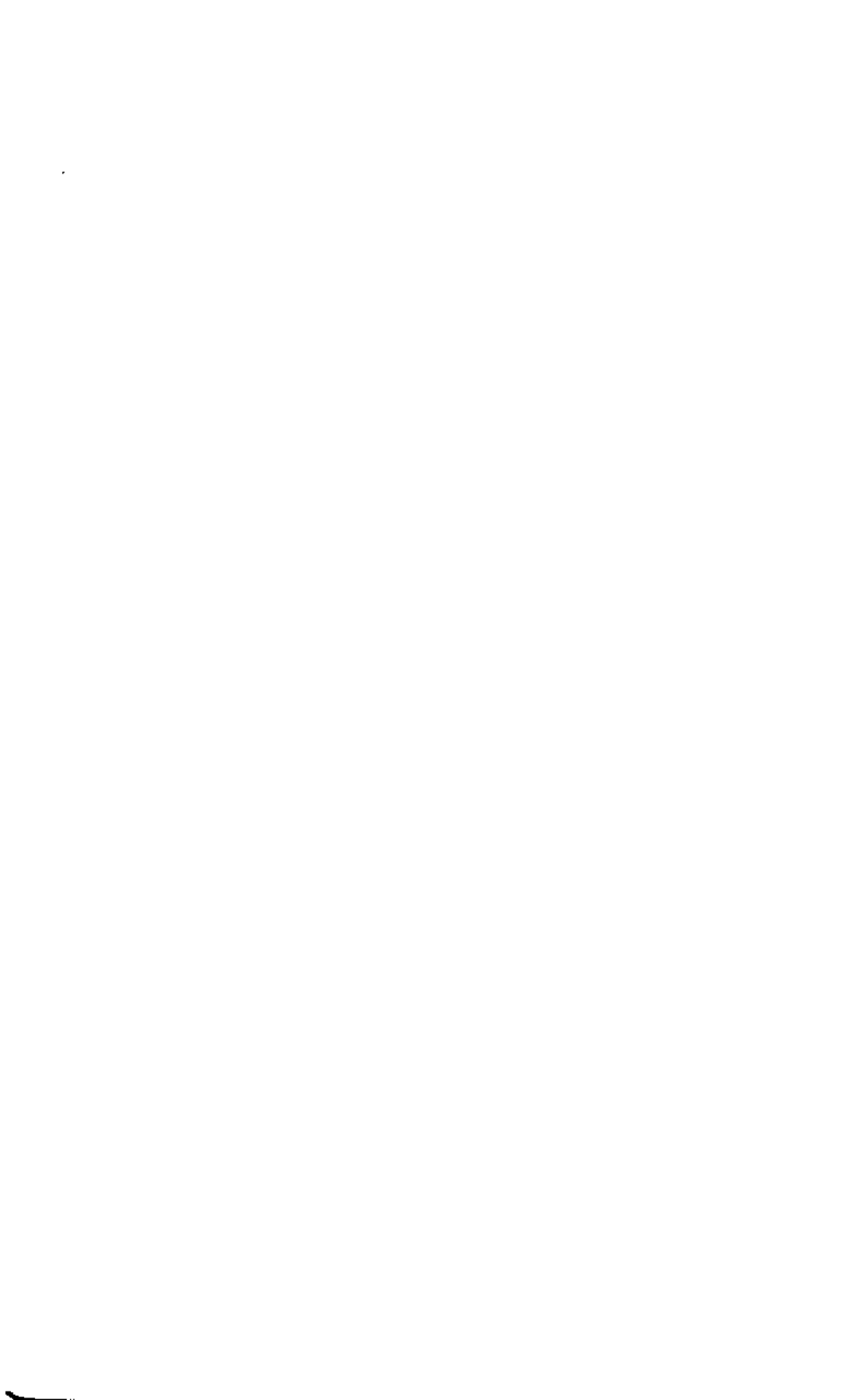


WESTERN  
WASHINGTON  
STATE  
COLLEGE  
CATALOGUE  
1965-66



**WESTERN WASHINGTON  
STATE COLLEGE  
BULLETIN**

**GENERAL CATALOGUE  
1965 - 1966**

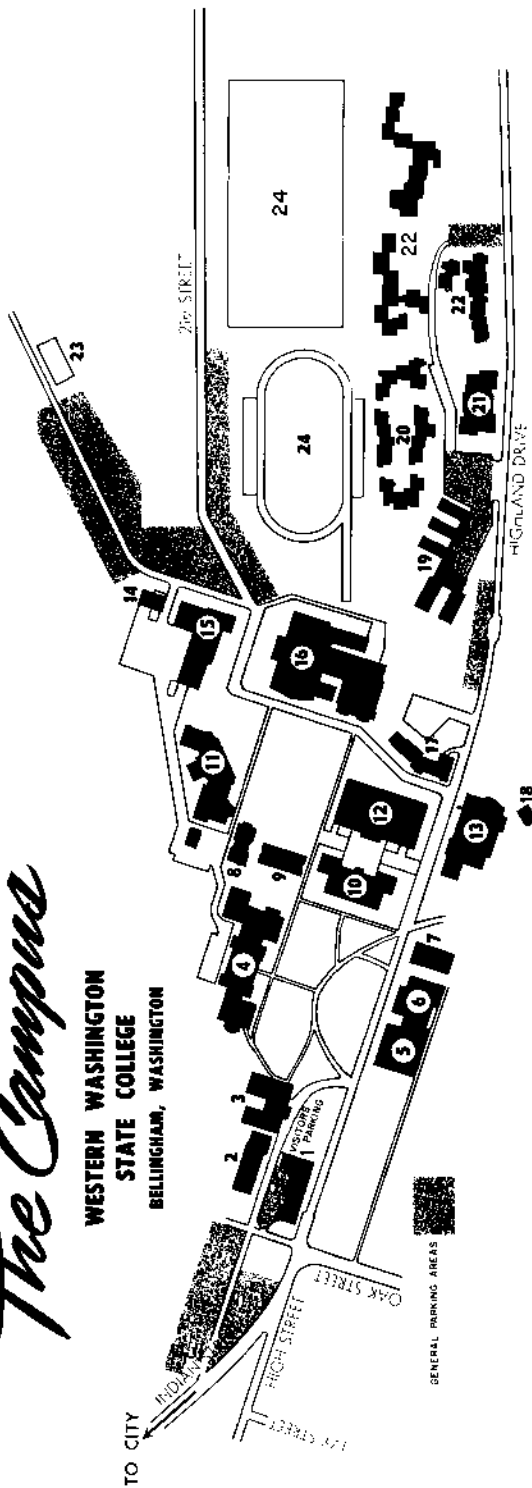
**July, 1965  
Bellingham, Washington**

**COVER DESIGN—**

The cover design by Gary Hallgren was selected from designs prepared as a project in the Art 371 class.

# The Campus

WESTERN WASHINGTON  
STATE COLLEGE  
BELLINGHAM, WASHINGTON



- |                     |                                 |                                 |                          |
|---------------------|---------------------------------|---------------------------------|--------------------------|
| 1. Higginson Hall   | 7. Book Store                   | 13. Auditorium-Music Bldg. (AM) | 19. Highland Hall        |
| 2. Edens Hall North | 8. Lecture Halls                | 14. Heating Plant               | 20. Ridgeway Dormitories |
| 3. Edens Hall       | 9. Humanities Bldg. (Hu)        | 15. Arts Building               | 21. Ridgeway Dining Hall |
| 4. Old Main (M)     | 10. Wilson Library (W)          | 16. Sanford E. Carver Gymnasium | 22. Ridgeway Dormitories |
| 5. Viking Commons   | 11. Campus School (CS)          | 17. Education Building (E)      | 23. Tennis Courts        |
| 6. Viking Union     | 12. Haggard Hall of Science (M) | 18. President's House           | 24. Athletic Fields      |

# Table of Contents

Campus Map .....	2
College Calendar .....	4
<b>THE COLLEGE</b>	
History and Accreditation .....	6
Objectives .....	6
Facilities .....	8
<b>ADMISSION</b>	
Freshmen .....	10
Transfers .....	11
Advanced Placement .....	13
Honors Program .....	14
<b>STUDENT FINANCES</b>	
Fees .....	15
Living Costs .....	17
Financial Assistance .....	18
<b>STUDENT LIVING</b>	
Housing .....	23
Health Service .....	27
<b>STUDENT PERSONNEL SERVICES</b>	
Advisement .....	28
Student Personnel Offices .....	29
<b>STUDENT ACTIVITIES AND ORGANIZATIONS</b>	30
<b>SPECIAL SERVICES</b>	
The Library .....	32
Audio-Visual Center .....	32
Extension Services .....	32
Research .....	33
<b>PROGRAMS OF INSTRUCTION</b>	
Academic Regulations .....	36
The Undergraduate Curriculum .....	43
Degree Requirements .....	43
Teacher Education .....	45
Arts and Sciences .....	51
Transfer Programs .....	52
Graduate Programs	
Master's Degrees .....	52
Fifth Year .....	53
<b>DEPARTMENTS OF INSTRUCTION</b>	54
Faculty, Concentrations, Description of Courses	
(Arranged by department — see back cover for reference)	
<b>ORGANIZATION AND PERSONNEL</b>	
Board of Trustees .....	192
Administrative Officers .....	192
Faculty .....	193
<b>ENROLLMENT SUMMARY</b>	214
<b>INDEX</b>	215

WESTERN WASHINGTON STATE COLLEGE BULLETIN

Volume LXI

July, 1965

Number 1

Published in July, October, January, and March. Entered as second class matter at the post office in Bellingham, Washington, under the Act of August 4, 1912. Second class postage paid at Bellingham, Washington

## 1965

SEPTEMBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		
OCTOBER						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						
NOVEMBER						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				
DECEMBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	
1966						
JANUARY						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					
FEBRUARY						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

## College

## Fall Quarter, 1965

## August 1

Last day to apply for admission.

## August 2-13, by appointment.

Registration counseling for freshmen.

## September 14-16, by appointment.

Registration of new transfer students.

## September 19, 7:30 p.m.

Convocation for new freshmen.

## September 21

Registration of returning students.

## September 22, 8:00 a.m.

Classes begin.

## November 11

Veterans' Day Holiday.

## November 24, noon—November 29.

8:00 a.m. Thanksgiving Recess.

## December 7-10

Final Examinations.

# Calendar

## Winter Quarter, 1966

**January 3**

Registration.

**January 4, 8:00 a.m.**

Classes begin.

**February 22**

Washington's Birthday Holiday.

**March 15-18**

Final Examinations.

## Spring Quarter, 1966

**March 28**

Registration.

**March 29, 8:00 a.m.**

Classes begin.

**May 30**

Memorial Day Holiday.

**June 6-9**

Final Examinations.

**June 10**

Commencement

## Summer Quarter, 1966

**June 20-July 29**

Six-Week Session.

**June 20-August 19**

Nine-Week Session.

**July 4**

Independence Day Holiday.

(Fall Quarter, 1966—Classes will begin Sept. 28).

1966						
MARCH						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		
APRIL						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
MAY						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				
JUNE						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		
JULY						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						
AUGUST						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

# The College

Western Washington State College is one of three state colleges which, along with the two universities and seventeen community colleges, comprise the state supported higher educational system in Washington. These institutions have individual governing boards but work together through voluntary associations and committees to coordinate their planning and efforts to provide adequate higher education for the rapidly growing college population of the State.

Western Washington State College is located in Bellingham, a city of 35,000 in the northwestern corner of the State near the Canadian border. Its historical antecedent was the State Normal School established by act of the State legislature in 1893, with actual operations commencing in the fall of 1899. From a normal school, the institution evolved to a degree granting institution in 1933, the College of Education in 1937, and to the State College in 1961.

The College is now a multipurpose institution offering degree programs in teacher education and in the arts and sciences at both the undergraduate and graduate levels. Preprofessional studies also provide one or two year programs for transfer to professional schools at the universities.

Full accreditation has been granted to the College by the Northwest Association of Secondary and Higher Schools and by the National Council for the Accreditation of Teacher Education.

## Objectives

Western Washington State College is a community of scholars. Students, who are apprentice scholars, associate with members of the faculty, who are seasoned scholars, in the advancement and dissemination of truth and beauty.

The College strives to provide its students with the opportunity and the incentive for gaining a higher education which will develop their intellectual powers and enlarge their understanding and appreciation of their cultural heritage. Such education is appropriate to a free citizen and provides a sound basis for any vocational pursuit.



A principal responsibility of the College is to prepare teachers, administrators, and other personnel for the public schools of Washington. To this end, programs leading to the Bachelor of Arts in Education and the Master of Education degrees are offered.

Programs within the liberal arts and sciences lead to the Bachelor of Arts, the Master of Arts, and the Master of Science degrees.

For students intending to enter schools of engineering, law, medicine, etc., preprofessional programs are provided.

In order to accomplish these functions the total college program provides planned experiences in the areas of:

1. **General education**
2. **Professional education of teachers**
3. **Subject matter specialization**

**The aims of the general education program are**

1. To broaden and intensify the student's understanding of the most significant aspects of man's cultural heritage;
2. To train the student in the methods and tools of thought and expression;
3. To assist the student in integrating his knowledge;
4. To assist the student in developing his powers of aesthetic enjoyment and creativity;
5. To stimulate the student in formulating a philosophy of life based upon knowledge and reflection.

**The aims of the teacher education program, developed upon a foundation of general education are**

1. To develop the student's
  - a. knowledge of the subject matter and techniques appropriate to his teaching fields;
  - b. understanding of individual differences and the process of growth and learning in children;
  - c. understanding of the processes whereby personality is formed and maladjustments avoided;

- d. understanding of the place of the school in society and its present organization and administration;
  - e. interest in forming his own philosophy of education.
2. To provide the student, prior to provisional (fourth-year) certification with the background and the opportunity to demonstrate his
- a. skill in planning and in carrying out his ideas independently;
  - b. skill in using established methods of instruction, plus a willingness to experiment with new methods;
  - c. ability to evaluate his own teaching practices;
  - d. ability to work cooperatively with children, colleagues, parents, and others in the community;
  - e. ability to discriminate between the significant and the less significant in education.
3. To provide the student, prior to standard (fifth-year) certification, with an opportunity
- a. to extend his knowledge of subject matter appropriate to his teaching fields;
  - b. to obtain training in techniques found lacking after one year of teaching under a provisional certificate.

**Subject matter specialization should meet the needs of a person who seeks**

- 1. Increased depth of subject matter mastery appropriate to his teaching assignment.
- 2. A sound basis for pursuing further and more advanced study in a specialized field.

## Facilities

The physical plant of the College has been expanded to keep pace with rapidly growing student enrollments. (See page 2 for graphic presentation of Campus facilities). Since 1959, Haggard Hall of Science, Carver Gymnasium, the Humanities Building and Lecture Halls, and two wings of the Mabel Zoe Wilson Library have been added to the academic facilities. Student residences have also grown apace with the addition of Higginson Hall and the Ridgeway Dormitories. The Viking Union, Student Cooperative Book Store, and two dining halls have also been opened within the past five years. Planning is proceeding for other buildings to be added as enrollment continues its rapid growth in the next decade.

# THE STUDENT

ADMISSION

FINANCES

HOUSING

PERSONNEL SERVICES

# Admission

## Admission Requirements

The College makes every effort to provide an opportunity for higher education to all qualified applicants. On the basis of the experience of students in recent years, certain criteria have been adopted for the selection of those most likely to succeed in an academic program. Details of the requirements for admission are outlined below for freshmen and for transfers, both resident and non-resident.

### FRESHMEN

**Graduates of Washington State high schools** are ordinarily admitted if their high school records indicate

a. a cumulative grade average of 2.5 or above;

or

b. rank in the upper half of the graduating class.

Students who fail to qualify on either of these criteria may receive consideration for admission by submitting such additional evidence as specified by the Director of Admissions which suggests that, in spite of such failure, they have the capacity and maturity to succeed in an academic program.

The Washington Pre-College Tests are required of all entering freshmen as a guidance and placement aid. Residents of the State should complete the tests during the senior year when administered in their locality.

**Graduates of high schools outside the State of Washington** are ordinarily admitted if they meet the requirements specified above, provided they also have the results of the Scholastic Aptitude Test submitted directly to the Admissions Office by the College Entrance Examination Board. (The Washington Pre-College Tests are also required, but opportunity to take them will be provided when the out-of-state student arrives in the Fall).

**Non-high school graduates** may be considered for admission if they are over twenty-one years of age. Such persons may establish eligibility by filing the appropriate application for admission

and by demonstrating ability to profit from college work on appropriate achievement and aptitude tests. Such students should consult the Director of Admissions for details.

## TRANSFERS

The College grants advanced standing for college-level study completed at other accredited institutions. Students contemplating transfer are urged to study carefully the academic program of their interest in the succeeding sections of this Catalogue in order to plan carefully for appropriate course selection. Guides to course equivalents or appropriate substitutions have been supplied to advisement officers at the community colleges in Washington.

Transfer students in good standing at the last institution attended are ordinarily admitted who

satisfy requirements for freshmen admission (above) and have attained a cumulative grade average of 2.00 (C) in college level study

or

do not satisfy freshman admission requirements but have achieved a cumulative grade average of 2.00 (C) based upon at least 40 transferable credits, or 2.50 on at least 25 transferable credits.

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.

Attention is called to the College regulation which requires each student to earn a grade of "C" or better in a course in English composition prior to enrollment in a fourth college quarter. This same regulation applies to transfers; they are expected to have satisfied this requirement as a condition of admission. Consideration for an exception to this regulation is given only upon formal written petition.

## GRADUATES

For admission to graduate standing as a candidate for a master's degree, see the **Graduate Bulletin**.

## FOREIGN STUDENTS

Canadian students who qualify for admission to the university

in their home province are considered for admission under the same general procedures as for 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 have demonstrated 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.

## Application Procedure

**Freshman candidates** should obtain from their principal or counselor the Application for Admission to Washington Higher Institutions, filling out page one and filing at the high school office to be completed and mailed to the College Admissions Office. (If form is not available, one may be obtained from the College Admissions Office.)

**Transfer candidates** may obtain applications from the Admissions Office. (Some are available in the guidance offices at Washington community colleges.) Complete and mail this form and see that a complete official transcript is forwarded directly to the Admissions Office by each institution attended. Students transferring fewer than 40 credits (quarter hours) must also submit a high school transcript.

### TIME OF APPLICATION

Applications and credentials for the fall quarter are accepted after February 1 and not later than August 1; application by April 1 is desirable. Applications must be on file by December 15 for winter quarter, March 15 for spring quarter, or June 1 for the summer session.

Freshman students must have completed the first half of the senior year; transfers may apply during the term preceding the one for which they seek entry. Students who are clearly eligible are admitted upon application, subject to satisfactory completion of studies undertaken subsequent to the submission of records.

### CONFIRMING APPLICATION

Each admitted student will be asked to confirm his enrollment by submitting a nonrefundable payment of \$35 on tuition and

fees. This payment **should not be submitted** until requested by the College when notification of admission is sent. Additional procedural instructions are sent to those who confirm their intention to enroll by submission of the advance fee payment.

## HEALTH EXAMINATION

A health examination is required of all entering students prior to registration. Necessary forms are sent to those who confirm their application. 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.

## AGREEMENT OF MUTUAL RESPONSIBILITY

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 the student has violated this agreement.

# Special Opportunities for Superior Students

## ADVANCED PLACEMENT AND COURSE CHALLENGE

The College is committed to a recognition of individual differences in the preparation of high school graduates who enter the freshman class. It is concerned that students be placed in courses at an instructional level commensurate with their ability and previous study. Students should receive credit for any course offered by the College, upon demonstration of achievement comparable to the expectations of that course. Achievement may be demonstrated by

- a. presenting acceptable results on the Advanced Placement

Examinations of the College Entrance Examination Board. Generally, scores of 3, 4, or 5 on these examinations will result in advanced placement with credit. The department concerned will review papers presented and will advise the Director of Admissions of appropriate placement and credit to be allowed;

- b. performing successfully on competency examinations prepared by academic departments; (see also page 40, "Credit by Examination");
- c. achieving satisfactorily in an advanced course of a sequence. In certain instances, an academic department may authorize a student to begin in an advanced course rather than in an introductory course which may duplicate previous study. In some cases, credit for the introductory course or courses will be allowed upon completion of the advanced course.

## THE HONORS PROGRAM

The Honors Program provides a challenging opportunity for the student of high academic ability to realize his potential. A student may be considered for admission to honors work if

- a. his scholastic aptitude test scores place him in the upper five per cent of all students at the College;
  - b. he attains a cumulative high school grade point average of 3.7;
- or
- c. he is nominated by a high school or college instructor.

Eligible students are selected by the Honors Board after an interview. Each honors student is assigned a tutor to whom he presents papers for subsequent discussion and with whom he confers regularly. There are a number of special courses for honors students.

Students interested in this program are invited to consult the Chairman of the Honors Board for more details.



# Student Finances

## Tuition and Fees

Checks and money orders for fees or living charges should be made payable to WESTERN WASHINGTON STATE COLLEGE.

### QUARTERLY CHARGES

#### FULL-TIME STUDENTS (7 or more credits)

Residents of the State of Washington, per quarter .....\$ 85.00

Tuition .....\$15.00

\*Other Fees ..... 70.00

Non-Residents of the State of Washington, per quarter .. 140.00

Tuition .....\$45.00

\*Other Fees ..... 95.00

\*These fees are required of all students who register for more than six quarter hours of credit. Funds derived from this source are used to finance certain non-instructional aspects of the College program, including (a) student activities, such as athletics and publications, not to exceed \$13.00 per student; (b) a student health program; (c) bond redemption for student residences and Union Building; (d) the student bookstore building; (e) the purchase of designated supplies and laboratory materials.

#### PART-TIME STUDENTS (Maximum 6 credits)

For each credit ..... 10.00

(Minimum fee \$20.00)

#### AUDITORS (without credit)

One or more courses per quarter ..... 16.00

**MUSIC — INDIVIDUAL INSTRUCTION** ..... 36.00

(See page 139 for special provisions applying to music majors and minors.)

**EXTENSION AND CORRESPONDENCE FEE**, per credit ..... 10.00

#### MISCELLANEOUS SERVICE CHARGES

**On-Campus Parking**, per quarter ..... 4.00

**Dormitory Resident Parking**, per quarter ..... 5.00

**Changes of Schedule.** After the student has completed his registration, \$1 is charged for any change not made at the initiative of the College.

**Late Registration.** \$3 is charged if a student fails to preregister or register at appointed times.

<b>Test Service</b> .....	5.00
Required of those who fail to take the entrance tests at the regularly scheduled time.	
<b>Special Examination Charge</b> for those who seek college credit in a given course through examination .....	2.00
<b>Teaching Certificate Filing Fee</b> , payable at the time of issuance .....	1.00
<b>Diploma Charge</b> , payable at graduation .....	5.00
<b>Placement Service Charge</b> , payable at graduation .....	2.00
<b>Music Instrument or Practice Space Charges</b>	
Pipe Organ or Other Instrumental or Practice Space Rental, per quarter .....	2.00

#### **Transcript Fee**

Each student is entitled to one official transcript of his scholastic record at Western Washington State College without charge. For subsequent transcript requests, there is a charge of \$1. Duplicate copies requested at the same time are issued at a charge of 25c each. When additional credits have been earned, a free supplement will be sent upon request to the same addressee as a previous transcript.

## **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.

## **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.

## TEXTBOOKS, MATERIALS AND LOCKERS

The Cooperative Bookstore is maintained by the Associated Students to furnish all necessary books and supplies at reasonable prices. The College does not provide textbooks for the personal use of students.

For the convenience of those in certain courses requiring the extensive use of materials or articles retained by the student, materials are charged at cost. The department issues an invoice for such materials and the student pays the charge at the Office of Budget and Accounts.

Metal lockers are available without charge to students in certain buildings. Students must provide themselves with the standard type combination lock sold only by the Student Cooperative Bookstore.

## Living Costs

### BOARD AND ROOM IN COLLEGE RESIDENCE HALLS:

#### QUARTERLY CHARGES

Board and room charges are payable by the quarter in advance.

The rates are as follows:

Fall Quarter .....	\$258.00
Winter Quarter .....	228.00
Spring Quarter .....	224.00

While arrangements for smaller payments at the first of each month may be made, the student is obligated for the total quarterly charge.

#### DELINQUENT ACCOUNTS

Unpaid room and board accounts are assessed a penalty of 25c per day effective on registration day. The penalty applies each pay period for those who are delinquent. Registration and payment for room and board are to be made before the student receives meals in the residence halls. Meals may be purchased on a cash basis until the student's board account is paid.

## REFUNDS

Room payments are not refundable. Board refunds or partial refunds are made in case of one week's illness or when a student teaching assignment conflicts with the meal schedule. Refund cards are issued in the Room Service Office, Viking Commons.

## FURNISHED ROOMS OFF-CAMPUS

Prices for furnished rooms without board in private off-campus houses range from \$25.00 to \$30.00 a month for each student in a room. Single occupancy rooms are somewhat higher.

## Estimate of Total Costs

The total estimated expense for three quarters, including cost of books and supplies as well as a moderate allowance for incidentals, is as follows:

	Minimum	Average
If rooming and boarding .....	\$1,150.00	\$1,300.00
If housekeeping .....	850.00	1,150.00
If living at home or working for room and board .....	450.00	550.00

These estimates make no provision for clothing costs or travel expense.

## Financial Assistance

It is the position of the College that the limited funds available for student assistance are most legitimately used, not as an inducement to attend this institution, but as a means to an end for the student—that of attending when this seems to be an educationally sound course of action and when, for financial reasons, it would otherwise not be possible.

The College evaluates the total educational program of the financial-aid applicant; school or college grades, test scores, participation in school or community activities, work experience, recommendations, future plans are reviewed.

If the applicant is judged qualified, the College will make every effort to make an offer of assistance commensurate with indicated need. The assistance may take the form of guaranteed employment, a loan, a scholarship, or some combination of these.

The College expects that every student aid applicant will supply

part of his own funds through summer or term-time employment, and that parents will contribute in proportion to their financial ability. In assessing need, the College uses the Parents' Confidential Statement prepared by College Scholarship Service.

## TYPES OF ASSISTANCE

Types of assistance and procedures of application are outlined for entering freshmen, transfers, graduates, and currently enrolled students.

### **Entering Freshmen** may apply for

#### Scholarships

One-year non-renewable scholarships from \$100 to \$300 are made available through private contributions. An annual average of \$6500 is being provided for freshmen scholarships. The possible continuation of a scholarship for a second or successive year is based upon outstanding performance and demonstration of continuing need. A renewal application is evaluated in free competition with other students.

#### NDEA Loans

It is expected that approximately \$60,000 will be available to freshmen in 1966-67 for these government sponsored, low interest, deferred payment loans. The maximum loan, based on demonstrated need, is \$800; the average loan granted is \$480. Parents must co-sign with students under 21.

#### Guaranteed Employment

Jobs paying from \$200—\$400 per year are available in the college library, custodial and food services and college offices.

### **How to Qualify**

Achieve a 2.8 high school grade average, and give evidence of either marked academic ability in one or more areas or an outstanding special ability in art, music, forensics, journalism, drama, or athletics.

Give evidence of personal involvement in the life of the school or community.

Present personal recommendations of a high order.

Demonstrate financial need.

### **How and When to Apply**

Application deadline for all forms of assistance is March 1. See high school counselor for necessary forms. Complete the Application for Admission and have it sent to the Director of Admissions as soon as the final semester has begun. Be certain to complete the section reserved for financial aid applicants. Send a Parents' Confidential Statement to College Scholarship Service, Berkeley, California. This form, with a service charge of \$3, must be mailed by February 15.

The College will notify freshman candidates of awards by May 1. Since many more apply for assistance than can be accommodated, students are cautioned not to count heavily on scholarships as a major source of college funding.

**Transfer Students** may apply, in advance of arrival, for  
Scholarships

A limited number of scholarships are available to graduates of Washington Community Colleges. A minimum grade average of 3.25 is required in transferable college courses. No scholarships are available to other transfers.

#### **USAF Loans**

The United Student Aid Fund loan program is a cooperative arrangement between banks and colleges. The student may borrow up to \$300 per quarter at 6 per cent annual interest; repayment is made on a 36 month schedule after graduation. Consent of parents is required for students under 21.

#### **Employment**

No advanced guarantee of employment is made to transfers. Application should be made after enrollment.

### **How and When to Apply**

The application deadline for transfers is April 15; notification of awards is sent by June 1. Scholarship application forms are available in the offices of Washington community colleges. Applications for loans are obtained from the College Financial Aids Office.

**Students in attendance** may apply for

#### **Employment**

The most common form of aid to enrolled students is

campus or community employment. The Financial Aids Office assists students in obtaining part-time jobs in the community. Students desiring on-campus employment make application directly to the appropriate departmental supervisor. Those seeking jobs in the food service or custodial service will also apply through the Financial Aids Office.

#### Scholarships

A very few scholarships are available to currently enrolled students. For details and applications, see the Financial Aids Officer.

#### Loans

NDEA and USAF loans as outlined above are available. Application well in advance of the time funds are needed is urged.

The Emergency Loan Fund provides loans of \$25 for up to 30 days in the event of genuine emergency. Such loans are not available for payment of fees.

The College Loan Fund provides loans up to \$150 for one year at 4 per cent interest. Application should be made two months in advance of anticipated need. A guarantor is required.

#### **Graduate Students** may apply for

graduate assistantships with duties assigned in the various departments of the College at a monthly stipend of \$270. A limited number of such assistantships are available; application should be made to the Dean of Graduate Studies. Graduate students may also apply for NDEA loans through the Financial Aids Office.

### POLICIES RELATING TO FINANCIAL AIDS

#### **Employment** (on-campus)

Students must be in good academic standing, carrying 12 or more quarter hours. A social security number is required. Foreign students must file a valid work permit issued by the Bureau of Immigration and Naturalization.

#### **NDEA Loans**

The College agreement with the Federal Government requires an exit interview for all NDEA loan holders. It is the responsibility of the student to request such an interview with the Financial Aids Officer if he leaves college at an unexpected time.

### Scholarship and Loan Disbursements

Most scholarships and large loans are made available to students in three equal installments at the beginning of each quarter. Such funds are not available for advance payment of fees.

### SCHOLARSHIP DONORS

The following business firms, organizations, and individuals have contributed funds for one or more tuition and fees scholarships:

Automotive Parts Service	Ireland & Bellingar Insurance
B & P Distributors	Drs. R. F. Kaiser and J. H. Hodge
Bellingham Builders Supply	King & Daul Tire Company
Bellingham Cold Storage	Kiwanis Club of Bellingham
Bellingham Lodge, B.P.O.E.	Lynden Tribune
Bellingham National Bank	Morse Hardware
Bellingham Rotary Club	Pacific First Federal Savings & Loan
Bellingham Tug & Barge	Puget Sound Power & Light Co.
Bellingham Women's Music Club	Safeway Stores
A. J. Blythe Plumbing & Heating, Inc.	Saga Food Scholarships
Boeing Scholarships	Thriftway Stores
Cascade Natural Gas Corporation	Vienna Cleaners
Diehl Motor Company	Whatcom County Dairymen's Association
Eiford Company, Inc.	Whatcom Travel Service
Fountain Motor Company	
Fraser Chevrolet	
General Electric Co. (College Bowl Program)	

Numerous smaller contributions make possible additional tuition and fees scholarships.



---

# Student Living Housing

The College considers group living an important phase in the total college experience and is therefore directly concerned in maintaining high standards. Residence halls for men and women, and a large number of inspected homes provide accommodations for students. Privately owned boarding places and housekeeping rooms are listed only as they meet college standards. There are three types of housing available: (1) college operated residence halls, (2) college inspected off-campus housing—room and board provided, room only, or room with cooking facilities, and (3) non-inspected off-campus housing.

## HOUSING REGULATIONS

### Women

Undergraduate women under 20 years of age or with less than junior status are required to live in residence halls or college inspected off-campus housing. Junior and senior women and women 20 years or older may take independent housing; written parental permission is required for those under 21.

### Men

Freshmen men are required to live in residence halls or college inspected off-campus housing. All other men students may take independent housing.

### Married and Graduate Students

Married students and graduate students are free to make their own housing arrangements. (See non-inspected off-campus housing.)

## COLLEGE RESIDENCE HALLS

### General Facilities

Rooms are furnished with a single bed, mattress and pad, desk, desk lamp, wardrobe or closet, pillow, and sheets and a pillow case for each student. The occupant furnishes blankets, towels, alarm clocks and other personal necessities. Rooms are generally for double occupancy. Kitchenette and laundry facilities (includ-

ing irons) are provided in central areas of each hall. Electric appliances are not permitted in the students' rooms. A recreation room, a reception area, small area lounge, special study rooms, vending machines, and extra storage space for trunks are provided in each hall.

### **Dining Facilities**

Two recently constructed dining halls (Ridgeway and Viking Commons) are located close to the residences. Students living in residence halls must also take their meals in dining halls. Both have co-educational dining and serve 21 meals a week.

### **Reservations**

Students desiring accommodations in the residence halls should send application with a \$25 deposit (check or money order) to the Director of Housing, Western Washington State College, Bellingham, Washington 98225. The check should be made payable to the College.

Space in the residence halls is assigned according to the date of receipt of application and deposit. The room assignment is made when the student moves into the hall. Students are notified with the return of their deposit receipt that they will be assured of a space in the residence hall or that their name has been placed on the waiting list. Official assignments are made about June 1 for fall quarter and one month before the beginning of other quarters.

Students making a deposit and later deciding they do not want residence hall accommodations must cancel their reservation or have their reservation transferred to a later quarter by notifying the Director of Housing not later than August 1 for fall quarter; for winter or spring quarter reservations, the cancellation must be received one month prior to the end of the preceding quarter. Students may not move from a residence hall during the quarter; the deposit is forfeited if such withdrawal occurs. If a student is found ineligible for admission to the College, his deposit is refunded. The deposit, less any unpaid accounts for damage or for board and room, will be refunded (providing the student completes his term of occupancy) after the end of the quarter when the student checks out of the hall. All residence halls are closed during vacation periods. A prepayment of one quarter's room rent is required when the hall assignment is received.

**Cost (Room and Board)**

The rates quoted below are for the 1965-66 academic year. The rates are subject to change by the College Board of Trustees.

Fall Quarter .....	\$258
Winter Quarter .....	228
Spring Quarter .....	224
Total .....	\$710

Room and board charges are assessed by the quarter, but may be paid monthly. The first payment is due at the time of official registration or one day after checking into the hall if check-in is after registration. Monthly payments are due the first business day of the month. A late payment fine of 25c per business day (to a maximum of \$2) is charged in the case of delinquent payments.

Room and board is charged from the official date of opening of a term. No adjustment is made for a student who enters the residence hall less than five full days after the official opening date. In the case of students who enter the hall five or more full days after the official opening date, board and room charges begin on the day the student checks into the hall.

If a student withdraws from the residence hall with the permission of the Dean of Women or Dean of Men but does not withdraw from the College, he must pay all room charges for the entire quarter during which the withdrawal occurs.

**INSPECTED OFF-CAMPUS HOUSING**

Privately owned, off-campus housing in Bellingham provides a necessary service to students and the College. These houses are properly supervised under the same rules as for students who live on campus. The activities of each house depend upon the group living there.

**Facilities Provided**

Most of the houses provide a single bed, linen, mattress, chest of drawers, closet, desk, chair, and other common facilities. Service offered may differ and an understanding should be reached with the house owner before a rental agreement contract is signed.

The types of houses available include those providing room only, room and board, and room with kitchen privileges.

The capacity of these houses range from 8 to 36 students. A total of 450 men and women students can be accommodated in inspected off-campus housing.

### **Reservations**

Students wishing to live in a private house must write directly to the listing of their choice. (Lists and costs are available from the Housing Office). Upon finding suitable accommodations, reservations must be confirmed by a \$25 deposit (check or money order) to the house owner. The deposit is a reservation fee and is non-refundable upon cancellation unless the vacancy is filled without loss to the owner. The rental agreement obligates the student to one quarter of occupancy. The deposit will be refunded when the student checks out of the house, provided notice of cancellation has been given one month prior to the end of the quarter, the student has completed one term of occupancy, has no unpaid accounts, and has caused no damage beyond normal wear.

### **Cost**

Room charges range from \$25 to \$30 a month for multiple rooms. Single rooms cost \$5 to \$10 more. Board and room is available in some women's houses for \$212.50 per quarter, excluding lunches and Sunday meals. Board on a meal ticket basis (21 meals per week) is available in the Viking Commons for about \$160 per quarter.

## **NON-INSPECTED OFF-CAMPUS HOUSING**

A number of privately owned houses, apartments, rooms, and duplexes are available for rent in the city. These facilities are to accommodate single students who qualify according to housing regulations, married students, staff and faculty. The rentals are listed as the owner describes the property. The College assumes no responsibility for the condition or suitability of these listings.

### **Cost**

The cost depends upon the number of bedrooms, location, facilities and furnishings provided.

### Reservations

The Housing Office maintains a list of private rentals but it is not published for mail distribution because of the constant change in rental availability. Since the office does not make individual rental arrangements, it will be to the student's advantage to arrive in Bellingham prior to the beginning of school to locate suitable housing. There is a great demand for housing at this time and available rentals move quickly. It may be necessary to arrange for temporary housing at one of the nearby motels while seeking permanent housing.

## Health Service

The primary function of the Health Service is the protection of the college community.

A dispensary is open to all students during class hours. The College also maintains an infirmary on the campus for communicable diseases and minor illnesses. Any student is provided care without charge for five days during the academic year. Thereafter a nominal per diem charge is made.

Illness of students must be reported at once, and each day thereafter, to the Health Office located on the ground floor of Edens Hall. After an illness, the student must report in person to the Health Office before attending classes.

In cases of severe illness the Health Service reserves the right to request the attendance of a physician chosen by the student. Close cooperation is maintained between the Health Service and the physician. For serious illness there are two city hospitals available to students.

In addition to the health services, the College sponsors a health and accident insurance plan which is available to students on an optional basis. This group policy with a national company provides broad coverage and liberal benefits for a modest premium. Students who do not already carry adequate health and accident insurance are urged to take advantage of this plan.

# Personnel Services

## Orientation and Advisement

Each student is recognized as a unique individual with his own pattern of abilities, circumstances, and needs. Through a broad spectrum of programmed individual and group guidance 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 faculty as a whole, participating as it does in giving direction to the entire college program, determines the extent and complexion of "student personnel services." While special responsibilities are assigned to some, the entire faculty contributes a major share of these services.

### THE ORIENTATION PROGRAM

New students are inducted into the academic and extra-curricular life of the College immediately prior to the opening of the fall quarter. In order to develop a thorough understanding of curricula, services, and facilities of the College, the program of individual and group conferences extends well into the student's first quarter.

### THE FRESHMAN COUNSELING PROGRAM

During his first year each student is teamed with a member of the faculty. These faculty counselors assume special responsibility for assisting freshmen to meet effectively the initial problems of adjusting to college, to develop an intelligent career plan, and to select the program of studies most appropriate to that plan.

**The aim of all counseling at Western Washington State College is to develop in the student himself the capacity and skills necessary for self-guidance.**

### THE ACADEMIC ADVISEMENT PROGRAM

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 major and minor students in their area.

---

## Student Personnel Offices

**The Office of the Dean of Students** has responsibility for planning and coordinating the out-of-class program and the guidance services of the College, developing an effective relationship between all student personnel offices, and administering the faculty counseling and advisement programs.

**The Counseling Center** provides services to undergird the counseling and advisement carried out by the entire faculty. Students seeking special assistance in career planning or the solution of personal problems are encouraged to use the resources of this office.

**The Testing Center** has primary responsibility for psychological and achievement testing and the interpretation of test data.

**The Office of the Registrar** encompasses admissions, enrollment procedures, administration of academic regulations, and the maintenance of complete student records. The Registrar assumes a major role in the guidance of students.

**The Admissions Office** administers the admissions policies of the College as regulated by the faculty, corresponds with and counsels prospective students and assists in their enrollment.

**The Offices of the Dean of Men and Dean of Women** provide students with friendly counsel in meeting any problems which may arise. The Deans also assume responsibility for planning and regulating living conditions conducive to success in college.

**The Housing Office** coordinates the housing of students in college residences and assists other students in finding off-campus living quarters.

**The Office of Student Affairs** encourages sound student government and coordinates the extracurricular program.

**The Office of Financial Aids** administers awards and scholarships, loans, and student employment.

**The Placement Offices** assist graduates and prospective graduates in finding full-time positions appropriate to their training and abilities. Placement service is also rendered to graduates who may register for promotion or change of position.

**The Health Service** provides consultation in cases of illness or accident and is available for guidance in all health matters. Dispensary and infirmary services are maintained.

## Student Activities and Organizations

A total college experience encompasses much that occurs outside the classroom. The program of student affairs at the College is planned and coordinated through the office of the Director of Student Activities to provide maximum opportunity for student participation in a wide range of genuinely profitable experiences. Student affairs 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 in large measure, are administered by the students themselves with faculty advisement and within the framework of general college policy. The student handbook, **The Navigator**, 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 many student activities, including the Associated Student Body, publications, and the Director of Student Activities, are located in the Union. The Director and the Union Board of Commissioners administer the facilities and services. Meeting rooms, lounges, shops and work areas, together with the organization and program represent a well-considered plan for the community life of the College.

LIVING GROUP ORGANIZATIONS provide an important opportunity for personal growth. Students will find that the residence halls are organized for self-government and often sponsor activities on the campus.

STUDENT ORGANIZATIONS provide an educational and social experience not always available to students in the ordinary classroom situation. Within the stated educational objectives of the College, and under the guidance of the Director of Student Activities and faculty advisers, 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 listing of all student organizations and their purpose is published in **The Navigator**.



POLITICAL ACTIVITIES are open to all students through local chapter organizations of major parties. Although these groups do not represent an official action of the College, students are able to develop and further their own political ideas and to find expression for them in these groups.

RELIGIOUS ACTIVITIES AND ORGANIZATIONS are open to all students through interdenominational groups not directly a part of the College program. See **The Navigator** for a complete listing of these organizations.

ATHLETICS have an important place in the activities program, whether intercollegiate or intramural. Students interested, either as spectators or as participants, in intercollegiate sports can choose from football, basketball, baseball, track, swimming, rugby, tennis, golf, wrestling, and skiing. The College participates as a member of the Evergreen Conference.

The comprehensive intramural schedule of class hours, includes practically all group and individual sports. All students are encouraged to participate and to reap the benefits, not only of healthful recreation, but of increased physical skill.

DEBATE, DRAMA, MUSIC, PUBLICATIONS. Broad opportunities for the development of new interests and skills lie in the activities of various departments. Debate is a field in which the College has won considerable eminence. With the facilities of a regulation theater-size stage, the students have an excellent opportunity for both acting and production. An active music department is developed around performance organizations including the band, orchestra, choir, various quartets, string ensembles, and other small groups. Various publications, including a news weekly, the WESTERN WASHINGTON COLLEGIAN, a college yearbook, the KLIPSUN, and certain minor publications, exemplify an active interest in journalistic and editorial talents.

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

# Special Services

## The Library

The newly remodeled and expanded Mabel Zoe Wilson Library now provides adequate modern facilities for this service center of the College. The addition of reading areas, carrels, and study areas easily accessible to the open stacks lends attraction to the library as a place of study for students and faculty. The five floors of each of the added wings provide space for increasing the present collection of 130,000 volumes to some 200,000 books, catalogued pamphlets and bound periodicals. They also include seminar rooms, typing facilities, and a room for the collection and viewing of microform materials. Substantial additions to the library collection are being made in 1965-1966.

The building also includes classrooms and quarters for instruction in library science.

Supplemental to the general library are the collection of 8,000 books for children housed in the Campus School, the curriculum materials room for teacher education students, and the Audio-Visual Center.

## Audio-Visual Center

The Audio-Visual Center maintains and operates a library of instructional materials and equipment, and reference files on materials and equipment that may be obtained in rental libraries. It provides faculty with reference services, arranges for rental or purchase of instructional materials, provides consultant and evaluative services to College personnel, prospective teachers, the public schools and the community in the purchase, use, and maintenance of instructional materials. It maintains facilities to serve the faculty and prospective teachers in the production of instructional materials.

## Extension Services

The College makes its resources available to those adults who wish to continue their formal or informal education. Community organizations are also invited to contact the College to cooperate in providing special programs for adults. The role of the College is to stimulate and assist adults in a wide range of educational activities which require resources not otherwise available.

## CREDIT PROGRAMS

Students may earn college extension credit in a wide variety of evening study courses available both on and off the campus. A number of courses are also offered by correspondence for home study. All classes are taught by regular members of the teaching faculty. Most of the courses are open to the general public who may earn credit upon establishment of eligibility. Some courses are open on an auditing basis.

## NON-CREDIT PROGRAMS

A wide variety of non-credit programs are offered including classes, art films, concerts, lectures, and discussion seminars. Subject matter ranges over such fields as arts and crafts, music, literature, languages, and public affairs. These activities are open to all interested adults regardless of educational background or age.

Brochures describing each of these various activities are available upon request from the Extension Office.

# Research

Faculty research and the training of students in scientific methods and techniques have received considerable impetus through recent foundation and government grants. In addition to grants made by the National Science Foundation, research funds have been made available by a wide range of institutions and agencies, including The Atomic Energy Commission, The Office of Economic Opportunity, the U.S. Department of Health, Education, and Welfare, the Canadian Social Science Research Council, the American Chemical Society, the Province of Saskatchewan, the Sigma Chi, and the City of Bellingham. A **Bureau for Faculty Research** has been established by the College to encourage and coordinate faculty research in the various departments.

