychology  
 Dittrich, William J. / Physics  
 Donker, Marjorie J. / English  
 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  
 Duff, John T. / Economics and Business
- Easterbrook, Don J. / Geology  
 Eddy, Lowell P. / Chemistry  
 Eddy, Peter A. / Foreign Languages  
 Ehemann, Jane H. / Geography  
 Eklund, Donald D. / History  
 Elder, Donald J. / Library

Elich, Peter J. / Psychology  
Ellis, Ross C. / Geology  
Elmendorf, William E. / Foreign Languages  
Embrey, Robert D. / Technology  
Erickson, John E. / Biology  
Eriksson, Folke / Mathematics  
Evans, Howard M. / Education  
Everitt, Jack M. / Huxley  
Faber, Eunice D. / Foreign Languages  
Fang, Jeffrey M. / Economics and Business  
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Faulkner, J. Kaye / Economics and Business  
Fennimore, Flora / Education  
Feringer, F. Richard / Education  
Ferris, Donald A. / 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  
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Frank, Barton / Music  
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Freeman, Kenneth D. / Fairhaven  
Frerichs, Bernard H. / Economics and Business  
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Friedland, Patricia A. / Physical Education  
Froderberg, Albert J. / Mathematics  
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Gayden, Ernst L. / Huxley  
Gelder, Harvey M. / Fairhaven  
Gerhold, George A. / Chemistry  
Gilbert, Donn D. / Education  
Gilbert, Naomi R. / Fairhaven  
Glass, Jerome / Music  
Glenn, Paul C. / Fairhaven  
Goldsmith, Helen H. / Foreign Languages  
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Gossman, Charles / Sociology/Anthropology  
Gough, Barry M. / History  
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  
Haard, Richard T. / Biology  
Haglund, Bryon E. / Economics and Business  
Hamlin, William D. / Education  
Hamm, Jacob / Music  
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Hanover, Carl H. Jr. / Technology  
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Hanson, Lawrence / Art  
Harder, K. Peter / Economics and Business  
Harris, Howard / Sociology/Anthropology  
Harris, William A. / Ethnic Studies

Hashisaki, Joseph / Mathematics  
Hearsey, Herbert R. / Library  
Hebal, John J. / Political Science  
Heid, William H. / Fairhaven  
Helfgott, Leonard M. / History  
Helgoe, Robert S. / Psychology  
Hengen, Nona L. / Library  
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Hildebrand, Francis H. / Mathematics  
Hildebrand, James L. / Mathematics  
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Hoisington, Arthur L. / Education  
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Huff, Robert E. / English

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Ives, Fred M. / Mathematics

Jack, Rand F. / Fairhaven  
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Keep, William C. / English  
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Kelley, Sara Jeanne / Mathematics  
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Kleinknecht, Ronald A. / Psychology  
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Kraft, Gerald F. / Biology  
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 Lee, Lawrence L. / English  
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 Long, Boyde / Physical Education  
 Lonner, Walter J. / Psychology  
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 McDonnell, Robert F. / English  
 McEroy, Arthur A. / Education  
 McGaw, Howard F. / Education  
 MacGregor, John / Sociology/Anthropology  
 McInnis, Raymond / Library  
 McInnes, Ruby D. / Education  
 McIntyre, Mary A. / Art  
 McIntyre, Patrick J. / Chemistry  
 McIntyre, Robert John / Music  
 MacKay, William R. / Psychology  
 McLeod, Donald B. / Fairhaven  
 McLeod, Raymond R. / Physics  
 McPherson, William H. / Technology  
 Mahoney, Eldon R. / Sociology/Anthropology  
 Mairs, John W. / Geography  
 Maksymowicz, Alex / Physics  
 Mammitzch, Ulrich / General Studies  
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 Mariz, George Eric / History  
 Marsh, David F. / Art  
 Martin, Grant L. / Education  
 Martin, James S. / Biology  
 Martin, Jeanne L. / Political Science  
 Martinsen, Wesley D. / Technology  
 Marx, Robert D. / Psychology  
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 Mason, Evelyn D. / Psychology  
 Mather, Dan / Library  
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 Mazur, D. Peter / Sociology/Anthropology  
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 Mees, Hayden L. / Psychology  
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 Montague, Phillip / Philosophy  
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 Moon, Donald E. / Education, Technology  
 Moore, S. Elizabeth / Education  
 Moore, John S. / Economics and Business  
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 Morrow, Frank A. / Philosophy  
 Moser, Douglas S. / Sociology/Anthropology  
 Mosher, Terence D. / English  
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 Mullen, Neill D. / Education  
 Murray, Keith A. / History  
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 Napiecinski, Thomas H. / Speech  
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 Nickelson, Alden L. / Education, Biology  
 North, Charles M. / Music  
 Nugent, Frank A. / Psychology  
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 Odell, C. Lee / English  
 Olmstead, Marvin L. / Speech  
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 Patton, Robert T. / Economics and Business  
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 Peterson, Gilbert A. / Huxley  
 Peterson, Richard K. / Library  
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 Pielstick, Norval L. / Psychology  
 Pinney, Robert H. / Education  
 Polen, Samuel B. / Speech