The establishment of the Computer Center in 1962 was made possible through a National Science Foundation grant and an educational allowance by the manufacturer of the equipment. The facilities of the Center are available to faculty, students and administration, with priority given to instruction and research. A computer programming course is given each quarter and the computer is used in other courses as an instructional tool. Increasing sophistication of types of use by faculty and administration has created a need for larger and more flexible facilities which must soon be added.



# **PROGRAMS OF INSTRUCTION**

ACADEMIC REGULATIONS

UNDERGRADUATE CURRICULA

GRADUATE PROGRAMS

## Academic Regulations

### English and Mathematics Proficiency

Entering students are expected to meet certain minimum requirements in English usage and in mathematics as measured by the Washington Pre-College Tests. Those who enter with a deficiency in either are required to remove that deficiency **prior to enrollment in a fourth college quarter.**

#### English

Students failing to meet minimum standards on the above tests must defer English 100 until the second quarter. Such students are urged to undertake review study during the first quarter.

English 100 must be completed satisfactorily (grade of C or better) by all students by the end of the first college year.

#### Mathematics

Students failing to meet minimum mathematics standards on the Washington Pre-College Tests may remove their deficiency by obtaining a satisfactory score on a retest offered prior to Fall Quarter and at the close of each quarter. Transfer students may demonstrate mathematical competency by offering a grade of C or better in any college level mathematics course.

While the College does not offer remedial or review courses as part of its curriculum, the two departments concerned do provide opportunities through the Extension Service for special instruction under qualified teachers. The cost of this instruction is borne by the student.

## Registration

### Registration Day

The first day of each quarter is normally reserved for registration procedures. A special schedule for advisement and program planning is provided in the fall for entering students. See College Calendar, pages 4-5, for dates.

### Preregistration During The College Year

During the fall, winter, and spring quarters, students in attendance who plan to continue the succeeding quarters are given the

opportunity to prepare their class schedules for that quarter and register on the days specified for the purpose, customarily during the two weeks prior to final examinations. In the spring quarter, students also preregister for summer as well as fall.

### **Late Registration**

A charge of \$3.00 is assessed if a student does not meet his scheduled registration appointment.

### **Changes in Registration**

A charge of \$1.00 is made for any change in a student's schedule after registration is completed unless such change is made upon the initiative of college authorities.

### **Entering New Classes**

After the close of the first week of class instruction in the fall, winter, and spring quarters, students are not permitted to enter new courses. Special limitations apply to the more brief summer sessions; details are given in the Summer Bulletin.

## **Withdrawal**

### **Withdrawal From Courses**

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 in the course. Students may withdraw from a course during the first four weeks of instruction in any quarter with no penalty attached other than the Change of Registration fee and the loss of credit. After the fourth week of instruction withdrawal from a course will normally result in a grade of "F" (failure). 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.

No withdrawals are permitted within the last two weeks of a quarter.

### **Withdrawal From College**

A student may completely terminate his enrollment at any time prior to the final two weeks of a quarter. Formal withdrawal at the Registrar's Office is necessary. Students who leave the College without official withdrawal will receive failing grades. The regulations pertaining to the assignment of grades in cases of withdrawal from courses as stated in the preceding section apply equally to withdrawal from College.

## Credits and Load

### Credits

The unit of college work, the "quarter hour credit", represents one class hour per week throughout 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. Sixteen credits on this basis constitute the work of a quarter, and forty-eight credits that of the regular school year of three quarters.

### Correspondence And Extension Credit

Work done by correspondence or extension 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 of the Registrar.

### The Academic Load

Sixteen hours, including physical education, constitute the standard student load. During the first quarter in residence students are limited to this amount. Thereafter any program in excess of seventeen credits must be approved by the Registrar.

Students who are permitted to carry an overload must have met the following grade point standard during the previous quarter or in all previous work done in this institution:

18-hour load .....	2.8
19-hour load .....	3.0
20-hour load .....	3.2

**A load in excess of twenty hours is not permitted under any circumstances.** The maximum load allowed is somewhat less in the summer sessions.

A student doing outside work for three or four hours per day shall not carry more than thirteen hours; including physical education, unless he has demonstrated his ability to carry the load without detriment to his scholarship or health. A student working more than four hours per day is expected to reduce his scholastic program accordingly.



## Attendance and Grades

### Attendance Regulations

Class attendance is required at all times. Absences are excused only for reasons of illness or injury certified by the Health Service, in cases of emergency allowed by the Registrar, or at the request of some authorized member of the staff.

### System of Grading

In reporting grades to the Registrar, faculty members use the following marks:

A .....	Superior	U .....	Unsatisfactory
B .....	High	S* .....	Satisfactory
C .....	Average	K .....	Incomplete
D .....	Low	W .....	Withdrawn
F .....	Failure		

A course in which a student has failed must be repeated if credit is desired.

A grade of F is assigned if a student fails to carry out the prescribed procedures when withdrawing from a course or from the College, or if he fails to clear a grade of K in the prescribed time.

The grade of K indicates that work is satisfactory as far as completed. It permits the student after consultation with the Registrar to complete the work within a reasonable period in the way prescribed by the instructor. 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.

If the student remains in college the incomplete must be cleared during the quarter immediately following receipt of the grade; otherwise a grade of F is assigned automatically. In special circumstances the Registrar may extend the period for removal of the incomplete. The privilege of clearing an incomplete lapses after five years even though the student is not continuously enrolled.

### Grade Reports

At the close of each quarter a grade report is mailed to all students. Reports will be mailed to parents of students under 21 years of age upon request of the parent or the student.

\* Used in student teaching courses. Credit is allowed as specified but no grade points are assigned and the course is disregarded in computing grade average.

## Mid-Term Deficiency Report

In the middle of each quarter, unsatisfactory work evaluated as less than "C" is reported directly to the student and his adviser, but not recorded.

## Grade Points

Grade points serve as a means of objectively stating a given level of scholarship. The point value assigned for each grade is as follows: A, 4 points; B, 3; C, 2; D, 1; F and U, 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. A grade of S and the credit involved in such a course do not enter into the computation of grade point average.

For most purposes, e.g., application of scholastic standards, honors, admission to teacher education and student teaching, the grade average takes into account only work completed at Western Washington State College.

## Grades For Repeated Courses

In the event a student repeats a course in which he has received a failing or low passing grade, both grades are used in computing the grade point average.

## Credit By Examination

Credit for work paralleling courses listed in the Catalogue may in some instances be established by examination.

The privilege of establishing credit by examination is extended only to students actually enrolled in the College. It is not to be considered as a means by which failing or low-passing grades may be raised, nor for earning credit in courses previously audited.

Students interested in applying for examination privileges will first consult the Registrar and the department chairman concerned to ascertain that appropriate study has been accomplished and that duplication of credit is not entailed.

See also Advanced Placement, page 13.

## Standards Governing Low Scholarships

### Termination Of Enrollment

At the end of the third quarter of college attendance\*, or any subsequent quarter, a student is dropped from the College if his cumulative grade average and his grade average for the quarter just completed both fall below 2.0. Students whose enrollment is terminated may normally petition the Scholastic Standing Committee for reinstatement unless they are on final probation. (See below.)

In computing cumulative grade point average, only work completed at Western Washington State College is taken into account.

### Warning

Students who are not dropped under the above regulations but who receive less than a 2.0 grade average during any given quarter 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

1. A freshman admitted to regular status who fails to achieve a grade average of 2.0 at the end of the first quarter of attendance is sent a warning notice. He is required to consult with his faculty counselor during the first week of the ensuing quarter. If he then fails to achieve a cumulative grade average of 2.0 at the end of his second quarter he is placed on academic probation.
2. Students other than first or second quarter freshmen are placed on academic probation:
  - a. when subject to scholastic warning for two consecutive quarters, or
  - b. when admitted or readmitted to the College by action of the Scholastic Standing Committee.

### Final Academic Probation

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

\*including quarters at other colleges

## **Restrictions Governing Students On Academic Probation**

Students on academic probation, including final academic probation, (a) are not eligible for remunerative employment on campus; (b) may not hold an elective or appointive office in any student organization nor appear in any performance before the student body or the public; (c) may not represent the College or student body at any conference nor 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.

## **Other Regulations**

### **Full-Time Status**

Certain College regulations and standards relative to on-campus employment, eligibility for student offices, and requirements for graduation require status as a "full-time student." This requires enrollment in regularly scheduled courses totaling not less than twelve quarter hours. However, veterans or students deferred by the Selective Service System are expected to carry loads adequate to constitute normal progress toward a degree.

### **Part-Time Students**

Persons carrying not more than six credits are classed as special students. They pay a smaller fee but do not share in certain student body privileges.

### **Auditors**

Any mature person not desiring to register for credit may, with the consent of instructors and upon payment of a fee of \$18.00 per quarter, enroll as an auditor in any except laboratory courses. No person may attend classes unless he has registered for credit or as an auditor.

## Final Examinations

As a matter of College policy, individual students are not permitted to take early final 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 is to be achieved early in the following quarter (summer excepted).

## The Undergraduate Curricula

The College offers courses of study in teacher education and in the arts and sciences at both the undergraduate and graduate levels. Students may earn the following bachelor's degrees:

Bachelor of Arts in Education (for teacher certification)

Bachelor of Arts with majors in 20 fields

## Common Degree Requirements

(For the Bachelor of Arts or Bachelor of Arts in Education degrees)

### CREDITS

192 quarter hours with not less than 60 credits in upper division study (courses numbered 300 and above).

### RESIDENCE

At least one full year (45 credits), including the final quarter with 12 or more credits.

Not more than 48 credits in extension or correspondence study.

### SCHOLARSHIP STANDARD

A cumulative grade point average of 2.0 (C), with no grades of less than "C" permissible in the major, minor, professional education courses, or in English 100 and 101.

## GENERAL EDUCATION COURSES . . . 58 credits

### Communications

- English 100, 101 — Freshman Reading and Writing  
(Minimum grade of "C" required)
- Speech 100 — Fundamentals of Speech

### Humanities

- General Education 121 — The Ancient and Medieval World
- General Education 122 — The Early Modern Period
- General Education 123 — The Modern World
- General Education 321 — Survey of Afro-Asia

### Natural Sciences and Mathematics

- Biology 101 or 104 — General Biology
- Earth Science — Geography 101 or Geology 101 or 211
- Physical Science — choice of one course from  
Chemistry 101, 121 or 125; Physics 101, 131 or 231
- Mathematics 151 or Mathematics 121 or 122

### Social Sciences

- General Education 105 — Behavioral Science
- General Education 200 — Introduction to Economic and Political Institutions

### Physical Education

- Three quarters in specified activities courses (see page 150)

### Sequence of Courses

Normally the major part of the General Education program is to be scheduled in the student's first year. He is expected to complete these requirements (except General Education 321) in his sophomore year. To effect a proper distribution of students among courses throughout the three quarters, the freshmen program is largely prescribed. With the exception of a few special programs, the first year is as follows:

- General Education 121, 122, 123 — in successive quarters
- English 100, 101, and Speech 100 — one in each quarter
- Physical Education activity — one in each quarter
- Other courses in General Education or in a major or minor.

## Teacher Education

(and additional requirements for the Bachelor of Arts in Education degree)

### TEACHER CERTIFICATION

The State of Washington provides two regular teaching credentials:

**THE PROVISIONAL CERTIFICATE** issued upon completion of the Bachelor of Arts degree program.

This certificate is valid for three years of teaching in the public schools; the first year its validity is restricted to teaching at the level and, or subject for which the teacher is recommended by virtue of his specific preparation. (Consult the academic departments as to standards required for recommendation for provisional certification.)

The provisional certificate may be renewed for an additional three years upon the basis of successful teaching experience and a substantial beginning on the fifth year of study.

**THE STANDARD CERTIFICATE** issued upon completion of two years of successful teaching and a fifth year of approved study (see page 53).

### FORMAL ADMISSION TO TEACHER EDUCATION

Admission to the College does not automatically admit the student to the teacher education program. Prior to formal admission to the latter, a student must meet the following requirements:

1. Demonstrate English competence.

Pass English 100 and 101 (or equivalents) with a grade of "C" or better.

Pass a spelling test, a standardized test of English mechanics, and submit evidence of acceptable expository writing while enrolled in Education 301. Unsatisfactory performance in these tasks may result in referral to a college English laboratory. Failure to achieve minimum competence bars the student from further course work in teacher education.

Transfer students who have successfully completed the equivalent of Education 301 at another institu-

tion will demonstrate English proficiency in a spelling-mechanics test given once each quarter on a pre-announced Saturday. Expository writing will be demonstrated while enrolled in Education 315 or 318.

2. Demonstrate speech competence.

A test for this purpose is given in Speech 100, and by special arrangement for those who have completed this course requirement elsewhere.

3. Complete the general education requirement of Mathematics 151, or equivalent, with a grade of "C" or better.

4. Maintain satisfactory grade average.

A cumulative grade average of 2.10 is required on all courses taken at this College. (After September, 1966, the minimum of 2.20 applies to these regulations.) This cumulative average must be maintained while a student is enrolled in teacher education; if he falls below this level, he is automatically dropped from the teacher education program and may enroll in no additional professional courses until the level is restored.

The student is automatically reinstated in the program if he restores the 2.10 grade average the next quarter in residence. If he fails to restore the minimum cumulative average of 2.10 in two consecutive quarters, he is no longer admissible to the program. A student dropped from the program more than once may not be reinstated.

5. Complete Education 301 or equivalent with a grade of "C" or better.

While the student's teacher education file will be initiated as a part of Education 301, no formal action will be taken on his application for admission to the program until all the prerequisites outlined above (items 1 to 4) have been completed and reported by the student to the Department of Education.

Students should expect a one-quarter lapse between the time of filing the completed application to the teacher education program and time of acceptance. Any professional work taken during the interim quarter may be used only as elective credit if the student is not admitted.



## COURSE REQUIREMENTS

In addition to the common degree requirements specified above, the candidate for the **Bachelor of Arts in Education** degree and the **Provisional Teaching Certificate** must complete the professional education sequence, Washington State History and Government, a major, and one minor concentration appropriate to his choice of teaching level.

### PROFESSIONAL EDUCATION — 37 credits

Education 301 — American Education and the Teacher  
(prerequisite to the remainder of this sequence)

One of the following:

Education 315 — Foundations of Education

or

Education 318 — History of Educational Thought

Education 385 — Foundations of Teaching Reading

\*Courses in Educational Psychology:

351 — Principles of Human Learning

352 — Human Development and Personality

371 — Evaluation in the Public School

Supervised Teaching — 16 credits

Various options are provided in Education 490-498.

An appropriate pattern for the individual teacher is to be selected under advisement of the Education Department to meet the 16 credit requirement. Opportunity for an additional supervised teaching experience may be provided on an elective basis.

### STATE HISTORY REQUIREMENT:

History 391 — History and Government of Washington

\*Sophomores and transfer students in teacher education will be given the option of satisfying the requirements in educational psychology either by the conventional class program or by independent study.

Under the independent study program the student is provided with study guides and reading lists which describe in detail the requirements of each of the course areas. Optional lectures and discussion sessions are offered, and faculty members are available for individual consultation. Competency examinations are given approximately once each quarter covering each of the course areas. The student may take these when he has prepared sufficiently. Each examination may be repeated once if the first attempt is not successful. A \$10 reading fee covers the cost of all reading materials.

Students interested in enrolling in the independent study program should consult the Psychology Department.

## SUBJECT MATTER CONCENTRATION

Approved concentrations totalling 65 to 75 credits 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 of the three levels: elementary, junior high, senior high school.

### FOR ELEMENTARY TEACHERS

#### Recommended Program

**MAJOR CONCENTRATION**—45 credits in specified courses in one of the following:

Art	Mathematics
Earth Science	Music
English	Psychology
Foreign Language	Sociology-
General Science	Anthropology
Geography	Social Studies
History	Speech, general
Library Science	Speech Therapy

See departmental listing, pages 56-191 for detailed specifications.

#### Elementary Teaching Minor— 28-30 credits

- Education 486
- Mathematics 251
- Mathematics 481
- Science Education 380
- Social Studies Education 425

Two courses from:

- Art 380
- Industrial Arts 350
- Music 350
- Physical Education 306

One course from:

- English 495
- Library 305
- Speech 233, 355, 330, or 373

#### Alternate Program

**Major Concentration**—28 credits  
At least 28 credits in one of the following:

Art	Mathematics
Earth Science	Music
English	Psychology
Foreign Language	Sociology-
General Science	Anthropology
Geography	Social Studies
History	Speech, general
Library Science	Speech Therapy

The selection of courses from those specified for the 45 credit major must be planned under the advisement of the appropriate department.

#### Elementary Concentration—40 credits

- Art 380
- Education 486
- Industrial Arts 350
- Mathematics 251
- Mathematics 481
- Music 350
- Physical Education 306
- Social Studies Education 425

Two of the following:

- English 495
- Library 305
- Speech 233, 355, 330, or 373

Two courses from:

- Biology 383
- Geology 384
- Physical Science 382

### FOR SECONDARY TEACHERS

(See departmental listings, pages 56-191, for detailed specifications.)

**Major Concentrations—45 credits** in specified courses in one of the following:

(Courses followed by (S) are applicable to senior high school only; courses followed by (J) are applicable to junior high school only. Others are acceptable at both levels.)

Art	Foreign Language	Music Specialist*
Biology**	General Science (J)	Physical Education
Business Education (S)	Geography	Physical Science
Chemistry** (S)	History	Physics** (S)
Earth Science	Home Economics	Political Science (S)
English	Industrial Arts	Social Studies (J)
	Mathematics	Speech

\* The Music Specialist program combines a major and minor in one 67-credit concentration.

\*\* Additional supporting courses are required for biology, chemistry and physics majors.

**Minor Concentrations—25 credits**

Art	Geography	Philosophy
Biology	Health Science	Physical Education
Business Education	History	Physical Science (J)
Chemistry	Home Economics	Physics
Economics	Industrial Arts	Political Science
English	Library Science	Psychology
Foreign Language	Mathematics	Recreation
Geology	Music	Sociology- Anthropology
		Speech

### FOR COMBINED JUNIOR HIGH-INTERMEDIATE GRADES

Students wishing to be recommended for teaching at **both** the intermediate and the junior high school levels will complete an approved major for junior high school (from the list above) and substitute the ELEMENTARY TEACHING MINOR for the junior high school minor. Competence in student teaching must be established at both levels.

### ELECTIVES

In addition to the courses specified in the various degree programs, the student elects sufficient subjects according to his needs and interests to bring his total to the required 192 credit minimum.

### Special Program for Degree Holders

Persons holding a Bachelor of Arts or Bachelor of Science degree from an accredited institution may be admitted to a special program leading to the Provisional Teaching Certificate. This individually prescribed study program replaces the pattern described above for selected degree-holding students. It normally entails three quarters of residence study.

Persons selected for this program must have:

- demonstrated academic ability
- a broad liberal arts preparation
- a major field acceptable for public school teaching
- realistic career plans

## The Arts and Sciences

(Additional requirements for the Bachelor of Arts degree)

In addition to the general requirements for graduation listed on page 44, the candidate for the Bachelor of Arts degree must complete a **major** concentration, usually accompanied by required **supporting courses**, and one **minor** concentration. In all cases, students are expected to confer early in their college careers with appropriate departmental advisers to plan and secure approval for study programs in the fields selected for specialization. Transfer students will consult these advisers for evaluation of applicable courses completed in other institutions, and will be expected to complete at least a portion of their work in the major and minor fields in this institution as prescribed by the departments concerned.

### Major concentration

Requirements for the major and its supporting courses are prescribed up to a maximum of 85 credits. Specifications are included with each department's course listings on succeeding pages.

Concentrations are offered in:

Art	Foreign Language	Philosophy
Biology	Geography	Psychology
Chemistry	Geology	Physics
Economics-	History	Political Science
Business	Home Economics	Recreation
Administration	Industrial Arts	Sociology-
Economics-General	Mathematics	Anthropology
English	Music	Speech

### Minor concentration

Requirements for the minor include specified courses totaling 25 credits.

Concentrations are offered in:

Art	Geology	Physical Education—
Biological Science	Health Science	The Dance
Business Education	History	Physics
Chemistry	Home Economics	Political Science
Economics-General	Industrial Arts	Psychology
English	Mathematics	Recreation
Foreign Language	Music	Sociology-
Geography	Philosophy	Anthropology
		Speech

### Electives

In addition to the general education requirements, the major concentration with its supporting courses, and a minor, the student will elect courses according to his own interest to complete the necessary 192 credits for the Bachelor of Arts degree.

## Transfer Programs

Carefully planned programs of study have been developed in the Arts and Sciences to meet the needs of students who are not concerned with teacher education or a full four-year program at this institution. The programs are designed for those who plan more advanced specialized study in other colleges and universities. Some students prefer to begin their college careers in such an institution as Western Washington State College, completing one or two years for advanced standing before transferring to a professional school. A number of specific pre-professional programs have been developed in close collaboration with Washington State University and the University of Washington. These include such fields as business administration, engineering, law and medicine.

## The Honors Program

Special honors courses are available. The student may graduate "with honors" in a number of departments. See departmental specifications on succeeding pages. See also page 14 for admission to the Honors Program.

## Graduate Programs

### Advanced Degrees

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

#### 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. New 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 history, English, psychology, and mathematics. Master of Science programs have been approved in mathematics and in chemistry. Specific announcements will be made when other programs are launched.

## Fifth Year (For Standard Teaching Certificates)

The candidate for a Standard Teaching Certificate (see page 45) must complete an approved fifth year of study beyond the requirements for the Bachelor of Arts in Education degree. This requirement may be satisfied in combination with one of the programs leading to a master's degree or by a study program without an advanced degree as its goal. Under either program the student files a fifth year plan with the Office of Fifth Year Advisement.

The plan for each student is developed with the assistance of local school officials and college advisers and is to be approved by the College **before courses are taken**.

State regulations for the standard certificate include the following general specifications:

1. Total credit: 45 quarter hours.
2. Extension and/or correspondence study is limited to 12 quarter hours.
3. At least one-half of the credits must be in upper division or graduate courses.
4. 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.
5. A limited amount of approved fifth year study may be completed prior to a year of teaching experience.
6. Evidence of two years of teaching experience which, judged as a whole, are successful.

Prior to beginning a program of fifth year study, the candidate for the Standard Certificate should consult the Office of Fifth Year Advisement for a more detailed statement of College standards and regulations governing fifth year study.

# **DEPARTMENTS of INSTRUCTION**

*DEPARTMENT FACULTY*

*MAJORS-MINORS*

*COURSE DESCRIPTIONS*



## **Departmental Concentrations and Courses**

### **Course Numbers**

Courses numbered from 100 to 299 are classified as lower division. The first digit generally indicates the year 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

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 397 and 497 are generally reserved for special workshops or courses offered once only.

#### **ANTHROPOLOGY**

**(See Sociology-Anthropology, page 180)**

DEPARTMENT of **ART**

## FACULTY

**Professor:** Weiner (Chairman)

**Associate Professors:** Kelsey, Marsh, Peck

**Assistant Professors:** Applegate, Foss, Mayor, Michener,  
Schlotterback, Tucker, Vike, Wegner

**Instructor:** Hanson

## CONCENTRATIONS

## Teacher Education

**MAJOR** (elementary and secondary) 46-47 credits

Art 101, 102, 103, 130, 210, 220, 230, 240, 270, 291, 381, 382

One course from: Art 391, 392, 491, 492

One course from: Art 371, 372, 471

Two 300 level courses from one or more of the studio concentrations listed below under Arts and Sciences.

Transfers are required to take 15 credits of the major in residence.

Students electing the alternate program for elementary teachers will complete 28 credits selected under departmental advisement from the above major.

**MINOR** 25 credits

Art 101, 102, 130, 291, 381

10 credits in electives under advisement

**Note:** Art 381 must be taken prior to student teaching in art.

## Arts and Sciences

*Students planning to major in art are urged to plan carefully early in their college careers with department advisers to assure proper scheduling of sequences. Transfer students are required to complete at least 11 credits in a major or 5 credits in a minor in residence at this College.*

**MAJOR** 73 credits, plus Supporting Courses

Art 101, 102, 103, 130, 201, 210, 220, 230, 291, 401

One course from: Art 240, 250, or 260

One course from: Art 302, 402, 403 (ceramics and jewelry majors substitute Art 331)

Three courses from: Art 391, 392, 491, 492

Upper division concentration from one of the following areas:

1. **Printmaking**—Art 311, 312, 313, 411, 412, 413  
An additional course from: Art 302, 402, 403  
One course from: Art 321, 325, 328  
5 credits from upper division studio courses outside this area.
2. **Painting**—Six courses from: Art 321, 325, 328, 421, 422, 423, 425, 426, 427  
An additional course from: Art 302, 402, 403  
8 credits from upper division studio courses outside this area.
3. **Sculpture**—Six courses from: Art 331, 332, 333, 431, 432, 433, 434, 435, 341  
8 credits from upper division studio courses outside this area.
4. **Crafts**—Art 341, 351, 361  
12 credits under advisement in a major craft—ceramics, jewelry or textiles.  
8 credits from upper division studio courses outside this area.
5. **Combined Concentration**—12 credits from one of the above concentrations  
9 credits in a second concentration (Commercial art courses may qualify—Art 371, 372, 471 or 472)  
8 credits from upper division courses outside the two selected areas.

**Supporting Courses:** 12 credits outside the field of art selected under advisement.

**MINOR** 25 credits

Art 101, 102, 130, 291

Electives selected under advisement

## Departmental Honors

In addition to the general requirements for all honors students (see page 123) an art major who wishes to graduate "with honors" must complete:

Art 401

Music 242 or 442 or English 487

## Graduate Study

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

## COURSES

*The Art Department has completely reorganized its courses and course numbers. Students who have completed some art courses under former numbers should consult the department as to appropriate additional courses.*

(Note: The Art Department may request samples of work produced in studio courses for exhibition purposes.)

- 101 DRAWING AND DESIGN I 3 credits**  
Fundamental principles and techniques using a variety of black and white media.
- 102 DRAWING AND DESIGN II 3 credits**  
Prerequisite: Art 101. Studies of form and structure in a variety of media; emphasis on color, pattern and design concepts.
- 103 DRAWING AND DESIGN III 3 credits**  
Prerequisite: Art 101. Emphasis on pictorial space, volume, and the figure.
- 130 THREE DIMENSIONAL DESIGN 3 credits**  
Exploration of sculptural construction in space employing a variety of media.
- 190 ART APPRECIATION 2 credits**  
Introduction to form and expression in the visual arts for the non-major; the role of line, plane, color, texture, volume, and space.
- 201 LIFE DRAWING I 3 credits**  
Prerequisite: Art 103.
- 210 PRINTMAKING I 3 credits**  
Prerequisites: Art 102, 103. Introduction to the major print processes, including relief, planographic, and intaglio.
- 220 PAINTING I 3 credits**  
Prerequisites: Art 102, 103. Beginning painting; control of form and technique in relation to still-life, life painting, landscape and personal invention, using water-soluble media.
- 230 SCULPTURE I 3 credits**  
Prerequisites: Art 102, 103, 130. Modeling and carving with an emphasis on projection of volume in space.
- 240 CERAMICS I 3 credits**  
Prerequisites: Art 102, 103, 130. Materials and techniques of ceramic forms; various hand processes including coil building and slab construction; elementary wheel forming, glaze composition, kiln stacking and firing.
- 250 JEWELRY I 3 credits**  
Prerequisites: Art 102, 103, 130. Design and construction of jewelry in various metals, with emphasis on silver; the setting of stones.
- 260 TEXTILES I 3 credits**  
Prerequisites: Art 102, 103. Problems using dyes, yarns and textiles in various introductory techniques.
- 270 LETTERING I 2 credits**  
Prerequisites: Art 101 or permission. The anatomy of letter forms, alphabets and calligraphy; problems in pen and brush lettering.

- 291 MODERN ART 3 credits**  
Prerequisites: Gen Ed, 122 and 123 or History 106, or concurrent registration. History of Western art in the 19th and 20th centuries; emphasis on French, German, and American modes of expression.
- 302 LIFE DRAWING II 3 credits**  
Prerequisite: Art 201
- 311 PRINTMAKING II 3 credits**  
Prerequisites: Art 210, 291. Planographic and relief processes; emphasis on lithography and woodcut.
- 312 PRINTMAKING III 3 credits**  
Prerequisites: Art 210, 291. Intaglio processes; etching, engraving and aquatint; continuation of relief processes.
- 313 PRINTMAKING IV 3 credits**  
Prerequisites: Art 210, 291. Serigraphy, emphasizing stencil techniques; continuation of relief processes.
- 321 OIL PAINTING 3 credits**  
Prerequisites: Art 220, 291.
- 325 WATER COLOR PAINTING 3 credits**  
Prerequisites: Art 220, 291. Various water-soluble media, including casein.
- 328 LIFE PAINTING 3 credits**  
Prerequisites: Art 220, 291. Concentration on the human figure.
- 331, 332, 333 SCULPTURE II, III, IV 3 credits each**  
Prerequisites: Art 230, 291. Problems in three-dimensional form and expression employing a variety of media and materials.
- 341 CERAMICS II 3 credits**  
Prerequisites: Art 240, 291. Problems in forming with the potter's wheel, high temperature glazes, clay body construction, stacking and firing practices.
- 342 CERAMICS III 3 credits**  
Prerequisites: Art 341. Advanced problems in ceramic form and expression.
- 351 JEWELRY II 3 credits**  
Prerequisites: Art 250, 291. Problems in simple and centrifugal casting.
- 352 ENAMELLING 3 credits**  
Prerequisite: Art 250. Techniques of enamelling on metals.
- 361 TEXTILES II 3 credits**  
Prerequisites: Art 260, 291. Problems with repeat pattern using silk screen, block printing, and dyes on textiles.
- 362 TEXTILES III 3 credits**  
Prerequisites: Art 260, 291. Problems in textiles using a variety of techniques in dyes, yarns and fabrics.
- 371 REPRODUCTION, LETTERING & GRAPHIC DESIGN 2 credits**  
Prerequisites: Art 101, 102, 270 or permission. Introduction to visual communication as related to graphic processes.
- 372 GRAPHIC DESIGN 3 credits**  
Prerequisites: Art 103, 291, 371. Design as communication; the design and execution of material for graphic reproduction.
- 380 ART IN ELEMENTARY EDUCATION 5 credits**  
Prerequisites: Humanities or Art 190. Child development in art for the elementary school; problems in design, drawing, painting and printmaking as they relate to the school. For non-majors.
- 381 ART EDUCATION 3 credits**  
Prerequisites: Art 102, 103, Psychology 352 or 355. The philosophy, psychology and procedures for art in the elementary and secondary schools.

- 382 ART EDUCATION STUDIO 3 credits**  
Prerequisites: Art 381 or concurrent registration. Problems in design, drawing, painting and sculpture and their adaptation to the elementary and secondary school.
- 391 ANCIENT AND MEDIEVAL ART 3 credits**  
Prerequisites: Art 291 (or Gen. Ed. 121 or History 105 or concurrent registration). The genesis of Western expression from the paleolithic era through the Middle Ages.
- 392 RENAISSANCE, BAROQUE AND ROCOCO ART 3 credits**  
Prerequisites: Art 291 (or Gen. Ed. 121 or History 105 or concurrent registration). Western art from the 15th through the 18th centuries.
- 397 MEXICO ART TOUR 3 credits**  
A study of Mexican art through visits to museums and art centers and the study of the archaeology, history, folklore, and geography of Mexico.
- 400 SPECIAL PROBLEMS 2 to 5 credits**  
Prerequisite: senior status and permission of instructor. Individual instruction in special projects under supervision.
- 401 SEMINAR IN ART 2 credits**  
Prerequisite: senior status or 9 credits in Art History; 18 credits in studio courses. A non-historical art criticism course; the development of criteria for mature artistic judgment.
- 402, 403 INVENTIVE DRAWING 3 credits each**  
Prerequisite: Art 201. Problems in drawing as a major medium.
- 411, 412, 413 PRINT WORKSHOP 3 credits each**  
Prerequisite: Art 313. Advanced printmaking, open media; use of color in intaglio or lithography.
- 421, 422, 423 ADVANCED OIL PAINTING 3 credits each**  
Prerequisite: 9 credits in painting or permission. Individual search for form and expression.
- 425, 426, 427 ADVANCED PAINTING 3 credits each**  
Prerequisite: 9 credits in painting or permission. Painting workshop, using aqueous media.
- 431 CERAMIC SCULPTURE 3 credits**  
Prerequisites: Art 331 and 341. Use of ceramic materials as a sculptural medium.
- 432 DIRECT METAL SCULPTURE 3 credits**  
Prerequisite: Art 331. Direct metal sculpture; emphasis on the welding processes.
- 433 BRONZE CASTING 3 credits**  
Prerequisite: Art 331. Bronze casting by the lost wax process; modeling in clay, wax and plaster; mold-making and other techniques for making cast metal sculpture.
- 434, 435 ADVANCED SCULPTURE 3 credits each**  
Prerequisite: Art 331. Advanced problems in sculptural form and expression.
- 441 ADVANCED CERAMICS 3 credits**  
Prerequisite: Art 342. Advanced problems in ceramic form and expression.
- 451 ADVANCED JEWELRY 3 credits**  
Prerequisite: Art 351. Advanced problems in jewelry as an art form.
- 461 ADVANCED TEXTILES 3 credits**  
Prerequisite: Art 361. Advanced workshop in tapestry, rug making and other media.

- 
- 462 PLASTICS 3 credits**  
Prerequisite: senior status. Problems in transparent design using plastics with metal, wood or other materials.
- 471 ILLUSTRATION 3 credits**  
Prerequisites: Art 291, 2 painting courses. Techniques of illustration for graphic reproduction.
- 472 POSTER AND DISPLAY 3 credits**  
Prerequisite: Art 313. Two and three-dimensional display; design and production of the silk screen poster.
- 481 ADVANCED ART EDUCATION 3 credits**  
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 credits**  
Prerequisite: teaching experience. Explorations in art media and their adaptation to use in the school. May be repeated.
- 491 AMERICAN ART TO 1913 3 credits**  
Prerequisites: Art 291, 391, 392 or permission. Art in the United States from the Colonial period to the Armory Show.
- 492 MODERN AMERICAN ART 3 credits**  
Prerequisites: Art 291, 391, 392. Art in the United States from 1913 to the present.
- 496 HONORS TUTORIAL 2 to 5 credits**
- 500 SPECIAL PROBLEMS 2 to 5 credits**  
Prerequisite: graduate status or completion of an art major or equivalent. Individual research under supervision.
- 511 GRADUATE DRAWING AND PRINTMAKING 2 to 4 credits**  
Prerequisite: graduate status or completion of an art major or equivalent. Individual problems.
- 521 GRADUATE PAINTING 2 to 4 credits**  
Prerequisites: graduate status or completion of an art major or equivalent. Individual problems in painting.
- 531 GRADUATE SCULPTURE 2 to 4 credits**  
Prerequisites: graduate status or completion of an art major or equivalent. Individual problems.
- 541 GRADUATE CRAFTS 2 to 4 credits**  
Prerequisites: graduate status or completion of an art major or equivalent. Individual problems in selected crafts.
- 580 SPECIAL PROBLEMS IN ART EDUCATION 2 to 4 credits**  
Prerequisites: teaching experience and 27 credits in art. Special problems under supervision.
- 581 SEMINAR IN ART EDUCATION 4 credits**  
Prerequisites: teaching experience and 27 credits in art. Selected problems in art education as announced.
- 582 CURRICULUM PLANNING 4 credits**  
Prerequisites: teaching experience and 27 credits in art. Planning, development, implementation and evaluation of art as related to the total curriculum.

DEPARTMENT of **BIOLOGY**

## FACULTY

**Professors:** Broad (Chairman), Flora, Martin

**Associate Professors:** Barron, Kirkpatrick, Mitchell,  
Schwemmin, Senger, Slesnick

**Assistant Professors:** Dube, Erickson, Heath, Kraft, Taylor

## CONCENTRATIONS

*Students desiring a major or minor in biology are urged to plan carefully early in their college careers with department advisers in order to assure proper sequence of courses selected. Biology 104 should be included as a part of the General Education program in the first quarter in college as it is prerequisite to most other Biology courses. Majors or minors should not take Biology 101.*

*Transfer students are required to complete at least 11 credits of the major or 5 credits of the minor in residence in this college.*

## Teacher Education and Arts and Sciences

For students planning to teach in the elementary or junior high school, the general science major is recommended (see page 177) That concentration includes courses in biology.

**MAJOR** 40 credits plus supporting courses for B.A. in Ed.;  
additional 10 credits for B.A.

Biology 301, 371, 477 (or Chemistry 471, 472)

Botany 251, 252

General Science 405

Zoology 261, 262

Upper division electives in biology under advisement to bring total to 40 credits for B.A. in Ed. or 50 credits for B.A.

**Supporting Courses** (required but may be applied to a minor):

Chemistry 121, 122

131, 233 (or 461, 462, 463)

251 (or 351, 354)

Physics—one college year under advisement

Mathematics 100 (if needed), 220 (or 121, 122), 240

Geology 211 or 212



**MINOR 25 credits**

Botany 252 and Zoology 261

Botany 251 or Zoology 262

10 additional credits selected from Botany 251, Zoology 262, or upper division biology courses.

## Departmental Honors

In addition to the general requirements for all honors students (see page 123) a biology major who wishes to graduate "with honors" must complete:

Biology 399, each quarter in the junior year.

Eight credits of "A" grades in upper division biology courses will be accepted for honors credit for those students first entering the program in their junior year.

Junior and senior tutorials will be utilized for background reading and research leading to a senior thesis.

## Graduate Study

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

## COURSES IN BIOLOGY

**101 PRINCIPLES OF GENERAL BIOLOGY 4 credits**

Major concepts of biology and their contribution to man's thinking and culture; cell physiology, genetics, growth and development, and evolution. Not for biology majors nor students having a background in chemistry; see Biology 104.

**104 PRINCIPLES OF GENERAL BIOLOGY 4 credits**

Prerequisite: satisfactory completion of one year of high school chemistry or one quarter of college chemistry. Content similar to that of Biology 101 but on a more quantitative and chemical basis. Not open to those having completed Biology 101.

**204 GENERAL BIOLOGY 4 credits**

Prerequisite: Biology 101 or 104. Problems dealing with variety, classification, development, adaptation, distribution, evolution and interrelationship of organic forms in the plant and animal kingdoms.

**240 MARINE BIOLOGY 3 credits**

Prerequisite: Biology 101 or 104. Study of plants and animals of the sea-shore. Not open to students with credit in Zoology 461 or Botany 456. Summers only.

**247 HEALTH SCIENCE 3 credits**

Prerequisite: Biology 101 or 104. A basis for intelligent guidance in the formation of health habits and attitudes, with stress on bodily functions.

**300 SPECIAL PROJECTS IN BIOLOGY 1 or 2 credits**

Prerequisites: 15 credits in biological science and permission of instructor.

- 301 ECOLOGY 5 credits**  
Prerequisites: Botany 252 and Zoology 261; physics and chemistry recommended. Basic principles studied in marine, estuarine, fresh water and terrestrial habitats. Not open to students with credit in Zoology 461 or 463.
- \*345 FUNDAMENTALS OF MICROBIOLOGY 5 credits**  
Prerequisites: Chemistry 121 and 122, or 125 and 251; 10 credits in botany or zoology, or permission of instructor. Comparative morphology, taxonomy, physiology and relationships of microbes; bacteria, yeasts, molds, and viruses.
- 371 GENETICS 4 credits**  
Prerequisite: Biology 101 or 104. Basic theories, principles and laws of heredity; laboratory experiments with *Drosophila*.
- 383 BIOLOGICAL SCIENCE FOR THE ELEMENTARY SCHOOL 3 credits**  
Prerequisite: Biology 101 or 104. Philosophy, concepts, learning experiences, and materials for the biological sciences suitable to the elementary school.
- 399 SEMINAR IN BIOLOGY 1 credit**  
Prerequisite: 25 credits in biological sciences and permission of instructor. Outstanding developments, past and present, in the biological sciences.
- 400 SPECIAL PROJECTS IN BIOLOGY 2 to 5 credits**  
Prerequisite: permission of the instructor.
- 402 LIMNOLOGY 5 credits**  
Prerequisite: Biology 301. Physical and chemical characteristics of fresh water in relation to biotic communities; field trips.
- 403 PHYSIOLOGICAL ECOLOGY 4 credits**  
Prerequisites: Biology 301 and permission of instructor. Field and laboratory studies of organisms from desert, mountains, rain forest, fresh and salt water; critical survey of literature; methods for design and analysis of experiments.
- 447 COMMUNITY HEALTH AND HYGIENE 3 credits**  
Prerequisites: 10 credits in biology. Practical application of the principles of hygiene in a study of community, national, and international health problems.
- 453 MONTANE BIOLOGY 3 or 5 credits**  
Prerequisite: Biology 301. Flora and fauna of the Cascade Mountains; a study of their variety, distribution and interactions with the environment. Summer only.
- 471 PHYSIOLOGICAL GENETICS 5 credits**  
Prerequisites: 10 credits in chemistry and Biology 371. Structure and chemical composition of genetic material; genetic systems of bacteria, viruses, yeasts and molds; aspects of the bio-chemical genetics of man which apply to the nature of gene functions.
- 473 HISTOLOGICAL TECHNIQUES 5 credits**  
prerequisite: 10 credits in biology. Preparation of microscope slides of both plant and animal tissues.
- \*477, 478 GENERAL CELLULAR PHYSIOLOGY 5 credits each**  
Prerequisites: 20 credits in biological sciences, Chemistry 121-122 and 251 or 351-352, or permission of instructor; Biology 477 prerequisite to Biology 478. Structural and functional basis of living matter; the cell.
- 493 BIOLOGICAL SCIENCE FOR THE JUNIOR AND SENIOR HIGH SCHOOL 3 credits**  
Prerequisite: 15 credits in biological science. Philosophy, concepts, learning experiences and material for the teaching of biological sciences in the secondary school.

\* It is recommended that students planning to take Biology 345 and 477 take Biology 345 first.

- 500 SPECIAL PROJECTS IN BIOLOGY 2 to 5 credits**  
Prerequisite: permission of instructor.
- 501 THESIS RESEARCH 4-9 credits**  
Prerequisite: permission of thesis advisory committee. Original investigation of a specific problem in biology. (A student should register for credit in the quarter in which he expects to complete the thesis.)
- 503 ADVANCED TOPICS IN ECOLOGY 4 credits**  
Prerequisites: Biology 301 and permission of instructor. Analysis of current literature on fundamental properties of ecosystems, communities, populations, species, and characteristic environments.
- 568 TOPICS IN DEVELOPMENTAL AND COMPARATIVE MORPHOLOGY 4 credits**  
Prerequisite: One course from Botany 472, 475, Zoology 366, 369, and permission of instructor. The structural changes, cellular interactions, and control mechanisms operating during growth and development or evolution of selected organisms.
- 571 ADVANCED TOPICS IN GENETICS 4 credits**  
Prerequisites: Biology 371 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 credits**  
Prerequisites: Biology 477 or Chemistry 471 and permission of instructor. Selected topics in general, microbial, or comparative physiology; laboratory work to illustrate selected processes or experimental techniques.
- 583 ADVANCED TOPICS IN BIOSYSTEMATICS 4 credits**  
Prerequisite: permission of instructor. Role of morphology, cytology, biochemistry and genetics in taxonomy; systematic study of some specific group of local organisms.
- 599 SEMINAR IN BIOLOGY 2 credits**  
Prerequisite: 40 credits in biology. Selected problems in biology, with emphasis on current literature.

## COURSES IN BOTANY

- 251 GENERAL BOTANY 5 credits**  
Prerequisite: Biology 101 or 104. Plants as living organisms; the structure and functions of typical vascular plants. Heredity and biology of the cell are included in Biology 101 or 104 and are not repeated here.
- 252 GENERAL BOTANY 5 credits**  
Prerequisite: Biology 101 or 104; Botany 252 may be taken without Botany 251 as a prerequisite. Comparative study of the major phyla of the plant kingdom with a view to interpreting present structure in terms of ecological adaptation and past evolutionary heritage.
- 253 PLANTS OF THE NORTHWEST 3 credits**  
The identification and field recognition of plants of the local region, and an understanding of their reproduction and adaptation to environment. Summers only.
- 352 SYSTEMATIC BOTANY 5 credits**  
Prerequisite: Botany 252. Historical survey of classification systems; use of taxonomic keys, and evolutionary development of flowering plants; recognition of common plants and plant communities.

- 404 PLANT COMMUNITIES 3 credits**  
Prerequisite: Biology 301. Ecology of plant communities with special emphasis on analysis, description, succession, and distribution. Week-end field trips included.
- 456 ALGAE 5 credits**  
Prerequisite: Botany 252. Collection, culture, identification, classification, distribution, and economic importance of marine and fresh water algae.
- 458 BRYOPHYTES 5 credits**  
Prerequisite: ten credits in biology. Collection, identification, distribution, and evolution of mosses and liverworts.
- 472 PLANT ANATOMY 4 credits**  
Prerequisite: Botany 251. Development and structure of cells, tissues, and organs of vascular plants.
- 475 DEVELOPMENTAL MORPHOLOGY 3 credits**  
Prerequisites: Botany 251 and 252. The experimental approach to the study of plant morphology.
- 479 PLANT PHYSIOLOGY 4 credits**  
Prerequisites: Botany 251 and two quarters of college chemistry. Mineral nutrition, water economy, soils, auxins, and other items of special importance to plant growth.

## COURSES IN ZOOLOGY

- 241 HUMAN ANATOMY 5 credits**  
Prerequisite: Biology 101 or 104 recommended. Not open to students taking the combined anatomy-physiology course, Zoology 248-249.
- 243 HUMAN PHYSIOLOGY 5 credits**  
Prerequisite: Biology 101 or 104 recommended. Normal functions of the human body and bodily processes. Not open to students taking the combined anatomy-physiology courses, Zoology 248-249.
- 248-249 HUMAN ANATOMY AND PHYSIOLOGY 5 credits each**  
Prerequisites: Biology 101 or 104 or permission of instructor; Zoology 248 prerequisite to Zoology 249. Structure and function of the human body. Not open to students who have had Zoology 241 or 243.
- 261 GENERAL ZOOLOGY 5 credits**  
Prerequisite: Biology 101 or 104. Survey of the invertebrate phyla, protozoa through the annelids, and molluscs.
- 262 GENERAL ZOOLOGY 5 credits**  
Prerequisite: Zoology 261. Survey of arthropod phylum and the chordate line.
- 263 ANIMALS OF THE NORTHWEST 3 credits**  
Amphibians, reptiles, birds and mammals; their identification, life histories, habits, and distribution. Summers only.
- 324 GENERAL ENTOMOLOGY 3 credits**  
Prerequisite: Zoology 262. Insects, their morphology, physiology, metamorphoses, classification, and economic importance.
- 325 GENERAL ENTOMOLOGY LABORATORY 2 credits**  
Prerequisite or concurrent: Zoology 324. Anatomy, physiology, and identification of insects.
- 361 ORNITHOLOGY 3 credits**  
Prerequisite: Biology 101 or 104. Morphological adaptations of birds, their evolution, classification, distribution, and economic importance; field trips.

- 362 ORNITHOLOGY 3 credits**  
Prerequisite: Biology 101 or 104, Zoology 361 recommended. Migration, foods, nesting behavior; types of bird protection.
- 363 MAMMALOLOGY 5 credits**  
Prerequisite: Zoology 262. Habits; identification, distribution, and classification of mammals of the Northwest; methods of collection, preparation of skins, and the use of taxonomic keys.
- 366 COMPARATIVE VERTEBRATE ANATOMY 5 credits**  
Prerequisite: Zoology 262. The morphology and evolution of the organic systems of major vertebrate groups.
- 368 GENERAL VERTEBRATE EMBRYOLOGY 5 credits**  
Prerequisite: Zoology 262. The development of the vertebrates; laboratory study of the embryos of the chick and pig with application to human development.
- 425 FIELD ENTOMOLOGY 3 credits**  
Prerequisite: Zoology 262. Collection, preservation, and identification of insects. Not open to those having had Zoology 324 and 325 or equivalent. Summers only.
- 426 PRINCIPLES OF INSECT CONTROL 3 credits**  
Prerequisite: Zoology 262 or permission of instructor; Zoology 324 recommended. The principles of legal, physical, cultural, chemical, and biological regulation of insect populations; life cycles and control of major pest species.
- 450 PARASITOLOGY 4 credits**  
Prerequisite: Zoology 261 and 262; two quarters of college chemistry. Representative animal parasites with emphasis on the structural and physiological adaptations of both parasite and host.
- 461 MARINE INVERTEBRATE ZOOLOGY 5 credits**  
Prerequisite: Biology 301. Laboratory and field study of local marine invertebrates.
- 510 AQUATIC HELMINTHOLOGY 5 credits**  
Prerequisite: Zoology 261 plus 20 additional credits in biology. Classification, life cycles, and bionomics of unsegmented worms, including flatworms, rotifers, kinorhynch, nematodes, of both fresh and marine waters.

## BUSINESS EDUCATION

(See page 78)

DEPARTMENT of **CHEMISTRY**

## FACULTY

**Professor:** Knapman

**Associate Professors:** Besserman, Eddy, Frank (Chairman), Neuzil

**Assistant Professor:** Chang, Lampman, Whitmer

## Program Planning

*Students planning to major in chemistry or to begin preprofessional programs involving chemistry courses are advised to consult the department at the beginning of their first year to arrange for proper sequence of courses. Potential majors should take the following to satisfy general education science requirements: Biology 104, Chemistry 121, Geology 211.*

## CONCENTRATIONS

## Teacher Education

**MAJOR** (senior high school) 45 credits, plus Supporting Courses

Chemistry 121, 122, 131, 233, 351, 352, 353, 354, 461, 462, 463

Physical Science 492

**Supporting Courses:** one year of college physics and Mathematics 121, 122, 222

**MINOR** 25 credits

Chemistry 121, 122, 131, 251 (or 351 and 354)

Chemistry 233 or 461 or Physical Science 492

## Arts and Sciences

**MAJOR** 56 credits, plus Supporting Courses

Chemistry 121, 122, 131, 233, 351, 352, 353, 354, 355,  
435, 436, 461, 462, 463, 464, 465

**Supporting Courses:** one year of college physics and Mathematics 121, 122, 222  
A reading knowledge of German or Russian [is recommended.

**MINOR** 25 credits

Chemistry 121, 122, 131, 251, (or 351 and 354) and 233 or 461

## Departmental Honors

In addition to the general requirements for all honors students (see page 123), a chemistry major who wishes to graduate "with

honors" must complete:

Honors 361 and 461

30 credits (Arts and Sciences) or 25 credits (Teacher Education) in upper division chemistry courses

Chemistry 498

At least four credits in Chemistry 396a,b,c, and/or 496a,b,c.

## Graduate Study

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

## COURSES IN CHEMISTRY

- 100 INTRODUCTORY CHEMISTRY 2 credits**  
The structure of matter and chemical reactions with emphasis on nomenclature, equations, and weight relations. Restricted to students who have had no high school chemistry.
- 101 CHEMICAL CONCEPTS 4 credits**  
Scientific method and its use in the development of such concepts as structure, states, and reactions of matter. Students with credit in high school chemistry should take Chemistry 125 instead of 101 to fulfill the general education requirement.
- 121, 122 GENERAL CHEMISTRY 5 credits each**  
Prerequisite: high school chemistry or satisfactory completion of Chemistry 100 or 101. Principles and laws of chemistry developed from the properties, structure, and reactions of matter.
- 125 GENERAL CHEMISTRY 5 credits**  
Principles and laws of chemistry developed from the properties, structure, and reactions of matter; an abbreviated course in general chemistry for students not requiring Chemistry 121, 122 in their programs.
- 131 QUALITATIVE ANALYSIS 5 credits**  
Prerequisite: Chemistry 122 or equivalent. The theory of electrolytic solutions and its applications to systematic separations.
- 233 QUANTITATIVE ANALYSIS 5 credits**  
Prerequisite: Chemistry 131. Theory and practice of gravimetric, volumetric, colorimetric, and electrolytic analysis.
- 251 ELEMENTARY ORGANIC CHEMISTRY 5 credits**  
Prerequisite: Chemistry 121 or 125. Reactions, nomenclature, and uses of carbon compounds; an abbreviated course in organic chemistry primarily for persons not requiring the Chemistry 351-354 series.
- 300 PROJECT IN CHEMISTRY 1 to 2 credits**  
Prerequisite: 20 credits in chemistry and permission of instructor. Projects under supervision.
- 305 GLASS WORKING 1 credit**  
Prerequisite: permission of instructor. Basic techniques of glass working and construction of simple glass apparatus.
- 344 INORGANIC PREPARATIONS 2 to 3 credits**  
Prerequisite: Chemistry 233. Preparations of selected inorganic compounds of high purity by diverse methods.

- 351, 352, 353 ORGANIC CHEMISTRY 3 credits each**  
Prerequisite: Chemistry 122 for 351; each course in the series prerequisite to the next; or permission of instructor. Chemistry of carbon compounds with emphasis on structural theory, reactions, and mechanisms.
- 354 ORGANIC CHEMISTRY LABORATORY 2 credits**  
Prerequisite: Chemistry 351. Reactions, separations and syntheses of organic compounds.
- 355 ELEMENTARY QUALITATIVE ORGANIC ANALYSIS 2 credits**  
Prerequisite: Chemistry 131, 354, and 353 or concurrent. Identification and characterization of organic compounds.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 399 SEMINAR IN CHEMISTRY 1 credit**  
Prerequisite: 25 credits in chemistry and permission of instructor. The presentation and discussion of papers in chemistry.
- 400 PROJECT IN CHEMISTRY 1 to 3 credits**  
Prerequisite: permission of instructor. Individual projects under supervision.
- 435 INSTRUMENTAL ANALYSIS 3 credits**  
Prerequisite: Chemistry 463 or permission of instructor. Theory of optical, electrical, and other physical measurements applied to chemical analysis.
- 436 INSTRUMENTAL ANALYSIS LABORATORY 2 credits**  
Prerequisite: Chemistry 435. Experimental techniques of instrumental analysis and analytical separation.
- 441 INORGANIC CHEMISTRY 3 credits**  
Prerequisite: Chemistry 463 or permission of instructor. Chemical bond, structure and shape of molecules, acids and bases, coordination compounds and ions, transition metals, lanthanides, and actinides.
- 454 ADVANCED ORGANIC SYNTHESIS 3 credits**  
Prerequisites: Chemistry 353 and 354. The use of preparative organic reactions involving advanced techniques of synthesis.
- 455 ADVANCED QUALITATIVE ORGANIC ANALYSIS 3 credits**  
Prerequisites: Chemistry 355 and 436. Separation, identification, and characterization of organic compounds involving some use of instrumental techniques.
- 461, 462, 463 PHYSICAL CHEMISTRY 4, 4, 3 credits**  
Prerequisite: one year of college physics, Mathematics 222, and Chemistry 233 or concurrent, or permission of instructor. Atomic and molecular structure, states of matter, solutions, chemical thermodynamics and equilibria, chemical kinetics, and electro-chemistry.
- 464, 465 PHYSICAL CHEMISTRY LABORATORY 2 credits each**  
Prerequisite: Chemistry 461, 462, 463; Chemistry 464 and 465 may be taken concurrently with Chemistry 462 and 463 respectively. Experiments designed to illustrate some concepts and techniques of physical chemistry; also formal report writing.
- 471 INTRODUCTORY BIOCHEMISTRY 3 credits**  
Prerequisites: Chemistry 353 and Biology 104. The chemistry of some fundamental life processes.
- 472 BIOCHEMICAL LABORATORY 2 credits**  
Prerequisites: Chemistry 233, 354, and Chemistry 471 (or concurrent). Laboratory techniques for the study of chemical life processes.
- 482 NUCLEAR CHEMISTRY 3 credits**  
Prerequisites: Chemistry 131 and Physics 233, or permission of instructor. Theoretical and applied nuclear and radio-chemistry.



- 483 NUCLEONICS LABORATORY 2 credits**  
Prerequisite: Chemistry 482 (or concurrent) or permission of instructor. Experimental techniques of nuclear chemistry.
- 492 HIGH SCHOOL CHEM STUDY 3 credits**  
Prerequisite: 25 credits in chemistry. Content and methods for teaching the "new" high school chemistry courses such as CHEM study; theoretical and experimental materials selected from the areas of atomic and molecular structure, bonding, kinetic theory, equilibria, chemical kinetics, carbon compounds.
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 498 RESEARCH PROJECT IN CHEMISTRY 6 credits**  
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.
- 511 ADVANCED LABORATORY METHODS 2 credits**  
Prerequisite: Chemistry 463. Specialized laboratory on a conference basis for a particular area of interest.
- 531 SPECIAL TOPICS IN ANALYTICAL CHEMISTRY 3 credits**  
Prerequisite: Chemistry 435 and 463. Special methods of separation; acid-base relationships in non-aqueous solvents; chromatography, coulometric and potentiometric methods; determination of organic functional groups, micro-analytical operations and methods.
- 541 SPECIAL TOPICS IN INORGANIC CHEMISTRY 3 credits**  
Prerequisite: Chemistry 463. Complex ions and coordination compounds, inorganic substances in non-aqueous media; mechanism of inorganic reactions.
- 551 PHYSICAL ORGANIC CHEMISTRY 3 credits**  
Prerequisites: Chemistry 353 and 463 or equivalent. Modern concepts of physical organic chemistry and their use in the elucidation of reaction mechanism, relation of structure to chemical reactivity.
- 561, 562 ADVANCED PHYSICAL CHEMISTRY I & II 3 credits each**  
Prerequisite: Chemistry 463 and Mathematics 224 (or concurrent with Chemistry 561). Emphasis on thermodynamics, solid state and chemical kinetics.
- 563 MOLECULAR SPECTROSCOPY AND QUANTUM MECHANICS, THEORETICAL CHEMISTRY 3 credits**  
Prerequisite: Chemistry 463, Mathematics 301 and 331. Modern aspects of theoretical chemistry and allied fields such as quantum and statistical mechanics.
- 571 GENERAL BIOLOGICAL CHEMISTRY 3 credits**  
Prerequisite: Biology 104 and Chemistry 353 and 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 credits**  
Prerequisite: Chemistry 571. Biosynthesis and chemical pathways of metabolism of amino acids, proteins, nucleic acids, lipids, vitamins, and porphyrins; mechanism of biochemical reactions.
- 581 ADVANCED NUCLEONICS 3 credits**  
Prerequisite: Chemistry 463 and 483 and Mathematics 224. Advanced techniques of nuclear chemistry and nuclear physics; nuclear reaction, nuclear fission and involved multi-particle detection and scattering experiments.

**595 SEMINAR 1 credit**

Prerequisite: Chemistry 463. Presentation of contemporary subjects in chemistry.

**598 RESEARCH 3 credits**

Prerequisite: Chemistry 463. Research in chemistry under faculty direction terminating in a master's degree thesis.

## DEPARTMENT of **ECONOMICS and BUSINESS**

### FACULTY

**Professors:** Mayer (Chairman), Palmer

**Associate Professors:** Haglund, Mischaikow, Mitchell

**Assistant Professors:** Faulkner, McAllister, Shaffer,  
Spratlen, Walter

**Instructors:** Wilkinson, Zoet

### CONCENTRATIONS IN ECONOMICS

#### Teacher Education

**MINOR** 24-25 credits

(For secondary-teachers other than Business Education majors.)

Economics 101, 201 and 202; or Economics 201, 202, and 251

10 credits in upper division courses under advisement

#### Arts and Sciences

**MAJOR** (Economics-Business Administration) 67 credits, plus Supporting Courses

Substitute Mathematics 220 for Mathematics 151 in the general education requirements.

Economics 201, 202, 251, 252, 253, 271, 301, 302, 311, 352 or 353, 375, 408

Two courses from Economics 322, 333, 335, 411

Mathematics 240

Additional courses in economics under departmental advisement

**Supporting Courses:** Geography 207; History 360; Mathematics 220 and 241 or 270 (Political Science 101 and Sociology 201 also recommended)

**MAJOR** (Economics-General) 53 credits, plus Supporting Courses

Substitute Mathematics 220 for Mathematics 151 in the general education requirements.

Economics 201, 202, 251, 252, 253, 301, 302, 311, 375, 403

Mathematics 240

Additional upper division credits selected under departmental advisement.

**Supporting Courses:** Geography 207; History 341, 360; Mathematics 220 and 241 or 270 (Political Science 101, Sociology 201, Philosophy 201 also recommended)

**MINOR** 25 credits

Economics 201, 202

Additional courses under advisement. At least 10 hours must be at upper division level.

## Departmental Honors

In addition to the general requirements for all honors students (see page 123) a major in Economics-Business Administration or Economics-General who wishes to graduate "with honors" must complete:

Economics 491H.

A reading knowledge of a foreign language, or the equivalent of two years of mathematics.

A grade average of 3.5 in upper division economics courses.

Satisfactory performance on a comprehensive examination in economics.

## CONCENTRATIONS IN BUSINESS EDUCATION

### Teacher Education

**MAJOR** (secondary) 45 credits (to be accompanied by minor which follows)

Business Education 116, 117, or 215; 120, 121, 122, 201, 223,  
241 or 242, 319, 321, 322, 323

Economics 101, 201

Electives under departmental advisement

(Those who have had previous instruction in typing and/or shorthand are placed as high in the sequence as their backgrounds permit.)

**MINOR IN ECONOMICS** (to accompany above major) 25 credits

Economics 202, 251, 252, 271, 408

5 credits from Economics 253, 311, 322, 325, 335, 341

**MINOR** (secondary) 25 credits

Business Education 319, 322 or 323

19 credits in typing, shorthand, and secretarial practice selected under departmental advisement.

### Arts and Sciences

**MINOR** 25 credits

25 credits in typing, shorthand, secretarial accounting, and secretarial practice selected under departmental advisement.

## COURSES IN ECONOMICS

**101 INTRODUCTION TO BUSINESS** 5 credits

Elementary business organization, various types of ownership, location of business plants, labor problems, marketing problems, long and short-term financing, and managerial controls.

- 201 INTRODUCTION TO ECONOMICS 5 credits**  
Organization and operation of the American economy; the basic problems of economics; the role of business, labor and government; money and the banking system; problems of inflation and deflation.
- 202 PRINCIPLES OF ECONOMICS 5 credits**  
Prerequisite: Economics 201. Theory of price and income distribution with particular application to the structure of American industry; problems of the world economy and alternative economic systems.
- 206, 207 THE AMERICAN ECONOMY 4 credits each**  
Organization and operation of the American economy; extension courses particularly recommended for social studies teachers.
- 250 INCOME TAX FOR THE EMPLOYEE AND SMALL PROPRIETOR 3 credits**  
For wage earners, small businessmen, and students who do not plan to major in economics. Fundamental principles of the federal income tax law; completion of simple returns. Extension only.
- 251 \*PRINCIPLES OF ACCOUNTING 4 credits**  
Prerequisite: passing score on mathematics entrance test; not open to first or second-quarter freshmen. Introduction to the theory of accounting, including bookkeeping and financial statements.
- 252 PRINCIPLES OF ACCOUNTING 3 credits**  
Prerequisite: Economics 251. Emphasis on depreciation, the voucher system, partnership and corporation accounting.
- 253 ADMINISTRATIVE ACCOUNTING 3 credits**  
Prerequisite: Economics 252. Manufacturing accounting, financial analysis, and interpretation of accounting data.
- 271 BUSINESS LAW I 5 credits**  
Legal principles of use in everyday business dealings, with emphasis upon contracts, agency and negotiable instruments.
- 291 PERSONAL FINANCE AND INVESTMENTS 3 credits**  
The various outlets for savings, such as savings accounts, stocks, bonds, and insurance; the major institutions in the investment market. Summer only.
- 301 NATIONAL INCOME ANALYSIS 3 credits**  
Prerequisite: Economics 201, 202, and 311. Determinants of the level of income, employment, and output in the economic system.
- 302 INTERMEDIATE ECONOMIC THEORY 4 credits**  
Prerequisites: Economics 201 and 202. The theory of price under conditions of competition and monopolistic competition; relation of prices and costs, and the functional distribution of income.
- 311 MONEY AND BANKING 5 credits**  
Prerequisite: Economics 201. Nature and functions of money, credit, banking, and the relationship of money and bank deposits to the economy.
- 322 PERSONNEL MANAGEMENT 5 credits**  
Prerequisite: Economics 101 or 201. Principles and practices involved in obtaining and maintaining an effective working force; job evaluation, hiring practices, and wage administration.
- 325 ECONOMICS OF LABOR 5 credits**  
Prerequisite: Economics 201. The problems of labor organizations in their relation to the total economy and to industry in particular.
- 333 PRINCIPLES OF PRODUCTION 5 credits**  
Prerequisite: Economics 202 and 253 or permission of instructor. Principles and procedures of the manufacturing enterprise; organization and administration, location and layout, planning and control.

- 335 PRINCIPLES OF MARKETING 5 credits**  
Prerequisite: Economics 101 or 201. Institutions, functions, problems and policies in the distribution of industrial and consumer goods; pricing, costs, and governmental regulations.
- 341 PRINCIPLES OF TRANSPORTATION 5 credits**  
Prerequisite: Economics 201. Economic principles and problems relative to the transportation and communication system of the United States.
- 350 INCOME TAX ACCOUNTING 3 credits**  
Prerequisite: Economics 251 or permission of instructor. Legal requirements and practical problems in connection with the preparation of individual and partnership income tax returns.
- 352 COST ACCOUNTING 5 credits**  
Prerequisite: Economics 253; available to students who have taken Economics 353 only with permission of instructor. Historical factory job and process cost systems, distribution cost systems, fixed and flexible budgeting and other controls over business operations available from the accounting records.
- 353 MANAGEMENT CONTROLS 3 credits**  
Prerequisite: Economics 253; not open to students who have taken Economics 352. Cost systems, fixed and flexible budgeting, and other controls over business operations available from the accounting records.
- 354 INTERMEDIATE ACCOUNTING 5 credits**  
Prerequisite: Economics 253. Analysis and interpretation of financial statements; advanced theory of inventories; depreciation, and the application of funds.
- 355 ADVANCED ACCOUNTING 5 credits**  
Prerequisite: Economics 354. The application of accounting theory to partnerships, branch accounting, installment sales, and other problems.
- 357 AUDITING 5 credits**  
Prerequisite: Economics 355 or 253 and permission of instructor. Generally accepted auditing standards and principles; applications in public and internal accounting.
- 361 INTERNATIONAL ECONOMICS 5 credits**  
Prerequisite: Economics 201 and 202. Theory of international trade; the theory of balance-of-payments equilibrium, and economic policies, including customs unions.
- 371 BUSINESS LAW II 5 credits**  
Prerequisite: Economics 271. Sales, conditional sales, personal property, partnership, and corporation law.
- 375 STATISTICAL METHODS 3 credits**  
Prerequisite: Mathematics 240 or equivalent. The concepts of sampling, statistical inference and statistical decision-making as they apply to problems in economics and business.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 400 SPECIAL PROBLEMS IN ECONOMICS 1 to 5 credits**  
Prerequisite: 20 credits in economics and prior consultation with the instructor.
- 401 PRINCIPLES OF BUSINESS MANAGEMENT 5 credits**  
Prerequisite: Economics 253 or permission of instructor. The role of the board of directors, committees, and the functions of top management in organizing, staffing, directing, planning, and controlling company operations.

- 403 THE HISTORY OF ECONOMIC THOUGHT 5 credits**  
Prerequisite: Economics 201 and 202 or senior standing and permission of instructor. Development of economic thought with major emphasis upon the period following Adam Smith.
- 405 COMPARATIVE ECONOMIC SYSTEMS 5 credits**  
Prerequisite: Economics 201 or permission of instructor. Economic systems of the leading nations of the world.
- 406 ECONOMIC DEVELOPMENT 5 credits**  
Prerequisite: Economics 201 and 202, or permission of instructor. Conditions necessary for and the progress of economic development in underdeveloped countries.
- 408 THE ROLE OF BUSINESS IN AMERICAN SOCIETY 3 credits**  
Development of American capitalism and its legal, philosophical, and ethical foundations.
- 409 CONTEMPORARY ISSUES OF ECONOMIC POLICY 3 credits**  
Prerequisite: a minimum of 20 credits in one field of the social sciences, or permission of instructor. An examination of such crucial policy issues as inflation, economic growth, automation, business concentration. Summer only.
- 410 PUBLIC FINANCE AND TAXATION 5 credits**  
Prerequisites: Economics 202 or permission of instructor. Principles of taxation and problems of tax administration; effects upon employment, income, prices, and structure of the economy.
- 411 BUSINESS ORGANIZATION AND FINANCE 5 credits**  
Prerequisites: Economics 101 or 201 and Mathematics 253, or permission of instructor. Major forms of business organization and problems dealing with the sources, uses, and control of funds in business enterprises.
- 412 BUSINESS FLUCTUATIONS AND FORECASTING 5 credits**  
Prerequisites: Economics 201 and 275 (or Mathematics 240) or permission of instructor. Characteristics and major explanations of the prosperity-depression cycle in business, with major emphasis on forecasting.
- 415 PROBLEMS AND PRACTICES IN STATE AND FEDERAL FINANCE 3 credits**  
Governmental expenditures, budgets, taxation, and borrowing; local, state, and federal.
- 421 PROBLEMS IN PERSONNEL ADMINISTRATION 3 credits**  
Problems of wage and salary administration, employee rating, and employee selection.
- 426 LABOR RELATIONS AND THE LAW 3 credits**  
Prerequisite: Economics 325 or permission of instructor. A non-technical course in the elements of labor law.
- 442 GOVERNMENT AND BUSINESS 5 credits**  
Prerequisites: Economics 202, or permission of instructor. Public policy and business enterprise; anti-trust laws and their interpretation.
- 482 REGIONAL ECONOMICS 4 credits**  
Prerequisites: Economics 201 and Geography 207, or permission of instructor. The problems, resource endowment, and principal policy issues related to the economic growth of a region.
- 491h HONORS SEMINAR 3 credits**
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**

## COURSES IN BUSINESS EDUCATION

- 115 BEGINNING TYPEWRITING 2 credits**  
For those with no previous instruction in typewriting. Offered by extension only.
- 116 INTERMEDIATE TYPEWRITING 2 credits**  
Prerequisite: Business Education 115 or equivalent, or one year of high school typewriting.
- 117 ADVANCED TYPEWRITING 2 credits**  
Prerequisite: Business Education 116 or equivalent or advanced high school study in typewriting. Advanced work on rough drafts, tabulation, and business communications.
- 120 BEGINNING SHORTHAND 3 credits**  
Fundamentals of Gregg Shorthand Simplified, including development of skill in reading and writing from printed shorthand.
- 121 INTERMEDIATE SHORTHAND 3 credits**  
Prerequisite: Business Education 120 or equivalent. Continued development of skill in reading and writing more advanced forms of shorthand.
- 122 ADVANCED SHORTHAND I to 3 credits**  
Prerequisite: Business Education 121 or equivalent. Principles of Gregg Shorthand, with intensive dictation on new matter, dictation and longhand transcription of business correspondence.
- 150 ACCOUNTING FOR SECRETARIES 3 credits**  
Theory and practice of bookkeeping and accounting, with emphasis on both cash and accrual systems.
- 201 BUSINESS CORRESPONDENCE 3 credits**  
Prerequisite: English 100 or equivalent. Development of skill in the use of correct English for business purposes.
- 215 BUSINESS TYPEWRITING 2 credits**  
Prerequisite: Business Education 117 or equivalent. An advanced course for the development of proficiency in speed and control.
- 222 ADVANCED SHORTHAND II 3 credits**  
Prerequisite: Business Education 122 or equivalent of two years high school shorthand. Intensive dictation and transcription practice on business correspondence; development of a comprehensive business vocabulary.
- 223 SHORTHAND TRANSCRIPTION 3 credits**  
Prerequisite: Business 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 credits**  
Prerequisite: Business Education 223 or equivalent. Further development of transcription skills, office techniques, and duties and problems of the secretary.
- 241 OFFICE MACHINES 3 credits**  
Prerequisite: Business Education 115 or equivalent. Operation of rotary and keydriven calculators, duplicating machines, adding machines, transcribing and recording machines, and electric typewriters; filing.
- 242 SPECIALIZED OFFICE MACHINES 3 credits**  
Prerequisite: Business Education 241, or equivalent. Advanced training on selected office machines.
- 319 BUSINESS EDUCATION IN THE SECONDARY SCHOOL 3 credits**  
Curriculum planning with consideration of philosophy, scope and objectives.



- 
- 321 TEACHING BOOKKEEPING AND BASIC BUSINESS SUBJECTS 3 credits**  
Analysis of objectives, materials, and method of presentation.
- 322 METHODS OF TEACHING TYPEWRITING 3 credits**  
The use of the newest instructional aids and equipment for the development of skill in typewriting.
- 323 METHODS OF TEACHING SHORTHAND AND TRANSCRIPTION 3 credits**  
Lesson planning, grading, demonstrations, and diction techniques.
- 400 DIRECTED STUDY IN BUSINESS EDUCATION 1 to 3 credits**  
Prerequisites: senior standing and permission of instructor. Individual instruction.
- 471 CURRENT TRENDS IN THE TEACHING OF TYPEWRITING 3 credits**  
Student motivation, electric typewriting techniques, the skillful use of supplementary materials and special audio-visual devices. Summer only.
- 472 IMPROVEMENT OF INSTRUCTION IN THE TEACHING OF BOOKKEEPING 3 credits**  
Prerequisite: permission of department. A critical evaluation of content materials, methods, and practices used in teaching bookkeeping. Summer only.
- 473 ECONOMIC AND CONSUMER EDUCATION IN THE SCHOOLS 3 credits**  
The organization and integration of economic and consumer education courses in school programs.
- 481 PROBLEMS AND ISSUES IN BUSINESS EDUCATION 3 credits**  
Trends in the business programs of secondary schools. Summer only.
- 497a OFFICE AUTOMATION FOR BUSINESS TEACHERS 3 credits**  
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. Summer, 1965.
- 501 SPECIAL PROJECTS IN BUSINESS EDUCATION 2 to 3 credits**  
Supervised planning and development of practical creative projects in business education.
- 502 IMPROVEMENT OF INSTRUCTION IN SECRETARIAL STUDIES 3 credits**  
Prerequisite: permission of department. Modern methods in teaching typing, shorthand, transcription, and office practice, with special concern for the psychology of skill building and teaching techniques. Summer only.

**DEPARTMENT of EDUCATION**

## FACULTY

**Professors:** Ross, Skeen, Thompson, Watrous

**Associate Professors:** Beldin, D. Brown, Carroll, Casanova, Ellis, Ferris, Higbee, Johnson, Karason, Kaufman, Lamb, McCracken, D. McDonald, McInnes, Margaritis, Nicol, Panches, Starbird

**Assistant Professors:** Bieler, Billings, Conquest, Gadzella, Grove, Hodges, H. Jones, Kelly, Klein, Nickelson, Riddles, Van Wingerden

## Supervised Teaching

**Requirement**

Practice in the classroom under supervision is an integral part of the student's professional preparation. The requirement for student teaching is 16 credits, inclusive of associated seminars.

The student, **under advisement**, may seek to develop competence in two fields or at two levels, either within the 16 credit requirement or by an additional experience.

**Prerequisites**

1. Acceptance for the teacher education program by the Selection Committee (see page 42).
2. Completion of all General Education requirements.
3. Completion of Education 301, 385, and Psychology 352 (formerly 355).
4. Completion of a minimum of 128 credits, including at least 30 credits of the academic major.
5. Attainment of a cumulative grade average (at Western Washington State College) of at least 2.30 (to be raised in September of 1966 to 2.20).
6. A chest X-ray in compliance with State Law.

**Application**

A Declaration of Student Teaching Plan must be filed with the Office of Student Teaching during the spring quarter of the junior year.

Upon completion of the above prerequisites, the student will apply to the Office of Student Teaching for an authorization to register for supervised teaching.

### Time Involvement

16 credit courses—Education 491, 492\*,—seven clock hours daily, plus seminar

8 credit courses—Education 493-498—three and one-half morning hours daily, plus seminar

\*In the Fall Quarter only, special sections are offered commencing with the opening of the public schools in September. These sections are in addition to the sections scheduled regularly to correspond with the College calendar. Those students not electing one of these special sections are strongly urged to observe in their home school districts for a few weeks when school opens in the fall. Arrangements should be made through the Office of Student Teaching at the College.

### Student Teaching Opportunities In Resident Centers

Western offers outstanding student teaching opportunities in Resident Centers established in Everett, Edmonds, Shoreline, and in Seattle. Inasmuch as these opportunities require earlier planning, it is advantageous for students to indicate Resident Center interest at the time of filing the Declaration of Student Teaching Plan. Arrangements have been made for reasonably priced housing in these Centers and it is possible to place a student in such a manner that he will be able to walk to and from his student teaching assignment.

### Departmental Honors

In addition to the general requirements for all honors students (see page 123), a student who wishes to graduate with departmental honors must complete:

Education 336efg — Honors Tutorial	2-5 credits
Education 336h — Summer Readings	2-5 credits
Education 337h Seminar in Research	2 credits
Education 436efg — Honors Tutorial	2-5 credits

A total of 20 credits of honors work in Education.

3 or 4 credits of honors work in student teaching.

Satisfactory performance 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

(See also pages 173-174 for courses in Educational Psychology)

- 301 AMERICAN EDUCATION AND THE TEACHER 3 credits**  
Prerequisite: sophomore status. The American school system and the role of the teacher; teaching as a profession. This course is prerequisite to the other courses in the professional sequence.
- 315 SOCIAL FOUNDATIONS OF EDUCATION 3 credits**  
Prerequisite: Education 301. Sociological and anthropological concepts and their relation to the field of education; cultural change and social organization as they apply to the teacher's role in school and community; value conflicts in curriculum and methods; the impact of social stratification on school purposes and organization.
- 318 HISTORY OF EDUCATIONAL THOUGHT 3 credits**  
Prerequisite: Education 301. Significant works in the history of educational thought as an analytical framework for evaluating statements of school purposes and curriculum; the derivation of educational objectives from basic philosophic premises.
- 326 INTRODUCTION TO EXCEPTIONAL CHILDREN 3 credits**  
Prerequisite: junior status and permission of department. Problems and methods of identifying and teaching children who are handicapped or gifted.
- 336efg HONORS TUTORIAL 2 to 5 credits**
- 336h SUMMER READINGS 2 to 5 credits**
- 337h SEMINAR IN RESEARCH 2 credits**
- 373 ELEMENTARY STATISTICAL INFERENCE 3 credits**  
Prerequisite: Mathematics 240 or permission of instructor. Statistical procedures and informed reading for original research. Also offered as Psychology 373.
- 385 FOUNDATIONS OF TEACHING READING 2 credits**  
History of reading instruction in the United States; basic principles and current practices in the teaching of reading in various grade levels; review of major research and controversial issues.
- 388 RECREATIONAL COUNSELING WITH HANDICAPPED CHILDREN 4 credits**  
An outdoor camp program for handicapped children and adults; responsibility for planning and carrying out a program of hiking, boating, fishing, swimming, working with craft materials, etc.
- 400 SPECIAL PROJECTS IN EDUCATION 2 to 3 credits**  
Prerequisites: permission of department; present a one-page description of project or research proposal. Special supervised individual projects.
- 410 SEMINAR IN FOUNDATIONS 5 credits**  
Prerequisite: admission to the special program for degree holders. Social, historical, and philosophical bases of education.
- 413 HISTORY OF AMERICAN EDUCATION 5 credits**  
Historical development of formal education emphasizing the impact of cultural forces on the evolution of the American system of public education.
- 414 COMPARATIVE EDUCATION 3 credits**  
Educational systems in the major countries in terms of backgrounds, aims, types, and present functions; comparison with the American system.

- 416 PERSISTENT PROBLEMS IN EDUCATION 3 credits**  
Such issues as merit pay, federal aid, ability grouping, teachers' organizations, school reorganization, and the place of religious observance in the public schools.
- 418 HIGHER EDUCATION IN THE UNITED STATES 3 credits**  
The college and university in past and contemporary society; historical-philosophical backgrounds, value orientations, organizational patterns and functions; relations with other educational institutions and with society.
- 421 CURRICULUM DEVELOPMENT 3 credits**  
Prerequisite: student teaching or teaching experience. Theory and structure of curriculum, including procedures for the selection, organization, and evaluation of school experiences at different levels.
- 422 THE ELEMENTARY CURRICULUM 3 credits**  
Prerequisite: Education 421. Historical and analytical study of the curriculum of the elementary school.
- 423 THE JUNIOR-COMMUNITY COLLEGE 3 credits**  
Prerequisite: senior or graduate status. The history, objectives, organization, and role of the public community college, with special attention to the expanding system in the State of Washington.
- 424 LANGUAGE ARTS IN THE CURRICULUM 3 credits**  
Prerequisite: student teaching, teaching experience, or permission of department. Functions and programs of the language arts in the curriculum.
- 425 THE SECONDARY CURRICULUM 3 credits**  
Prerequisite: Education 421. Historical and analytical study of the curriculum of the secondary school with application of theory to instructional practices.
- 428 KINDERGARTEN EDUCATION 3 credits**  
Prerequisites: senior status and student teaching or teaching experience. Historical background, recent trends, and organization of facilities and materials for the kindergarten program.
- 436efg HONORS TUTORIAL 2 to 5 credits**
- 441 SCHOOL LAW 3 credits**  
Prerequisite: senior status or teaching experience. Legal principles underlying statutes and court decisions related to the schools, with emphasis on the status of the teacher and the administration. Summer only.
- 450 ADULT EDUCATION: PRINCIPLES AND METHODS 3 credits**  
Social, educational, and administrative implications of continuing education. Summer only.
- 462 METHODS, CURRICULUM, AND MATERIALS FOR EXCEPTIONAL CHILDREN 3 cr.**  
Prerequisite: senior or graduate status. Objectives, organization, facilities, and materials needed for teaching exceptional children.
- 473 ADVANCED STATISTICAL INFERENCE 3 credits**  
Prerequisite: Education or Psychology 373 or equivalent. More advanced methods for the analysis of research data. Also offered as Psychology 473.
- 480 WORKSHOP IN INSTRUCTION 2 to 5 credits**  
Offered in conjunction with a summer conference, the workshop emphasizes an aspect of instruction. Topics vary from summer to summer.  
480s Teaching the Social Studies—Summer 1965.
- 481 OBSERVATION AND PARTICIPATION 2 credits**  
Prerequisite: permission of department. Guided observation of experienced teachers and limited participation in teaching situations.

- 482 THE CONSTRUCTION OF AUDIO-VISUAL MATERIALS FOR THE CLASSROOM 3 cr.**  
Education 489 recommended as preparatory. Skills and techniques involved in planning and making motion pictures, filmstrips, slides, still photographs, models, charts, and posters as aids in teaching.
- 483 SEMINAR IN OUTDOOR AND CONSERVATION EDUCATION 3 credits**  
Natural history with emphasis on conservation, biology, ecology, geography, geology and mineralogy, and forestry.
- 484 PRACTICUM IN CONSERVATION EDUCATION 2 credits**  
Methods and techniques of working with children in the natural environment; supervised teaching of intermediate grade children.
- 486 INDIVIDUALIZING READING INSTRUCTION 3 credits**  
Techniques for an individualized reading program; techniques of remedial reading; survey of children's trade books; designing, making, and programming material for self-instruction.
- 487 IMPROVEMENT OF INSTRUCTION IN READING 3 credits**  
Prerequisite: teaching experience. Analysis of current reading texts and programs; measurement of achievement; use of an informal reading inventory.
- 489 AUDIO-VISUAL INSTRUCTION 3 credits**  
Types of audio-visual aids, technical processes, educational procedures, and the administration of audio-visual instruction; the operation of motion picture, opaque, and slide-film projectors, tape recorders and other sound and visual apparatus.

## Supervised Teaching

(See pages 80-81 for prerequisites, applications, procedures, and amount of time required in all supervised teaching courses — Education 491 — 496 and 498.)

- 491 SUPERVISED TEACHING—ELEMENTARY 16 credits**  
Prerequisites: Social Studies Education 425, Mathematics 251 and 481, Education 486 and a course in science education. Supervised teaching experience providing opportunities to develop and demonstrate teaching competence at the primary and/or intermediate level.
- 492 SUPERVISED TEACHING—SECONDARY 16 credits**  
Prerequisite: 30 credits in the major field.  
Supervised teaching experience providing opportunities to develop and demonstrate teaching competence of the junior high and/or senior high school level.
- 493, 494 SUPERVISED TEACHING—ELEMENTARY 8 credits each**  
Prerequisites: Social Studies 425, Mathematics 251 and 481, Education 486 and a course in science education. Supervised teaching experience providing opportunities to develop and demonstrate teaching competence at the primary and/or intermediate level.
- 495, 496 SUPERVISED TEACHING—SECONDARY 8 credits each**  
Prerequisite: 30 credits in the major field.  
Supervised teaching experience providing opportunities to develop and demonstrate teaching competence at the junior high and/or senior high school level.
- 497b WORKSHOP FOR TEACHERS OF INDIAN CHILDREN AND YOUTH 3 credits**  
The historical backgrounds and present status of Pacific Northwest Indians; agencies and their programs; the problems encountered by Indian children and youth; educational provisions and opportunities. Summer 1965.

**497c,d,e,f THE DISADVANTAGED**

- c. Psychological Implications 3 credits
- d. Educational Implications 4 credits
- e. Sociological Implications 3 credits
- f. Seminar 2 credits

An examination of the effects of cultural-economic deprivation on children and youth; the sociological and educational implications of the disadvantaged. Summer 1965.

**498 SUPERVISED TEACHING—EXCEPTIONAL CHILDREN 8 credits**

Prerequisites: Education 326 and 462 and teaching experience. Supervised teaching experience providing opportunities to develop and demonstrate teaching competence for exceptional children.

**500 SPECIAL PROJECTS IN EDUCATION 2 to 5 credits**

Prerequisites: permission of department; present a one-page description of project or research proposal. Special supervised individual projects.

**501 INTRODUCTION TO GRADUATE STUDY 4 credits**

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 EDUCATIONAL SOCIOLOGY 3 credits**

Major problems in American culture as they relate to education: social stratification, individual-group interaction, the family, social attitudes and prejudices, public health and welfare.

**512 SEMINAR IN EDUCATIONAL CONCEPTS AND ISSUES: HISTORICAL-PHILOSOPHICAL 4 credits**

Prerequisite: Education 501. Differing concepts of the nature of man and his education; the historical and philosophical development of these concepts, their basic premises, implicit assumptions, and issues.

**513 SEMINAR IN EDUCATIONAL CONCEPTS AND ISSUES: PSYCHOLOGICAL-SOCIOLOGICAL 4 credits**

Prerequisites: Education 501 and Education 512. Differing concepts of the nature of the individual and society; the psychological and sociological development of these concepts; basic premises and implicit assumptions.

**515 PHILOSOPHY OF EDUCATION 3 credits**

Critical analysis of theoretical positions in educational philosophy; emphasis on modern and contemporary discussions of educational theory. Also offered as Philosophy 515.

**516 SEMINARS IN PHILOSOPHY OF EDUCATION 3 credits each**

Prerequisite: Education 318, 415, or equivalent. Studies of the works of one man, of a problem, or of a movement and the implications for schooling.

Education 516a—The Concept of Intelligent Human Conduct in Education. Summer 1965.

Education 516b—Pragmatism and Existentialism in Modern Educational Thought. Summer 1965.

**521a,b,c,d SEMINARS IN CURRICULUM 4 credits each**

Prerequisites: teaching experience and Education 421 or permission of department. The planning and development of curriculum, including advanced study of curriculum design and materials; independent research. (a-primary; b-intermediate; c-junior high; d-senior high.)

**541 PUBLIC SCHOOL ORGANIZATION AND ADMINISTRATION 3 credits**

Practical problems related to administration of school personnel, plant, and program; the structure and organization of the school system.

- 542 WORKING WITH STUDENT TEACHERS 3 credits**  
Techniques for the orientation of student teachers, major problems which confront student teachers, and evaluation of their achievement.
- 543 SUPERVISION IN THE PUBLIC SCHOOLS 3 credits**  
Supervision as educational leadership in the development and periodic revision of plans for the continuous evaluation and improvement of school practice.
- 544 ORGANIZATION AND ADMINISTRATION OF AUDIO-VISUAL MATERIALS 3 credits**  
Prerequisite: Education 489 or permission of department. Basic problems and principles in establishing and directing an audio-visual center; co-ordinating, staffing, financing, housing, and evaluating the service.
- 545 PUBLIC SCHOOL FINANCE 3 credits**  
Prerequisite: Education 541. Problems involved in school finance, including budgetary and accounting procedures.
- 546 PUBLIC SCHOOL BUILDINGS AND FACILITIES 3 credits**  
Prerequisite: Education 541. Planning school building programs through analysis of population trends in the community; the relationship of school plant to the educational program; problems in utilization of school facilities.
- 548 FIELD EXPERIENCE IN ADMINISTRATION FOR THE PRINCIPAL 1 to 5 credits**  
For applicants for the principals' credential who have been admitted to candidacy for the master's degree. See Graduate Bulletin for details.
- 549 SEMINAR IN SCHOOL PERSONNEL ADMINISTRATION 3 credits**  
Professional relationships among certified employees, and other school personnel; the development and implementation of policies. Summer only.
- 560 SEMINARS IN SPECIAL EDUCATION 2 to 5 credits**  
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. Summer only.
- 561s ADVANCED PROBLEMS IN SPECIAL EDUCATION 3 to 5 credits**  
Prerequisite: permission of department. Intensive study of problems in a selected area of special education.
- 562 CURRICULUM AND PROBLEMS OF INSTRUCTION FOR THE MENTALLY RETARDED. 3 credits**  
Prerequisite: teaching experience or permission of department. Problems of diagnosis, class organization, selection of curriculum content and instructional aids for teaching the slow learner.
- 570 FIELD PROJECT OR THESIS 6 credits**  
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.
- 585 SEMINAR IN READING EDUCATION 2 or 3 credits**  
Prerequisite: Education 385 or 487 or permission of department. Reading research; 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 credits**  
Prerequisite: Education 594e, 594f. Development and execution of a research design in reading education.



**594e,f,g PRACTICUM IN READING DIAGNOSIS AND REMEDIATION 12 credits**

Prerequisite: Education 487 or its equivalent, or concurrent enrollment in Education 487, and permission of department; e, f, and g must be taken in sequence.