Porter, Sam R. / Technology  
Prim, Merle M. / Psychology  
Purtill, Richard L. / Philosophy

Quigley, Robert J. / Physics

Radke, August / History  
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Randall, Charles R., Jr. / Physical Education  
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Rangel-Guerrero, Daniel / Foreign Languages  
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Rees, Earl R. / Psychology  
Regier, Bernard W. / Music  
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Richard, Jerome E. / Fairhaven  
Richardson, Larry S. / Speech  
Riffey, Meribeth M. / Biology  
Ritter, Harry Ray, Jr. / History  
Ritter, Marian B. / Library  
Robbins, Lynn A. / Huxley  
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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  
Ryan, Marjorie / English  
Rygg, Paul T. / Mathematics

Safavi, Farrokh / Economics and Business  
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Savage, Tom V. / Education  
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  
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  
Seiko, Michael T. / Speech  
Senger, Clyde M. / Biology  
Shaffer, Ronald W. / Psychology

Sherwood, Tom M. / Fairhaven  
Sigler, Byron E. / Speech  
Sijohn, Henry / Education  
Skinner, Knute / English  
Slaten, Dorothy S. / Education  
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  
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Southcott, Marvin A. / Technology  
Spanel, Leslie E. / Physics  
Sprague, Donald L. / Physics  
Stannard, R. E., Jr. / English  
Starbird, Richard O. / Education  
Steele, Jay L. / Art  
Steffens, Peter / English  
Stellwagen, M. Alan / Geography  
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Stoever, William K. D. / General Studies  
Stoner, Paul H. / Music  
Summers, William C. / Huxley  
Swift, Larry E. / Education  
Swineford, Ada / Geology  
Symes, Ken M. / English  
Symes, Martha t. / Ethnic Studies

Taylor, Christopher J. / Psychology  
Taylor, Herbert C., Jr. / Sociology/Anthropology  
Taylor, Ronald J. / Biology  
Taylor, Sandra J. / Psychology  
Teasley, Howard A. / Huxley, Economics  
Templeton, David E. / Art  
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Terich, Thomas A. / Geography  
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Tholfsen, Paul A. / Physics  
Thomas, Edward B. / Art  
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Thompson, Richard W. / Psychology  
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

Valum, Rolf W. / Technology  
Vander Velde, Philip B. / Education  
Vander Yacht, Douglas R. / Speech  
Van Wingerden, Stewart / Education  
Vassdal, Thomas O. / Art  
Vawter, Richard D. / Physics

Veit, J. Joseph / Physics  
Vernon, Manfred C. / Political Science, Huxley  
Vike, Gene E. / Art  
Vogel, Richard F. / Technology