- e. Introduction to standard diagnostic tests and supervised practice in their administration. 4 credits
- f. Individual case study diagnosis of children with reading problems. 4 credits.
- g. Remedial instruction for children with reading problems. 4 credits.

**DEPARTMENT of ENGLISH**

## FACULTY

**Professors:** Brown (Chairman), Cederstrom, Clapp, Hicks, Van Aver

**Associate Professors:** Finder, Hovde, Larsen, O'Brien, Odom, Peters, Ryan

**Assistant Professors:** Abel, Bennett, Huff, Hunt, Lawyer, Lee, Muldrow

**Instructors:** Allan, Bridge, Bunnell, Cary, Farley, Fredeman, Haynes, Hitchcock, Johnson, LaBelle, Lewis, McLeod, McNeil, Merrill, Merritt, Rank, Standley, Tipton

**Lecturer:** Skinner

## CONCENTRATIONS

## Teacher Education

**MAJOR** (secondary) 45 credits

English 202, 260 (or 261, 262 and 263), 343, 390 (or 490), 496

Two courses from: English 321, 322, 323, 324, 325, 326

Two courses from: English 331, 332, 333

Electives under departmental advisement

**MAJOR** (elementary) 45 credits

English 202, 260 (or 261, 262 and 263), 343, 390 (or 490), 495

Two courses from: English 321, 322, 323, 324, 325, 326

Two courses from: English 331, 332, 333

Electives under departmental advisement

Students electing the alternate program for elementary teachers will complete 28 credits selected under departmental advisement from the above major.

**MINOR** (secondary) 25 credits

English 202, 260 (or 261, 262 and 263), 343, 390 (or 490), 496

Electives under departmental advisement

## Arts and Sciences

**MAJOR** 60 credits, plus Supporting Courses

English 202, 260 (or 261, 262 and 263), 341, 343, 390, 487

Three courses from: English 321, 322, 323, 324, 325, 326

(At least one of these from English 321, 322, 323)

Two courses from English 331, 332, 333

At least one course from both the English 349 and 359 series

Electives under departmental advisement

**Supporting Courses:** 24 credits or the equivalent in one foreign language

**MINOR** 25 credits

English 202, 260 (or 261, 262 and 263), 343, 390

Electives under departmental advisement

## Journalism

A limited number of courses in journalism are offered by the English Department. See English 210, 211, 212, 213, 311, 312, 313.

## Departmental Honors

In addition to the general requirements for all honors students (see page 123) an English major who wishes to graduate "with honors" must complete:

1. English 460 and 487
2. An upper-division course in philosophy or in comparative literature or in literature read in a foreign language.

## Graduate Study

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

## COURSES

- 100 FRESHMAN READING AND WRITING 3 credits**  
Prerequisite: satisfactory performance on English placement tests or second-quarter standing. The comprehension and communication of expository materials.
- 101 FRESHMAN READING AND WRITING 3 credits**  
Prerequisite: satisfactory completion of English 100 or equivalent. Continuation of English 100 with emphasis upon case study and the investigative paper.
- 102 FRESHMAN READING AND WRITING 3 credits**  
Prerequisite: satisfactory completion of English 101 or equivalent. Continuation of English 101 with emphasis on tone, style, and close analysis of literary texts leading to the writing of analytical and interpretative papers.
- 202 SOPHOMORE EXPOSITION 3 credits**  
Prerequisite: English 101 or equivalent; primarily for majors and minors. Materials drawn from literature, literary history, and criticism.

- 210 NEWS WRITING 3 credits**  
Writing for newspapers; news elements and values, gathering news, structure and style of news stories; covering speeches and meetings, interviewing, laws affecting the press; history and role of the press in society.
- 211, 212, 213 NEWSPAPER STAFF\* 1 credit each**  
Prerequisite: English 210 or permission of instructor. Practice in writing or editing copy for the college newspaper.
- 260 CRITICAL INTRODUCTION TO LITERATURE 5 credits**  
Prerequisite: English 100 or equivalent; primarily for majors and minors. Form and function, meaning and value in the three genres: fiction, drama, poetry. Not open to students who have credit for English 261, 262, or 263.
- 261, 262, 263 CRITICAL INTRODUCTIONS TO FICTION, DRAMA, POETRY 2 credits each**  
Prerequisite: English 100 or equivalent; intended primarily for majors and minors. Form and function, meaning and value in fiction (261), drama (262), poetry (263). Not open to students who have credit for English 260.
- 281, 282, 283 WESTERN WORLD LITERATURE 3 credits each**  
Reading from classical and medieval, renaissance and neoclassical, romantic and modern literature. Intended for transfer students who have not had General Education 121, 122, 123 or equivalent. Credit may not be earned in parallel segments of both sequences.
- 302 ADVANCED EXPOSITION 3 credits**  
Prerequisite: English 202 or permission of instructor. Opportunity for writing on a mature level looking toward publication.
- 303 CREATIVE WRITING 3 credits**  
Prerequisite: English 202 or permission of instructor. Opportunity for disciplined expression in poetry and/or fiction.
- 311, 312, 313 ADVANCED NEWSPAPER STAFF\* 2 credits each**  
Prerequisite: English 211, 212, 213 or permission of instructor. Practice in advanced assignments in writing or editing copy for the college newspaper.
- 321, 322, 323 ENGLISH LITERATURE TO 1780 5 credits each**  
Historical and critical survey of English literature, with emphasis upon the greater poets and non-fiction prose writers: Anglo-Saxon, medieval, and early Renaissance; Elizabethan and early seventeenth century; Restoration and eighteenth century.
- 324, 325, 326 ENGLISH LITERATURE SINCE 1780 5 credits each**  
The greater romantic, Victorian, and modern writers.
- 331, 332, 333 AMERICAN LITERATURE 3 credits each**  
Historical and critical survey of American literature, with emphasis upon the greater poets and non-fiction prose writers: 1800-1860; 1860-1900; since 1900.
- 341 CHAUCER 3 credits**  
Chaucer's language and poetry, with emphasis upon *The Canterbury Tales*.
- 343 SHAKESPEARE 5 credits**  
A survey of the principal plays. Also offered as Speech 320.
- 349 MAJOR ENGLISH WRITERS 2 credits each**  
Different writers of eminence will be treated from year to year in this series.  
In 1965-66: 349f Donne, 349g Shelley
- 359 MAJOR AMERICAN WRITERS 2 credits each**  
Different writers of eminence will be treated from year to year in this series.  
In 1965-66: 359c Hemingway, 359e O'Neil

\*Not applicable to the English major or minor.

- 390 AMERICAN ENGLISH AND ITS BACKGROUND 3 credits**  
The nature of language, lexicography, American dialects, usage, history of English and English grammar, and descriptions of English grammar (traditional, structural, transformational).
- 399a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 403 SENIOR WRITING WORKSHOP 1 to 5 credits**  
Prerequisite: English 302 or 303 or permission of instructor. Individual writing projects.
- 440 PERIOD STUDIES 2 to 5 credits**  
Since different literary periods and movements will be treated from year to year in this series, the course may be taken more than once for credit.  
In 1965-66: 440a Irish Renaissance
- 443 STUDIES IN SHAKESPEARE 3 credits**  
Prerequisite: English 343. Seminar in selected plays. Also offered as Speech 420.
- 460 STUDIES IN FORM AND TEMPER 2 to 5 credits**  
Prerequisite: acceptance for the Departmental Honors program, or permission of instructor. Since different literary types and genres will be treated from year to year in this series, the course may be taken more than once for credit.  
In 1965-66: 460b The Classical Epic
- 461, 462, 463 DEVELOPMENT OF ENGLISH DRAMA 3 credits each**  
Historical and critical survey of the English drama, with emphasis upon the greater writers (exclusive of Shakespeare): medieval and Elizabethan-Jacobean; Restoration and eighteenth century; late nineteenth and early twentieth centuries. Also offered as Speech 421, 422, 423.
- 464, 465, 466 DEVELOPMENT OF THE ENGLISH NOVEL 3 credits each**  
Historical and critical survey of the English novel, with emphasis upon the greater writers: from the beginnings through the eighteenth century; romantic and Victorian; late nineteenth and early twentieth centuries.
- 470 CONTEMPORARY POETRY 3 credits**  
Prerequisite: English 326 and 333 or permission of instructor. Selected representative English and American poets of stature.
- 473 MODERN AMERICAN DRAMA 3 credits**  
The American theater beginning with O'Neill and concluding with World War II. Also offered as Speech 424.
- 474, 475, 476 DEVELOPMENT OF THE AMERICAN NOVEL 2 credits each**  
Historical and critical survey of the American novel, with emphasis upon the greater writers: from the beginnings to the Civil War; the later nineteenth century; the twentieth century to World War II.
- 477 THE CONTEMPORARY NOVEL 3 credits**  
The English and American novel since World War II.
- 480 INTRODUCTION TO ORIENTAL LITERATURE 5 credits**  
Literature of India and China as related to the thought of our time, with emphasis upon Indian epic and philosophy and the ideals of Confucius.
- 481 THE BIBLE AS LITERATURE 2 credits**  
Cultural backgrounds of the Old and New Testaments, together with a literary analysis of selected passages.
- 483 SOCIAL CHANGE AND THE MORAL ORDER IN RECENT LITERATURE 4 credits**  
Also offered as Philosophy 483 and Sociology 483.

- 487 HISTORY OF LITERARY CRITICISM 5 credits**  
Prerequisite: fifteen credits in literature or permission of instructor. The theory of literature; analysis of critical principles and problems from ancient to modern times.
- 488 MODERN LITERARY CRITICISM 3 credits**  
Prerequisite: English 487. Tendencies in recent and contemporary criticism with emphasis upon the work of English and American critics of distinction.
- 490 STRUCTURAL AND TRANSFORMATIONAL GRAMMARS 3 credits**
- 491 HISTORY OF THE ENGLISH LANGUAGE 3 credits**  
The historical development of the English language: phonology, morphology, syntax, semantics.
- 495 ENGLISH FOR THE ELEMENTARY SCHOOL 3 credits**  
Teaching the language arts: reading, writing, speaking, and listening; formal and informal methods; textbooks and materials.
- 496 ENGLISH FOR THE SECONDARY SCHOOL 3 credits**  
Prerequisite: English 390 or 490 or permission of instructor. Teaching composition, language, and literature in the junior and senior high school: programs, procedures, and materials.
- 498 WORKSHOP IN THE TEACHING OF ENGLISH 5 credits**
- 499a,b,c HONORS TUTORIAL 2 to 5 credits each**

### Graduate Courses

*Registration in the following 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 a limited topic: one writer or a small group of writers, selected works, a single form.*

- 501 BIBLIOGRAPHY AND METHODS OF GRADUATE STUDY IN ENGLISH 3 credits**  
Required of all candidates for the M.A. and of all candidates for the M.Ed. electing the thesis option. To be taken as soon as possible after the student's admission to graduate degree status.
- 503 WRITING SEMINAR 1 to 3 credits**  
Prerequisites: English 302 or 303 or equivalent.
- 520 SEMINAR IN ANGLO-SAXON LITERATURE 3 credits**  
Prerequisite: English 591a or equivalent.  
520a Beowulf
- 521 SEMINAR IN MEDIEVAL LITERATURE 3 credits**  
Prerequisite: English 321 or 341 or equivalent.  
521a Chaucer (Summer, 1965)
- 522 SEMINAR IN SIXTEENTH-SEVENTEENTH CENTURY LITERATURE 3 credits**  
Prerequisite: English 322 or 343 or equivalent.  
522a Milton
- 523 SEMINAR IN EIGHTEENTH CENTURY LITERATURE 3 credits**  
Prerequisite: English 323 or equivalent.

- 
- 524 **SEMINAR IN ROMANTIC LITERATURE 3 credits**  
Prerequisite: English 324 or equivalent.
- 525 **SEMINAR IN VICTORIAN LITERATURE 3 credits**  
Prerequisite: English 325 or equivalent.  
525b Hardy
- 526 **SEMINAR IN CONTEMPORARY LITERATURE 3 credits**  
Prerequisite: English 326 or 333 or equivalent.  
526a Auden, Spender, MacNeice, Lewis
- 531 **SEMINAR IN AMERICAN LITERATURE: 1800-1860 3 credits**  
531a The Transcendental Movement  
Prerequisite: English 331 or equivalent
- 532 **SEMINAR IN AMERICAN LITERATURE: 1860-1920 3 credits**  
532a The American Sociological Novel (Summer 1965)  
Prerequisite: English 332 or equivalent.
- 543 **SEMINAR IN SHAKESPEARE 3 credits**  
Prerequisite: English 343 or equivalent.
- 560 **SEMINAR IN A LITERARY FORM 3 credits**
- 587 **SEMINAR IN LITERARY CRITICISM 3 credits**  
587b The 19th Century Critics (Summer, 1965)  
Prerequisite: English 324 or 325 or 487.  
587c Theories of Comedy  
Prerequisite: English 487 or equivalent.
- 589 **DIRECTED INDIVIDUAL STUDY 1-3 credits**  
Research on topics not included in formal courses.
- 590 **LINGUISTICS 3 credits**  
Prerequisite: English 490 or equivalent.
- 591 **HISTORICAL LINGUISTICS 3 credits**  
Prerequisite: English 491 or equivalent.  
591a Old English; 591b Middle English (Summer, 1965)
- 598 **RESEARCH IN THE TEACHING OF ENGLISH 1-3 credits**  
Prerequisite: teaching experience. For Master of Education candidates only.
- 599 **THESIS 5-9 credits**  
Prerequisite: English 501. Credit varies according to the individual project.

**DEPARTMENT of FOREIGN LANGUAGES****FACULTY**

**Associate Professors:** King, Robinson (Chairman), Young

**Assistant Professors:** Adam, Brockhaus, Elmendorf, Moerschner, Seigneuret

**Instructors:** Milicic, Shiebert

**Lecturers:** Bourgues, Barragán, Faber, Moisson, van Voorst Vader

**CONCENTRATIONS**

*(Students majoring in one foreign language may elect a minor in a second language.)*

**MAJOR (elementary) 45 credits**

Offered in French, German, Russian, or Spanish

Required courses: 201, 202, 203, 210, 211, 310, 311, 312, 410, or 411 in a given language.

Foreign Language Education 432

Electives under departmental advisement to total 45 credits

Students electing the alternate program for elementary teachers will complete 28 credits selected under advisement from the above major.

**MAJOR (secondary) 45 credits**

(a) A Modern Foreign Language

Forty-five credits in courses numbered 201 and above in French, German, Russian, or Spanish, including 310, 311, 312 and Foreign Language Education 432.

(b) Latin

Forty-five credits selected under advisement

**MINOR 20 credits**

Twenty credits in courses numbered 201 and above, including at least six credits in upper division courses.

**Arts and Sciences****MAJOR**

(a) A Modern Foreign Language

Forty-five credits in courses numbered 201 and above in French, German, Russian or Spanish, including 310, 311 and 312

(b) Classics

Thirty credits in Greek and

Thirty credits in Latin in courses numbered 201 and above



Additional courses in such fields as history, philosophy, geography, or English appropriate to each language are to be selected under departmental advisement. One year of college Latin is strongly recommended.

**MINOR 20 credits**

Twenty credits in courses numbered 201 and above including at least six credits in upper division courses

### Departmental Honors

In addition to the general requirements for all honors students (see page 123) a foreign language major who wishes to graduate "with honors" must complete:

Arts and Sciences—20 credits in upper division honors work in one foreign language.

Teacher Education—17 credits in upper division honors work in one foreign language.

## COURSES

*All students enrolling for the first time at this College in any language and having previous knowledge of the language, however acquired, must take a placement test prior to registration. In some cases students may be granted advanced placement credit.*

*In all courses in the literature of a language (except 367) active use and continued study of the language remain primary aims.*

## FOREIGN LANGUAGE EDUCATION

**432 METHODS AND MATERIALS FOR THE TEACHING OF MODERN FOREIGN LANGUAGES 3 credits**

Prerequisite: nine credits of one modern foreign language beyond the second year.

## FRENCH

**1005 FUNDAMENTALS OF THE FRENCH LANGUAGE 3 to 5 credits**

Prerequisite: some background experience in French; not open to students with the equivalent of more than two years of high school French. A refresher course in pronunciation, grammar, aural comprehension, reading and speaking. Not applicable to a major or minor. Summer only.

**101, 102, 103 FIRST YEAR FRENCH 5 credits each**

Fundamentals of the French language; pronunciation, grammar, aural comprehension, reading, and speaking.

- 201, 202, 203 SECOND YEAR FRENCH 3 credits each**  
Prerequisites: French 103, or two years of high school French or equivalent. Review of fundamentals, reading, aural comprehension and speaking.
- 210, 211 SECOND YEAR CONVERSATION AND COMPOSITION 2 credits each**  
Prerequisites: French 103, or two years of high school French, or equivalent; French 210 prerequisite to 211. Speaking, understanding and writing French. French 210 should be taken concurrently with French 203; 211 with 202.
- 290 INTRODUCTION TO FRENCH LITERATURE 3 credits**  
Prerequisite: nine credits in second year French or equivalent. Selected works of major French authors, with emphasis on reading improvement and methods of textual interpretation.
- 301 INTRODUCTION TO NINETEENTH CENTURY FRENCH LITERATURE 3 credits**  
Prerequisite: French 290 or permission of instructor. Major works and movements.
- 302 INTRODUCTION TO EIGHTEENTH CENTURY FRENCH LITERATURE 3 credits**  
Prerequisite: French 290 or permission of instructor. The Age of Enlightenment represented in various genres.
- 303 INTRODUCTION TO SEVENTEENTH CENTURY FRENCH LITERATURE 3 credits**  
Prerequisite: French 290 or permission of instructor. The classical period represented in various genres.
- 310, 311, 312 THIRD YEAR COMPOSITION AND GRAMMAR 2 credits each**  
Prerequisite: French 211, or the equivalent; each course prerequisite to the next. Written and oral composition and vocabulary building, *explication de texte*.
- 330 CIVILIZATION OF FRANCE 3 credits**  
Prerequisite: nine credits in second year French or equivalent. Significant elements of French civilization presented through French texts.
- 340 THE FRENCH NOVEL 3 credits**  
Prerequisite: French 290 or permission of instructor. Interpretation and discussion of selected readings.
- 341 FRENCH DRAMA 3 credits**  
Prerequisite: French 290 or permission of instructor. Interpretation and discussion of selected readings.
- 342 FRENCH POETRY 3 credits**  
Prerequisite: French 290 or permission of instructor. Interpretation and discussion of selected readings.
- 367 FRENCH LITERATURE IN TRANSLATION 3 credits**  
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 to 5 credits**
- 401 SURVEY OF MEDIEVAL FRENCH LITERATURE 3 credits**  
Prerequisite: nine credits in upper division French. Masterpieces of the Middle Ages.
- 402 SURVEY OF FRENCH RENAISSANCE LITERATURE 3 credits**  
Prerequisite: nine credits in upper division French. Masterpieces of the sixteenth century.
- 403 SURVEY OF CONTEMPORARY FRENCH LITERATURE 3 credits**  
Prerequisite: nine credits in upper division French. Masterpieces of the twentieth century.

- 410 PHONETICS 2 credits**  
Prerequisites: French 210, 211, 310, 311. Phonetic transcription and intensive oral practice to attain a mastery of good pronunciation.
- 411 COURS DE STYLE 3 credits**  
Prerequisite: French 312 or permission of instructor. Advanced composition and grammar.
- 450 STUDIES IN FRENCH LITERATURE 3 credits**  
Prerequisite: nine credits in upper division French or equivalent, and permission of department. Major authors and movements; since topics vary the course may be repeated.
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**

## GERMAN

- 100s FUNDAMENTALS OF THE GERMAN LANGUAGE 3 to 5 credits**  
Prerequisite: some background experience in German; not open to students with the equivalent of more than two years of high school German. A refresher course in pronunciation, grammar, aural comprehension, reading and speaking. Not applicable to a major or minor. Summer only.
- 101, 102, 103 FIRST YEAR GERMAN 5 credits each**  
Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.
- 201, 202, 203 SECOND YEAR GERMAN 3 credits each**  
Prerequisite: German 103, or two years of high school German, or the equivalent. Review of fundamentals, reading, aural comprehension, and speaking.
- 210, 211 SECOND YEAR CONVERSATION AND COMPOSITION 2 credits each**  
Prerequisites: German 103, or two years of high school German, or equivalent; German 210 is prerequisite to 211. Speaking, understanding, and writing German. German 210 should be taken concurrently with German 201; 211 with 202.
- 290 INTRODUCTION TO GERMAN LITERATURE 3 credits**  
Prerequisite: nine credits of second year German or the equivalent. Selected works of major German authors, with emphasis on reading improvement and methods of textual interpretation.
- 301 NINETEENTH CENTURY GERMAN LITERATURE I 3 credits**  
Prerequisite: German 290 or permission of department. Emphasis on the Romantic Movement.
- 302 NINETEENTH CENTURY GERMAN LITERATURE II 3 credits**  
Prerequisite: German 290 or permission of department. Emphasis on realism and naturalism.
- 303 EIGHTEENTH CENTURY GERMAN LITERATURE 3 credits**  
Prerequisite: German 290 or permission of department. The classical period of German literature as reflected in a major work of Lessing, Goethe, and Schiller.
- 310, 311, 312 THIRD YEAR COMPOSITION AND GRAMMAR 2 credits each**  
Prerequisite: German 211 or equivalent; each course prerequisite to the next. Written and oral composition and vocabulary building.
- 330 CIVILIZATION OF GERMANY 3 credits**  
Prerequisite: nine credits of second year German or equivalent. Significant elements of German civilization, presented through German texts.

- 340 THE GERMAN NOVELLA 3 credits**  
Prerequisite: German 290 or permission of instructor. Interpretation and discussion of selected readings.
- 341 THE GERMAN DRAMA 3 credits**  
Prerequisite: German 290 or permission of instructor. Interpretation and discussion of selected readings.
- 342 GERMAN POETRY 3 credits**  
Prerequisite: German 290 or permission of instructor. Interpretation and discussion of selected readings.
- 367 GERMAN LITERATURE IN TRANSLATION 3 credits**  
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.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 401 EARLY GERMAN LITERATURE 3 credits**  
Prerequisite: nine credits in upper division German. Monuments of literature from pagan times through the development of New High German.
- 402 GERMAN LITERATURE FROM THE SEVENTEENTH CENTURY THROUGH THE ENLIGHTENMENT 3 credits**  
Prerequisite: nine credits in upper division German. Selections reflecting the development of German literature and thought from the Baroque through the Enlightenment.
- 403 GERMAN LITERATURE IN THE TWENTIETH CENTURY 3 credits**  
Prerequisite: nine credits in upper division German. Selections reflecting the development of recent German literature.
- 411 ADVANCED COMPOSITION AND GRAMMAR 3 credits**  
Prerequisite: German 312 or permission of instructor.
- 450 STUDIES IN GERMAN LITERATURE 3 credits**  
Prerequisite: nine 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 to 5 credits each**

## GREEK

- 101, 102, 103 FIRST YEAR GREEK 5 credits each**  
Fundamentals of grammar designed primarily to provide an elementary reading knowledge; selected readings from Plato's simpler dialogues.
- 201, 202, 203 SECOND YEAR GREEK 3 credits each**  
Prerequisite: Greek 103 or equivalent. Review of fundamentals; selected readings from the *Iliad* and *Odyssey*; Sophocles' *Oedipus Tyrannus* and Euripides' *Medea*; selected readings from the Gospels and the Pauline Epistles.
- 350 GREEK MYTHOLOGY 3 credits**  
The nature of mythical thought, its development among the Greeks, and its influence on Western literature; selected readings in English. Not applicable to a classics major or minor.

- 367 GREEK LITERATURE IN TRANSLATION 3 credits**  
Selected readings from epic, lyric, drama, history, and oratory and their influence on Western literature. Not applicable to a classics major or minor.

### Modern Greek

- 121, 122, 123 INTRODUCTION TO MODERN GREEK 3 credits each**  
Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking; some emphasis on conversational Greek. Not applicable to a major or minor. Extension only.

## LATIN

- 1005 FUNDAMENTALS OF THE LATIN LANGUAGE 3 credits**  
Prerequisite: some background experience in Latin; not open to students with the equivalent of more than two years of high school Latin. Rapid survey of grammar with readings in classical and medieval Latin. Not applicable to a major or minor.
- 101, 102, 103 FIRST YEAR LATIN 5 credits each**  
A structural approach providing a foundation in grammar, an introduction to the general laws of language, and an elementary reading knowledge with selections from Cicero, Virgil, Ovid, and other Roman writers.
- 201, 202, 203 SECOND YEAR LATIN 3 credits each**  
Prerequisite: Latin 103 or two years of high school Latin. Review of fundamentals; selected readings from various Roman writers; early books of the *Aeneid*, *Metamorphoses* of Ovid; review of Greco-Roman mythology; history of Latin literature.
- 301 ROMAN LYRIC POETRY 3 credits**  
Prerequisite: Latin 203 or equivalent. Special attention to the lyrics, epigrams and wedding songs of Catullus and the *Odes* of Horace; review of grammar.
- 302 ROMAN COMEDY 3 credits**  
Prerequisite: Latin 203 or equivalent. Popular plays of the second century B.C., their influence on European drama; review of grammar.
- 303 ROMAN PHILOSOPHY 3 credits**  
Prerequisite: Latin 203 or equivalent. Selected readings with emphasis on the Stoics and Epicureans.
- 304 POST-CLASSICAL LATIN 3 credits**  
Prerequisite: Latin 203 or equivalent. Selected prose and poetry from the post-classical period.
- 305 SILVER LATIN LITERATURE 3 credits**  
Prerequisite: Latin 203 or equivalent. Studies in the literary traditions of the Early Roman Empire, including selections from Seneca, Pliny, and Martial.
- 306 ROMAN HISTORY AND ORATORY 3 credits**  
Prerequisite: Latin 203 or equivalent. Readings from Sallust, Livy, Tacitus, and Cicero's orations.
- 310 LATIN COMPOSITION 2 to 3 credits**  
Prerequisite: Latin 203 or permission of instructor. Systematic reviews in grammar with exercises based on Cicero; emphasis on correctness of expression and a feeling for idiom.

- 350 LATIN AND GREEK IN CURRENT USE 2 credits**  
The principles governing the formation of English words derived from Latin and Greek. (No knowledge of these languages is required.) Not applicable to a major or minor.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**

## RUSSIAN

- 101, 102, 103 FIRST YEAR RUSSIAN 5 credits each**  
Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking.
- 201, 202, 203 SECOND YEAR RUSSIAN 3 credits each**  
Prerequisite: Russian 103 or two years of high school Russian, or equivalent. Review of fundamentals, reading, aural comprehension, and speaking.
- 210, 211 SECOND YEAR CONVERSATION AND COMPOSITION 2 credits each**  
Prerequisite: Russian 103 or two years of high school Russian, or equivalent. Russian 210 is prerequisite to 211. Speaking, understanding and writing Russian. Russian 210 should be taken concurrently with 201; 211 with 202.
- 290 INTRODUCTION TO RUSSIAN LITERATURE 3 credits**  
Prerequisite: nine credits of second year Russian or equivalent. Selected works of major Russian authors, with emphasis on reading improvement and methods of textual interpretation.
- 301 NINETEENTH CENTURY LITERATURE I 3 credits**  
Prerequisite: Russian 290 or permission of instructor. An introduction to Pushkin, Lermontov, Gogol, and Turgenev.
- 302 NINETEENTH CENTURY LITERATURE II 3 credits**  
Prerequisite: Russian 290 or permission of instructor. An introduction to Dostoevsky, Tolstoy, and Chekhov.
- 303 TWENTIETH CENTURY LITERATURE 3 credits**  
Prerequisite: Russian 290 or permission of instructor. The Symbolists, Acemists, and Futurists; Russian formalism; Soviet Russian literature; versification.
- 330 CIVILIZATION OF RUSSIA 3 credits**  
Prerequisite: nine credits of second year Russian or equivalent. Significant elements of Russian civilization presented through Russian texts.
- 367 RUSSIAN LITERATURE IN TRANSLATION 3 credits**  
Selections from eminent Russian authors read and discussed in English. Not applicable to a major or minor in Russian. When topics vary, the course may be repeated.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 400 SPECIAL STUDIES 3 credits**  
Prerequisite: nine credits in upper division Russian and permission of department.
- 411 ADVANCED COMPOSITION AND GRAMMAR 3 credits**  
Prerequisite: Russian 312 or permission of instructor.
- 470 STRUCTURE OF RUSSIAN I 2 credits**  
Prerequisite: three years of college Russian or permission of instructor. Principles of phonology and their application; phonetics as the basis of phonology.
- 471 STRUCTURE OF RUSSIAN II 2 credits**  
Prerequisite: Russian 470 or permission of the instructor. Morphology of the verb.

- 472 STRUCTURE OF RUSSIAN III 2 credits**  
Prerequisite: Russian 470 or permission of instructor. Morphology of the noun.
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**

## SPANISH

- 1005 FUNDAMENTALS OF THE SPANISH LANGUAGE 3 to 5 credits**  
Prerequisite: some background experience in Spanish; not open to students with the equivalent of more than two years of high school Spanish. Refresher course in pronunciation, grammar, aural comprehension, reading and speaking. Not applicable to a major or minor. Summer only.
- 101, 102, 103 FIRST YEAR SPANISH 5 credits each**  
Fundamentals of the language, pronunciation, grammar, aural comprehension, reading and speaking.
- 201, 202, 203 SECOND YEAR SPANISH 3 credits each**  
Prerequisite: Spanish 103 or two years of high school Spanish or the equivalent. Review of fundamentals, reading, aural comprehension, and speaking.
- 210, 211 SECOND YEAR CONVERSATION AND COMPOSITION 2 credits each**  
Prerequisite: Spanish 103 or two years of high school Spanish, or the equivalent; Spanish 210 prerequisite to 211. Speaking, understanding, and writing Spanish. Spanish 210 should be taken concurrently with Spanish 201; 211 with 202.
- 301 INTRODUCTION TO SPANISH LITERATURE 3 credits**  
Prerequisite: nine credits of second year Spanish or equivalent. Selected masterpieces of Spanish prose and poetry.
- 302 NINETEENTH CENTURY SPANISH LITERATURE 3 credits**  
Prerequisite: Spanish 301, 330A, or permission of department. Prose and poetry of the nineteenth century, with emphasis on the novel of realism.
- 303 THE GENERATION OF '98 3 credits**  
Prerequisite: Spanish 301, 330A, or permission of department. Novels, drama, essays of Baroja, Valle-Inclan, Azorin, Unamuno, Ortega y Gasset, and Benavente.
- 304 INTRODUCTION TO SPANISH-AMERICAN LITERATURE 3 credits**  
Prerequisite: nine credits of second year Spanish or equivalent. Prose and poetry from the colonial period to the present studied in an historical and sociological framework.
- 305 THE SPANISH-AMERICAN NOVEL 3 credits**  
Prerequisite: Spanish 301, 330B, or permission of department. The novel in the late nineteenth and twentieth centuries in Mexico and South America, with emphasis on its regional character and the political and social atmosphere in which it developed.
- 306 THE MODERNISTA MOVEMENT IN SPANISH-AMERICAN LITERATURE 3 credits**  
Prerequisite: Spanish 301, 330B, or permission of department. Prose and poetry of the late nineteenth century writers comprising the school of modernism.
- 310, 311, 312 THIRD YEAR CONVERSATION AND GRAMMAR 2 credits each**  
Prerequisite: Spanish 211 or equivalent; each course is prerequisite to the next. Written and oral composition and vocabulary building.
- 330A CIVILIZATION OF SPAIN 3 credits**  
Prerequisite: nine credits of second year Spanish or equivalent. Significant elements of Spanish civilization presented through Spanish texts.

- 3308 CIVILIZATION OF SPANISH AMERICA 3 credits**  
Prerequisite: nine credits of second-year Spanish or equivalent. Significant elements of Spanish-American civilization presented through Spanish texts.
- 340 READINGS IN CONTEMPORARY SPANISH DRAMA 3 credits**  
Prerequisite: Spanish 203 or equivalent. Interpretation and discussion of selected readings.
- 341 THE CONTEMPORARY SPANISH NOVEL 3 credits**  
Prerequisite: Spanish 203 or equivalent. Interpretation and discussion of selected readings.
- 342 SPANISH POETRY 3 credits**  
Prerequisite: Spanish 203 or equivalent. Interpretation and discussion of selected readings.
- 367 SPANISH AND SPANISH-AMERICAN LITERATURE IN TRANSLATION 3 credits**  
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.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits**
- 401 SURVEY OF SPANISH LITERATURE FROM 1492-1554 3 credits**  
Prerequisite: nine credits in upper division Spanish or equivalent. Selections from the chief works of the Renaissance.
- 402 SURVEY OF SPANISH LITERATURE FROM 1554-1681 3 credits**  
Prerequisite: nine credits in upper division Spanish or equivalent; the literature of the Baroque period and some masterpieces of the Golden Age.
- 403 THE GOLDEN AGE OF DRAMA 3 credits**  
Prerequisite: nine credits in upper division Spanish or equivalent. Masterpieces of Golden Age drama from Lope de Vega to Calderón.
- 411 ADVANCED COMPOSITION AND GRAMMAR 3 credits**  
Prerequisite: Spanish 312 or permission of instructor.
- 450 STUDIES IN SPANISH LITERATURE 3 credits**  
Prerequisite: nine credits in upper division Spanish and permission of department. Major authors and movements. Since topics vary, the course may be repeated.



## INTERDEPARTMENTAL OFFERINGS in

**GENERAL EDUCATION**

Each candidate for the Bachelor of Arts and the Bachelor of Arts in Education degree is required to complete General Education courses as outlined on page 44.

English 100, 101, and Speech 100 are to be completed in the student's first year. The remaining courses are to be included as study programs prescribe, generally during the first two years.

A number of courses are given as departmental offerings:

Biology 101 or 104	Mathematics 151 or 121 or 122
Chemistry 101 or 121 or 125	Physical Education activities
English 100, 101	Physics 101 or 131 or 231
Geography 101	Speech 100
or	
Geology 101	

See the respective departmental sections of the Catalogue for descriptions.

Those which are interdepartmental and designated by General Education course numbers follow:

**105 BEHAVIORAL SCIENCE 4 credits**

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 7 credits each**

(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 AN INTRODUCTION TO ECONOMIC AND POLITICAL INSTITUTIONS 4 credits**

Investigation of economic, legal, and political institutions in the context of private property from the pre-constitution period to the present.

**321 SURVEY OF AFRO-ASIA 2 credits**

Prerequisite: junior status and completion of the preceding required General Education courses. Cultural, socio-economic, and historical survey of the societies of Africa and Asia, with emphasis upon the recent past and problems of the present.

General Science

(See page 177)

**DEPARTMENT of GEOGRAPHY**

## FACULTY

**Professor:** Critchfield (Chairman)

**Associate Professors:** Miller, Monahan

**Assistant Professors:** Mookherjee, Teshera

**Instructor:** Figy

## CONCENTRATIONS

## Teacher Education

**MAJOR** (elementary) 45 credits

Geography 101, 201, 251, 401, 421, 460

5 credits from: Geography 311, 313, 314, 315, 316, 318, 319, 320, 415

One course from: Geography 331, 333, 351, 353, 453

One course from: Geography 207, 341, 422, 423, 430, 435, 440, 470, 480, 481

Electives—all selections are to be made under departmental advisement

Students electing the alternate program for elementary teachers will complete 28 credits selected under advisement from the above major.

**MAJOR** (secondary) 45 credits

Geography 101, 201, 207, 311, 331, 460, 470

5 credits from: Geography 313, 314, 315, 316, 318, 319, 320, 401, 415

One course from: Geography 251, 333, 351, 353, 453

Two courses from: Geography 341, 421, 422, 423, 430, 435, 440, 454, 480, 481, 490; Social Studies Education 426

All selections are to be made under departmental advisement.

**MINOR** (secondary) 20 credits

Geography 201, 207, 470

Electives under advisement

## Arts and Sciences

The program of the undergraduate major or minor in geography should include fundamental courses in both the natural sciences and the social studies. The department will recommend supporting courses related to the student's career objectives. The student contemplating graduate work toward the Ph.D. 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.

### Concentrations in Geography

**MAJOR 50 credits**

Geography 101, 201, 207, 331, 351

Three courses selected under advisement from: Geography 311, 313, 314, 315, 316, 318, 319, 320, 401, 415

One course from: Geography 333, 353, 421, 422, 423, 452, 453, 454; Geology 310; Biology 301

One course from: Geography 341, 430, 435, 440, 470

One course from: Geography 480, 481, 490

Electives

All selections are to be made under departmental advisement.

**MINOR 25 credits**

Geography 100 or 201

Electives under advisement

### Concentrations in Rural and Urban Planning

**MAJOR 65 credits**

This undergraduate major is intended to prepare students for pre-professional service in planning agencies as well as to provide a foundation for graduate study in this field. Early consultation with advisers in the department is essential.

Geography 311 (or 401), 341, 351, 430, and 454 (or 480 or 490)

Economics 201

Mathematics 240

Political Science 253, 420 (or Geography 421), and 421

Sociology 366, 413

Electives under advisement from Geography 353, 452, 453; Biology 447; Economics 202, 408, 410; Industrial Arts 240; Mathematics 270; Sociology 431, 441

**MINOR 25 credits**

Geography 341, 430

Electives under advisement from courses listed for the major in this field (see above).

### Departmental Honors

In addition to the general requirements for all honors students (see page 123) a geography major who wishes to graduate "with honors" must complete:

5 credits from Geography 480, 481, 490

15 credits in a foreign language

Satisfactory performance on an oral examination in geography

## Graduate Study

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

### COURSES

- 100 WORLD REGIONAL GEOGRAPHY 5 credits**  
For students who have not had a high school course in geography. Major world regions treated with special attention to population, land, and resources.
- 101 PHYSICAL GEOGRAPHY 4 credits**  
Principles and techniques in the analysis of areal distributions in the natural environment; landforms, hydrography, climate, soils, and vegetation.
- 201 HUMAN GEOGRAPHY 3 credits**  
Interrelations of man and his natural environment, emphasizing cultural influences on world geographic patterns.
- 207 ECONOMIC GEOGRAPHY 5 credits**  
World resources, industries, commodities, and commerce.
- 251 MAP READING AND ANALYSIS 2 credits**  
Construction of maps and charts based on sources in the natural and social sciences.
- 311 GEOGRAPHY OF ANGLO-AMERICA 5 credits**  
Prerequisite: three credits in geography. Physical environments, resources, settlement and economies of Canada and the United States.
- 313 GEOGRAPHY OF CARIBBEAN AMERICA 3 credits**  
Prerequisite: three credits in geography. Land forms, climate, vegetation, and soils of Mexico, Central America, and the West Indies and their relationship to history, settlement patterns, and current economic conditions.
- 314 GEOGRAPHY OF SOUTH AMERICA 5 credits**  
Prerequisite: three credits in geography. South American nations, emphasizing culture, natural environment, economic activities and regional differences.
- 315 GEOGRAPHY OF ASIA 5 credits**  
Prerequisite: three credits in geography. Asia's settlement, population, economic resources and activities, and associated problems.
- 316 GEOGRAPHY OF EUROPE 5 credits**  
Prerequisite: three credits in geography. Economic, political, and cultural problems of Europe.
- 318 GEOGRAPHY OF THE PACIFIC 3 credits**  
Prerequisite: three credits in geography. Physical environment, resources, and settlement of the Pacific Islands, Australia, and New Zealand.
- 319 GEOGRAPHY OF AFRICA 3 credits**  
Prerequisite: three credits in geography. Resources, settlement, peoples, and development of Africa.
- 320 GEOGRAPHY OF THE U.S.S.R. 3 credits**  
Prerequisite: three credits in geography. Physical environment, resources, industries, population, and settlement of the Soviet Union with emphasis on the nation's role in world affairs.
- 331 WEATHER AND CLIMATE 5 credits**  
Prerequisite: Geography 101 or equivalent. Elements of climate, climatic regions, and climate as an environmental factor.

- 333 BIOGEOGRAPHY 3 credits**  
Prerequisite: Geography 101 or equivalent. Origin, distribution, and adaptation of plant and animal associations; examination of representative plant and animal forms in relation to their physical environment and to man.
- 341 URBAN GEOGRAPHY 3 credits**  
Prerequisite: Geography 101 or Geography 201. Geographic relations of the modern city with emphasis upon the development, functions, and problems of American cities.
- 351 CARTOGRAPHY 5 credits**  
Practical experience in map and chart construction; the principles of grid representation, scale, symbols, lettering, design, and reproduction.
- 353 INTERPRETATION OF MAPS AND AERIAL PHOTOGRAPHS 3 credits**  
Reading and interpretation of maps and aerial photos; techniques used to identify geographic features of the landscape, field work.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 400 SPECIAL PROBLEMS IN GEOGRAPHY 2 to 5 credits**  
Prerequisite: permission of instructor. Individual projects under supervision.
- 401 GEOGRAPHY OF THE PACIFIC NORTHWEST 3 credits**  
Prerequisite: three credits in geography. Pacific Northwest resources and industries and problems in resource development.
- 415 GEOGRAPHY OF INDIA AND PAKISTAN 3 credits**  
Prerequisite: Geography 100 or 201. Natural and cultural regions of India and Pakistan; their resources, population, and economic activities.
- 421 CONSERVATION OF NATURAL RESOURCES 5 credits**  
Principles and practices in the wise management and economic use of our natural resources with emphasis on the Pacific Northwest; materials and objectives in conservation education.
- 422 GEOGRAPHY OF WATER RESOURCES 3 credits**  
Prerequisite: three credits in geography. Principles and practices in water use and water conservation; the distribution of water resources and the problems of water conservation in the United States.
- 423 GEOGRAPHY OF SOILS 3 credits**  
Prerequisite: Geography 101 or equivalent. Properties, formation, classification, distribution and management of the world's soils.
- 430 RURAL AND URBAN PLANNING 5 credits**  
Prerequisite: Geography 341. Principles, problems, and techniques of planning urban, suburban, and rural land use; theoretical and legal bases for functions of planning agencies.
- 435 HISTORICAL GEOGRAPHY OF THE UNITED STATES 3 credits**  
Prerequisite: Geography 311 or American history. The relation of settlement of the United States to geographic factors; correlation of history and geography.
- 440 GEOGRAPHY OF POPULATION 3 credits**  
Prerequisite: Geography 201. Distribution of population density and composition; patterns of migration and settlement in selected world areas.
- 452 ADVANCED CARTOGRAPHY 3 to 5 credits**  
Geography 351 and permission of instructor. Advanced problems and laboratory projects in map and chart construction.
- 453 FIELD METHODS IN GEOGRAPHY 3 credits**  
Prerequisite: Geography 351 or permission of instructor. Recording, mapping, and analysis of physical and cultural features.

- 454 ANALYSIS OF AREAL DATA 4 credits**  
Prerequisite: Mathematics 240. Statistical and cartographic techniques in the solution of geographic problems.
- 460 THE TEACHING OF GEOGRAPHY 3 credits**  
Prerequisite: ten credits in geography. Source materials and methods of geographic instruction in the public schools.
- 470 GEOGRAPHY AND WORLD AFFAIRS 3 credits**  
Prerequisite: three credits in geography. Geographical basis of contemporary world problems and international relations; military strategy, tension zones, natural resources, boundaries; the current problem areas of the world.
- 480 THEORETICAL AND APPLIED GEOGRAPHY 2 to 5 credits**  
Prerequisite: permission of instructor. Seminars in topics such as location theory, land use planning, population, regional analysis.
- 481 READINGS IN THE HISTORY AND THEORY OF GEOGRAPHY 3 credits**  
Prerequisite: twenty credits in geography. Directed readings from the works of leading geographers of the past and present on the nature and development of geography.
- 490 SEMINAR IN GEOGRAPHIC RESEARCH AND WRITING 3 credits**  
Prerequisite: twenty credits in geography. Source materials and techniques of geographic research; selected topics investigated in detail as a basis for written papers.
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 501 SEMINAR IN HISTORY AND PHILOSOPHY OF GEOGRAPHY 4 credits**  
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 credits**  
Application of bibliographic, cartographic, statistical, and field techniques in geographic investigation.
- 520 SEMINAR IN REGIONAL GEOGRAPHY 5 credits**  
Methods of regional analysis applied in the detailed study of a world region.
- 521 SEMINAR IN PHYSICAL GEOGRAPHY 5 credits**  
Advanced topics in biogeography, climatology, landforms, or soil geography.
- 522 SEMINAR IN CULTURAL GEOGRAPHY 5 credits**  
Advanced topics in social, economic, historical, or political geography.
- 550 GEOGRAPHY IN THE SOCIAL SCIENCES 2 credits**  
Geographic concepts and techniques in the social sciences, with particular attention to the place of geography in social studies education.
- 551 GEOGRAPHY IN THE NATURAL SCIENCES 2 credits**  
Geographic concepts and techniques in the biological sciences and earth science, with emphasis on geography in public school science curricula.
- 552 PERSPECTIVES IN GEOGRAPHIC EDUCATION 1 credit**  
Prerequisite: Geography 460 or concurrent. Current trends in geographic instruction at all educational levels.
- 560 PROBLEMS IN SYSTEMATIC GEOGRAPHY 5 credits**  
Prerequisite: Geography 510 and 521 or 522. Directed research on a selected topic in physical or cultural geography.
- 590 THESIS 6-9 credits**  
Prerequisite: admission to candidacy for the master's degree and appointment of thesis adviser.

**DEPARTMENT of GEOLOGY**

## FACULTY

**Associate Professors:** Christman, Easterbrook (Chairman), Ellis**Assistant Professor:** Ross

## CONCENTRATIONS

*The student interested in a geology major should consult early in his college career with departmental advisers in order to plan for the proper sequence of courses.*

## Teacher Education

**MAJOR** Earth Science (elementary) 45 credits

Geology 211, 212, 310, 311; Geography 331, Physics 105

Biology 383 or Physical Science 382 (select one in addition to courses taken in elementary concentration).

Electives under advisement from Geology 316, 317, 399, 407, 410, 412, 413, 414; Geography 333, 353, 421, 422, 423; Physics 131, 321

Students electing the alternate program for elementary teachers will complete 28 credits selected under advisement from the above major.

**MAJOR** Earth Science (secondary) 45 credits

Geology 211, 212, 305, 306, 310

Geography 331; Physics 105, 131

Electives from: Geology 316, 317, 319, 399, 400, 407, 410, 412, 413, 414, 430  
Geography 333, 353, 421, 422, 423  
Physics 321**MINOR** Geology (secondary) 25 credits

Geology 211, 212

16 credits under advisement of the department

## Arts and Sciences

**MAJOR** 50 credits, plus Supporting Courses

Geology 211, 212, 305, 306, 310, 316, 317, 407

14 credits under advisement from: Geology 300, 319, 399, 400, 410, 416, 418, 423, 424, 425, 430 or

3 credits from Geology 412, 413, 414

Substitutions in biology may be made for paleontology emphasis

**Supporting Courses:**

Chemistry 121, 122; Physics 131 or 231; Mathematics 121 in meeting general education requirements.

20 additional credits under advisement in biology, mathematics, physics or chemistry.

It is strongly recommended that the minor be taken in one of these fields.

**MINOR 25 credits**

Geology 211, 212

16 credits selected under advisement of the department

**Departmental Honors**

In addition to the general requirements for all honors students (see page 123) a geology major who wishes to graduate "with honors" must include:

Geology 399

Satisfactory performance on a comprehensive examination in geology

24 credits or a demonstrated reading knowledge of French, German or Russian.

**COURSES IN GEOLOGY****101 GENERAL GEOLOGY 4 credits**

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 credits**

Prerequisite: sophomore status or permission of department. Origin, composition, and structure of the 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 credits**

Prerequisite: Geology 211 or permission of department. History of the earth as interpreted from the rocks and the story of the development of its inhabitants; the geologic history of North America and the Pacific Northwest.

**300 SPECIAL PROJECTS IN GEOLOGY 2 to 5 credits**

Prerequisite: 10 credits in geology and permission of department. Special projects under supervision.

**305 PRINCIPLES OF MINERALOGY 4 credits**

Prerequisite: Chemistry 121. Crystallography, crystal chemistry, and crystal structure fundamental to the study of minerals.

**306 DESCRIPTIVE MINERALOGY 5 credits**

Prerequisite: Geology 305 and 211. Identification of common rock-forming and other common minerals with special reference to their geologic occurrence.

**310 GEOMORPHOLOGY 5 credits**

Prerequisites: Geology 211 or permission of department. Landscape features, the sculpturing of mountains, hills, plains, and plateaus by surface processes.

**311 COMMON ROCKS AND MINERALS 4 credits**

Prerequisite: Geology 101 or Geology 211, and high school or college chemistry. More detailed work with rocks and minerals than is afforded in Geology 101 or 211; the origin, occurrence, and identification of minerals and rocks.

**316 PRINCIPLES OF PALEONTOLOGY 5 credits**

Prerequisites: Geology 212 or permission of department. Life on the earth as revealed by its inhabitants, past and present.

**317 STRUCTURAL GEOLOGY 5 credits**

Prerequisite: Geology 211, 212. Description, classification, and interpretation of earth structures; laboratory solution of structural problems by use of geologic maps.



- 319 ECONOMIC GEOLOGY 3 credits**  
Prerequisite: Geology 306. Economic minerals and ore deposits, their genesis and occurrence.
- 384 EARTH SCIENCE FOR THE ELEMENTARY SCHOOL 3 credits**  
Prerequisite: Geology 101 or Geography 101. Concepts, experiences, and materials from the earth sciences adaptable to the elementary and junior high school classroom.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 399 SEMINAR IN GEOLOGY 1 credit**  
Prerequisite: permission of department. Geological reports, papers, and discussion.
- 400 SPECIAL PROJECTS IN GEOLOGY 2 to 5 credits**  
Prerequisite: permission of department. Special projects under supervision.
- 407 PETROLOGY 3 credits**  
Prerequisite: Geology 306. Comprehensive course for geology majors and minors; non-majors should take Geology 311. Origin, occurrence, and classification of igneous, sedimentary, and metamorphic rocks, and hand specimen identification.
- 410 FIELD GEOLOGY 3 or 5 credits**  
Prerequisite: Geology 317. 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 3 credits**  
Prerequisite: Geology 311 or permission of department. The geology of Northwest Washington as observed in the field. Summer only.
- 413 PHYSIOGRAPHY OF WESTERN UNITED STATES 3 credits**  
Prerequisite: Geology 101 or 211. Geological forces and processes that have shaped the landscape of the West; origin of scenic geological features in the national parks.
- 414 GEOLOGY OF WASHINGTON 3 credits**  
Prerequisites: Geology 311 or permission of department. The significant geologic features of Washington State; field studies.
- 416 STRATIGRAPHY 5 credits**  
Prerequisite: Geology 316. Analysis of physical and biological characteristics of stratified rock sequences; principles of correlation, determination of geologic age and facies relationships.
- 418 OPTICAL MINERALOGY 5 credits**  
Prerequisite: Geology 306. Optical phenomena as related to mineralogy and identification of minerals from optical properties with the use of the polarizing microscope.
- 423 IGNEOUS PETROGRAPHY AND PETROLOGY 3 credits**  
Prerequisite: Geology 407 and 418. Origin, occurrence, and classification of igneous rocks and minerals and use of thin sections in identifying igneous minerals.
- 424 SEDIMENTARY PETROGRAPHY AND PETROLOGY 3 credits**  
Prerequisites: Geology 407 and 418 and preferably Geology 423. Origin, occurrence, and classification of sedimentary rocks and minerals, and use of thin sections in identifying sedimentary minerals.
- 425 METAMORPHIC PETROGRAPHY AND PETROLOGY 3 credits**  
Prerequisites: Geology 407, 418, 423, and preferably 424. Origin, occurrence, and classification of metamorphic rocks and minerals, and use of thin sections in identifying metamorphic minerals.

- 430 MAP AND AERIAL PHOTOGRAPH INTERPRETATION 3 credits**  
Prerequisite: Geology 310. Identification and interpretation of geologic features using topographic maps and aerial photographs.
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 500 SPECIAL PROJECTS IN EARTH SCIENCE 2-5 credits**  
Prerequisite: permission of instructor. Special projects under supervision.
- 510 FIELD PROBLEM 2-5 credits**  
Prerequisite: Geology 410 or recognized summer field camp. Field mapping problem and report in geology.
- 511 ADVANCED STUDIES IN PHYSICAL GEOLOGY 3 credits**  
Prerequisite: Geology 407 or permission of instructor. Independent or class study of recent advances in physical geology.
- 512 ADVANCED STUDIES IN HISTORICAL GEOLOGY 3 credits**  
Prerequisite: Geology 316 or permission of instructor. Independent or class study of recent advances in historical geology.

### **GERMAN**

(See page 97)

### **GREEK**

(See page 98)

### **HEALTH EDUCATION**

(See page 159)

---

**DEPARTMENT of HISTORY****FACULTY****Professors:** Murray (Chairman), Radke**Associate Professors:** Boylan, Hiller, McAree, Schuler**Assistant Professors:** Horn, Roe, Thomas**Instructors:** Benowitz, Newman**Lecturer:** Knibbs**CONCENTRATIONS****Teacher Education****MAJOR** 45 credits (all levels)

History 203-204

Select two: History 426, 427, 428, 429, 431, 432, 435, 436, 437, 438, 439

Select one: History 410, 411, 412, 415, 416, 420

History 399

Additional courses under advisement

Students electing the alternate program for elementary teachers will complete 28 credits selected under advisement from the above major.

**MINOR** 25 credits

History 203-204. Additional courses, including one upper division course, under advisement.

**Arts and Sciences****MAJOR** 50 credits, plus Supporting Courses

History 203-204

Select two: History 426, 427, 428, 429, 431, 432, 435, 436, 437, 438, 439

Select one: History 410, 411, 412, 415, 416, 420

History 399

Additional courses under advisement

**Supporting Courses:** Political Science 251 and one or more basic courses in other fields of the social sciences; 24 credits or the equivalent in one appropriate foreign language.**MINOR** 25 credits

History 203-204, with additional courses in history under advisement.

## Departmental Honors

A history major who wishes to graduate "with honors" must meet the general requirements for all honors students (see page 123). He should consult the department chairman regarding special requirements.

## Graduate Study

For concentrations in history leading to a Master of Education or Master of Arts degrees, see **Graduate Bulletin**.

## COURSES

Courses in the Department of History cover a wide range of subject areas. For ready reference courses may be classified as follows:

General Courses — 105, 106, 399, 400, 408, 501, 502, 503, 504, 505

Ancient and Medieval — 410, 411, 412, 415, 416, 420, 510

Modern Europe — 336, 341, 347, 388, 425, 426, 427, 428, 429, 431, 432, 433, 434, 435, 436, 437, 438, 439, 530, 540

United States — 203, 204, 360, 367, 391, 450, 451, 452, 453, 454, 455, 457, 459, 461, 463, 465, 467, 550

Western Hemisphere — 270, 471, 473, 570

Afro-Asia — 280, 385, 481, 482, 483, 484, 485, 487, 580

### 105, 106 HISTORY OF CIVILIZATION 5 credits each

Not open to entering freshmen. Human development from earliest times to the present; an orientation to contemporary life and culture based on a study of the growth of human culture; the development of institutions, arts and ideas.

### 203 AMERICAN HISTORY TO 1865 5 credits

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

### 204 AMERICAN HISTORY SINCE 1865 5 credits

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

### 270 THE WESTERN HEMISPHERE 5 credits

Western Hemisphere history from European origins to the present.

### 280 THE FAR EAST 5 credits

The Far East from 1500 to the present.

### 336 FRANCE IN THE MODERN WORLD 3 credits

Leading political, social and intellectual trends in 19th and 20th century French history. Summer only.

### 341 EUROPEAN ECONOMIC HISTORY 5 credits

European economic development from the origins of capitalism to the present with special emphasis on the emergence of modern industrialism.

### 347 EUROPEAN INTELLECTUAL HISTORY 5 credits

Development of the European mind from the seventeenth century to the present.

- 360 AMERICAN ECONOMIC HISTORY 5 credits**  
American economic development from colonial times to the present with particular emphasis upon the later periods.
- 367 AMERICAN INTELLECTUAL HISTORY 5 credits**  
The development of the American mind from colonial times to the present.
- 385 AFRICA 5 credits**  
African history from the sixteenth century to the present.
- 388 THE BRITISH EMPIRE 5 credits**  
The development of the overseas empire of Great Britain from Elizabethan times to the present.
- 391 HISTORY AND GOVERNMENT OF WASHINGTON 3 credits**  
The general history of the Pacific Northwest, state development, samples of local history, and state and local government. This course meets the requirement for state teacher certification.
- 399 HISTORICAL RESEARCH 3 credits**  
Introduction to historical research methods; analysis of a particular historical field; an assigned special project.
- 400 SPECIAL PROBLEMS 1 to 5 credits**  
Prerequisite: permission of department.
- 408 WORLD WARS OF THE TWENTIETH CENTURY 5 credits**  
A military analysis of the Great Wars of this century with emphasis on the strategic and tactical considerations which governed their course.
- 410 ANCIENT NEAR EAST 5 credits**  
Prerequisite: History 105 or General Education 121. The genesis of Western civilization: our cultural debt to the ancient Mesopotamians, Egyptians, Hittites, Phoenicians, Armaeans, Hebrews, Assyrians, and Persians.
- 411 GREECE 5 credits**  
Prerequisite: History 105 or General Education 121; open to sophomores with permission of instructor. The Greek World from the Minoan-Mycenaean period to about 220 B.C.
- 412 ROME 5 credits**  
Prerequisite: History 105 or General Education 121; open to sophomores with permission of instructor. From the foundation of Rome (753 B.C.) to the death of Theodosius I (395 A.D.) and the division of the Empire.
- 415 WESTERN MEDIEVAL EUROPE 5 credits**  
Prerequisite: History 105 or General Education 121; open to sophomores with permission of instructor. Political, social, economic, and cultural developments of Western Europe from the death of Theodosius I (395 A.D.) to the eve of the Hundred Years War (1337).
- 416 THE BYZANTINE EMPIRE 5 credits**  
Prerequisite: History 105 or General Education 121; open to sophomores with permission of instructor. From the dedication of Constantinople to its fall (330-1453).
- 420 THE RENAISSANCE AND THE REFORMATION 5 credits**  
Prerequisite: History 105 or General Education 121; open to sophomores with permission of instructor. The 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 credits**  
Development of the modern state system and the conflict between the monarchs and the growing middle class.

- 426 MODERN EUROPE, 1789-1850 5 credits**  
Political, economic, social, and diplomatic developments between the French Revolution and mid-19th century.
- 427 MODERN EUROPE, 1850-1914 5 credits**  
From the age of "Realpolitik" to the First World War.
- 428 MODERN EUROPE, 1914-1945 5 credits**  
Results of World War I, attempts at world organization, the Succession States of Central Europe, World War II.
- 429 EUROPE SINCE 1945 3 credits**  
Major political, economic, and social developments; origin and operation of the cold war and attempts of Europe to adjust to the changing status of the continent.
- 431 GERMANY 5 credits**  
From the Thirty-years War to the present; the rise of Brandenburg-Prussia and the role of Germany in the international state system.
- 432 RUSSIA, 1689-1905 3 credits**  
Political, social, economic, and diplomatic history from Peter the Great to the Revolution of 1905; influences on the development of the modern Russian state.
- 433 RUSSIA, 1905 TO THE PRESENT 5 credits**  
Political, social, economic, and diplomatic history with emphasis on the period since the Bolshevik Revolution.
- 434 RUSSIA SINCE 1917 3 credits**
- 435 FRANCE SINCE 1815 5 credits**  
Political, social, and economic development of France since Napoleon.
- 436 ENGLAND, 1485-1688 5 credits**  
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 credits**  
Political, social, economic, and diplomatic history of England from the Glorious Revolution to the end of the Napoleonic Wars; constitutional developments of the period.
- 438 ENGLAND, 1815-1906 5 credits**  
Political, social, economic, and diplomatic history of England from Waterloo to the Liberal government of 1906; the development of parliamentary institutions.
- 439 ENGLAND SINCE 1906 5 credits**  
The role of England in the World Wars of the twentieth century; the impact of these wars on English politics, economics, and society.
- 450 AMERICAN COLONIAL HISTORY 5 credits**  
The colonial period from the discovery of America to the end of the Revolution.
- 451 THE EARLY NATIONAL PERIOD 5 credits**  
The development of political parties, partisan conflict concerning issues, constitutional adoption and interpretation, and foreign policies of the United States from the Confederation period to 1816.
- 452 THE AGE OF JACKSON 5 credits**  
The United States from 1816 through the Mexican War.
- 453 THE CIVIL WAR AND RECONSTRUCTION 5 credits**  
The development of rival nationalisms; problems of war in North and South; the efforts toward reunion; the new problems in 1877.
- 454 THE UNITED STATES 1877-1900 5 credits**  
Social, economic, and political development of the American nation after Reconstruction.

- 
- 455 THE PROGRESSIVE MOVEMENT 5 credits**  
Economic, social, and political protest in America from the Civil War to 1920; growth and decline of the Progressive Party between 1900 and 1916.
- 457 THE UNITED STATES IN THE TWENTIETH CENTURY 5 credits**  
Political, economic, social, and intellectual development in the United States from 1900 to 1945.
- 459 THE UNITED STATES SINCE 1945 3 credits**  
Internal and international consequences of the rise of the United States as a world power since the end of the Second World War.
- 461 DIPLOMATIC HISTORY OF THE UNITED STATES 5 credits**  
The relationship of the United States to world politics from colonial times to the present.
- 463 AMERICAN CONSTITUTIONAL HISTORY 5 credits**  
Prerequisite: History 203 or equivalent. Constitutional development from the Revolutionary era to the present.
- 465 THE AMERICAN WEST 5 credits**  
The Westward Movement from the Allegheny Mountains to the Pacific Ocean with special emphasis upon the Far West.
- 467 THE SOUTH 5 credits**  
From the development of a distinctive Southern culture in late eighteenth century America to the present.
- 471 CANADA 5 credits**  
From the period of French colonization to the present.
- 473 LATIN AMERICA 5 credits**  
From the period of early Spanish and Portuguese colonization to the present.
- 481 CHINA 5 credits**  
Chinese history from the Ming Dynasty to the present.
- 482 INDIA 5 credits**  
Modern India in its political, social, economic, and cultural development.
- 483 ASIA IN THE TWENTIETH CENTURY 3 credits**  
Impact of the Western World on the Orient in the light of Asiatic development since 1900.
- 484 CONTEMPORARY CHINA AND JAPAN 3 credits**  
Rise of Chinese and Japanese nationalism from the mid-nineteenth century to the mid-twentieth century. Summer only.
- 485 CONTEMPORARY AFRICA SOUTH OF THE SAHARA 3 credits**  
European imperialism in Africa in the late nineteenth and the twentieth century with emphasis on the recent development of African nationalism.
- 487 THE NEAR EAST 5 credits**  
The cultural and historical background of Arab and Turkish lands of North Africa and the Near East; the decline of Islamic influence in early times and its revival in the twentieth century.
- 501 HISTORIOGRAPHY 5 credits**  
Analysis of historians and historical literature to the 19th century.
- 502 HISTORIOGRAPHY 5 credits**  
A continuation of History 501. Analysis of historians and historical literature of the 19th and 20th centuries.
- 503 WRITING SEMINAR 5 credits**  
Prerequisites: 36 credits in history or permission of department. Materials and methodology of historical research.

- 504 WRITING SEMINAR 5 credits**  
Prerequisite: History 503. Continuation of research begun in History 503. Not offered in summers.
- 505 WRITING SEMINAR — THESIS 5 credits**  
Prerequisite: History 504. Not offered in summers.
- 510 FIELD COURSE — ANCIENT HISTORY 10 credits**  
Prerequisites: 36 credits in history or permission of department; Greece special prerequisite: an upper division course in Greek history; Rome special prerequisite: an upper division course in Roman history.
- 530 FIELD COURSE — ENGLISH HISTORY 10 credits**  
Prerequisites: 36 credits in history or permission of department. Historical literature from English history.
- 540 FIELD COURSE — MODERN EUROPEAN HISTORY 10 credits**  
Prerequisites: 36 credits in history or permission of department. Historical literature from modern European history.
- 550 FIELD COURSE — AMERICAN HISTORY 10 credits**  
Prerequisites: 36 credits in history or permission of department. Historical literature from American history.
- 570 FIELD COURSE — WESTERN HEMISPHERE HISTORY 10 credits**  
Prerequisites: 36 credits in history, including the corresponding undergraduate course, or permission of department. Historical literature from Canadian or Latin American history. The corresponding undergraduate course may be taken concurrently with the first quarter of the field course.
- 580 FIELD COURSE — AFRO-ASIAN HISTORY 10 credits**  
Prerequisites: 36 credits in history or permission of department. Historical literature from African or Asian history.



**DEPARTMENT of HOME ECONOMICS**

## FACULTY

**Associate Professor:** Ramsland (Chairman)

**Assistant Professors:** Bieler, Larrabee

**Instructor:** Leno

## CONCENTRATIONS

## Teacher Education

A major in home economics qualifies the student to teach home economics at junior high and non-vocational senior high school level. Students wishing to qualify for home economics vocational certification should consult the chairman of the Home Economics Department.

**MAJOR** (secondary) 45 credits

Home Economics 100, 120, 150, 164, 253, 260, 272, 334, 338, 341, 353, 375, 410, 420, 424, 430

Chemistry 125 is recommended in meeting the general education requirement in physical science.

Supporting courses: Art 102, 190, Economics 201

Students anticipating vocational certification should include Chemistry 125, 251 and Home Economics 432

**MINOR** (secondary) 20 credits

20 credits selected under departmental advisement. Preliminary consultation with an adviser is essential before undertaking a minor.

## Arts and Sciences

**MAJOR** 49 credits, plus Supporting Courses

Home Economics 100, 120, 150, 164, 253, 260, 272, 334, 338, 353, 370, 375, 410, 420, 424, 430, and one course from Home Economics 362, 363, 460, or 475

**Supporting Courses:** Art 102, 190; Economics 201; Sociology 201, 351

**MINOR** 25 credits

Home Economics 100, 120, 150 or 250, 253, 260, 334, 375, and either 420 or 424.

A one or two-year program is planned for students who may wish to transfer or who have special needs for a shorter program. See department for details.

## COURSES

- 100 INTRODUCTION TO HOME ECONOMICS 1 credit**  
Restricted to home economics majors 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, and professional opportunities.
- 120 THE PRE-SCHOOL CHILD IN THE FAMILY 2 credits**  
Intellectual, physical, social, and emotional development of the pre-school child, with emphasis upon the relationship of the child to the family.
- 150 HUMAN NUTRITION 3 credits**  
Basic nutrition principles and nutritive needs of people, cultural aspects of foods and food habits, nutrition education.
- 164 TEXTILES FOR THE CONSUMER 3 credits**  
Identification and evaluation of textiles for clothing and household purposes.
- 166 CLOTHING SELECTION 2 credits**  
Prerequisite: Art 102 and Home Economics 164 recommended; not open to Home Economics majors. Selection of clothing from aesthetic and consumer aspects.
- 250 NUTRITION 2 credits**  
Not open to Home Economics majors. Fundamental principles of human nutrition and the study of modern dietary standards as applied to normal conditions of everyday living; nutrition education.
- 252 FOOD AND MEAL MANAGEMENT (men) 2 credits**  
Basic principles related to food, its preparation and service.
- 253 FOODS 3 credits**  
Prerequisites: for majors, Home Economics 150; for non-majors, Home Economics 150 or 250. Basic principles of food preparation and selection, including laboratory experience, and demonstration.
- 260 CLOTHING SELECTION AND CONSTRUCTION 5 credits**  
Prerequisite: Home Economics 164, Art 102, sophomore status; open only to home economics majors and minors. Selection of clothing from the aesthetic and consumer aspects; sociological and psychological influences; new construction techniques and methods.
- 261 INTERMEDIATE CLOTHING CONSTRUCTION 3 credits**  
Prerequisite: Home Economics 164 (or concurrent) or permission of instructor; not open to home economics majors. Pattern adaptation, principles of fitting, advanced construction techniques, and use of present-day fabrics.
- 267 WEAVING 3 credits**  
Weaving taught through the use of a variety of looms and materials. Also offered as Industrial Arts 201.
- 272 HOUSEHOLD EQUIPMENT 3 credits**  
Evaluation of household equipment; application to the family's management.
- 300 SPECIAL PROBLEMS IN HOME ECONOMICS 1 to 5 credits**  
(See Home Economics 400)
- 334 FAMILY FINANCE 3 credits**  
Prerequisites: General Education 105 and Economics 201. Management of family income and expenditures in the changing family cycle.
- 338 CONSUMER ECONOMICS 2 credits**  
Prerequisites: General Education 105 and Economics 201. The consumer in the current economic world; his responsibilities and protections.

- 341 HOME ECONOMICS EDUCATION 3 credits**  
Prerequisite: junior status and 20 credits in prescribed home economics. The philosophy and curriculum emphasizing current concepts in the home economics programs of the junior and senior high school.
- 350 PROBLEMS IN NUTRITION 3 credits**  
Prerequisites: Home Economics 150 or 250. Significant problems in human nutrition.
- 353 FAMILY MEAL MANAGEMENT 3 credits**  
Prerequisites: Home Economics 150 or 250, and 253. Concepts of management applied to meal service for the family.
- 362 FAMILY CLOTHING 2 credits**  
Prerequisite: Home Economics 260 or 261 or permission of instructor. The selection and construction of clothing for the family.
- 363 FLAT PATTERN AND DRAPING 3 credits**  
Prerequisite: Home Economics 260 or 261. Basic theory and principles of pattern and draping techniques.
- 365 NEW FABRICS AND FINISHES 2 credits**  
Prerequisite: Home Economics 164 recommended. New developments in fabrics and finishes. Summer only.
- 368 HISTORY OF COSTUME 3 credits**  
Historical costumes from the Egyptian period to the present day.
- 370 THE HOUSE: ITS PLANNING AND ARCHITECTURE 5 credits**  
Prerequisite: Art 102. Housing for the family; historical, social and cultural implications.
- 375 HOME FURNISHINGS 5 credits**  
Prerequisite: Art 102, 190; Home Economic 164 recommended but not required. Principles of design in relation to the selection and arrangement of home furnishings.
- 400 SPECIAL PROBLEMS IN HOME ECONOMICS 1 to 5 credits**  
Prerequisite: permission of department chairman. Advanced students who have a creditable record in home economics may work on a special problem by conference arrangement.
- 410 SEMINAR IN HOME ECONOMICS 1 to 5 credits**  
Prerequisites: 36 credits in home economics and permission of instructor. Reading and discussion of recent literature and research in the five areas of home economics.
- 420 LABORATORY EXPERIENCE WITH THE PRE-SCHOOL CHILD 3 credits**  
Prerequisites: Home Economics 120 and Psychology 352 (355). Observation of children and participation in nursery school; administration and evaluation of the child development program in the home economics curriculum.
- 424 FAMILY RELATIONSHIP 3 credits**  
Prerequisites: General Education 105, Home Economics 120 and 420, and Sociology 351 recommended. Concepts of the family; personal, economic, and social problems; family life education.
- 430 HOME MANAGEMENT 2 credits**  
Prerequisites: senior standing, General Education 105 or equivalent. Philosophy and theory of management and decision-making in the family.
- 432 HOME MANAGEMENT RESIDENCE 3 credits**  
Prerequisites: General Education 105, Home Economics 353, 430; permission of department. Application of the concepts and principles of home management to group and home living.

- 441 HOME ECONOMICS EDUCATION 2 credits**  
Prerequisites: Home Economics 341 or equivalent; open only to experienced home economics majors. Developments in the junior and senior high school home economics curriculum emphasizing current trends.
- 448 EVALUATION IN HOME ECONOMICS 2 credits**  
Prerequisites: Home Economics 341 or equivalent, supervised teaching in home economics, or graduate status. Application of current concepts in evaluation to the fields of home economics.
- 455 EXPERIMENTAL FOODS 3 credits**  
Prerequisites: Home Economics 253, Chemistry 125 or 251. Application of scientific principles and experimental procedure to the food processes.
- 460 TAILORING 3 credits**  
Prerequisite: Home Economics 260 or 261, or permission of instructor. Modern tailoring techniques.
- 469 SPECIAL PROBLEMS IN CLOTHING CONSTRUCTION 3 credits**  
Prerequisite: Home Economics 161 or 260 or permission of instructor. Construction and fitting problems; individual projects; recent literature and research in clothing.
- 475 ADVANCED HOME FURNISHINGS 3 credits**  
Prerequisites: Home Economics 164 and 375. Traditional and contemporary design in home furnishings; advanced planning problems.
- 476 CONTEMPORARY DESIGN IN HOME FURNISHINGS 2 credits**  
Prerequisite: Home Economics 375. American and international influences on contemporary design.
- 497A FAMILY AND PERSONAL FINANCES 3 credits**  
Prerequisite: teaching experience—home economics, business education or social studies. An interdisciplinary approach to the study of family and personal finance, with emphasis on teaching methods and materials. Summer 1965.
- 497B SCANDINAVIAN STUDY TOUR OF DESIGN AND ART 5 credits**  
Scandinavian art, design, architecture, home furnishings, industrial design, arts and crafts. Summer extension, 1965.
- 500 SPECIAL PROBLEMS IN HOME ECONOMICS 1 to 5 credits**  
(See Home Economics 400.)

INTERDEPARTMENTAL COURSES in **HONORS**

These courses are restricted to students who are enrolled in the Honors Program (see page 14).

In order to graduate "with honors," a student must:

- a. be recommended by the Honors Board
- b. have completed at least 6 quarters of honors work
- c. have completed at least 20 credits of honors courses, and
- d. have written a senior thesis. (Rare exceptions may be made under departmental advisement and with the concurrence of the Honors Board)

A student may enter the program as late as the beginning of his junior year and still meet requirements for graduation "with honors". Special requirements for Departmental Honors work are listed under the departments concerned. A student who plans to graduate "with honors" should consult the department in which he proposes to major early in his college career since individual requirements vary and all programs are tailored to the individual's needs. The following departments offer honors work: Art, Biology, Chemistry, Economics, Education, English, Foreign Languages, Geography, Geology, History, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Sociology-Anthropology.

- 151, 152, 153 TUTORIAL 2 credits each
- 161 SCIENCE COLLOQUIUM 2 credits
- 162 HUMANITIES COLLOQUIUM 2 credits
- 163 SOCIAL SCIENCE COLLOQUIUM 2 credits
- 251, 252, 253 TUTORIAL 2 credits each
- 261 SCIENCE COLLOQUIUM 2 credits
- 262 HUMANITIES COLLOQUIUM 2 credits
- 263 SOCIAL SCIENCE COLLOQUIUM 2 credits
- 290 SUMMER READINGS 2 credits
- 300 INDEPENDENT STUDY Variable credit
- 361 SCIENCE COLLOQUIUM 2 credits
- 362 HUMANITIES COLLOQUIUM 2 credits
- 363 SOCIAL SCIENCE COLLOQUIUM 2 credits
- 390 SUMMER READINGS 2 credits
- 400 INDEPENDENT STUDY Variable credit
- 461 SCIENCE COLLOQUIUM 2 credits
- 462 HUMANITIES COLLOQUIUM 2 credits
- 463 SOCIAL SCIENCE COLLOQUIUM 2 credits
- 490 SUMMER READINGS 2 credits

**DEPARTMENT of INDUSTRIAL ARTS**

## FACULTY

**Professors:** Atteberry (Chairman), Schwalm

**Associate Professor:** Channer

**Assistant Professors:** Fowler, Olsen, Porter

**Lecturer:** Hill

## CONCENTRATIONS

## Teacher Education

**MAJOR** (secondary) 45 credits

Industrial Arts 101, 102, 103, 491, 493

Choice of 30 credits under departmental advisement divided as follows:

20 credits in one technology and 10 in a second

or

15 credits in two technologies

or

10 credits in each technology

A. Graphics Technology

B. Mechanical and Electrical Technology

C. Materials and Process Technology

**MINOR** 25 credits

Industrial Arts 101, 102, 103, 493

Thirteen credits selected under departmental advisement

## Arts and Sciences

**MAJOR** 65 credits

Industrial Arts 210, 233 or 231, 240, 270, 280, 310, 360

Choice of one of the following plans:

40 credits in one area

25 credits in one area and 15 in a second area

13 credits in each of three areas

10 credits in each of the four areas

A. Graphics Technology

B. Mechanical and Electrical Technology

C. Materials and Processes Technology

D. Industrial Design

**MINOR** 25 credits

Courses selected under departmental advisement

## Graduate Study

For a concentration in Industrial Arts leading to a Master of Education degree, see **Graduate Bulletin**.

### COURSES

- 101, 102, 103 INTRODUCTION TO INDUSTRIAL ARTS TECHNOLOGY 3 credits**  
Problems, human and mechanical, related to scientific principles and knowledge, and their significance in the industrial complex and culture.  
101 — Graphics Technology  
102 — Mechanical and Electrical Technology  
103 — Materials and Processes Technology
- 201 WEAVING DESIGN 3 credits**  
Weaving design taught through the use of a variety of looms and materials.
- 210 ENGINEERING DRAWING 3 credits**  
Use of drafting instruments and the art of freehand lettering, geometrical construction, and technical sketching, orthographic projection, selection, isometric and oblique pictorial drawing, and duplication methods.
- 211 ENGINEERING DRAWING 3 credits**  
Prerequisite: Industrial Arts 210. Continuation of drafting techniques, emphasizing working drawings of machine parts, double auxiliary views, fasteners, developments, pictorial representations, and duplication methods.
- 212 DESCRIPTIVE GEOMETRY 3 credits**  
Prerequisites: Industrial Arts 211. Theory and problems with practical application and the projection of points, lines surfaces, and solids.
- 215 INDUSTRIAL DESIGN 3 credits**  
Survey of design theory; design procedure and evaluation.
- 223 GENERAL METALS 5 credits**  
Introductory course to the following metal areas: art metal, bench metal, sheet metal, forging, pattern making, foundry, welding, and machining.
- 231 GENERAL WOODS 3 credits**  
Experiences in problems related to materials, processes, production, tool maintenance, shop management and demonstrations.
- 240 VISUAL COMMUNICATION AND GRAPHIC ARTS 5 credits**  
Techniques and methods of the graphic arts and their relation to a more effective visual communication medium.
- 270 APPLIED ELECTRICITY 3 credits**  
Theory and practice in electricity; projects and related studies involving the principles of electricity, electrical construction, repair, and maintenance.
- 280 POWER MECHANICS 3 credits**  
Basic operating principles of heat engines involving the practical application of theory to automotive, small gas, and aircraft engines.
- 300 SPECIAL PROBLEMS 1 to 5 credits**  
Prerequisite: permission of instructor. Special problems under supervision.
- 301 CRAFTS 3 credits**  
Design and construction in crafts, including experiences in weaving, carving, puppetry, bookbinding, and the use of wood and clay.
- 302 JEWELRY AND LAPIDARY 3 credits**  
Stonecutting and jewelry making involving techniques of shaping gem stones, forming and joining metal shapes, and enameling on metal; attention to creative design through the use of color, form, and texture.

- 304 JEWELRY DESIGN 3 credits**  
Design and construction of jewelry in various metals with emphasis on silver; the setting of stones. Also offered as Art 250.
- 305 INDUSTRIAL CERAMICS 3 credits**  
Techniques in working with clay, experimenting with glazes, and operating a kiln.
- 310 TECHNICAL ILLUSTRATION 3 credits**  
Prerequisite: Industrial Arts 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 credits**  
Prerequisite: Industrial Arts 211. Problems in machine drawing, pattern drafting, and boat lofting.
- 313 ARCHITECTURAL DRAWING AND HOUSE PLANNING 3 credits**  
Historical development; considerations of design; analysis of needs; utilization of sites; preparation of plans.
- 314 GRAPHIC GEOMETRY 3 credits**  
Prerequisites: Industrial Arts 211. Problem solving in drafting technical solutions through the use of descriptive geometry techniques.
- 315 INDUSTRIAL DESIGN 3 credits**  
Prerequisite: Industrial Arts 215. Application of design theory and procedure in preparing a portfolio of research sketches, working drawings, renderings, and creation of a mock-up or model of a new or modified product.
- 320 ADVANCED GENERAL METALS 3 credits**  
A continuation of Industrial Arts 223.
- 331 ADVANCED WOODS 3 credits**  
Prerequisite: Industrial Arts 231. Development of further skills and knowledge in the broad area of woodworking.
- 333 PLASTICS 3 credits**  
The materials, products and processes of the plastics industry.
- 340 GENERAL GRAPHIC ARTS I 5 credits**  
Prerequisite: Industrial Arts 240.
- 341 GENERAL GRAPHIC ARTS II 5 credits**  
Prerequisite: Industrial Arts 340. Reproduction processes and techniques of the graphic arts industry relative to packaging, advertising, color, paper, and publishing.
- 342 GRAPHIC ARTS FOR ART MAJOR 3 credits**  
Prerequisite: permission of instructor. Technical processes for preparation and reproduction of graphic material.
- 350 INDUSTRIAL ARTS FOR ELEMENTARY SCHOOLS 3 credits**  
Experience in working with materials and processes basic to home and industry which contribute to the elementary school curriculum.
- 360 GENERAL PHOTOGRAPHY I 3 credits**  
Function, principles, and application of photography in visual communication.
- 361 GENERAL PHOTOGRAPHY II 3 credits**  
Prerequisite: Industrial Arts 360 or equivalent. Selected problems in advanced photographic techniques.
- 370 ELECTRON TUBES AND SEMI-CONDUCTORS 4 credits**  
Prerequisite: Industrial Arts 270, Physics 155, or permission of instructor. Theory and application; circuitry using these components.
- 371 BASIC ELECTRONIC CIRCUITS 4 credits**  
Prerequisites: Industrial Arts 370 or permission of instructor.



**372 INDUSTRIAL ELECTRONICS 4 credits**

Prerequisites: Industrial Arts 371 or permission of instructor. Industrial uses of electronics, including electron tubes, control devices, relays and closed loop systems.

**375 MOTORS AND GENERATORS 3 credits**

Prerequisites: Industrial Arts 270 or permission of instructor. Theory and practical uses of motors and generators.

**381 ADVANCED POWER MECHANICS 5 credits**

Prerequisites: Industrial Arts 280 or permission of instructor. Function and operating principles of hydraulic, pneumatic, refrigeration machines and heat engines.

**382 AUTOMOTIVE ELECTRICITY 2 credits**

Prerequisites: Industrial Arts 270 or 280 or permission of instructor. Repair and maintenance of the electrical components of the automobile and other small gasoline engines, with emphasis on understanding basic principles of operation.

**384 MECHANICS OF MATERIALS 3 credits**

Study and experimentation in stress, strain, torsion, shear-bending, pure bending, plane stress, and engine design of members.

**391 DRIVER EDUCATION FOR INSTRUCTORS 3 credits**

Conducting driver education classes in the public schools; practice teaching utilizing a dual-control automobile; lectures and demonstrations. Students completing the course satisfactorily receive a certificate of proficiency from the American Automobile Association.

**397a SAFETY EDUCATION 3 credits**

The cause, incidence, prevalence and effect of home, school, recreational and vocational accidents; establishment of educational programs and practices to reduce accidents. Summer extension, 1965.

**397b ADVANCED UNITS IN DRIVER EDUCATION 3 credits**

Prerequisite: Industrial Arts 391 or permission of instructor. Individual research problems in traffic safety. Summer extension, 1965.

**400 SPECIAL PROBLEMS 1 to 5 credits**

Prerequisite: permission of instructor; open only to industrial arts majors. Specialized advanced study through individual instruction.

**403 FINISH PRINCIPLES AND PRACTICE 3 credits**

Modern finishing materials and processes.

**406 PRINCIPLES OF OCCUPATIONAL ANALYSIS 3 credits**

Analysis, selection and organization of occupational content for instruction in industrial education classes.

**411 PRACTICAL LETTERING TECHNIQUES 3 credits**

Development of skill in hand lettering.

**413 ARCHITECTURAL PROBLEMS 3 credits**

Prerequisites: Industrial Arts 313. Advanced residential planning, cost estimating; FHA standards; building codes; individual research.

**419 ADVANCED UNITS IN DRAFTING 1 to 3 credits**

Prerequisite: Industrial Arts 211. Sheet metal drafting, architectural drafting, furniture design, machine and other drafting units.

- 429 ADVANCED UNITS IN METALS 1 to 3 credits**  
Prerequisite: Industrial Arts 223 and 320.  
429f Foundry  
429g Advanced General Metals  
429m Machine Maintenance  
429s Sheet Metal  
429t Machine Tools  
429w Welding
- 439 ADVANCED UNITS IN WOODS 1 to 3 credits**  
Prerequisite: Industrial Arts 231 and 331.  
439a Advanced Wood Technology  
439b Furniture Design and Construction  
439c Machine Maintenance
- 440 GRAPHIC DESIGN 6 credits**  
Prerequisite: Industrial Arts 240. Principles of layout, design and printing in relation to their commercial applications.
- 441 GRAPHIC ARTS MANAGEMENT 5 credits**  
Prerequisites: Industrial Arts 341 or permission of instructor. Estimating and pricing, simplified cost accounting; organization and administration of graphic arts services; production, quality and color control instruments and techniques.
- 447 PUBLICATIONS PRODUCTION 5 credits**  
Prerequisites: Industrial Arts 240 or permission of instructor. Experiences in design and layout, composition, general and process photography, and press-work in the production of publications.
- 448 SEMINAR; GRAPHIC ARTS AND VISUAL COMMUNICATION 2 credits**  
Prerequisites: Industrial Arts 240 and 340 or permission of instructor. Development of a critical understanding of graphic design and improvement of literacy in an age increasingly dependent upon perceptual awareness. Summer only.
- 449 ADVANCED UNITS IN GRAPHIC ARTS 1 to 3 credits**  
Prerequisites: Industrial Arts 340 or permission of instructor. Selected problems in the graphic arts.
- 459 ADVANCED UNITS IN INDUSTRIAL ARTS FOR THE ELEMENTARY SCHOOL 1 to 3 credits**  
Developing industrial arts units with emphasis on the relationship between industrial arts and the social studies, language, literature, and other activities of the elementary grades; experience with new materials and techniques.
- 469 ADVANCED UNITS IN PHOTOGRAPHY 3-5 credits**  
Prerequisites: Industrial Arts 361 or permission of instructor. Problems in photography as related to medical, industrial, commercial, scientific, advertising media.
- 477 THEORY AND OPERATION OF ELECTRONIC TEST EQUIPMENT 4 credits**  
Prerequisites: Industrial Arts 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 credits**  
Prerequisites: Industrial Arts 371 or permission of instructor. Theory of radio and television transmitters and receivers.
- 479 ADVANCED UNITS IN ELECTRICITY 1 to 3 credits**  
Prerequisites: Industrial Arts 371 or permission of instructor. Advanced study of problems in electricity involving motors, generators, and electronics.
- 489 ADVANCED UNITS IN POWER MECHANICS 1 to 3 credits**  
Planning, completion, and reporting of problems in power mechanics.

- 491 SELECTION AND ORGANIZATION OF SUBJECT MATTER IN INDUSTRIAL ARTS 3 credits**  
Curriculum development for teachers of industrial education; problems, techniques, and procedures.
- 493 THE TEACHING OF INDUSTRIAL ARTS 3 credits**  
Principles and procedures of organizing students, laboratories and instructional materials in teaching industrial type classes.
- 494 INDUSTRIAL TOURS 1 to 5 credits**  
Visitation to selected plants in the Pacific Northwest to acquire first-hand understanding of regional industry, with opportunity for thorough analysis of processes, product design, and materials. Summer only.
- 495 PRODUCT DESIGN AND SELECTION 5 credits**  
Prerequisite: Industrial Arts 213 or permission of instructor. Tectonic principles applied to industrial products; consumer protection laws; product motivation research.
- 496 ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL EDUCATION 3 credits**  
The interrelationships of industrial arts, industrial-vocational education, adult education, technical education, and apprentice training.
- 498 INDUSTRIAL DESIGN 3 to 5 credits**  
Prerequisites: Industrial Arts 215 or permission of instructor. The three-dimensional form in modern technology; utilizing contemporary art expression in everyday objects; seeking an integration of industry with our culture.
- 540 GRAPHIC ARTS TECHNOLOGY 3 credits**  
Prerequisite: an undergraduate concentration in graphic arts. The technological changes in the graphic arts industry and the responses.
- 541 THEORIES OF COLOR SEPARATION 3 credits**  
Prerequisite: an undergraduate concentration in graphic arts. The newer concepts and techniques of color separation as applied to the graphic arts industry.
- 542 INFORMATION FORMS DESIGN AND PRODUCTION 3 credits**  
Prerequisite: an undergraduate concentration in graphic arts. The differentiation and necessity for integrating information forms design into more productive systems.
- 543 PRINCIPLES OF COLOR & QUALITY CONTROLS 3 credits**  
Prerequisite: an undergraduate concentration in graphic arts. The principles, and devices for maintaining control of color and quality.
- 544 SEMINAR: CURRENT GRAPHIC ARTS TOPICS 3 credits**  
Prerequisite: an undergraduate concentration in graphic arts. Research and discussion concerning pertinent problems in the graphic arts industry.
- 590 CURRICULUM PROBLEMS OF INDUSTRIAL EDUCATION 3 credits**  
Problems involved in teaching industrial arts in the elementary and secondary schools.
- 591 INDUSTRIAL TECHNOLOGY 3 credits**  
The development of trade, technical, and industrial technology; motivating forces, philosophical concepts, issues and trends.
- 592 SUPERVISION AND ADMINISTRATION IN INDUSTRIAL TECHNOLOGY 3 credits**  
The organization of men and equipment for work.
- 594 SEMINAR IN INDUSTRIAL ARTS 1 to 5 credits**  
Research in special problems.

## LATIN

(See page 99)

## DEPARTMENT of LIBRARY SCIENCE

### FACULTY

**Professor:** McGaw

**Associate Professors:** Hearsey, Herrick, Mathes

**Assistant Professors:** Frazier, Jahns, Phillips, Scott

**Instructors:** Johnson, McClinis, Paeglis, Remsberg

### CONCENTRATIONS

#### Teacher Education

**MAJOR** (elementary) 42 credits

Library Science 305, 306 or 309, 307, 401, 402, 403, 404

Education 421, 489

15 credits to be elected under advisement from among courses in art, education, English, language, and speech.

Students electing the alternate program for elementary teachers will complete 28 credits in the above major under departmental advisement.

**MINOR** (junior high school) 24 credits

Library Science 305, 307, 401, 402, 403, 404

Education 421, 489

**MINOR** (senior high school) 24 credits

Library Science 307, 308, 401, 402, 403, 404

Education 421, 489

**State Standards—** 18 credits for preparation of librarians with less than 400 enrollment: Library Science 305, 307, 308 (whichever appropriate), 401, 402, 403, 404; Education 489. A library school degree is required in larger schools.