Wallace, William L. / General Studies  
Walter, Ada G. / Economics and Business  
Walter, Don C. / Music  
Warner, Beverly M. / Fairhaven  
Waterman, C. Fred / Library  
Watrous, Mary W. / Education  
Webb, Dean / Math  
Webb, Loren L. / Speech  
Webber, Hubert H. / Huxley  
Wegner, Walter F. / Art  
Weiner, Homer A. / Art  
Weiss, Rudolf / Foreign Languages  
Wellman, Evelyn H. / Music  
Weyh, John A. / Chemistry  
Whitaker, Roy A. / Geography  
Whitmer, John C. / Chemistry

Wicholas, Mark L. / Chemistry  
Wilcock, David N. / Geography  
Wilkins, James W., Jr. / Psychology  
Williams, Don C. / Biology  
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  
Wyskiel, Elizabeth W. / Home Economics

Yu, Ming-Ho / Huxley  
Yurovchak, Lynne M. / Economics and Business

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.  
HERBERT R. HEARSEY (1941) Associate Professor and Associate Director of the Library. BA, EdM, Tufts College; BS in LS, MS in LS, University of Illinois.  
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

MARION L. ALEXANDER (1970) Assistant Professor and Serials Librarian. AB, Occidental College; MLS, University of California, Los Angeles.  
ROBERT J. CROSS (1969) Associate Professor and Assistant Director for Public Services. BA, Carleton College; MLS, University of Washington.  
DONALD J. ELDER, JR. (1970) Assistant Professor and Head Catalog Librarian. BA, University of Montana; AMLS, University of Michigan.  
THOMAS FRAZIER (1964) Associate Professor and Reference Librarian. BA, MA, MLS, University of Washington.

KATHLEEN J. KUHNS (1972) Instructor and Acquisitions 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 Director for Technical Services & Library Systems. BA, MLS, University of Washington.  
MOLLY R. MIGNON (1969) Assistant Professor and Educational-Curriculum 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 (1968) 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

**GEORGE BLACK**

Tuba, String Bass, Professional Musician.

**FRANK BLIVEN**

Classical Guitar, BM, San Francisco Conservatory of Music.

**NICHOLAS BUSSARD**

Oboe, B.A., Whitman College; M.M., University of Oregon.

**SUSAN ERICKSON**

Voice, M.A., Western Washington State College

**MARK EUBANKS**

Bassoon, B.A., University of Washington.

**DAVID FORBES**

Brass, Professional Musician

**SCOTT GOFF**

Flute, M.S. Juilliard School of Music.

**SERGE KARDALIAN**

Violin and Viola, B.M., Juilliard School of Music.

**KATHIE RAMM**

Percussion, B.A., University of Washington.

## ACCOMPANISTS

**NANCY BUSSARD**

Piano, B.A., Whitman College.

**LUCILLE OSTER**

Piano, Diploma, Olga Steeb Piano School.

## ASSOCIATES IN THE ARTS

**DONALD A. ADAMS (1964)**

Associate in Theatre Arts, B.A., M.A., University of Washington.

**JEANETTE SCOTT (1972)**

Associate in Music.

## RESEARCH ASSOCIATES

**JOHN BOLLINGER (1972)**

A.B., San Diego State College; Ph.D., University of California, Berkeley.

**JAMES D'ARGAVILLE CLARK (1964)**

B.Sc., Capetown; B.Sc., University of London; Ph.D., Institute of Paper Chemistry, Lawrence College.

## DEPARTMENT CHAIRMEN

|                          |                        |
|--------------------------|------------------------|
| Mr. David Marsh          | Art                    |
| Dr. Clyde M. Senger      | Biology                |
| Dr. Joseph R. Crook      | Chemistry              |
| Dr. Howard Mitchell      | Economics & Business   |
| Dr. Herbert Hite         | Education              |
| Dr. Robert McDonnell     | English                |
| Dr. Walter Robinson      | Foreign Languages      |
| Dr. Roscoe L. Buckland   | General Studies        |
| Dr. Howard Critchfield   | Geography              |
| Dr. Don Easterbrook      | Geology                |
| Dr. Roland L. DeLorme    | History                |
| Dr. Dorothy Ramsland     | Home Economics         |
| Dr. Robert Lawyer        | Library                |
| Dr. Albert J. Froderberg | Mathematics            |
| Mr. Phillip Ager         | Music                  |
| Dr. Stanley Daugert      | Philosophy             |
| Dr. Margaret Aitken      | Physical Education     |
| Dr. W. Louis Barrett     | Physics                |
| Dr. Gerard F. Rutan      | Political Science      |
| Dr. Peter J. Elich       | Psychology             |
| Dr. Garland F. Grabert   | Sociology/Anthropology |
| Dr. Arthur Solomon       | Speech                 |
| Dr. Sam Porter           | Technology             |