Students planning to transfer to the School of Librarianship, University of Washington, are advised to take Library Science 308, 402, 403, 404.

### COURSES

**125 LIBRARY ORIENTATION 1 credit**

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 credits**

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 the relation of books to the curriculum and the reading interests of children.

**306 INTRODUCTION OF BOOKS TO CHILDREN 3 credits**

Prerequisite: Library 305. More intensive reading and discussion of books appropriate for primary and intermediate grade boys and girls, with emphasis on preparation of bibliographies, and methods of arousing interest in books.

- 
- 307 BOOKS FOR JUNIOR HIGH SCHOOLS 3 credits**  
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 the relation of books to the curriculum and to reading interests.
- 308 BOOKS FOR SENIOR HIGH SCHOOLS 3 credits**  
Examination, reading, and discussion of books most suitable for secondary schools, with emphasis on development of appreciation and methods of arousing interest in reading, and on standards for selection of books, book lists, reviews, and the relation of books to the curriculum.
- 309 STORYTELLING 2 credits**  
Prerequisite: Library 305. Selection, adaptation, and presentation of stories for elementary school children.
- 401 THE LIBRARY IN THE SCHOOL 3 credits**  
Importance of the library as a materials center in the modern elementary and secondary school; organization and maintenance of effective library service.
- 402 ORGANIZATION OF MATERIALS 3 credits**  
Principles of classification and cataloging; making unit cards, adapting printed cards, and organizing a shelf list dictionary catalogue.
- 403 BASIC INFORMATION SOURCES 3 credits**  
Evaluation of basic information sources and practice in their use.
- 404 THE LIBRARY IN THE SOCIAL ORDER 3 credits**  
Social, educational, and cultural implications of the role of the library in society.
- 497 NEW DIMENSIONS FOR THE ELEMENTARY SCHOOL LIBRARY PROGRAM 3 credits**  
New emphases in teaching and their implications for the elementary school library. Summer workshop, 1965

## DEPARTMENT of MATHEMATICS

### FACULTY

**Professors:** Hashisaki (Chairman), McCandless, Young

**Associate Professors:** Abel, Gelder, Hildebrand, Lister, McFarland, Reay, Rygg, Witter, Yandl

**Assistant Professors:** Chaney, Gray, Sanderson, Wu

**Lecturer:** Purtil

The study of college level mathematics should begin with Mathematics 122 for the student who has a command of:

- (a) one and one-half years of algebra
- (b) one year of geometry
- (c) one-half year of trigonometry
- (d) one additional year of work including mathematical logic, sets, the real number system, equations, inequalities, and function and their graphs.

Mathematics 121 is offered for students needing a knowledge of the topics listed in (d). The student who is deficient in (a) should enroll in Mathematics 100; students deficient in (c) should enroll in Mathematics 105; these courses, if needed, should be completed before enrolling in Mathematics 121.

### CONCENTRATIONS

*Transfer students must complete at this institution a minimum of nine upper division credits for a major in mathematics or five upper division credits for a minor.*

### Teacher Education

#### **MAJOR** (elementary) 45 credits

Mathematics 481 in lieu of the mathematics requirement in general education

Mathematics 121, 122, 222, 241, 251, 305, 310, 321

13 credits from: Mathematics 223, 270, 301, 311, 322

Students electing the alternate program for elementary teachers will complete 28 credits selected under departmental advisement from this major.

#### **MAJOR** (secondary) 45 credits

Mathematics 483 in lieu of the mathematics requirement in general education

Mathematics 121, 122, 222, 223, 224, 301, 321, 322 or 325, 401

Two courses from: Mathematics 310, 311, 410, 411

Approved electives from Mathematics 270 and upper division courses

#### **MINOR** 25 credits

Mathematics 481 or 483 in lieu of the mathematics requirement in general education

Mathematics 121, 122, 222

Selected courses from: Mathematics 223, 224, 241, 270, 301, 305, 310, 321, 322 as advised

## Arts and Sciences

### MAJOR 60 credits, plus Supporting Courses

Mathematics 121, 122, 222, 223, 224 and not less than 18 credits of approved courses numbered 400 or above.

(a) The upper division courses must include either the one year sequence in Advanced Calculus (325, 425, 426) and 8 credits from Modern Algebra (401, 402, 403) or 8 credits from the Advanced Calculus sequence and the one year sequence of Modern Algebra.

(b) The remaining courses are to be selected from Mathematics 270, 305, 331, 332, 361, 371 and approved courses numbered 400 or above.

**Supporting Courses:** 15 credits from Physics 231, 232, 233, or other courses related to mathematics as approved by the department. Language competency in French, German, or Russian is required.

### MINOR 25 credits

Mathematics 121, 122, 222, 223, and selections from Mathematics 224, 241, 270, and upper division courses as advised.

## Departmental Honors

### ARTS and SCIENCES

In order to graduate with "honors in mathematics" a student must:

- a. Complete Mathematics 325, 331, 401, 402, 403, 425, 426
- b. Complete 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
- c. Attain a 3.5 G. P. A. in the courses taken for a and b, and a 3.0 G. P. A. in all college courses
- d. Complete an Arts and Sciences major in mathematics together with supporting courses
- e. Complete two non-departmental Honors colloquia
- f. 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 (mathematics concentration)

In order to graduate with "honors in mathematics" a student must:

- a. Complete Mathematics 301, 325, 401, 425, and two quarters of geometry
- b. Complete additional upper division credits in mathematics, as advised by the honors committee, to a total under a and b of 30 credits
- c. Attain a 3.5 G. P. A. in the courses taken for a and b, and a 3.0 G. P. A. in all college courses
- d. Complete the requirements for a teacher education concentration in mathematics
- e. Complete two non-departmental Honors colloquia
- f. 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.

## Special Honors Program — Combined Physics-Mathematics Concentrations (Arts and Sciences)

A combined major in mathematics and physics is available to superior students. Application for admission to the program should be made jointly to the departments of Mathematics and Physics during the second year of college work in lower division calculus and general physics based on calculus. A 3.0 grade average in all courses is required for admission to and continued participation in this program. This program substitutes for the major and the minor in requirements for the B. A. degree.

**Mathematics:** Mathematics 121, 122, 222, 223, 224, 301, 325, 331, 332, 425, 426.

8 upper division credits selected from: Mathematics 361, 371 and approved courses numbered 400 or above. (At least 12 credits of the above must be 400 or higher).

**Physics:** Physics 231, 232, 233, 341, 342, 343, 355, 356, 357, 381

13 credits in upper division courses, including Physics 481, 482, 483 or Physics 485, 486, 487.

**Supporting Courses:** Mathematics 270 and 10 additional credits under advisement.

## Graduate Study

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

## COURSES

### 100 ALGEBRA 4 credits

Prerequisite: clearance of mathematics entrance test; one year of high school algebra. For students who do not have sufficient preparation for college level mathematics.

### 105 TRIGONOMETRY 3 credits

Prerequisite: clearance of mathematics entrance test; one and one-half years high school algebra or Mathematics 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.

### 111 ENGINEERING PROBLEMS 3 credits

Prerequisite: Mathematics 121 or 105, or advanced placement. Methods of analyzing and solving engineering problems in the field of elementary dynamics.

### 112 ENGINEERING PROBLEMS 3 credits

Prerequisite: Mathematics 111. The fundamental principles of statics, mathematical and graphical analysis of simple force systems, stresses, trusses, and simple mechanics.



- 121 INTRODUCTION TO COLLEGE MATHEMATICS 5 credits**  
Prerequisite: 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 ANALYTIC GEOMETRY AND CALCULUS 5 credits**  
Prerequisite: Mathematics 121 or equivalent. (see introductory statement, page 000). 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 credits**  
Prerequisite: clearance of mathematics entrance test. Logic, sets, and the real number system. Not open to those who have credit in Mathematics 121.
- 220 INTRODUCTION TO CALCULUS 5 credits**  
Prerequisite: Mathematics 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 Mathematics 122.
- 222, 223, 224 ANALYTIC GEOMETRY AND CALCULUS 5, 4, 4 credits**  
Prerequisite: Mathematics 122. Elementary treatment of coordinate geometry of the plane and solid spaces. Mathematics 222: the integral and integration, the differentiation of transcendental function, and parametric equations; Math 223, 224: methods of integration, improper integrals, indeterminate forms, infinite series, series expansion of functions, partial differentiation, and multiple integration.
- 240 INTRODUCTION TO STATISTICS 3 credits**  
Prerequisite: Mathematics 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 credits**  
Prerequisite: Mathematics 100 or 121. An introduction to probability with applications.
- 251 THEORY OF ARITHMETIC 4 credits**  
Prerequisite: one course from Mathematics 100, 105, 121, 151. Systems of numeration, sets, relations and number systems, and the integration of these concepts.
- 270 DIGITAL COMPUTER PROGRAMMING 3 credits**  
Prerequisite: Mathematics 220, 222, or 240. An introduction to machine language, compiler language, and elementary numerical methods; laboratory experience at the Computer Center\*.
- 301 VECTORS AND MATRIX ALGEBRA 4 credits**  
Prerequisite: Mathematics 224 or permission of instructor. Vectors, matrices, determinants; application to solving systems of linear equations.
- 305 NUMBER THEORY 3 credits**  
Prerequisite: Mathematics 222. The properties of integers, Euclid's algorithm, Diophantine equations, congruences, continued fractions and residues.

\*The facilities of the Computer Center, including an IBM 1620 Computer, are available to qualified students free of charge for instruction in computer techniques, for research and for general education in computer applications. Mathematics 270 provides basic instruction in the use of the computer.

- 310 COORDINATE AFFINE GEOMETRY 3 credits**  
Prerequisite: Mathematics 223. The analytic geometry of two and three dimensions; curves, surfaces, coordinate transformations, point transformations, invariants and canonical forms.
- 311 INTRODUCTION TO PROJECTIVE AND AFFINE GEOMETRY 3 credits**  
Prerequisite: Mathematics 310. Projective geometry; the postulates of incidence, models, duality, perspectivities, projectivities, figures, quadrangular and harmonic sets, coordinate systems, transformations, lines, and conics.
- 321 THE ALGEBRAIC FOUNDATION OF MATHEMATICS 4 credits**  
Prerequisite: Mathematics 222. Introduction to algebraic systems; the concept of order and completeness; the natural numbers and construction of the rational and real numbers.
- 322 INTERMEDIATE ANALYSIS 3 credits**  
Prerequisite: Mathematics 222. Properties of real numbers, with emphasis on order and completeness; a study of the theory of limits.
- 325 ADVANCED CALCULUS 4 credits**  
Prerequisite: Mathematics 224. Real number system; infinite sequences; infinite series; metric spaces, continuity.
- 331 DIFFERENTIAL EQUATIONS 5 credits**  
Prerequisite: Mathematics 224. Ordinary differential equations, elementary methods of solution of first, second, and higher order linear equations; solutions by operators and by series; method of Frobenius; Legendre and Bessel equations.
- 332 DIFFERENTIAL EQUATIONS 3 credits**  
Prerequisite: Mathematics 331. Partial differential equations and boundary value problems; Fourier Series and orthogonality; Dirichlet-Fourier theorem and Sturm Liouville theorem.
- 361 VECTOR ANALYSIS 4 credits**  
Prerequisite: Mathematics 224. The algebra of vectors, vector spaces, vector calculus, line integrals, divergence curl, Stokes' Theorem, the application of vectors to the study of work, potential theory, and fluid flow.
- 371 NUMERICAL METHODS 3 credits**  
Prerequisite: Mathematics 224 and 270. Solution of equations, polynomial approximations, interpolation, numerical integration, error analysis.
- 381 INFORMAL GEOMETRY 4 credits**  
Prerequisite: Mathematics 251. For elementary teachers. Experimental geometry as models of physical space and geometry as a deductive system.
- 396a,b,c Honors TUTORIAL 2 credits each**  
Prerequisite: permission of department
- 397 MODERN MATHEMATICS FOR TEACHERS 3 credits**  
Sets, set operations and relations, systems of numeration, rational numbers; offered by extension.
- 397a,b, STATISTICAL METHODS 4 credits each**  
Prerequisites: Mathematics 121 and 241. Elementary course in statistical methodology with emphasis on point estimates and confidence interval estimation, hypothesis testing, and analysis of variance.
- 397c, LINEAR PROGRAMMING 3 credits**  
Prerequisite: Mathematics 270. Graphical solution of linear programming problems; convex sets in the Cartesian plane; linear forms; fundamental extreme point theorem; simplex method in linear programming; elementary aspects of the theory of games; matrix games and linear programming.
- 399 MATHEMATICS SEMINAR 1-3 credits**

- 400 SPECIAL PROBLEMS 1-5 credits**  
An opportunity for individual study under departmental supervision.
- 401, 402, 403 INTRODUCTION TO ABSTRACT ALGEBRA I, II, III 4 credits each**  
Prerequisite: Mathematics 224; 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.
- 410, 411 MODERN GEOMETRY I, II 3 credits**  
Prerequisite: Mathematics 301. Synthetic projective planes; collineations, dilatations, translations and similitudes; non-Desarguean planes, non-Fano planes; vertex preserving endomorphisms; introduction of coordinates; Veblen-Wedderburn systems, alternative division rings; the fundamental theorem of projective and affine geometry.
- 415 CONVEXITY 4 credits**  
Prerequisite: Mathematics 301 or permission. Geometry of convex bodies and polytopes, separation and support theorems, combinatorial analysis, Helly's Theorem and its relatives, integral representations of convex sets in terms of their extremal structure.
- 425, 426 ADVANCED CALCULUS 4 credits each**  
Prerequisite: Mathematics 325. Basic concepts in metric spaces; the Riemann integral; derivations; the elementary functions; Taylor series; partial differentiation; implicit function theorem; multiple integrals, Green's theorem.
- 427 INTRODUCTION TO TOPOLOGY AND ANALYSIS 4 credits**  
Prerequisite: Mathematics 426. Metric spaces, topological spaces and concepts.
- 441, 442, 443 MATHEMATICAL STATISTICS 4 credits each**  
Prerequisites: Mathematics 301, 325, 425; (or concurrent). Probability theory; development of distributions, generating functions; averages, moments, regression, correlation, variance, and statistical inference.
- 471 NUMERICAL METHODS 3 credits**  
Prerequisite: Mathematics 301 or equivalent and 371. Systems of equations, matrices, eigenvalues.
- 472 NUMERICAL METHODS 3 credits**  
Prerequisite: Mathematics 331 and 471. Ordinary differential equations, boundary value problems, eigenvalue problems, partial differential equations.
- 481 MATHEMATICS IN GRADES 1 THROUGH 8 4 credits**  
Prerequisite: Mathematics 251 or permission. The teaching of mathematics in terms of objectives and methods of presentation.
- 483 MATHEMATICS IN THE SECONDARY SCHOOL 3 credits**  
Prerequisite: Mathematics 304 or 301 or 310. Mathematics content of the advanced high school course from the point of view of the teacher; the major experimental programs.
- 495 EXPERIMENTAL MATHEMATICS IN THE ELEMENTARY SCHOOL 3 credits**  
Prerequisite: Mathematics 251. Experimental elementary school mathematics projects with emphasis on the mathematical context of such programs.
- 496a,b,c HONORS TUTORIAL 2 credits each**  
Prerequisite: permission of department.
- 499 MATHEMATICS SEMINAR 1-3 credits**
- 500 SPECIAL PROBLEMS 1-5 credits**  
Prerequisite: advanced standing and permission of instructor.

- 501, 502, 503 ADVANCED ABSTRACT ALGEBRA 3 credits each**  
Prerequisite: Mathematics 402 or equivalent. Topics selected from theory of fields and Galois theory, theory of rings and ideals, representation theory and groups with operators.
- 505 THEORY OF NUMBERS 5 credits**  
Prerequisite: permission of instructor. Properties of the natural numbers, divisibility, the Euclidean algorithm, congruences, primitive roots, quadratic residues, and diophantine equations.
- 511, 512, 513 TOPOLOGY 3 credits each**  
Prerequisite: Mathematics 425. Topological spaces, metric spaces, convergence, connectedness, compactness, product and quotient spaces, function spaces.
- 521, 522 ANALYSIS 3 credits each**  
Prerequisite: Mathematics 427 or equivalent. Introduction to measure theory, Lebesgue integration, Fourier series function spaces.
- 525, 526, 527 THEORY OF FUNCTIONS OF A REAL VARIABLE 3 credits each**  
Prerequisite: Mathematics 522 or permission of instructor. Topological concepts in analysis; general measure theory; integration in locally compact Hausdorff spaces, LP spaces; abstract Hilbert spaces; classical representation theorems; related topics.
- 531, 532, 533 COMPLEX VARIABLES 3 credits each**  
Prerequisite: Mathematics 426. Complex numbers as a field; function theory including analytic functions; exponential and logarithmic functions; derivatives; linear and bilinear transformations; the complex integral calculus; Cauchy-Goursat Theorem, Cauchy Integral Formula; power series, residues and poles; conformal mappings.
- 550 MATHEMATICAL LOGIC AND SETS 5 credits**  
Prerequisite: graduate status in mathematics. Introduction to formal symbolic logic and to set theory with an emphasis on mathematical examples.
- 590 MATHEMATICS CURRICULUM SEMINAR 1 credit**  
Prerequisite: admission to the Master-Teacher program. The mathematics curriculum in the public schools.
- 597 THEORY OF ALGORITHMS 3 credits**  
Prerequisite: Mathematics 401. Numerical algorithms; algorithms for games; an algorithm for finding paths in a labyrinth; computing machines with automatic control; the Turing machine and Turing machine algorithms; the basic hypothesis of the theory of algorithms.
- 598 RESEARCH variable credit**
- 599 MATHEMATICS SEMINAR 1-3 credits**

**DEPARTMENT of MUSIC**

## FACULTY

**Professors:** D'Andrea (Chairman), Regier

**Associate Professors:** Glass, Schaub, Stoner, Walter, Whitcomb

**Assistant Professors:** Ager, Hinds, Osborn, Sackrison, Simon

**Instructor:** Dimond

**Affiliated:** Burrier, Bussard, Cloud, Stonehouse, Thal, Wicks

## Music Performance and Concert Attendance

All music majors are required to participate in a choral and/or instrumental organization, to attend a specified number of concerts and recitals throughout their music study, and to perform in student recitals sometime during the year.

## Music Awards

Music majors or minors are provided individual lessons free of additional fees to the extent of requirements. Other students may receive a music award which provides a full year of individual lessons on their major instrument or voice free of cost. Such an award may be extended to a second, third, and fourth year. To maintain the music award the student must achieve a grade point average of 2.5 in general academic work and an average of 3.0 in music studies. A student accepting the award obligates himself to participate in major performing organizations of the Music Department. He further obligates himself to accept and continue the award for a minimum of one year. A student discontinuing his musical study before the close of any year forfeits his award.

## CONCENTRATIONS

## Piano Competency

All Music Majors (67 hour, 45 hour, and Arts and Sciences) will be required to pass a piano proficiency examination. Students who enter as freshmen must pass the examination by the end of the sophomore year. Transfer students must pass the examination by the end of their first year at this College. The examination may be taken at the end of any quarter. An outline of the requirements covered in the examination is available in the Music Office.

## Teacher Education

### **MAJOR** (vocal and/or instrumental; all grade levels) 67 credits

Structure and Musicianship: Music 131, 132, 133, 231, 232, 233

History: Music 241, 242, 243

Music Education: Music 351, 462, 463, 464

Performance:

- a. Music 105, 204, 205, 206 or 301
- b. Music 310, 311, 312
- c. major instrument or voice—6 credits
- d. piano competency

### **MAJOR** (vocal and/or instrumental; grades 1-8) 45 credits

Structure and Musicianship: Music 131, 132, 133

History: Music 241, 242, 243

Music education: Music 351

Performance: Music 310, 105, 106, 107; class or applied piano—6 credits

Electives: 6 credits in music

8 hours of student teaching in elementary music

Students electing the alternate program for elementary teachers will complete 28 credits to the above under departmental advisement.

### **MINOR A** (strings) 25 credits

Music 131, 132, 133, 301, 302, 303, 310

Applied strings, 4 credits

Class piano, 3 credits

### **MINOR B** (general) 25 credits

Music 105, 131, 132, 133, 241, 242, 243

## Arts and Sciences

### **MAJOR** 72 credits

Music 131, 132, 133, 231, 232, 233, 241, 242, 243, 310, 311, 312, 331, 332, 333

Major instrument or voice, 12 credits

Secondary instrument or voice, 6 credits

### **MINOR** 25 credits

Music 105, 131, 132, 133, 241, 242, 243

## Departmental Honors

In addition to the general honors requirements (see page 123) a student planning to graduate "with honors" must complete:

Music 396a,b,c

Music 401

Music 496a,b,c

Philosophy 405

A comprehensive examination in music

Students qualifying for the Departmental Honors Program may elect either of two areas:

1. Music History and Criticism

or

2. Music Composition and Theory

The area chosen must be realized by a thesis and illustrated by musical performance.

## Graduate Study

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

## COURSES

**101, 102, 103 CLASS PIANO 1 credit each**

Fundamental techniques with stress upon sight-reading, accompanying, and literature.

**105, 106, 107 CLASS VOICE 1 credit each**

Tone production, song repertoire and interpretation for those students who have had little or no previous vocal instruction.

**121 COLLEGE SINGERS 1 credit**

Open to all students; no audition.

**123 MARCHING BAND 1 credit**

Open to all students with previous band experience.

**131 ELEMENTARY HARMONIC PRACTICE 4 credits**

Music notation; scales, key signatures, intervallic two-part counterpoint; analysis; coordinated singing, listening and keyboard experiences with emphasis upon functional application.

**132 ELEMENTARY HARMONIC PRACTICE 4 credits**

Prerequisite: Music 131. Diatonic harmony in root position; phrase structure and chord grouping; analysis.

**133 ELEMENTARY HARMONIC PRACTICE 4 credits**

Prerequisite: Music 132. Triad inversion; figures bass; analysis; intervallic counterpoint in three voices.

**140 THE ART OF LISTENING TO MUSIC 3 credits**

A non-technical basis for enjoyable listening to music; performance practices relate to symphony orchestras, instrumental ensembles, opera, choral groups, and solo performance.

**201, 202, 203 CLASS PIANO 1 credit each**

Prerequisite: Music 103. Intermediate techniques; sonata literature.

**204, 205, 206 INSTRUMENTAL TECHNIQUES 1 credit each**

Basic principles and playing techniques of brass, woodwind and percussion instruments.

## Individual Instruction

Music majors and minors are provided individual lessons free of additional fees to the extent of requirements. Others pay a fee of \$36 in addition to regular enrollment fees. (See Music Awards, page 139.)

- 211 ORGAN 1 credit**  
Prerequisite: permission of instructor.
- 212 PIANO 1 credit**
- 213 STRINGS 1 credit**
- 214 BAND INSTRUMENTS 1 credit**
- 215 VOICE 1 credit**
- 223 SYMPHONIC BAND 1 credit**  
Open to students with previous band experience.
- 231 ADVANCED HARMONIC PRACTICE 4 credits**  
Prerequisite: Music 133. Seventh chords; irregular resolution; sequence; introduction to accented dissonances; analysis.
- 232 ADVANCED HARMONIC PRACTICE 4 credits**  
Prerequisite: Music 231. Modulation; secondary dominants; introduction to chromatic harmony; the period form; analysis.
- 233 ADVANCED HARMONIC PRACTICE 4 credits**  
Prerequisite: Music 232. Chromatic harmony; modulation; relationship of harmony to larger formal units; analysis.
- 241 HISTORY OF MUSIC TO 1600 4 credits**  
Music styles, forms and composers up to 1600; performance of representative compositions.
- 242 HISTORY OF MUSIC 1600-1800 4 credits**  
Main styles, forms and composers from 1600 to 1800; performance of representative compositions.
- 243 HISTORY OF MUSIC 1800 TO PRESENT 4 credits**  
Main styles, forms and composers from 1800 to the present; performance of representative compositions.
- 301, 302, 303 STRING CLASS 1 credit each**  
Principles and techniques of playing and teaching string instruments.
- 310 CONDUCTING 3 credits**  
Basic conducting techniques with laboratory experiences in elementary choral and instrumental music.
- 311 CONDUCTING 3 credits**  
Prerequisite: Music 310. Techniques, score reading and interpretative analysis for conducting junior high choral and instrumental groups.
- 312 CONDUCTING 3 credits**  
Prerequisite: Music 311. Application of conducting techniques, score reading ability and interpretative analysis to choral and instrumental music for senior high school groups.
- 321 CONCERT CHOIR 1 credit**  
Selected group—experience, vocal ability, reading skills, musicianship, and interest in serious choral music considered for membership.



- 322 SYMPHONY ORCHESTRA 1 credit**  
Prerequisite: permission of instructor. Open to all students who can qualify.
- 323 CHAMBER BAND 1 credit**  
Prerequisite: participation in Music 223 and permission of instructor.
- 324 WESTERN SYMPHONIC STRINGS 1 credit**  
Open to all students who can qualify.
- 326 CHAMBER MUSIC 1 credit**  
Participation in small string and wind ensembles; string trio, quartet, brass and woodwind ensembles; opportunity for performance on and off campus.
- 327 VOCAL ENSEMBLE 1 credit**  
Participation in small vocal ensembles such as trios, quartets, and madrigal groups; opportunity to perform at college functions and in the community.
- 331, 332, 333 COUNTERPOINT 3 credits each**  
Prerequisite: Music 233. Vocal and instrumental counterpoint from the 16th through the 18th centuries in theory and practice.
- 350 MUSIC FOR ELEMENTARY TEACHERS 3 credits**  
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 credits**  
Prerequisite: Music 133 and music major. Teaching techniques, materials, and organization of the elementary music program; observation and laboratory experience.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**  
Prerequisite: approval of department.
- 401 HONORS SEMINAR 3 credits**
- 424 OPERA PRODUCTION 1 to 3 credits**  
Preparation of a major musical production offered for public performance. Admission by audition.
- 430 HARMONIC STRUCTURE AND FORM 5 credits**  
Prerequisite: Music 233. Traditional harmonic usage emphasizing harmonic analysis and the function of harmony in musical forms.
- 431 ORCHESTRATION 3 credits**  
Orchestration, with special reference to the needs of the instrumental director.
- 432 TWENTIETH CENTURY HARMONIC PRACTICE 3 credits**  
Harmonic techniques since the period of Brahms, Wagner, and Franck; cor-related sight-singing, dictation, and analysis.
- 433 ANALYTICAL TECHNIQUES 3 credits**  
Prerequisite: Music 233. Practice and procedures applied to the basic musical structures from the small part-forms to the larger formal units; the function of harmony in the structure.
- 434 PHYSICS OF MUSICAL INSTRUMENTS 3 credits**  
Production and transmission of musical tone and the acoustical problems of musical performance.
- 435, 436 COMPOSITION 3 credits each**  
Prerequisite: Music 233. Writing pieces in part forms, variation form, and sonata form for solo instruments, voice, and small ensembles.
- 440 COLLEGIUM MUSICUM 3 credits**  
Little known masterpieces of music from periods currently studied in Music 441.

- 441 MUSIC HISTORY 3 credits each**  
Prerequisite: Music 242. Advanced study of the chief vocal and instrumental forms in their historical and musical development. Summer only.
- 441a Music in the Ancient and Medieval Period
  - 441b Music in the Renaissance
  - 441c Music in the Baroque Period
  - 441d Music of Classic and Early Romantic Period (1750-1825)
  - 441e Music in the Romantic Period (1825-1890)
  - 441f Contemporary Music (late 19th and 20th centuries)
- 442 AMERICAN MUSIC 3 credits**  
History and development of American music from colonial times to the present.
- 451 MUSIC LISTENING IN THE ELEMENTARY SCHOOL 3 credits**  
Literature, activities, and teaching techniques; correlation with other classroom studies; out-of-classroom activities and programs.
- 452 MUSIC LITERATURE FOR ELEMENTARY SCHOOLS 3 credits**  
Appropriate literature to be used in the elementary school music activities of singing, rhythms, outside reading, programs.
- 453 MUSIC WORKSHOP FOR ELEMENTARY TEACHERS 2 credits**  
Techniques, activities, and materials in a program of music development for grades one through six. Summer only.
- 454 STRING TECHNIQUES AND MATERIALS 3 credits**  
Summer only.
- 455 BRASS AND PERCUSSION TECHNIQUES AND MATERIALS 3 credits**
- 456 WOODWIND TECHNIQUES AND MATERIALS 3 credits**
- 457 BAND TECHNIQUES 2 credits**  
Rehearsing and performing outstanding band literature; problems of intonation, balance, tone quality and interpretation.
- 458 ORCHESTRA TECHNIQUES 2 credits**  
Rehearsing and performing outstanding orchestra literature; problems of intonation, bowing, fingering, tone quality and interpretation.
- 459 COACHING SMALL ENSEMBLES 3 credits**  
Organization, coaching, and repertoire for small vocal and instrumental ensembles of high school students.
- 460 MARCHING BAND TECHNIQUES 3 credits**  
Marching band organization, parade marching, and show routine.
- 462 INSTRUMENTAL METHODS AND MATERIALS 3 credits**  
Problems, organization, techniques, and materials of an elementary and secondary program in instrumental music.
- 463 MUSIC IN GENERAL EDUCATION 3 credits**  
Organization, content, literature, and methods of teaching the history and appreciation of music in secondary school humanities courses, music classes, and performance groups.
- 464 CHORAL METHODS AND MATERIALS 3 credits**  
Problems, organization, techniques, and materials of the secondary program in choral music.
- 465 SCHOOL MUSICAL PRODUCTIONS 3 credits**  
Workshop experience encompassing a wide range of new ideas, materials, and techniques for all types of musical productions.

- 467 **BIRCH BAY BAND MUSIC WORKSHOP 2 credits**  
Summer only.
- 468 **CHORAL MUSIC WORKSHOP 2 credits**  
Summer only.
- 470 **MUSIC SEMINAR 1 credit**  
Readings and discussion of major issues and development in music and music education.
- 496a,b,c **HONORS TUTORIAL 2 to 5 credits**  
Prerequisite: approval of department.
- 501 **INSTRUMENTAL CONDUCTING AND REHEARSAL TECHNIQUES 4 credits**  
Advanced work in conducting school band orchestra music; baton technique, interpretation, score preparation, and rehearsal techniques.
- 502 **CHORAL LITERATURE AND INTERPRETATION 4 credits**  
Established and recent literature, interpretative analysis of scores, conducting and rehearsal techniques, and laboratory rehearsal. Summer only.

### Individual Instruction — Graduate Level

(Fee: \$36 per quarter, plus regular enrollment fees.)

- 511 **ADVANCED ORGAN 1 credit**  
Prerequisite: permission of instructor.
- 512 **ADVANCED PIANO 1 credit**
- 513 **ADVANCED STRINGS 1 credit**
- 514 **ADVANCED BAND INSTRUMENTS 1 credit**
- 515 **ADVANCED VOICE 1 credit**
- 531 **ARRANGING FOR SCHOOL INSTRUMENTAL GROUPS 3 credits**  
Practical techniques in arranging and composing for large and small ensembles. Summer only.
- 532 **ARRANGING FOR SCHOOL CHORAL GROUPS 3 credits**  
Practical techniques in arranging and composing for large and small ensembles. Summer only.
- 550 **ADMINISTRATION OF SCHOOL MUSIC 3 credits**  
Reappraisal of music's place in today's schools; current philosophic issues, new curricular developments, problems of supervision and instruction, development of community and professional relations. Summer only.
- 551 **CHORAL TECHNIQUES 3 credits**  
Methods, materials, and devices used in the development of choral groups. Summer only.
- 552 **SUPERVISION OF ELEMENTARY SCHOOL MUSIC 3 credits**  
Advanced work in methods, materials, organization, and supervision of the music program. Summer only.
- 553 **PSYCHOLOGY OF MUSIC 3 credits**  
Recent advances in the psychological foundations of total organization, perception, and function underlying music education's objectives and procedures. Summer only.

- 554 DIRECTED READINGS AND RESEARCH 3 credits**  
Seminar discussion of areas of needed research in music education. To be taken concurrently with Education 501.
- 555 COMPREHENSIVE INSTRUMENTAL CURRICULUM 3 credits**  
The continuous development of wind instrumentalists from beginning classes through high school performing groups with emphasis on the integration of technical, musical, and aesthetic understanding in a developmental process. Summer only.

**DEPARTMENT of PHILOSOPHY**

## FACULTY

**Professor:** Daugert (Chairman)**Associate Professor:** Karason**Assistant Professors:** Fleetwood, Lamb, Lehman, Purtill

## CONCENTRATIONS

## Teacher Education

**MINOR** 25 credits

Three courses from Philosophy 304, 305, 306, 307

One course from Philosophy 102, 202, or 302

Additional courses selected under departmental advisement

## Arts and Sciences

**MAJOR** 40 credits

Philosophy 202, 304, 305, 306, 307, 220 or 420 and 404

Additional courses selected under departmental advisement

**MINOR** 20 credits

Courses to be selected under departmental advisement

## Departmental Honors

A philosophy major who wishes to graduate "with honors" must meet the general requirements for all honors students (see page 123). In addition he must take advanced courses selected under departmental advisement in philosophy beyond the major. He must achieve a grade average of 3.3 in philosophy courses.

## COURSES

**102 LOGICAL THINKING 2 credits**

Signs, symbols, and language in human behavior; the detection of common fallacies, ambiguities, and vagueness; practice in defining.

**201 INTRODUCTION TO PHILOSOPHY 4 credits**

The great recurrent philosophical problems and some of the answers developed through the ages.

**202 INTRODUCTION TO LOGIC 4 credits**

Rules of valid deduction from premises and methods of formulating valid generalizations from experience.

- 220 INTRODUCTION TO THE PROBLEMS OF ETHICS 3 credits**  
The nature of moral problems and judgments; with emphasis upon the meaning of such concepts as "goodness," "rightness," "evil," "duty," and "happiness."
- 230 SOCIAL AND POLITICAL PHILOSOPHY 3 credits**  
Concepts and principles involved in analysis and appraisal of social institutions with attention to natural rights, natural law, social utility, social function, and justice.
- 250 PROBLEMS IN THE PHILOSOPHY OF RELIGION 4 credits**  
The definition of religion, the existence and nature of God, free will, and immortality, and such problems.
- 301 HISTORICAL INTRODUCTION TO PHILOSOPHY 4 credits**  
Prerequisite: fifth year or graduate status or permission of instructor. The types and problems of philosophy; for graduate students with limited training in philosophy; not open to those who have taken Philosophy 304, 305, or 306.
- 302 ADVANCED LOGIC 4 credits**  
Further development of the tools and techniques of logic, and their applications in mathematics, science, and philosophy.
- 304 HISTORY OF PHILOSOPHY: ANCIENT TO EARLY MIDDLE AGES 4 credits**  
Great philosophical thinkers from the early Greeks to the early Middle Ages, with special attention to Plato and Aristotle.
- 305 HISTORY OF PHILOSOPHY: MIDDLE AGES TO RENAISSANCE 4 credits**  
Great philosophical thinkers from the twelfth to the seventeenth 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 credits**  
Great philosophical thinkers including Descartes and the rationalists, Locke and the empiricists.
- 307 HISTORY OF PHILOSOPHY: THE NINETEENTH AND TWENTIETH CENTURIES 4 credits**  
Great philosophical thinkers from Kant to the present.
- 308 AMERICAN PHILOSOPHY 3 credits**  
Main currents in American philosophical thought from Jonathan Edwards to the present.
- 310 THEORY OF KNOWLEDGE 3 credits**  
Prerequisite: Philosophy 202 and one other course numbered above 200, Problems and concepts having their focus in the attempt to understand the possibility, nature, origins, and limits of knowledge.
- 350 ORIENTAL PHILOSOPHY AND RELIGION 3 credits**  
Some of the major philosophical and religious traditions of the Orient.
- 400 CONFERENCE IN PHILOSOPHY 2 to 5 credits**  
Prerequisite: permission of instructor. Special problems.
- 404 SEMINAR IN PHILOSOPHY 3 credits**  
Prerequisite: permission of instructor. Concentration for a full quarter upon the thought of an individual philosopher, a particular problem, or a movement.
- 405 AESTHETICS 3 credits**  
Philosophical study of beauty and of the creation, appreciation and criticism of works of art.

- 
- 406 PHILOSOPHY OF LITERATURE 2 credits**  
The nature of literature and the relation of its aesthetic to its moral and cognitive values.
- 407 CONTEMPORARY PHILOSOPHY 4 credits**  
Prerequisite: permission of instructor. A critical discussion of the "analytic" and "linguistic" trends, such figures as Moore, Wittgenstein, and J. L. Austin.
- 410 METAPHYSICS 3 credits**  
Prerequisite: Philosophy 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 credits**  
Prerequisite: permission of instructor. Varying theories as to the nature, presuppositions, limitations and interrelations of the sciences.
- 420 ETHICAL THEORY 3 credits**  
Prerequisite: Philosophy 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.
- 460 PHILOSOPHY OF HISTORY 3 credits**  
Prerequisite: seven credits in philosophy or permission of instructor. A critical examination of the idea of history and the concepts and categories allied to it — process, permanence and change, cause, time, among others.
- 483 SOCIAL CHANGE AND THE MORAL ORDER IN LITERATURE 4 credits**  
Also offered as English 483 and Sociology 483.
- 515 PHILOSOPHY OF EDUCATION 3 credits**  
Critical analysis of theoretical positions in educational philosophy; emphasis on modern and contemporary discussions of educational theory. Also offered as Education 515.

DEPARTMENTS of  
**PHYSICAL EDUCATION, HEALTH  
EDUCATION, and RECREATION**  
FACULTY

**Men's Department of Physical Education and Athletics**

**Associate Professors:** Lappenbusch, LeProtti, Lounsberry,  
Tomaras (Chairman)

**Assistant Professors:** Randall, Smith, Wiseman

**Women's Department**

**Professor:** Weythman

**Associate Professors:** Aitken (Chairman), Kilby, Hansen

**Assistant Professors:** Arnett, Gutchow

**Instructor:** Ames

The departmental programs encompass: (a) activity courses to meet general education requirements; (b) activity courses as electives; (c) professional study in fields of physical education, health education, and recreational leadership; (d) intramural sports and dance; (e) intercollegiate athletics.

**General Education Requirements**

The student has the opportunity to choose three activities within the framework of the required program and is encouraged to elect additional courses. The requirements are normally completed in the freshman year.

For Women:

The Physical Education Placement Test is required of entering students before enrolling in any activity class. Students are then assigned to proper sections of P.E. 102w and aquatics.

One course is to be selected from each of the following:

Movement Fundamentals — Physical Education 102w

Aquatics\* — 1 credit

Sports and Dance — 1 credit. (P.E. 120, 152 and 153 do not satisfy this requirement.)

Majors and minors in physical education will take P.E. 102w and the professional activities courses to meet their general education requirement.



Women thirty years of age and over may fulfill the above requirements or work out an individual plan of activities under the guidance of the department.

**\*Aquatics** — all students must satisfactorily pass the minimum swimming proficiency test or the beginning swimming course. Those who pass the test select another physical education activity course to complete the three-quarter requirement.

#### For Men:

Students may select one course from three activity categories: aquatics, developmental, dance, team sports, individual sports; dual sports, or varsity sports. Majors and minors should substitute courses from Physical Education 201m, 202m, 203m, 207m, 208m, 209m.

**Developmental** — Students who fail to meet minimum standards on the physical fitness test are required to enroll in a developmental course.

**\*Aquatics** — all students must satisfactorily pass the minimum swimming proficiency test or the beginning swimming course. Those who pass the test select another physical education activity course to complete the three-quarter requirement.

## CONCENTRATIONS

### Teacher Education

#### **MAJOR** Physical Education (men) 45 credits

Physical Education 201m, 202m, 203m, 207m, 208m, 209m  
 Physical Education 204m, 205, 302, 303, 306, 308m, 351m, 404m, 490  
 Health Education 350 or 450  
 Zoology 241  
 Electives under departmental advisement

#### **MAJOR** Physical Education (women) 45 credits, plus general education requirements

Physical Education 102w, 202w, 205, 208w, 209w, 302, 320, 405  
 and one of the following sequences:

##### Option A (to be accompanied by Health Science Minor)

Physical Education 201w, 203w, 207w, 305w, 306, 342w, 341w or 343w,  
 402, 404w  
 Recreation 201, 250  
 Three additional credits under departmental advisement.

##### Option B (general, with choice of minor)

Physical Education 201w, 203w, 207w, 302, 305w, 306, 342w, 341w or 343w,  
 404w  
 Health Education 252, 450  
 Zoology 243

**Option C (dance, with choice of minor)**

Physical Education 226, 228, 229, 305w, 306 or 326, 324, 325, 425  
 Zoology 241, 243

Recommended courses: Physical Education 134, an officiating course, and additional team sport courses.

Participation in intramural activities is required in all women's majors and minors during four quarters of the freshman and sophomore years.

**MINOR Physical Education (men) 25 credits**

Six credits from Physical Education 201m, 202m, 203m, 207m, 208m, 209m

Physical Education 204m, 205, 306, 308m, 351m, 404m

Three credits selected under departmental advisement.

**MINOR Physical Education (women) 28 credits, including general education courses**

Physical Education 102w, 201w, 202w, 203w, 205, 207w, 208w, 207w

Health Education 252

Physical Education 305w, 320, 404w

Physical Education 306 and additional upper division courses in physical education advised

**MINOR Dance (women) 25 credits**

Physical Education 121, 123, 126, 226, 228, 229, 320, 324, 325, 425

Philosophy 405

Four additional credits under departmental advisement

**MINOR Recreation (women) 25 credits**

Physical Education 201w or 203w, 305w, 306, 320

Recreation 201, 250, 412, 450w, 451w, 452w

Industrial Arts 301

Three additional credits under departmental advisement

**MINOR Health Science (men, women) 24-27 credits**

Health Education 252, 350, 450

Biology 447

Home Economics 250

Men add:

Zoology 243 and two courses under advisement from Biology 247, 371  
 Zoology 241, 261, 262

Women add:

Zoology 241, 243 and one course from Biology 371, Zoology 262

## Arts and Sciences

**MAJOR Recreation (men) 45 credits**

Recreation 201, 250, 412, four credits — Recreation 450m

Physical Education 205 and six credits from Physical Education 201m, 202m, 203m, 207m, 208m, 209m

Health Education 252

Industrial Arts 301

Psychology 351

Sixteen credits from: Industrial Arts 210, 240; Economics 101, 271; Psychology 352; Sociology 201, 366

**MAJOR** Recreation (women) 68 credits plus Supporting Courses

Recreation 201, 250, 412 and eight credits in Recreation 450w, 451w, or 452w  
Physical Education 201w, 202w, 203w, 207w, 208w, 209w, or equivalent professional activity courses

Physical Education 205, 305w, 306, 320

Health Education 252

One course from: Health Education 301, Biology 247, 447

Industrial Arts 301, Library Science 309, Music 250, Psychology 352, 440,  
Sociology 201, 401D, Speech 330

**Supporting Courses:** Seventeen credits from Botany 253, Geography 421, Geology 211, Physical Education 326; Psychology 351, Sociology 366, Speech 236, 433, Zoology 263

**MINOR** Health Science (men, women) 25 credits

Biology 447

Health Education 350

Home Economics 250

Zoology 241, 243

Two courses under departmental advisement from:

Health Education 252, 450; Biology 371; Chemistry 125; Zoology 261, 262

**MINOR** Dance (women) 25 credits

Physical Education 121, 123, 126, 226, 228, 229, 320, 324, 325, 425

Philosophy 405

Four additional credits under departmental advisement

**MINOR** Recreation (men) 25 credits

Recreation 201, 250, 412, 450 (2 credits)

Physical Education 306

Four credits from Physical Education 201m, 202m, 203m, 207m, 208m, 209m

Industrial Arts 301 or 210

Health Education 252

Three credits under departmental advisement

**MINOR** Recreation (women) 25 credits

Six credits from Physical Education 201w, 202w, 203w, 207w, 208w, 209w

Physical Education 306

Recreation 201, 250

Three credits in Recreation 450w, 451w, 452w

Industrial Arts 301

Five additional credits from supporting course list for Recreation Major.

## Graduate Study

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

### COURSES IN PHYSICAL EDUCATION ACTIVITIES

(See also page 31 for intramural program)

*Activity courses 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.*

#### DEVELOPMENTAL ACTIVITIES (101-109) 1 credit each

102w MOVEMENT FUNDAMENTALS

106m BODY CONDITIONING

108m WEIGHT TRAINING

#### AQUATICS (110-119) 1 credit each

112 BEGINNING SWIMMING  
(for non-swimmers)

113 INTERMEDIATE SWIMMING  
Prerequisite: P.E. 112 or swim  
twenty-five yards and support  
self in deep water.

114 ADVANCED SWIMMING

Prerequisite: P.E. 113 or swim  
100 yards with one stroke; ability  
to use a variety of other  
strokes.

115 SYNCHRONIZED SWIMMING

Prerequisite: P.E. 214 or equivalent.

(See also P.E. 216, Lifesaving and Water Safety, and P.E. 217, Water Safety Instructor's Course.)

#### DANCE (120-129) 1 credit each

120 BEGINNING SOCIAL DANCE

121 INTERMEDIATE SOCIAL DANCE

122 BEGINNING FOLK AND SQUARE DANCE

123 INTERMEDIATE FOLK AND SQUARE DANCE

124 INTERNATIONAL FOLK DANCE

125 MODERN DANCE

126 INTERMEDIATE MODERN DANCE

#### DUAL SPORTS (130-139) 1 credit each

132 BEGINNING BADMINTON

133 INTERMEDIATE BADMINTON

134 FENCING

136 BEGINNING TENNIS (The student furnishes equipment)

137 INTERMEDIATE TENNIS (The student furnishes equipment)

139m BEGINNING WRESTLING

**TEAM SPORTS (140-149) 1 credit each**

141w FIELD HOCKEY

144m SPEEDBALL & SOCCER

142m BASKETBALL

144w SPEEDBALL & SOCCER

142w BASKETBALL

145m VOLLEYBALL

143m SOFTBALL

145w VOLLEYBALL

143w SOFTBALL

147m TOUCH FOOTBALL

148w LaCROSSE

**INDIVIDUAL SPORTS (150-159) 1 credit each**

150 ARCHERY

151w GYMNASTICS, TUMBLING & REBOUND TUMBLING

151m APPARATUS STUNTS & TUMBLING

152 BEGINNING BOWLING (Bowling alley fee \$6.00)

153 INTERMEDIATE BOWLING (Bowling alley fee \$6.00)

154 BEGINNING GOLF

155 INTERMEDIATE GOLF

156m TRACK & FIELD

156w TRACK & FIELD

\*157 BEGINNING SKIING

\*158 INTERMEDIATE SKIING

\*159 ADVANCED SKIING

\*The student enrolling for skiing furnishes equipment, pays cost of transportation and of individual instruction.

**VARSITY SPORTS (men) (180-189) 1 credit each**

180m VARSITY FOOTBALL

185m VARSITY GOLF

181m VARSITY BASKETBALL

186m VARSITY TENNIS

182m VARSITY BASEBALL

187m VARSITY SKIING

183m VARSITY TRACK

188m VARSITY SWIMMING

184m VARSITY WRESTLING

189m VARSITY RUGBY

## PROFESSIONAL COURSES IN PHYSICAL EDUCATION

**201m, 202m, 203m PROFESSIONAL ACTIVITIES 2 credits each**

Open to freshmen majors or minors in physical education or recreation. 201m—Team Sports; 202m Individual Sports; 203m Aquatics (Prerequisite: intermediate level swimmer).

- 201w, 202w, 203w PROFESSIONAL ACTIVITIES 2 credits each**  
Prerequisite: open to freshmen majors or minors in physical education. Development of knowledge and skill; 201w—field hockey, basketball; 202w—badminton, gymnastics; 203w—volleyball, softball, track and field.
- 204m ATHLETIC INJURIES AND TRAINING 3 credits**  
Treatment for injuries common to the playfield, gymnasium, and athletic field; training and safety measures for prevention of injuries; procedures for building physical stamina; experience in taping procedures.
- 205 HISTORY OF PHYSICAL AND HEALTH EDUCATION AND RECREATION 3 credits**  
Historical backgrounds, the range of opportunities in the fields, essential qualifications, and professional preparation.
- 207m PROFESSIONAL ACTIVITIES— TRACK AND PHYSICAL CONDITIONING 1 cr.**  
Open to freshmen majors or minors in physical education or recreation.
- 208m PROFESSIONAL ACTIVITIES— WRESTLING AND WEIGHT TRAINING 2 cr.**  
Open to freshmen majors or minors in physical education or recreation.
- 209m PROFESSIONAL ACTIVITIES— DANCE IN THE PUBLIC SCHOOLS 1 credit**  
Open to freshmen majors or minors in physical education or recreation.
- 207w, 208w, 209w PROFESSIONAL ACTIVITIES 2 credits each**  
Prerequisite: open to sophomore majors or minors in physical education. Development of knowledge and skill: 207w—soccer, speedball, fencing, and bowling; 208w—modern dance, aquatics; 209w—social, folk and square dance, tennis, archery, golf.
- 216 LIFESAVING AND WATER SAFETY 2 credits**  
(Applicable to the general education aquatics requirement.) Prerequisite: satisfactory performance in aquatics test. Instruction leading to qualification for the American Red Cross Lifesaving Certificate.
- 217 WATER SAFETY INSTRUCTOR'S COURSE 2 credits**  
(Applicable to the general education aquatics requirement.) Prerequisite: current American Red Cross Senior Lifesaving Certificate. Stroke analysis and methods of teaching lifesaving and aquatics skills, instruction leading to qualification as an American Red Cross Water Safety Instructor.
- 226 RHYTHMIC ANALYSIS 2 credits**  
Prerequisite: Physical Education 125. Inherent factors of rhythm; application of the rhythmic analysis to all forms of movement including sports, dance, aquatics, and stage techniques.
- 228 DANCE PRODUCTION 2 credits**  
Prerequisite: Physical Education 125. Practical experience in formulating, developing, and presenting dance programs.
- 229 DANCE COMPOSITION 2 credits**  
Prerequisite: Physical Education 125. Lectures and laboratory in the fundamentals of composition, emphasizing theme and development; preclassical dance forms, modern dance forms.
- 300 SPECIAL PROBLEMS IN THE AREA OF PHYSICAL EDUCATION 2 to 5 credits**  
Prerequisite: permission of department chairman.
- 302 KINESIOLOGY 3 credits**  
Prerequisite: Zoology 241. Important muscles of the body; origin, insertion, action and structure; principles of body mechanics; analysis of leverage in body movements; problems of readjustment in relation to posture and physical activities.

- 303 PHYSIOLOGY OF MUSCULAR EXERCISE 3 credits**  
Prerequisite: Zoology 241. Application of physiological facts to the problem of conditioning; relation to physical activities.
- 305w METHODS AND MATERIALS FOR TEACHING SPORTS 4 credits**  
Prerequisites: Physical Education 201w, 202w, 203w, 207w, 208w, 209w, or equivalent. Preparation for teaching individual and team sports to secondary school girls.
- 306 METHODS AND MATERIALS FOR ELEMENTARY SCHOOL PHYSICAL EDUCATION 3 credits**  
Prerequisite: Psychology 352 (355). Purposes and requirements of the program, with emphasis on planning, methods and materials of instruction.
- 308m METHODS AND MATERIALS OF PHYSICAL EDUCATION FOR BOYS 3 credits**  
Prerequisite: completion of activities requirements for majors and minors, or permission of instructor. Selection of activities and appropriate methods of instruction for secondary school boys.
- 320 METHODS AND MATERIALS FOR TEACHING DANCE 3 credits**  
Prerequisites: Physical Education 120, 122, 125, or equivalent. The teaching of modern, folk, social, and square dancing.
- 324 THEORY AND PRACTICE OF CONTEMPORARY DANCE TECHNIQUES 2 credits**  
Prerequisites: Physical Education 125, 126, or equivalent. Backgrounds for various dance styles provided by professional schools of modern dance and progressive jazz techniques.
- 325 CONCERT DANCE 1 credit**  
Prerequisites: Physical Education 125 or 126, or equivalent. Group and individual experience in dance as a theatre art; participation in the winter dance concert.
- 326 DANCE FOR CHILDREN 3 credits**  
Dance activities for the elementary school-age child; singing games, creative dance, dramatizations and characterizations, ball and rope rhythms, simple square and folk dances.
- 341w, 342w, 343w OFFICIATING IN WOMEN'S SPORTS 1 credit each**  
Officiating techniques in volleyball, basketball, tennis, track and field.
- 343m OFFICIATING IN TEAM SPORTS 2 credits**  
Principles, techniques and practice of officiating in team sports for men.
- 351m TEACHING GYMNASTICS 1 credit**  
Prerequisite: Physical Education 151m. Intermediate performance skills, with opportunity for each student to teach several basic stunts and calisthenics.
- 380m COACHING FOOTBALL 2 credits**  
The theory and appreciation of football, with methods and materials of organization.
- 381m COACHING BASKETBALL 2 credits**
- 382m COACHING BASEBALL 2 credits**
- 383m COACHING TRACK 2 credits**  
Theory of track and field events and organization and administration of a track meet.
- 384m COACHING WRESTLING 2 credits**  
Practical and theoretical aspects of teaching wrestling with special consideration to wrestling skills, methodology, class organization, equipment and officiating.

- 397b FIELD HOCKEY FOR GIRLS AND WOMEN 3 credits**  
Beginning, intermediate, and advanced performance skills and game strategies for field hockey. Summer, 1965.
- 400 SPECIAL PROJECTS IN PHYSICAL EDUCATION 2 to 5 credits**  
Prerequisites: senior status and permission of instructor and department chairman. Individual instruction for students who wish to undertake special projects under supervision.
- 402 TEACHING OF BODY MECHANICS AND MOVEMENT FUNDAMENTALS 3 credits**  
Prerequisite: Physical Education 302, Zoology 241. Methods and materials used in teaching body mechanics and movement fundamentals including a study of relaxation, conditioning, and testing.
- 404m ADMINISTRATION OF PHYSICAL EDUCATION IN SCHOOLS 3 credits**  
Prerequisite: Physical Education 308m. Organization and administration of the secondary school program for boys: service, intramural, recreational, and athletic.
- 404w ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION FOR SECONDARY SCHOOL GIRLS 3 credits**  
Prerequisites: Physical Education 205 and 305w. Criteria for the selection of activities, the organization of classes, departmental personnel and policies, physical plant and its upkeep, purchase and care of equipment.
- 405 PRINCIPLES OF PHYSICAL EDUCATION 3 credits**  
Prerequisites: Physical Education 205, 306, and 305w or 308m. Scientific and philosophical principles related to physical education, its purposes, scope, and curriculum.
- 407w SEMINAR IN GIRLS' PHYSICAL EDUCATION ACTIVITIES 3 credits**  
Prerequisite: teaching experience. Summer only.
- 410w EXTRA-CLASS ACTIVITIES IN PHYSICAL EDUCATION FOR GIRLS 2 credits**  
Intramural programs, tournaments, play day, sports days, and G.A.A. for secondary school girls. Summers only.
- 425 HISTORY AND PHILOSOPHY OF THE DANCE 3 credits**  
Historical and philosophical development of the dance and its relation to other arts from primitive man through the contemporary period.
- 430 ADVANCED TECHNIQUES AND TEACHING IN INDIVIDUAL SPORTS 3 credits**  
Prerequisite: Physical Education 305w, or teaching experience. Special techniques for teaching dual and individual sports to the highly skilled. Summers only.
- 49D TECHNIQUES FOR EVALUATING PHYSICAL ABILITIES 3 credits**  
Prerequisites: Psychology 371 and permission of instructor. Application of measurement theory to physical education; selection and administration of appropriate tests, and interpretation of results of fundamental statistical procedure.
- 497b HEALTH ADAPTATIONS OF MUSCULAR ACTIVITY 3 credits**  
Healthful activities in the teaching of physical education. Summer, 1965.
- 497c WORKSHOP IN PHYSICAL FITNESS 2 credits**  
Current theory and practice in the implementation of physical fitness programs for all age levels. Summer, 1965.
- 497d PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL TEACHER 2 credits**  
Workshop for classroom teachers concerned with physical education programs, emphasizing organization and desirable activities. Summer, 1965.
- 498 STRAIGHT LINE PHILOSOPHY 3 credits**  
Administration of human conduct in activities as straight-line enclosures; not limited to those with athletic experience.



- 499 PHYSICAL FITNESS AND THE PUBLIC SCHOOL 3 credits**  
Prerequisite: senior or graduate status or teaching experience. Organization and development of physical fitness programs in the public schools. Summers only.
- 500 PROBLEMS IN PHYSICAL EDUCATION 2 to 5 credits**  
For teachers with experience in physical education. Controversial issues in the field; the professional problems pertinent to the individual members of the group.
- 501 SURVEY OF RESEARCH AND PROFESSIONAL LITERATURE 3 credits**  
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 credits**  
Prerequisites: Zoology 241, Physical Education 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 credits**  
Design and construction of gymnasiums and other physical education facilities, and the purchase and care of athletic and physical education equipment. Summers only.
- 504 CURRICULUM IN PHYSICAL EDUCATION 3 credits**  
A study of physical education programs based on the needs of boys and girls.
- 505 CURRENT DEVELOPMENTS IN PHYSICAL EDUCATION 3 credits**  
Prerequisite: teaching experience. Developments of current significance in the field of physical education, including recreation and athletics.

## COURSES IN HEALTH EDUCATION

- 252 FIRST AID 2 credits**  
First aid for common injuries and illnesses based on the American Red Cross Standard and Advanced first aid courses. Student qualifies for the American Red Cross Certificate.
- 350 CURRENT INFORMATION FOR HEALTH INSTRUCTION 2 credits**  
Recent developments in personal and consumer health, mental and emotional health, and family life education.
- 352 THE FIRST AID INSTRUCTOR 1 credit**  
Prerequisites: Health Education 252 or a current advanced American Red Cross First Aid Certificate; minimum age, 20 years. Instruction leading to qualification for the American Red Cross First Aid Instructor Certificate.
- 450 HEALTH EDUCATION IN THE PUBLIC SCHOOLS 3 credits**  
Prerequisite: Health Education 350 or equivalent. Basic principles of health instruction, organization, methods and materials, and school health services.
- 500 PROBLEMS IN HEALTH EDUCATION 2-5 credits**  
For the graduate student concerned with a special problem in the field.

## COURSES IN RECREATION

- 201 RECREATION LEADERSHIP 2 credits**  
Skills and leadership techniques for leaders of school, playground, and community recreation, stressing use of materials and methods in various activities.

- 250 CAMPING AND OUTDOOR EDUCATION 3 credits**  
Organization and program in private agency and school camps; qualifications and responsibilities of the camp counselor; camping techniques.
- 412 ORGANIZATION AND ADMINISTRATION OF SCHOOL AND COMMUNITY RECREATION 3 credits**  
Prerequisites: Recreation 201, 250. Development of programs for school and community recreation including personnel, finance, facilities, and activities.
- 450m FIELD WORK IN RECREATION 1-4 credits**  
Prerequisites: Physical Education 306, Recreation 201, 412. Practical experience in a community recreation program.
- 450w, 451w, 452w FIELD WORK IN RECREATION 1-4 credits each**  
Prerequisites: Physical Education 306, Recreation 201, 412. Practical experience in a community recreation program.
- 500 PROBLEMS IN RECREATION 2-5 credits**  
For experienced recreation leaders; opportunity for individualized study of problems growing out of professional experience.

### PHYSICAL SCIENCE

(See page 178)

**DEPARTMENT of PHYSICS**

## FACULTY

**Professors:** Bender, Lahti**Associate Professors:** Lindsay, McLeod (Chairman)**Assistant Professors:** Dittrich, Rupaal, Sprague, Veit

## CONCENTRATIONS

## Teacher Education

**MAJOR** 45 credits, plus Supporting Courses

Physics 231 to meet the general education requirement

Physics 232, 233, 341, 355, 398 (one credit), 401

Physical Science 492

Physics 407 or 408, or General Science 405

Additional electives in physics, 15 credits

**Supporting Courses:** 15 credits in mathematics**MINOR** 25 credits, plus Supporting Courses

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

Physics 132, 133, (or 232, 233) and 381

Physical Science 492

Electives in Physics

**Supporting Courses:** 15 credits in mathematics

## Arts and Sciences

**MAJOR** 50 credits, plus Supporting Courses

Physics 231 to meet the general education requirement

Physics 232, 233, 341, 342, 343, 355, 356, 357, 381, 401

One course from Physics 407, 408, General Science 405

Upper division electives, 8 credits

**Supporting Courses:**32 credits in mathematics, including Mathematics 121, 122, 222, 223,  
224, 331, 332Also recommended: reading knowledge of a foreign language and 10 credits  
in chemistry selected under advisement.**MINOR** 25 credits, plus Supporting Courses

Physics 231 to meet the general education requirement

Physics 232, 233, 341, 355, 381

**Supporting Courses:** 18 credits in mathematics through Mathematics 222

## Special Honors Program — Combined Physics- Mathematics Concentration

A combined major in mathematics and physics is available to superior students. Application for admission to the program should be made jointly to the departments of Mathematics and Physics during the second year of college work in lower division calculus and general physics based on calculus. A 3.0 grade average in all courses is required for admission to and continued participation in this program. This program substitutes for the major and minor in requirements for the B.A. degree.

**Mathematics:** Mathematics 121, 122, 222, 223, 224, 301, 325, 331, 332, 425, 426

8 upper division credits selected from: Mathematics 361, 371, and approved courses numbered 400 or above.

(At least 12 credits of the above must be 400 or higher.)

**Physics:** Physics 231, 232, 233, 341, 342, 343, 355, 356, 357, 381

13 credits in upper division courses, including Physics 481, 482, 483 or Physics 485, 486, 487.

**Supporting Courses:** Mathematics 270 and 10 additional credits under advisement.

## Departmental Honors

Physics majors who wish to graduate "with honors" should consult the department chairman for special requirements beyond the general honors courses for all honors students.

## Graduate Study

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

## COURSES

**101 ELEMENTARY PHYSICS 4 credits**

Not available for credit to students with high school physics or to science majors. Introduction to physical methods through a survey of topics in mechanics, electricity, magnetism, optics, and modern physics; historical and philosophical foundations.

**105 INTRODUCTION TO ASTRONOMY 3 credits**

Prerequisites: Mathematics 151, Physics 131. The real and apparent motion of stars; the solar system and its origin.

**131 INTRODUCTION TO EXPERIMENTAL PHYSICS 5 credits**

Prerequisite: 1½ years of high school algebra or Mathematics 100 or 151. Classical topics from light, sound, electricity, magnetism, mechanics, and heat.

**132, 133 GENERAL PHYSICS 5 credits each**

Prerequisite: Physics 131; Physics 132 is prerequisite to 133. Physics 132 unifies the ideas of motion and fields; Physics 133 unifies ideas of sound, light, and electromagnetism through the concept of waves.

- 155 ELEMENTARY ELECTRONICS 2 credits**  
Prerequisite: 1½ years of high school algebra or Mathematics 100 or 151. Principles of electron tubes and electrical circuits; construction of circuits.
- 231, 232, 233 GENERAL AND ENGINEERING PHYSICS 5 credits each**  
Prerequisite: Mathematics 222 (or concurrent) or permission of instructor. Basic concepts of physics using calculus; particle mechanics in Physics 231; rigid body mechanics, thermodynamics, and kinetic theory in Physics 232; electricity and magnetism in Physics 233.
- 300 PROJECTS IN PHYSICS 1 to 2 credits**  
Prerequisite: 15 credits in physics and permission of instructor.
- 311 RADIATION BIOPHYSICS 2 credits**  
Prerequisites: Physics 133 (or 233) and Mathematics 223 or permission of instructor. The physical and biological effects of penetrating radiations.
- 312 RADIATION BIOPHYSICS LABORATORY 2 credits**  
Prerequisites: Physics 133 (or 233) and Mathematics 223 or permission; may be taken concurrently with Physics 311. Principles of radiation dosimetry and bioassay.
- 321 ATMOSPHERIC SCIENCE 3 credits**  
Prerequisite: one year of college physics. Principles of meteorology applicable to weather analysis and forecasting.
- 322 ATMOSPHERIC SCIENCE 3 credits**  
Prerequisite: Physics 321. Processes governing the distribution of atmospheric pollutants.
- 341, 342, 343 ANALYTICAL MECHANICS 3 credits each**  
Prerequisite: Physics 233, Mathematics 222 for Physics 341; Mathematics 331 for 342. Vector treatment of the basic principles of particle mechanics, including statics of rigid bodies, dynamics of particles, the theory of small vibrations and the continuum theory of matter; the special theory of relativity and the Lagrangian and Hamiltonian formalisms.
- 351 OPTICS 3 credits**  
Prerequisite: Physics 233 (or concurrent), Mathematics 222. Geometrical optics.
- 352 OPTICS AND SPECTROSCOPY 4 credits**  
Prerequisite: Physics 351. Physical optics and introduction to atomic spectroscopy.
- 355, 356, 357 ELECTRICITY AND MAGNETISM 3 credits each**  
Prerequisite: Physics 233 and Mathematics 222 for Physics 355; Mathematics 331 an additional prerequisite for Physics 356 and 357. Elementary treatment of the classical theory of fields; basic principles of electrostatics, potential theory, magnetic properties of matter, electric currents and associated magnetic and electric fields; Maxwell's field equations, propagation of plane and spherical electromagnetic waves; introduction to microwave theory.
- 361, 362 THERMODYNAMICS AND STATISTICAL MECHANICS 3 credits each**  
Prerequisites: Physics 233 and Mathematics 224 or permission for Physics 361; Physics 361 and Mathematics 331 for Physics 362. Kinetic theory, the laws of thermodynamics, classical statistical mechanics.
- 371, 372 ELECTRONICS 3 credits each**  
Prerequisites: Physics 233 and differential and integral calculus or permission; Physics 371 prerequisite for Physics 372. Physics of electron devices, basic electronic circuits.
- 381 ATOMIC PHYSICS 4 credits**  
Prerequisite: Mathematics 222; Physics 133, or 233 (or concurrent), or permission of instructor. Kinetic theory; special theory of relativity; quantum theory; wave-particle duality; atomic structure.

- 382 NUCLEAR PHYSICS 4 credits**  
Prerequisite: Physics 381. Nuclear systematics and structure: nuclear reactions.
- 398 LABORATORY INSTRUCTION 1 credit each quarter. (three credits maximum)**  
Laboratory assistance and instructional practice in Physics 131, 132, 133 and 231, 232, 233 laboratories.
- 399 SEMINAR IN PHYSICS 1 credit**  
Prerequisite: 25 credits in physics and permission of instructor.
- 400 PROJECTS IN PHYSICS 1 to 3 credits**  
Prerequisite: permission of instructor. Special projects under supervision.
- 401, 402, 403 PHYSICS SENIOR LABORATORY 2 credits each**  
Prerequisite: Physics 381 for 401; Physics 382 and 401 recommended for 402, 403. Experimentation in electricity and electrical circuits, optics, atomics, X-Ray spectroscopy, radioactivity and nuclear physics.
- 407, 408 FOUNDATIONS OF PHYSICS 3 credits each**  
Prerequisite: one year of college physics; Physics 407 prerequisite to Physics 408. The development of concepts from the Greek period through the 18th century (407) and during the 19th and 20th centuries (408).
- 431 INTRODUCTION TO SOLID STATE PHYSICS 4 credits**  
Prerequisite: Physics 381, Mathematics 331 (or concurrent). Theoretical and experimental description of mechanical, electrical, and magnetic properties of solids.
- 481, 482, 483 INTRODUCTION TO QUANTUM MECHANICS 3 credits each**  
Prerequisites: Physics 343, 352, 357, 381; Mathematics 331, 332. The elementary theory of quantum mechanics including particles and waves, the Schroedinger theory, perturbation theory, multielectron atoms, magnetic moments, spin and relativistic effects, identical particles and the Pauli principle, X-rays, collision theory, and introduction to nuclear physics.
- 485, 486, 487 INTRODUCTION TO THEORETICAL PHYSICS 3 credits each**  
Prerequisites: Physics 343, 357; Mathematics 331, 332. Basic mathematical tools needed by the theoretical physicist; classical mechanics, phase space, Lagrangian and Hamiltonian formalisms, continuum theory of matter, variational methods in mechanics, theory of linear transformations, theory of fields, relativity theory, and applications of partial differential equations.
- 498 RESEARCH PROJECTS IN PHYSICS 6 credits**  
Prerequisite: permission of instructor. Investigation of a problem in physics under the sponsorship and supervision of a member of the physics faculty; project must extend over a minimum of two quarters.
- 531, 532 SOLID STATE PHYSICS 3 credits each**  
Prerequisites: 45 credits in physics. Properties of solids and the experimental basis of the modern theory of solids.
- 541, 542, 543 ADVANCED MECHANICS 3 credits each**  
Prerequisite: 45 credits in physics including Physics 487. Advanced classical mechanics including the Kepler problem in action angle variables; application of the integral invariants of Poincaré and of Lagrange and Poisson brackets, infinitesimal contact transformations; small oscillations; Lagrangian and Hamiltonian formulations for continuous systems.
- 551, 552 NUCLEAR THEORY 3 credits each**  
Prerequisite: 45 credits in physics. Theory and experimental basis for the structure of the atomic nucleus and nuclear properties and reactions.

**561, 562 PHYSICS OF PLASMAS 3 credits each**

Prerequisite: 45 credits in physics. The physics of fully ionized gases, fusion, gas dynamics, effects of simultaneous electric and magnetic fields, magneto-hydrodynamics, and current developments in plasma research.

**571, 572 ELECTROMAGNETIC THEORY 3 credits each**

Prerequisite: 45 credits in physics. General properties of vector fields, electromagnetic field equations, and boundary value problems; topics in wave propagation.

**581, 582 QUANTUM THEORY 3 credits each**

Prerequisite: 45 credits in physics including 483 and 487. Advanced concepts in quantum theory including matrix formalism, quantization of the electromagnetic field, the Dirac theory of the electron, the interaction of radiation with matter.

**591, 592, 593 RELATIVITY THEORY 3 credits each**

Prerequisite: 45 credits in physics including Physics 487. Special relativity mechanics and electrodynamics in Physics 591; design theory of high energy particle accelerators in Physics 592; general relativity theory including planetary motion, electrodynamic formulations, and brief reviews of the status of unified field theories in Physics 593.

**599 RESEARCH 3 to 9 credits**

Prerequisites: 18 credits in 500 level courses in physics, permission of instructor and department chairman. Investigation of an original problem in physics under supervision.

## DEPARTMENT of POLITICAL SCIENCE

### FACULTY

**Professors:** Vernon (Chairman), Wuest

**Associate Professors:** Hebal, Payne

**Instructor:** Muller

### CONCENTRATIONS

#### Teacher Education

**MAJOR** (secondary) 45 credits

Political Science 101, 250, 270

Eight or more credits from each of **three** of the following:

Comparative Government: Political Science 401, 402, 403, 404, 405, 406, 407, 409, 453

Political Dynamics and

Public Administration: Political Science 320 or 340, and one from 253, 345, 420, 421, 422, 425, 440, 442, 443, 450, 453

Political Theory: Political Science 360 and one from 461, 462, 463

International Relations: Political Science 375, 376, 406, 411, 474

Electives under departmental advisement.

**MINOR** 25 credits

Political Science 101, 250, 270

Minimum of five credits selected under departmental advisement in each of two fields.

#### Arts and Sciences

**MAJOR** 50 credits, plus Supporting Course

Political Science 101, 250, 270

Eight or more credits from each of **four** of the following:

Comparative Government: Political Science 401, 402, 403, 404, 405, 406, 407, 409, 453

Public Law: Political Science 310, 315, 410, 411

Public Administration: Political Science 320, and one from 253, 420, 421, 422, 425, 453

Political Dynamics: Political Science 340, and one from 345, 423, 440, 442, 443, 450, 453

Political Theory: Political Science 360 and one from 461, 462, 463

International Relations: Political Science 375, 376, 406, 411, 474

Elective: any three credits

**Supporting Course:** Economics 201

Recommended courses: History 203, 204; Psychology 440, Sociology 431; Geography 311, 320, 341



**MINOR 25 credits**

Political Science 101, 250, 270

Minimum of 5 credits in each of **two** of the following:

Comparative Government: Political Science 401, 402, 403, 404, 405, 406, 407, 409, 453

Political Dynamics and

Public Administration: Political Science 320 or 340, and **one** from 253, 345, 420, 421, 422, 423, 425, 440, 442, 443, 450, 453

Political Theory: Political Science 360 and one from 461, 462, 463

International Relations: Political Science 375, 376, 406, 411, 474

## Departmental Honors

In addition to the general requirements for all honors students, (see page 123) a political science major who wishes to graduate "with honors" must:

Complete Political Science 490 (with the advice of the departmental honors adviser)

Complete Political Science 499

Have taken courses leading to a reading knowledge of a foreign language, or two years of foreign language training

Have a grade average of 3.5 in upper division political science courses

Submit a senior thesis

## COURSES

- 101 GOVERNMENT IN THE MODERN WORLD 5 credits**  
Special areas of human interest and activity in political science and their relationship to government in the modern world.
- 250 AMERICAN NATIONAL GOVERNMENT 5 credits**  
Principles and institutions of the national government; its main functions.
- 253 STATE AND LOCAL GOVERNMENT 5 credits**  
Prerequisite: Political Science 250, or permission of instructor. Sub-national levels of government and inter-governmental relations; legislative, executive, and judicial authorities; the electoral process.
- 270 (370) INTERNATIONAL POLITICS 5 credits**  
Prerequisite: Political Science 250, or permission of instructor. Basic principles and forces in international relations with emphasis on the nation-state, nationalism, and international order.
- 310 AMERICAN CONSTITUTIONAL LAW 5 credits**  
Prerequisite: Political Science 250. Significant Supreme Court decisions, interpreting major parts of the Constitution in practice.
- 315 LAW AND SOCIETY 3 credits**  
Prerequisite: Political Science 250, or permission of instructor. Jurisprudence, the legal order, sources of law and the judicial process.

- 320 PUBLIC ADMINISTRATION 5 credits**  
Prerequisite: Political Science 250, or one of the following courses: Sociology 201 or 301, Psychology 201 or 440, or permission of instructor. An interdisciplinary approach to the conduct of public business centered on the executive branch of government; some treatment of other countries.
- 340 POLITICAL PARTIES AND ELECTIONS 5 credits**  
Prerequisite: Political Science 101 and 250, or permission of instructor. Nature and functions of political parties; electoral methods.
- 345 GOVERNMENTAL AND POLITICAL PROBLEMS OF WASHINGTON 3 credits**  
Prerequisite: Political Science 250 and 253, or permission of instructor. Governmental and political issues of the State of Washington.
- 360, (460) INTRODUCTION TO POLITICAL THEORY 5 credits**  
Prerequisite: Political Science 101, General Education 121 or History 105 or permission of instructor. Origin and evolution of major concepts in Western political thought from the time of Pericles to that of Machiavelli.
- 375 (475) FOREIGN POLICIES OF MAJOR POWERS 3 credits**  
Prerequisite: Political Science 270, or permission of instructor. Analysis and evaluation of the foreign policies of major powers other than the United States.
- 376 (476) AMERICAN FOREIGN POLICY 3 credits**  
Prerequisite: Political Science 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 to 5 credits**  
Prerequisite: permission of department.  
Supervised readings and/or research in a selected area of political science.
- 401 GOVERNMENT AND POLITICS OF GREAT BRITAIN 3 credits**  
Prerequisites: Political Science 101 or permission of instructor. Analysis of the British system of Government.
- 402 GOVERNMENTS AND POLITICS OF WESTERN EUROPE 3 credits**  
Prerequisite: Political Science 101 or permission of instructor; not open to students with credit in previously numbered 401 course. Political system of France, West Germany, Switzerland, and/or other countries.
- 403 (402) GOVERNMENTS OF THE SOVIET UNION AND EASTERN EUROPE 3 credits**  
Prerequisite: Political Science 101 or permission of instructor. The political system of the U.S.S.R. emphasizing constitutional theory and practice, the Communist party, and the position of the individual.
- 404 GOVERNMENTS AND POLITICS OF LATIN AMERICA 3 credits**  
Prerequisite: Political Science 101 or permission of instructor. The governmental and political systems of Latin American countries.
- 405 THE MIDDLE EAST 3 credits**  
Prerequisite: Political Science 101 or permission of instructor. Discussion of outstanding political, cultural, and governmental problems of the Middle East.
- 406 GOVERNMENT AND POLITICS OF CANADA 3 credits**  
Prerequisite: Political Science 101, or permission of instructor. Canadian government and politics; problems such as federalism, position in the Commonwealth, etc.
- 407 GOVERNMENTS AND POLITICS OF THE FAR EAST 3 credits**  
Prerequisite: Political Science 101, or permission of instructor, not open to students with credit in previously numbered 405 course. The political systems of China and Japan, and other selected countries of the Far East.

**409 (301) PROBLEMS IN COMPARATIVE GOVERNMENT 5 credits**

Prerequisite: Political Science 101, at least one course between 401 and 407, or permission of instructor. Similarities and dissimilarities between states with respect to constitutional and legal concepts, institutions and procedures of government, civil and administrative functions, political processes.

**410 THE SUPREME COURT AND CIVIL RIGHTS 3 credits**

Prerequisite: Political Science 250 and 310. Leading Supreme Court 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 3 credits**

Prerequisite: Political Science 270, or permission of instructor. The origin, principles, and problems of international law.

**420 NATURAL RESOURCES: ADMINISTRATIVE AND POLICY PROBLEMS 3 credits**

Prerequisite: Political Science 320 or permission of instructor. Problems in forest policy, minerals, water and power, with emphasis on Western United States.

**421 METROPOLITAN AREA GOVERNMENT 3 credits**

Prerequisites: Political Science 101 and 250, or Sociology 201, or Geography 341, or permission of instructor. Problems related to the "exploding metropolis," alternative forms of "metro" government, and critical urban problems.

**422 STAFFING THE PUBLIC BUREAUCRACY 3 credits**

Prerequisite: Political Science 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 credits**

Prerequisite: Political Science 250 or permission of instructor. The executive branch, its organization and problems.

**440 THE LEGISLATIVE PROCESS 3 credits**

Prerequisite: Political Science 101 and 250 or 253 or 340 or permission of instructor. Interaction of executives, administrators, parties, pressure groups, the press, and public in the legislative process at both national and state levels.

**442 POLITICAL BEHAVIOR 3 credits**

Prerequisite: Political Science 340 or permission of instructor. Human action in political settings, with emphasis on social class analysis, voting, and legislative behavior.

**450 PUBLIC OPINION 3 credits**

Prerequisite: Political Science 250 and 340, or permission of instructor. Nature, formation, and role of public opinion; public opinion surveys, pressure groups, and role of government in the forming of public opinion.

**453 COMPARATIVE LOCAL GOVERNMENT 3 credits**

Prerequisite: Political Science 253 or 409 or permission of instructor. Structures and functions of local governments in relation to higher levels of government in the United States, Canada, Great Britain, and France.

**461 POLITICAL THEORY: RENAISSANCE AND MODERN 3 credits**

Prerequisite: General Education 122, or Political Science 360, or permission of instructor. Origin and evolution of major concepts in Western political thought from the time of Machiavelli to that of Edmund Burke.

- 462 POLITICAL THEORY: CONTEMPORARY IDEOLOGIES 3 credits**  
Prerequisite: General Education 123, or History 106, or Political Science 360, or permission of instructor. Origin and evolution of major concepts in Western political thought from the time of Edmund Burke to the present; development of modern conservatism, liberalism, Marxism, and Fascism or National Socialism.
- 463 AMERICAN POLITICAL THOUGHT 3 credits**  
Prerequisite: History 203, 204, or equivalent, or Political Science 101 and/or 250. Major concepts in American political thought from the Colonial Period to the present.
- 474 INTERNATIONAL ORGANIZATION 3 credits**  
Prerequisite: Political Science 270 or permission of instructor. Development, organization, and activities of various types of international institutions, including the United Nations.
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 499 SENIOR SEMINAR: APPROACHES TO THE STUDY OF POLITICS 3 credits**  
Prerequisite: 30 credits in political science, senior standing, permission of department. Methods of studying political phenomena and application of systematic political theory.

## DEPARTMENT of PSYCHOLOGY

### FACULTY

**Professors:** Adams, Budd, Harwood (Chairman) Nugent, Woodring

**Associate Professors:** Blood, Diers, Elich, E. Jones, Mason, McQuiston, Meade, Straughan

**Assistant Professors:** Carmean, Crow, Kintz, Laidlaw, MacKay, Namikas

### CONCENTRATIONS

#### Teacher Education

**MAJOR** (elementary) 45 credits

(This is in addition to the psychology courses in the general education and professional requirements.)

Psychology 201, 303, 373, 440, 452

Electives under advisement—25 credits

Students electing the alternate program for elementary teachers will complete 28 credits in the above major.

**MINOR** (secondary) 20 credits

Psychology 201 plus 16 credits in psychology other than courses required in the educational-psychology professional requirements.

Recommended courses: Psychology 373 and 303

#### Arts and Sciences

**MAJOR** 40 credits, plus Supporting Courses

Psychology 201, 303, 373

Majors should complete these before electing upper division courses. A knowledge of descriptive statistics is prerequisite to these courses. This knowledge may be demonstrated by completing Mathematics 240 or by a departmental examination. Those electing the latter may obtain a study program from the department in preparation for the examination. It is recommended that this prerequisite be fulfilled before taking Psychology 201.

Electives under advisement—28 credits

**Supporting Courses:** Mathematics 240 or equivalent (see above) Philosophy 201, Sociology 201, and at least one of the following sequences:

(a) Chemistry 121, 122, 251

(b) Chemistry 125, 251, and one course from (c), (d) or (e) below

(c) Physics 131, 132, 133 (or 231, 232, 233)

(d) Mathematics 220, 241, 270

(e) Either Zoology 241-243 or Zoology 261-262, and one course from Biology 301, 371, Zoology 363, 366

Recommended additional elective courses: one year or more of a foreign language, Philosophy 411, Psychology 406, upper division courses in mathematics and the physical, biological, or social sciences

**MINOR 24 credits**

Psychology 201

Twenty credits selected under advisement as follows:

Two courses or more from Psychology 302, 303, 373, 405, 406, 407, 408, 409, 440, 452, 473

Other courses from above or from Psychology 320, 352 (355), 453

It is recommended that biology majors elect Psychology 303, 407, 409, and economics majors Psychology 320.

Students planning to take advanced work in psychology at Western should consult the **Graduate Bulletin** for courses prerequisite to a master's degree program.

### Departmental Honors

In addition to the general requirements for all honors students (see page 123) a psychology major who wishes to graduate "with honors" must complete:

Psychology 401

Satisfactory performance on a comprehensive examination in psychology

Beginning in 1966, 24 credits in French, German, or Russian, or a demonstrated reading knowledge of one of these languages.

### Graduate Study

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

### COURSES

**201 GENERAL PSYCHOLOGY 4 credits**

Prerequisite: General Education 105 or permission of instructor. Experimentally oriented study of the basic psychological concepts.

**261 THE PSYCHOLOGY OF ADJUSTMENT 3 credits**

Prerequisite: General Education 105 or a course in general psychology. Adjustments in normal human life; the development of personality and its relation to the adequacy of adjustment. Discontinued after 1965-1966.

**302 COMPARATIVE PSYCHOLOGY 3 credits**

Prerequisite: Psychology 201. Phylogenetic comparison of animal behavior, learning, motivation, and sensory processes in selected species of animals, lectures and laboratory.

**303 ADVANCED GENERAL PSYCHOLOGY 4 credits**

Prerequisite: Psychology 201, 373. The use of quantitative techniques in behavioral analyses. Lectures and laboratory.

**320 INDUSTRIAL PSYCHOLOGY 3 credits**

Prerequisite: Psychology 201 or 261 or 351. Application of psychological principles to such industrial problems as personnel selection and appraisal, human relations, marketing, training and engineering psychology.

- \*351 PRINCIPLES OF HUMAN LEARNING 3 credits**  
Prerequisite: General Education 105. Application of the psychological principles of learning to classroom teaching.
- \*352 HUMAN DEVELOPMENT AND PERSONALITY 5 credits**  
Prerequisite: Psychology 351 and Biology 101 or 104 or equivalent. Basic principles of development and personality with special attention to the school age child; implications for educational practices. Not open to students who have credit for Psychology 355 or 456.
- \*355 HUMAN GROWTH AND DEVELOPMENT 4 credits**  
Prerequisites: Psychology 261 and Biology 104 or equivalent. Physical, social, and emotional growth and development from birth to adulthood; implications for curriculum and classroom procedures. Discontinued after 1965-66; see Psychology 352.
- \*371 EVALUATION IN THE PUBLIC SCHOOL 3 credits**  
Prerequisite: Psychology 351. Evaluating pupil achievement; construction of instruments for determining what a student has learned and how much he has developed; the use of standardized tests.
- 373 ELEMENTARY STATISTICAL INFERENCE 3 credits**  
Prerequisite: Mathematics 240 or departmental examination (see department for preparatory study program). Statistical procedures and informed reading of original research. Also offered as Education 373.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 397a APPLIED OPERANT CONDITIONING 1 credit**  
Prerequisite: permission of instructor. Winter, 1965.
- 397b SEMINAR IN THE BEHAVIORAL SCIENCES 3 credits**  
Prerequisite: permission of instructor. Fall, 1964.
- 397c LEARNING THEORY TREATMENT OF CHILDREN'S BEHAVIORAL DISORDERS 2 credits**  
Prerequisite: permission of instructor.
- 400 SPECIAL PROBLEMS 1 to 3 credits**  
Prerequisite: permission of instructor. Opportunity for advanced students who wish to investigate problems.
- 401 HONORS SEMINAR 3 credits**
- 402 MOTIVATION 3 credits**  
Prerequisite: Psychology 201. Experimental findings, and theoretical interpretations of the biological and psychological aspects of motivation.
- 405 SEMINAR IN RECENT PSYCHOLOGICAL LITERATURE 3 credits**  
Prerequisite: permission of instructor.
- 406 HISTORY AND SYSTEMS OF PSYCHOLOGY 3 credits**  
Prerequisite: 15 credits in psychology. Historical development of the systematic viewpoints of psychology.
- 407 SENSATION AND PERCEPTION 3 credits**  
Prerequisite: Psychology 201. An experimentally oriented course emphasizing sensory processes and necessary stimuli to perception; perceptual theory, classical and contemporary.
- 408 THE PSYCHOLOGY OF LEARNING 5 credits**  
Prerequisite: Psychology 201 or equivalent. Major principles of learning, empirical evidence underlying them, and their theoretical interpretation; lectures and laboratory.

\*Educational—psychology courses.

- 409 PHYSIOLOGICAL PSYCHOLOGY 5 credits**  
Prerequisites: Zoology 241 and 243, or 248; Psychology 201 and 10 additional credits in psychology. Biological foundations of behavior; lecture and laboratory.
- \*431 INTRODUCTION TO GUIDANCE SERVICES 3 credits**  
Prerequisite: 15 hours of psychology and senior status. Roles of teacher, principal, psychologist, counselor, and other specialists in an integrated program; guidance and counseling techniques.
- 440 SOCIAL PSYCHOLOGY 3 credits**  
Prerequisites: 10 credits in psychology, or Psychology 201 and 5 credits in sociology. Psychology of human institutions with special reference to impact on individual behavior.
- 452 THEORY OF PERSONALITY 5 credits**  
Prerequisite: 11 credits in psychology. Theoretical approaches to personality; major philosophic assumptions, historical position, and experimental data considered in evaluating personality theories.
- 453 INDIVIDUAL DIFFERENCES 3 credits**  
Behavioral differences among individuals.
- 456 RESEARCH IN DEVELOPMENT AND PERSONALITY 5 credits**  
Prerequisites: Psychology 303, 452. Basic principles and theories underlying development and personality. Not open to students who have had Psychology 352 (or 355).
- 457 PROGRAMMED LEARNING 3 credits**  
Principles and theories of learning upon which programmed learning is based. Practicum in program design and development.
- 459 SEMINAR IN EDUCATIONAL PSYCHOLOGY 1 credit**  
Prerequisite: successful completion of Independent Study Program.
- 464 ABNORMAL PSYCHOLOGY 3 credits**  
Prerequisite: Psychology 261 or permission of instructor. Psychoses, neuroses, and other forms of behavior deviation; conceptions regarding these conditions.
- \*466 THE BRIGHT AND GIFTED CHILD 3 credits**  
Prerequisite: teaching experience, permission, or 11 hours of psychology. Identification procedures, curriculum, and teaching methods suited to education of children with superior and special abilities.
- \*471 STANDARDIZED TESTS 3 credits**  
Prerequisite: Educational Psychology 371 or permission of instructor. Standardized group tests commonly used in the public schools; selection and administration of tests; interpretation of norms.
- 473 ADVANCED STATISTICAL INFERENCE 3 credits**  
Prerequisite: Psychology 373 or equivalent. Advanced methods for the analysis of research data. Also offered as Education 473.
- 474 EXPERIMENTAL PSYCHOLOGY 5 credits**  
Prerequisite: Psychology 201, 373, and permission of instructor. Participation in conducting experiments and in the interpretation of data. Discontinued after 1965-66.
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 497a SEMINAR IN COGNITIVE PROCESSES 2 credits**  
Prerequisite: permission of instructor.
- 500 SPECIAL PROBLEMS 1 to 3 credits**  
Prerequisite: permission of instructor.

\*Educational—psychology courses.