## MASTER'S DEGREE PROGRAM AND SPECIALIZATION ADVISERS

|                                 |                           |
|---------------------------------|---------------------------|
| Adult Education                 |                           |
| Administration                  | Dr. Richard F. Feringer   |
| Anthropology                    | Dr. Angelo Anastasio      |
| Art—Elementary,                 |                           |
| Secondary                       | Dr. David E. Templeton    |
| Biology                         | Dr. Richard W. Fonda      |
| Business Education              | Dr. Harold O. Palmer      |
| Chemistry—M.Ed.                 | Dr. John A. Miller        |
| M.S.                            | Dr. John A. Weyh          |
| Earth Science                   | Dr. Don J. Easterbrook    |
| Economics                       | Dr. Howard E. Mitchell    |
| 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. Stewart Van Wingerden |
| 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<br>Children | Dr. C. Max Higbee       |
| English                                      | Dr. Richard L. Francis  |
| French                                       | Dr. Arthur S. Kimmel    |
| General Science                              | Dr. Willard A. Brown    |
| Geography                                    | Dr. Howard Critchfield  |
| 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 Schaub        |
| Music—M.A.                                   | Dr. David Schaub        |
| Physical Education—<br>Men                   | Dr. James Lounsberry    |
| Women  | Dr. M. Chappelle Arnett |
| Physical Science                             | Dr. Willard A. Brown    |

|  |                           |
|--|---------------------------|
| Physics—M.Ed.  | Dr. Paul A. Tholfsen      |
| M.S.   | Dr. Richard H. Lindsay    |
| Political Science                                      | Dr. Everett W. Chard      |
| Psychology   | Dr. Richard W. Thompson   |
| Psychology—School<br>Counselor                         | Dr. Elvet G. Jones        |
| Psychology—School<br>Psychologist                      | Dr. Elvet G. Jones        |
| Science Education                                      | Dr. John A. Miller        |
| Sociology  | Dr. Donald J. Call        |
| Spanish  | Dr. Herbert L. Baird, Jr. |
| Speech   | Dr. Sene R. Carile        |
| Student Personnel Administration —<br>Higher Education | Dr. Ray Romine            |
| Technology   | Dr. Sam R. Porter         |

## SUMMARY OF ENROLLMENT

|                                |        |
|--------------------------------|--------|
| <i>Resident</i>                |        |
| Summer Quarter, 1972           | 3,997  |
| Fall, Winter, Spring, 1972-73  | 10,461 |
| <i>Extension</i>               |        |
| Independent Study              | 255    |
| Evening Classes (on campus)    | 1,064  |
| Extension Classes (off campus) | 6,382  |
| Total Extension Enrollment     | 7,701  |

## DEGREES AND CERTIFICATES

*Degrees granted from August, 1972 to  
June, 1973, inclusive:*

|   |       |
|---|-------|
| Master of Education   | 162   |
| Master of Arts  | 36    |
| Master of Science   | 40    |
| Bachelor of Arts in Education   | 694   |
| Bachelor of Arts  | 896   |
| Bachelor of Science   | 131   |
| Total   | 1,959 |
| <i>Teaching Certificates issued from<br/>August, 1972, to June, 1973, inclusive:</i>        |       |
| Provisional   | 729   |
| <i>Recommended for certification to the State<br/>Superintendent of Public Instruction—</i> |       |
| Standard Teaching Certificate   | 365   |



# 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.

## 1. 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 WWSU 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

representatives 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)

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