- 501a,b PRO-SEMINAR IN PSYCHOLOGICAL FOUNDATIONS 4 credits each**  
501a—perception, psychological, comparative, learning.  
501b—developmental, social, personality, abnormal.  
Prerequisite: 501a.
- 511 INSTRUMENTATION FOR PSYCHOLOGICAL RESEARCH 1 credit**  
Typical technological solutions to problems encountered in original research; lecture and laboratory.
- 522 SEMINARS IN PSYCHOLOGY 3 credits**  
Prerequisite: Psychology 501. (Topics vary from quarter to quarter.)
- 531a,b SUPERVISED PRACTICE IN COUNSELING 3 credits**  
Prerequisite: permission of instructor. Supervised experience with selected cases in a college, school or agency; a—college level. b—public school or community agency.
- 532 PSYCHOLOGICAL CASE WORK SEMINAR 3 credits**  
Prerequisite: Psychology 531 (or 578 concurrent). Presentation of actual cases to allow for team interaction among and interdisciplinary evaluation by a variety of specialists as to procedure, referral, interaction, and follow-up.
- 533 COUNSELING THEORY AND PRACTICE 3 credits**  
Prerequisites: Psychology 452, 536, and permission of instructor. The counseling and clinical interview with laboratory opportunity for the development of interviewing skills.
- \*536 INTRODUCTION TO COUNSELING PSYCHOLOGY 3 credits**  
Prerequisite: Psychology 431 and permission of instructor. The theories of psychological counseling as they relate to philosophical positions, social conditions, personality, and learning theory.
- 548 FIELD INTERNSHIP IN SCHOOL PSYCHOLOGY 0-3 credits**  
Prerequisite: Psychology 578 and permission of department. Provision for an academic year of college-supervised work in school psychology. Arrangements must be made in cooperation with the school administration involved.
- 555 ADVANCED CHILD PSYCHOLOGY 3 credits**  
Prerequisite: Educational Psychology 352 or 355 or equivalent. Research and theory in the field of child development and behavior.
- 556 PSYCHOLOGY OF ADOLESCENCE 3 credits**  
Prerequisite: Educational Psychology 352 or 355 or equivalent. Advanced study of development characteristics, behavior problems, personal and social adjustments of children and youth, with implications for secondary education and guidance programs.
- 571 INDIVIDUAL APPRAISAL IN COUNSELING 3 credits**  
Prerequisite: Psychology 373 or equivalent and Psychology 431 and permission of instructor. The collection, evaluation, application, and interpretation of data available to the school counselor.
- 572 INDIVIDUAL INTELLIGENCE TESTS 5 credits**  
Prerequisite: Psychology 373 and permission of instructor. Theory and principles underlying the construction of individual intelligence tests; supervised practice in the administration of tests.
- 577 ADVANCED CLINICAL PROCEDURES AND REPORT WRITING 3 credits**  
Prerequisite: Psychology 572 and permission of instructor. Approaches to clinical appraisal with special attention to value and limitations of personality and interest measures.
- 578 SUPERVISED PRACTICE IN SCHOOL PSYCHOLOGY 3 credits**  
Prerequisite: Psychology 577 and permission of instructor. Diagnostic and interpretative work with selected cases under direct supervision.

\*Educational—psychology courses.

- 591 PSYCHOLOGY OF OCCUPATIONS 3 credits**  
Prerequisite: Psychology 431 and permission of instructor. Sources of occupational materials, theories of career development; applications to vocational counseling.
- 592, 593 DESIGN AND ANALYSIS OF EXPERIMENTS 2 credits each**  
Prerequisite: Psychology 473; 592 prerequisite to 593. Multidimensional analysis of variance, trend analysis, and analysis of covariance.
- 594 FOUNDATIONS OF MEASUREMENT 4 credits**  
Prerequisite: Psychology 473. Theory basic to construction and application of psychological tests and scaling techniques.
- 595 CORRELATION THEORY 3 credits**  
Prerequisite: Psychology 473. Rectilinear, curvilinear, multiple and partial correlation; sampling theory applied to correlation.
- 596a,b,c REVIEW OF PSYCHOLOGICAL APPRAISAL AND TREATMENT 2 credits each**  
Prerequisite: Psychology 501b.
- 596a Survey of Intelligence and Aptitude Tests.  
Prerequisite: a course in principles of psychological testing. Research and theory related to more widely used individual and group tests.
- 596b Survey of the Techniques of Personality Evaluation.  
Objective and projective personality tests for children and adults.
- 596c Survey of Therapeutic Practices and Clinical Procedures.  
Major systematic approaches to psychotherapy; critical evaluation of use of drugs, shock, psychosurgery, hypnosis and other special techniques.
- 599 THESIS 6 credits**

**RECREATION**  
(See page 159)

**RUSSIAN**  
(See page 100)

## INTERDEPARTMENTAL OFFERINGS in **SCIENCE**

(General Science, Health Science, Physical Science, Science Education)

### CONCENTRATIONS

#### Teacher Education

**\*GENERAL SCIENCE MAJOR** (elementary) 45 credits

Physics 131

Geology 211, 311

Biology 204

Physics 105 and/or Geography 331

One of the following: Geology 212, 412, 413, 414

3 to 8 credits from Biology 240, 301; Botany 253; Zoology 263

Additional electives under advisement, with a minimum of 11 credits in each area of physical, biological, and geological studies.

**\*GENERAL SCIENCE MAJOR** (junior high school) 45 credits

In addition to the general education requirements in science:

Physical Science 492

Biology 493

25 credits in one field of concentration (biology or geology)

15 credits in the second field (biology or geology)

Students taking this major are advised to include the Physical Science Minor (see below) if they wish to be recommended for general science teaching.

**HEALTH SCIENCE MINOR** (See Physical Education Department—page 152)

**\*PHYSICAL SCIENCE MAJOR** (secondary) 45 credits

General Science 405

Chemistry 121, 122, 131, 251

Physics 231, 232, 233, (or 131, 132, 133), 381

Physical Science 492

**\*PHYSICAL SCIENCE MINOR** (junior high school) 25 credits

25 credits, in addition to the general education requirements, selected under advisement.

\* For these interdepartmental concentrations, Dr. Lahti, of the Physics Department, has been assigned as consulting adviser.

### Arts and Sciences

**HEALTH SCIENCE MINOR** (See Physical Education Department—page 153)

## COURSES

## General Science

**405 HISTORY OF SCIENCE 3 credits**

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.

## Physical Science

**382 PHYSICAL SCIENCE FOR THE ELEMENTARY SCHOOL 3 credits**

Prerequisite: science general education requirements or equivalent. The use of experiments, demonstrations, and reading to achieve selected objectives in teaching.

**492 PHYSICAL SCIENCE FOR THE JUNIOR AND SENIOR HIGH SCHOOL 3 credits**

Prerequisite: 15 credits in chemistry or physics. The content, materials, and methods of teaching general physical science, physics, and chemistry in the junior and senior high schools.

## Science Education

**380 SCIENCE FOR THE ELEMENTARY SCHOOL 5 credits**

Prerequisite: permission of instructor. Selected generalizations and processes in science adaptable to the elementary school; classroom-laboratory study of "new" curricula with observation and participation in a clinical situation.

**480 SPECIAL PROJECTS IN SCIENCE FOR THE ELEMENTARY SCHOOL 2 to 5 cr.**

Prerequisites: Biology 104, and one course for the elementary school, or teaching experience; permission of instructor.

**490 SPECIAL PROJECTS IN SCIENCE TEACHING IN THE JUNIOR AND SENIOR HIGH SCHOOL 2 to 5 credits**

Prerequisites: Physical Science 492 or Biology 493; permission of instructor.

**500 SPECIAL PROJECTS IN SCIENCE 2 to 5 credits**

Prerequisite: permission of instructor.

**501 DEVELOPMENT OF A SCIENCE PROGRAM IN THE PUBLIC SCHOOL 3 to 5 cr.**

For principals, superintendents, supervisors, and teachers interested in developing a comprehensive program of science.

**580 SPECIAL PROBLEMS IN SCIENCE TEACHING IN THE ELEMENTARY SCHOOL 2 to 5 credits**

Prerequisites: teaching experience and permission of instructor. Problems concerning content, utilization of community resources, materials of the environment, development of special areas for instruction, integration with other activities in the school program, and organization of courses of study.

**582 IMPROVEMENT OF SCIENCE INSTRUCTION IN THE ELEMENTARY SCHOOL 2 to 5 credits**

Developing science programs for a particular school system and reorganizing science instruction.

**590 SPECIAL PROJECTS IN SCIENCE TEACHING IN THE JUNIOR AND SENIOR HIGH SCHOOL 2 to 5 credits**

Prerequisites: permission of instructor and teaching experience.

**592 IMPROVEMENT OF SCIENCE INSTRUCTION IN THE JUNIOR AND SENIOR HIGH SCHOOL 2 to 5 credits**

Developing a science program to meet the needs and circumstances of a specific school situation.

INTERDEPARTMENTAL PROGRAMS in

## **SOCIAL STUDIES EDUCATION**

### CONCENTRATIONS

#### Teacher Education

For advisement or approval of area majors, students should consult the chairman of the Department of History.

**MAJOR** (junior high school) 45 credits

Geography 201

5 credits from Geography 311, 313, 314, 315, or 316

History 203 or 204

Sociology or Anthropology 201

Social Studies Education 426

Political Science 250 or Economics 201

Courses under advisement:

14 credits concentrated in one of the following fields:

geography, history or sociology-anthropology

**MAJOR** (elementary) 45 credits

History 203, 204; Geography 201, 311; Sociology-Anthropology 201;

Political Science 250 or Economics 201

Seventeen additional credits under advisement in one of the following three fields: geography, history, or sociology-anthropology

Students electing the alternate program for elementary teachers will select 28 credits of the above under departmental advisement.

### COURSES

**425 SOCIAL STUDIES FOR THE ELEMENTARY SCHOOL 3 credits**

The incorporation of social science concepts in the social studies program.

**426 SOCIAL STUDIES FOR THE SECONDARY SCHOOL 3 credits**

Choice and adaptation of materials of instruction to the junior and senior high school level.

## DEPARTMENT of **SOCIOLOGY—ANTHROPOLOGY**

### FACULTY

**Professor:** Taylor

**Associate Professors:** Anastasio (acting chairman), Mazur, Tweddell

**Assistant Professors:** Call, Douglas, Spaulding, Thomas

**Instructor:** Bronsdon

### CONCENTRATIONS

#### Teacher Education

**MAJOR** 40 credits

Sociology-Anthropology 201; either Anthropology 200 or Sociology-Anthropology 202, chosen under departmental advisement; Sociology-Anthropology 275. Additional courses under departmental advisement.

Students intending to teach in the secondary schools must receive special departmental permission to major in sociology-anthropology.

**MINOR** 20 credits

Sociology-Anthropology 201. Additional courses under departmental advisement.

#### Arts and Sciences

**MAJOR** 50 credits, plus Supporting Courses

Sociology-Anthropology 201; either Anthropology 200 or Sociology-Anthropology 202, chosen under departmental advisement; Sociology-Anthropology 275, 370.

20 credits in upper division courses

Additional courses under advisement

**Supporting Courses** two courses selected from Biology 371, Psychology 440 or 453; Geology 211, 316; Geography 435, 470, Economics 403.

Recommendations for graduate schools will be made only after the student has performed satisfactorily in Sociology-Anthropology 490.

**MINOR** 25 credits

Sociology-Anthropology 201; either Anthropology 200 or Sociology-Anthropology 202 chosen under departmental advisement.

Additional courses under departmental advisement.

#### Departmental Honors

In addition to the general requirements for all honors students (see page 123), a sociology or anthropology major who wishes to graduate "with honors" must complete:

Sociology-Anthropology 401h

Reading knowledge of a foreign language, or two years of foreign language training.

Satisfactory performance on a comprehensive examination in sociology-anthropology.

Submission of a senior thesis

## COURSES IN ANTHROPOLOGY

*Several courses are listed as Sociology as well as Anthropology. Those having the same numbers are identical courses.*

### 200 HUMAN ORIGINS 5 credits

The development of man; human origins and prehistory; criteria and theories of race classification; human diffusion, contacts and problems.

### 201 CULTURE AND SOCIETY 5 credits

Prerequisite: General Education 105 or permission of instructor. The range and variety of cultural and social phenomena including technology, social, political, and economic organization, religion and art.

### 202 CONTEMPORARY SOCIETIES 5 credits

Prerequisite: Sociology-Anthropology 201 or permission of instructor. Social behavior observable in selected contemporary societies, the concept "social system," the formulation of general propositions applicable to human behavior.

### 260 PEOPLES OF THE WORLD 5 credits

A survey of the principal cultures and peoples of the world.

### 275 STATISTICAL METHODS 5 credits

Prerequisites: Sociology-Anthropology 201 and Mathematics 100 or its equivalent. Measures of central tendency, dispersion association, linear regression, correlation and binomial probability with emphasis on their application to statistical research in sociology and anthropology.

### 301h HONORS SEMINAR 2 credits

### 320 ECONOMIC ORGANIZATION 5 credits

Prerequisite: Sociology-Anthropology 201 or permission of instructor. Economic behavior and its relationship to the wider social context in selected areas (societies) of the world.

### 330 SOCIOLOGY OF RELIGION 5 credits

Prerequisite: Sociology-Anthropology 201 or permission of instructor. The "supernatural" as an institution and its relationship to other social and cultural phenomena.

### 340 POLITICAL ORGANIZATION 5 credits

Prerequisite: Sociology-Anthropology 201 or permission of instructor. Political structure in selected areas (and societies) of the world and the relationship between political institutions and other aspects of the social system.

### 348 INTRODUCTION TO LINGUISTICS 5 credits

Languages of the world; techniques of linguistic analysis; role of language in society; relation of linguistics to other disciplines.

### 351 FAMILY AND KINSHIP ORGANIZATION 5 credits

Prerequisite: Sociology-Anthropology 201 or equivalent. Types of family systems from selected societies, with emphasis upon variation in structure and socio-psychological functions.

- 354 SOCIOLOGY OF DEVIANT BEHAVIOR 5 credits**  
Prerequisite: Sociology-Anthropology 201 or equivalent. The collective aspects of non-normative or nonconforming behavior as a product of the social system.
- 361 PEOPLES OF THE AMERICAS 3 credits**  
Native Indian culture and native cultural areas of the new world.
- 362 PEOPLES OF EURASIA 3 credits**  
European and Asian racial and cultural distribution.
- 363 PEOPLES OF AFRICA 3 credits**  
Races and cultures of Africa with emphasis on the area south of the Sahara but including a brief ethnological survey of North America.
- 366 COMMUNITY ORGANIZATION 5 credits**  
Prerequisites: Sociology-Anthropology 201 or equivalent; Sociology 275 or 370 recommended. The nature of "community," analyzed in terms of changing demographic, institutional, and interpersonal patterns.
- 370 INTRODUCTION TO RESEARCH METHODS 5 credits**  
Prerequisite: Sociology-Anthropology 201. The nature of scientific theory; the development of social research; the basic methods and techniques of data-gathering, processing, and analysis.
- 390 HISTORY OF SOCIAL THOUGHT 5 credits**  
Prerequisite: 10 credits in sociology or anthropology, or permission of instructor. The development of social thought in Europe and America with major emphasis upon the period following Auguste Comte.
- 391 CONTEMPORARY SOCIAL THEORY 5 credits**  
Prerequisite: 10 credits in sociology or anthropology or permission of instructor; Sociology-Anthropology 390 recommended. Major contemporary theories of society and social organization.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits**
- 401 SEMINARS 3 credits**  
Selected topics in anthropology, varying from quarter to quarter. Consult Class Schedule for specific prerequisites applicable to a given seminar.  
Topics offered 1964-1966:  
401a The Child in Society  
401d Interaction and Group Dynamics  
401g Primate Behavior  
401r Social Stratification  
401s Culture and Personality
- 430 THEORIES OF SOCIAL CHANGE 3 credits**  
Prerequisite: 15 credits in sociology or 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.
- 448 LANGUAGE IN CULTURE AND SOCIETY 5 credits**  
Prerequisite: Sociology-Anthropology 201 and Anthropology 348. Language as related to semantics and world view; speech communities, processes of change in language.
- 462 INDIANS OF THE NORTHWEST COAST 3 credits**  
Tribal distributions, social organization, and ecological adjustment with emphasis on the Indians of Western Washington; problems of adjustment to the modern world.



- 470 RESEARCH 2 to 6 credits**  
Prerequisite: permission of instructor. For the student who wishes to investigate a problem through field or library research.
- 481 APPLIED ANTHROPOLOGY 3 credits**  
Prerequisite: 10 credits in sociology or anthropology or permission of instructor. Utilization of anthropological theory in the practical problems of government, industry, education and social welfare; the administration of colonial and dependent peoples.
- 485 READING AND CONFERENCE IN CULTURAL ANTHROPOLOGY 1 to 5 credits**  
Prerequisite: 15 credits in sociology or anthropology or permission of instructor. Selected readings in the major works in the fields of cultural and social anthropology. Discussion centers on a specific topic chosen for the quarter.
- 486 READING AND CONFERENCE IN PHYSICAL ANTHROPOLOGY AND ARCHAEOLOGY 1 to 5 credits**  
Prerequisite: permission of instructor. Selected reading in the major works on human paleontology, morphology, genetics, prehistory and archaeological field techniques. The topic to be discussed in a given quarter will be determined by the instructor.
- 490 SEMINAR IN SOCIAL THEORY 3 credits**  
Prerequisite: permission of instructor. Selected problems in social and cultural theory with emphasis upon contemporary literature in the field.
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**

## COURSES IN SOCIOLOGY

*Several courses are listed as Anthropology as well as Sociology. Those having the same number are identical courses.*

- 201 CULTURE AND SOCIETY 5 credits**  
Prerequisite: General Education 105 or permission of instructor. The range and variety of cultural and social phenomena including technology, social, political, and economic organization, religion and art.
- 202 CONTEMPORARY SOCIETIES 5 credits**  
Prerequisite: Sociology-Anthropology 201 or permission of instructor. Social behavior observable in selected contemporary societies; the concept of "social system," the formulation of general propositions applicable to human behavior.
- 275 STATISTICAL METHODS 5 credits**  
Prerequisites: Sociology-Anthropology 201 and Mathematics 100 or its equivalent. Measures of central tendency, dispersion association, linear regression, correlation and binominal probability with emphasis on their application to statistical research in sociology and anthropology.
- 301h HONORS SEMINAR 2 credits**
- 311 WORLD DEMOGRAPHY 5 credits**  
Prerequisite: Sociology-Anthropology 201; Sociology-Anthropology 275 is recommended. Growth, distribution and composition of human population; social and economic implications of demographic trends in industrialized countries and under-developed areas; elementary demographic techniques essential to understanding the components of population change.

- 320 ECONOMIC ORGANIZATION 5 credits**  
Prerequisite: Sociology-Anthropology 201 or permission of instructor. Economic behavior and its relationship to the wider social context in selected areas (societies) of the world.
- 330 SOCIOLOGY OF RELIGION 5 credits**  
Prerequisite: Sociology-Anthropology 201 or permission of instructor. The "super-natural" as an institution and its relationship to other social and cultural phenomena.
- 340 POLITICAL ORGANIZATION 5 credits**  
Prerequisite: Sociology-Anthropology 201 or permission of instructor. Political structure in selected areas (and societies) of the world; the relationship between political institutions and other aspects of the social system.
- 351 FAMILY AND KINSHIP ORGANIZATION 5 credits**  
Prerequisite: Sociology-Anthropology 201 or equivalent. Types of family systems from selected societies, with emphasis upon variation in structure and socio-psychological functions.
- 354 SOCIOLOGY OF DEVIANT BEHAVIOR 5 credits**  
Prerequisite: Sociology-Anthropology 201 or equivalent. The collective aspects of non-normative or nonconforming behavior as a product of the social system.
- 366 COMMUNITY ORGANIZATION 5 credits**  
Prerequisite: Sociology-Anthropology 201 or equivalent; Sociology 275 or 370 recommended. The nature of "community," analyzed in terms of changing demographic, institutional, and interpersonal patterns.
- 370 INTRODUCTION TO RESEARCH METHODS 5 credits**  
Prerequisite: Sociology-Anthropology 201. The nature of scientific theory; the development of social research; the basic methods and techniques of data-gathering, processing and analysis.
- 390 HISTORY OF SOCIAL THOUGHT 5 credits**  
Prerequisite: 10 credits in sociology or anthropology, or permission of instructor. The development of social thought in Europe and America with major emphasis upon the period following August Comte.
- 391 CONTEMPORARY SOCIAL THEORY 5 credits**  
Prerequisite: 10 credits in sociology or anthropology or permission of instructor; Sociology 390 recommended. Major contemporary theories of society and social organization.
- 396a,b,c HONORS TUTORIAL 2 to 5 credits each**
- 401 SEMINARS 3 credits**  
Selected topics in sociology, varying from quarter to quarter. Consult Class Schedule for specific prerequisites applicable to a given seminar.  
Topics offered 1964-1966:  
401a The Child in Society  
401d Interaction Theory and Group Dynamics  
401h Honors Seminar  
401r Social Stratification  
401s Culture and Personality  
401w Sociology of Science  
401z North American Minority Groups and Acculturation
- 413 POPULATION OF WASHINGTON STATE 3 credits**  
Prerequisite: permission of instructor. Population growth, distribution and composition; a course for administrators, educators, and sociologists.

- 430 THEORIES OF SOCIAL CHANGE 5 credits**  
Prerequisite: 15 credits in sociology or 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 5 credits**  
Prerequisite: 10 credits in sociology or anthropology or permission of instructor. Social change in the United States (1900-1960); contemporary theories of social change; problems in predicting change.
- 441 PUBLIC OPINION 3 credits**  
Prerequisite: Sociology-Anthropology 201 or permission of the instructor. Factors involved in the formation of public opinion; propaganda analysis; agencies of mass impression; opinion measurement; the role of leadership.
- 446 CRIME AND DELINQUENCY 5 credits**  
Prerequisite: Sociology-Anthropology 201 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.
- 455 PENOLOGY—TREATMENT AND CORRECTION 3 credits**  
Prerequisite: 10 credits in sociology or anthropology or permission of instructor. Reactions of society to criminal and delinquent behavior; juvenile and criminal courts; correctional institutions and correctional programs.
- 457 HISTORY OF SOCIAL WELFARE 3 credits**  
Development of social welfare services in Western European civilization with particular emphasis upon twentieth century United States.
- 458 LAW AND WELFARE IN WASHINGTON STATE 3 credits**  
The practice of social welfare in Washington State with particular emphasis upon legal aspects.
- 470 RESEARCH 2 to 6 credits**  
Prerequisite: permission of instructor. An opportunity to investigate a problem through field or library research.
- 475 INTERMEDIATE STATISTICS 3 credits**  
Prerequisite: Sociology-Anthropology 275 and 370 or permission of instructor. Statistical methods with emphasis on tests of hypotheses and statistical inference as they apply to problems in sociology.
- 483 SOCIAL CHANGE AND THE MORAL ORDER IN RECENT LITERATURE 4 credits**  
Also offered as English 483 and Philosophy 483.
- 485 READING AND CONFERENCE IN SOCIOLOGY 1 to 5 credits**  
Prerequisite: 15 credits in sociology or anthropology or permission of instructor. Selected reading in major works in the fields of sociology. Discussion on a specific topic chosen for the quarter.
- 490 SEMINAR IN SOCIAL THEORY 3 credits**  
Prerequisite: permission of instructor. Selected problems in social and cultural theory with emphasis upon contemporary literature in the field.
- 496a,b,c HONORS TUTORIAL 2 to 5 credits each**  
Prerequisite: permission of instructor.

**SPANISH**

(See page 101)

## DEPARTMENT of **SPEECH**

### FACULTY

**Professor:** Carlile (Chairman)

**Associate Professors:** Brewster, Herbold, Napiecinski, Schinske

**Assistant Professors:** Flanders, Sigler, Webb

**Instructors:** Birner, Gustafson, Jenness, Waldo

**Lecturers:** Borchers

### CONCENTRATIONS

#### Teacher Education

**MAJOR** (elementary—general classroom) 45 credits

Speech 201 or 204 or 205, 233, 330, 350, 355, 356, 373, 461, and four credits in clinical practice

17 additional credits in speech selected under departmental advisement

(Students electing the alternate program in elementary education may defer these 17 credits.)

**MAJOR** (speech therapist) 45 credits

Speech 201 or 204 or 205, 233, 330, 350, 355, 373, 461, six credits in clinical practice, plus additional credits selected under departmental advisement

**Directed Teaching**, under the supervision of a speech therapist

**MAJOR** (secondary) 45 credits

Speech 105, 130, 201, 204 or 205, 236, 305, 350, 355, 373, 437, 485

Additional elective hours selected under departmental advisement

**MINOR** (secondary) 25 credits

Speech 105, 130, 201, 204 or 205 or 206, 236, 373, 437, 485

Additional course selected under departmental advisement.

#### Arts and Sciences

**MAJOR** 50 credits

Speech, 130, 201, 233 or 341, 355, and 373

20 credits in one of the areas listed below, plus 6 credits in each of the remaining two areas.

Theatre: Speech 230, 231, 232, 236, 237, 238, 320, 330, 336, 337, 338, 421, 422, 424, 425, 426, 427, 430, 433, 437, 438

Public Address: Speech 202, 204, 205, 206, 207, 208, 305, 480, 490

Speech Therapy: Speech 350, 356, 357, 358, 359, 360, 454, 455, 456, 457, 458, 459, 461, 462, 463

**MINOR** 25 credits

Speech 130, 201, 233, 340 or 341, 355, and 373, plus additional courses chosen under advisement from those listed in the three areas above

## Graduate Study

For a concentration in speech therapy leading to the Master of Education degree see the **Graduate Bulletin**.

### COURSES

- 100 FUNDAMENTALS OF SPEECH 3 credits**  
Functional approach to effective communication; application of principles to practical problems of speech.
- 105 VOICE AND ARTICULATION IMPROVEMENT 2 credits**  
Open to majors and minors in speech. Laboratory work designed to improve articulation and increase voice proficiency in the classroom, on the stage and lecture platform and in everyday life.
- 130 INTRODUCTION TO THE THEATRE 3 credits**  
Appreciation of the art of theatre, cinema, and television; play analysis, play production, and dramatic criticism.
- 200 SPEECH ANALYSIS 3 credits**  
Prerequisite: Speech 100. Analytical study of the speech process enabling the student to improve his own speech and to deal more intelligently with the speech problems of others.
- 201 EXTEMPORE SPEAKING 3 credits**  
Theory and practice in an extemporaneous mode of speaking.
- 202 PARLIAMENTARY LAW 1 credit**  
Parliamentary principles and procedures.
- 204 DISCUSSION AND CONFERENCE 3 credits**  
Prerequisite: Speech 100. The fundamentals of effective participation in small problem-solving groups with topics of current interest.
- 205 ARGUMENTATION AND DEBATE 3 credits**  
Prerequisite: Speech 100. Application of principles of reasoned discourse to public discussion of controversial issues; the theory of debate.
- 206, 207, 208 INTERCOLLEGIATE FORENSICS 1-3 credits each**  
Impromptu, extempore, and after-dinner speaking; oratory, debate, and other phases of forensics. Not more than 6 credits may be earned by participating in intercollegiate forensics.
- 230, 231, 232 THE ACTED DRAMA 1 to 3 credits each**  
Admission by tryout only. Participation in plays offered for public production. Three credits may be allowed for major work, with 1 or 2 credits for minor parts or responsibilities; a maximum total of 6 credits may be earned in these courses.
- 233 ORAL INTERPRETATION 3 credits**  
Practice in reading prose, poetry, and drama to help the student determine the logical and emotional meaning of a selection and to project that meaning to his listeners.
- 236 STAGECRAFT 3 credits**  
Theory, practice, and organization of planning, drafting, construction, and rigging of scenery; technical analysis and laboratory work on current productions.
- 237 STAGE LIGHTING 3 credits**  
Technical and artistic study of light and color as they affect other theatre arts and contribute to artistic design; laboratory work in production.

- 238 STAGE MAKE-UP 1 credit**  
Theory and practice in the actual application of make-up for students working in activities involving stage production.
- 305 PERSUASION 3 credits**  
Prerequisite: at least one 200 level course in public address. An advanced study of the principles that influence the belief and action of audiences and practice in application of these principles.
- 306 ORGANIZING AND DIRECTING THE FORENSICS PROGRAM 2 credits**  
Fundamentals of interscholastic debate, discussion, oratory, and extempore speaking. For non-majors or minors. Summer only.
- 320 SHAKESPEARE 5 credits**  
A survey of the principal plays. Also offered as English 343.
- 330 INTRODUCTION TO CHILD DRAMA 3 credits**  
The various aspects of child drama, relationships between formal theatre and informal dramatics, and the role of child drama in education, recreation, and speech therapy.
- 336 DESIGN FOR THE STAGE 3 credits**  
Prerequisite: Speech 236. Design for modern theatre with emphasis on interpretation of the play through design; practical design and techniques.
- 337 ACTING 3 credits**  
Prerequisite: Speech 233 or permission of instructor. Interpretation and action on the stage; application of the basic techniques of acting.
- 338 COSTUMING 3 credits**  
The history of costume and its adaptation to the needs and limitations of the stage; opportunity for laboratory work on dramatic production.
- 340 INTRODUCTION TO RADIO AND TELEVISION 3 credits**  
Radio and television as media of communication, with emphasis on their social, economic, political, and educational roles.
- 341 BROADCAST SPEECH 3 credits**  
Prerequisite: Speech 340 or permission of instructor. Laboratory practice before the microphone and camera; applying the methods of oral communication to the broadcast media.
- 350 SPEECH SCIENCE 3 credits**  
The speech and hearing mechanisms and the physical aspects of speech.
- 355 INTRODUCTION TO SPEECH CORRECTION 3 credits**  
Survey of speech disorders including identification, classification, and fundamentals of therapy.
- 356 ARTICULATION AND VOICE DISORDERS 3 credits**  
Prerequisites: Speech 355. Symptomatology, etiology, and therapy for voice and articulation disorders.
- 357 OBSERVATION OF CLINICAL PRACTICE 1 credit**  
Prerequisite: Speech 355 or concurrent. Directed observation and evaluation of the methods, materials, and techniques used in treating speech and/or hearing cases.
- 358, 359, 360 CLINICAL PRACTICE IN SPEECH THERAPY 2 credits each**  
Prerequisites: Speech 350, 355, 356, 357, and 373. Supervised clinical practicum in therapy for the more prevalent voice and articulation disorders.
- 373 PHONETICS 3 credits**  
Training in recognition and production of sounds of spoken English through use of the International Phonetic Alphabet.

- 384 PROGRAM MATERIALS FOR THE PUBLIC SCHOOL 2 credits**  
Materials, organizations, and production of assembly programs in the elementary and secondary schools.
- 400 SPECIAL PROBLEMS 1 to 3 credits**  
Prerequisite: permission of instructor. Investigation of special problems in the fields of speech.
- 420 STUDIES IN SHAKESPEARE 3 credits**  
Prerequisite: English 343 or Speech 320. Seminar in selected plays. Also offered as English 443.
- 421, 422, 423 DEVELOPMENT OF THE ENGLISH DRAMA 3 credits each**  
Historical and critical survey of the English drama, with emphasis upon the greater writers (exclusive of Shakespeare); medieval and Elizabethan-Jacobean; Restoration and eighteenth century; from the late nineteenth century to World War II. (Also offered as English 461, 462, 463.)
- 424 MODERN AMERICAN DRAMA 3 credits**  
The American theatre beginning with O'Neill and concluding with World War II. Also offered as English 473.
- 425 MODERN EUROPEAN DRAMA 3 credits**  
Ibsen and Strindberg as the founders of the modern drama; selected plays from 1850 to 1920.
- 426 CONTEMPORARY DRAMA 3 credits**  
Selected plays and significant trends in contemporary European and American drama.
- 427 AMERICAN DRAMA AND THEATRE: 1750-1890 3 credits**  
Development of native theatre traced with reference to well-known actors, stock and touring companies, frontier theatres, plays and playwrights of the period.
- 430 CREATIVE DRAMATICS 3 credits**  
Prerequisite: Speech 330. Developing original dramatizations with children; observation of children's classes in creative dramatics; story selection, story telling, and story dramatization.
- 433 CHILDREN'S THEATRE 3 credits**  
Prerequisite: Speech 330. Various aspects of presenting plays with children as well as plays for children; play selection, play direction, and play production.
- 437 PLAY DIRECTION 3 credits**  
Theory and practice of stage direction including play selection, casting, and blocking.
- 438 ADVANCED PLAY DIRECTION 3 credits**  
Prerequisite: Speech 437. Continued study of the theory and practice of direction with special emphasis on working with the actor.
- 441 PRODUCING AND DIRECTING THE BROADCAST PROGRAM 3 credits**  
Prerequisite: Speech 341 or permission of instructor. An introductory course in program production and directing for radio and television with emphasis on educational broadcasting.
- 454 DISORDERS OF RHYTHM 3 credits**  
Prerequisite: Speech 355 and 357. Stuttering, cluttering, and related disorders.
- 455 SPEECH THERAPY IN THE PUBLIC SCHOOLS 3 credits**  
Prerequisite: Speech 355 and 357. The role of the clinician in organizing and directing a speech therapy program.

- 456 ORGANIC SPEECH DISORDERS 3 credits**  
Prerequisite: Speech 355 and 357. Symptomatology, etiology, and therapy for cerebral palsy, cleft palate, aphasia, dysarthria, and laryngectomy.
- 457, 458, 459 ADVANCED CLINICAL PRACTICE IN SPEECH THERAPY 2 credits each**  
Prerequisites: Speech 358 plus a minimum of 6 additional credits in the field. Supervised clinical practicum dealing with more complex cases.
- 461 INTRODUCTION TO HEARING 3 credits**  
Prerequisite: Speech 355 and 356, and 373. Structure and functioning of the auditory mechanism, emphasizing the psycho-physics of audition; symptomatology and pathology of hearing disorders.
- 462 AUDIOMETRIC TESTING 3 credits**  
Prerequisite: Speech 461. Determining types and kinds of hearing loss; practice in testing the hearing function and interpreting the results.
- 463 HEARING REHABILITATION 3 credits**  
Prerequisite: Speech 461. Principles, procedures, and techniques of auditory training, speech conservation, speech reading, and language development for the aurally handicapped.
- 480 THE HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS 3 credits**  
Prerequisite: some background in American history. Historical and critical study of principal speakers and their relationship to American political, social, and intellectual life beginning with Jonathan Edwards and continuing to the present-day speakers.
- 485 TEACHING SPEECH IN THE SENIOR HIGH SCHOOL 3 credits**  
Prerequisite: 15 credits in speech or permission of instructor. Examination of materials and methods useful in teaching drama, interpretation, and public address.
- 487 DISCUSSION TECHNIQUES FOR TEACHERS AND ADMINISTRATORS 3 credits**  
The cultivation of attitudes and skills to aid teachers and administrators to engage in and lead discussions with greater competency.
- 488 PUBLIC SPEAKING FOR TEACHERS AND ADMINISTRATORS 3 credits**  
The development of additional skill in meeting speech situations in the field of education; delivery, composition, audience analysis, and interests.
- 490 CLASSICAL RHETORIC 3 credits**  
Principles of rhetoric proposed by Aristotle, Quintilian, and Cicero, and the relationship of those principles to modern speech-making.
- 500 SPECIAL PROBLEMS 1 to 3 credits**  
Prerequisite: permission of instructor. For advanced students who wish to investigate special problems.
- 505 SEMINAR IN PERSUASION AND ARGUMENTATION 3 credits**  
Prerequisite: undergraduate major in speech, or permission of instructor. Evaluation of experimental research in persuasion and argumentation.
- 530 SEMINAR IN PLAY PRODUCTION 3 credits**  
Prerequisite: 12 credits in theatre courses or permission of instructor. Synthesis and application of the principles of theatre arts in selection and presentation of major dramatic productions for school, college, or community.
- 531 SEMINAR IN DRAMATIC THEORY AND CRITICISM 3 credits**  
Prerequisite: undergraduate major in speech or permission of instructor. Evaluating concepts, principles, and issues dominant in main periods of dramatic thought.



- 
- 540 SEMINAR IN MASS COMMUNICATIONS 3 credits**  
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.
- 551 SEMINAR IN SPEECH DISORDERS: THEORY AND THERAPY 3 credits**  
Prerequisite: experience as a speech and/or hearing therapist and permission of instructor. Analysis and evaluation of recent concepts, issues, techniques, and methods applicable to speech disorders.
- 552 DIAGNOSTIC METHODS IN SPEECH THERAPY 3 credits**  
Prerequisite: 15 credits in speech and hearing therapy. Materials, procedures, techniques and instruments used in diagnosing speech disorders.
- 557 INTERNSHIP IN SPEECH PATHOLOGY AND THERAPY 3 credits**  
Prerequisite: experience as a speech therapist and permission of instructor. Experimentation with new methods and materials, and clinical implementation of current practices; an opportunity for senior clinicians to plan, direct, and supervise the activities of speech clinicians.
- 562 SEMINAR IN HEARING DISORDERS: THEORY AND THERAPY 3 credits**  
Prerequisite: experience as speech and/or hearing therapist and permission of instructor. Detailed study and research in the area of hearing.
- 573 ADVANCED PHONETICS 3 credits**  
Prerequisite: Speech 373. The phonetic structure and symbolization of principal American and other English dialects and certain European languages.

## ZOOLOGY

(See page 66)

# Organization and Personnel

## BOARD OF TRUSTEES

JOSEPH T. PEMBERTON, LL.B. ....	Bellingham
MARSHALL FORREST, J.D. ....	Bellingham
DAVID SPRAGUE, M.A. ....	Seattle
BERNICE M. HALL, B.A. in Ed. ....	Bellingham
STEPHEN CHASE, B.A. ....	Everett

## ADMINISTRATIVE OFFICERS

HARVEY C. BUNKE, Ph.D. ....	President
CHARLES J. FLORA, Ph.D. ....	Academic Dean
MERLE S. KUDER, Ph.D. ....	Dean of Students
J. ALAN ROSS, Ph.D. ....	Dean of Graduate Studies and the Summer Session
HERBERT C. TAYLOR, Ph.D. ....	Associate Dean, Research
GERALD W. BROCK, B.S. ....	Director of Housing
SAM BUCHANAN .....	Comptroller
WILLIAM C. BUDD, Ph.D. ....	College Examiner
DOROTHY BUTTON, M.Ed. ....	Assistant Registrar
F. RICHARD FERINGER, Ed.D. ....	Director of Extension Services
DONALD A. FERRIS, M.A. ....	Coordinator of Space and Schedules
HAROLD A. GOLTZ, M.A. ....	Assistant to the President
CORINNE HAMILTON, M.A. ....	Director of Placement in Business and Government
WILLIAM T. HATCH, M.A. ....	Financial Aids Officer
HALLDOR KARASON, Ph.D. ....	Director of General Studies
C. W. McDONALD, M.A. ....	Dean of Men
HOWARD F. McGAW, Ed.D. ....	Director of the Library
CALVIN E. MATHEWS, M.A. ....	Associate Registrar and Coordinator of College Relations
JAMES H. MULLIGAN, M.A. ....	Public Information Officer
FRANK A. NUGENT, Ph.D. ....	Director of Counseling Center
JOE NUSBAUM, B.A. ....	Business Manager
EUGENE OMEY, M.A. ....	Director of Admissions
WILLIAM J. O'NEIL, M.Ed. ....	Registrar
LORRAINE POWERS, M.A. ....	Dean of Women
FRANK N. PUNCHES, M.A. ....	Director of Educational Placement and Alumni Relations
RICHARD C. REYNOLDS, M.Ed. ....	Director of Students Affairs
BEARNICE SKEEN, Ed.D. ....	Director of the Campus School
RICHARD O. STARBRD, Ed.D. ....	Director of Field Experiences

## THE FACULTY AND ADMINISTRATIVE OFFICERS

### 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.
- EDWARD J. ARNTZEN** ..... **Professor Emeritus of History**  
 B.A., University of Washington; M.A., Columbia University; University of Wash-  
 ington.
- HAZEL BREAKAY** ..... **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.
- MAY LOVEGREN BETTMAN** ..... **Instructor Emeritus in Commercial Studies**  
 Vashon College; Washington State University; Western Michigan College of  
 Education, Kalamazoo; Western Washington State College.
- MIRA E. BOOTH** ..... **Assistant Professor Emeritus of Music**  
 B.A. University of Washington; M.A., Teachers College, Columbia University;  
 University of Southern California.
- LINDA COUNTRYMAN** ..... **Associate Professor Emeritus 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 Col-  
 lege, Columbia University
- RAYMOND F. HAWK** ..... **Professor Emeritus of Education**  
 B.A., DePauw University; M.A., Stanford University; Ph.D., Washington State  
 University.
- THOMAS F. HUNT** ..... **Associate Professor Emeritus of Geography**  
 B.A., University of Minnesota; M.A., Clark University; University of Chicago;  
 University of California.

- LUCY KANGLEY** ..... **Professor Emeritus of English**  
B.A., M.A., University of Washington; Ph.D., Columbia University; Cambridge University; University of London; University of Minnesota; University of Colorado.
- PRISCILLA KINSMAN** ..... **Assistant Professor Emeritus of Education**  
Ph.B., University of Chicago; M.A., Teachers College, Columbia University; 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.
- 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.
- LEONA M. SUNDQUIST** ..... **Professor Emeritus of Biology**  
B.A., M.S., University of Washington; Teachers College, Columbia University.

## The 1965-1966 Faculty and Administrative Officers

(The following list is complete as of June 1 when the Catalogue went to press. Addition or deletions since that date are not included.)

NOTE: *Date in parenthesis indicates year of initial service with the College.*

- PATRICIA A. ABEL (1962)** ..... **Assistant Professor of English**  
A.B., University of South Dakota; Ph.D., University of Missouri.
- WILLIAM R. ABEL (1962)** ..... **Associate Professor of Mathematics**  
B.A., Morningside College; M.A., University of South Dakota; Ph.D., University of Missouri.
- GOTTFRIED K. V. ADAM (1963)** ..... **Assistant Professor of German**  
B.A., M.A., University of California, Berkeley.
- HENRY L. ADAMS (1957)** ..... **Professor of Psychology**  
B.A., M.A., University of Kentucky; Ph.D., University of Illinois.
- PHILIP AGER (1965)** ..... **Assistant Professor of Music**  
B.A. in Ed., Western Washington State College; University of Washington.
- MARGARET AITKEN (1946)** ..... **Associate Professor of Physical Education  
and Chairman of the Department**  
B.A., University of Washington; M.A., Ed.D., Teachers College, Columbia University.
- JAMES A. ALLAN (1964)** ..... **Instructor in English**  
B.A., University of Vermont; Brown University.
- EVELYN E. AMES (1964)** ..... **Instructor of Physical Education**  
B.S., University of Nevada; M.S., Washington State University.

- ANGELO ANASTASIO (1955)** ..... Associate Professor of Anthropology and Sociology  
and Acting Chairman of the Department  
A.A., Boston University; M.A., Ph.D., University of Chicago.
- MEIDEL APPEGATE (1964)** ..... Assistant Professor of Art  
A.B., M.A., University of California (Berkeley); M.A., San Diego State College.
- CHAPPELLE ARNETT (1960)** ..... Assistant Professor of Physical Education  
B.S., Centenary College; M.S., Purdue University; University of Washington.
- P. H. ATTEBERRY (1954)** ..... Professor of Industrial Arts and  
Chairman of the Department  
B.S., M.S., Kansas State College; Ed.D., University of Missouri.
- GUADALUPE GARCIA BARRAGON (1965)** ..... Lecturer in Spanish  
M.A., New Galicia; University of Guadalajara.
- DECLAN BARRON (1946)** ..... Associate Professor of Biological Science  
B.A. in Ed., Western Washington State College; M.A., Yale University; Stanford  
University.
- HORACE O. BELDIN (1965)** ..... Associate Professor of Education  
B.S., M.S., University of Oregon; Ph.D., Syracuse University.
- WILLIAM BENDER (1960)** ..... Professor of Physics  
B.A., M.S., University of Colorado; Ph.D., Yale University.
- \*\*JAMES R BENNETT (1962)** ..... Assistant Professor of English  
B.A., M.A., University of Arkansas; Ph.D., Stanford University.
- ELIOT BENOWITZ (1964)** ..... Instructor of History  
B.A. New York State College; M.S., University of Wisconsin.
- MARION BESSERMAN (1952)** ..... Associate Professor of Chemistry  
B.S., University of Washington; M.S., Purdue University; Ph.D., University of  
Washington.
- BARBARA BIELER (1965)** ..... Assistant Professor of Home Economics  
B.S., M.H.Ec., Oregon State University; Pennsylvania State University.
- THOMAS BILLINGS (1964)** ..... Assistant Professor of Education  
B.S., Ph.D., University of Oregon.
- WILLIAM B. BIRNER (1964)** ..... Instructor of Speech  
B.A., Brooklyn College; M.A., University of Kansas.
- DON F. BLOOD (1951)** ..... Associate Professor of Psychology  
B.A., in Ed., Central Washington State College; M.A., Ph.D., State University of  
Iowa.
- GLADYS L. BORCHERS (1965)** ..... Lecturer in Speech  
B.A., M.A., Ph.D., University of Wisconsin.

-----  
\*\*On leave 1965-1966.

- JEANNE BOURGUES (1965)** ..... Lecturer in French  
License d'Anglais, Faculte des Lettres, Toulouse, France.
- BERNARD L. BOYLAN (1956)** ..... Associate Professor of History  
B.A., M.A., University of Washington; Ph.D., University of Missouri.
- LAURENCE W. BREWSTER (1948)** ..... Associate Professor of Speech  
B.A., Yankton College; M.A., Ph.D., State University of Iowa.
- THOMAS J. BRIDGE (1965)** ..... Instructor of English  
B.A., University of British Columbia; M.A., Ohio State University.
- ALFRED C. BROAD (1964)** ..... Professor of Biology and Chairman of the Department  
B.A., M.A., University of North Carolina; Ph.D., Duke University.
- GERALD W. BROCK (1964)** ..... Director of Housing  
B.S., Oregon State University.
- HENRICH BROCKHAUS (1965)** ..... Assistant Professor of German  
B.A., M.A., University of British Columbia; University of Washington.
- MADÉLIN BRONSDON (1965)** ..... Instructor of Anthropology  
B.A., University of British Columbia.
- DON W. BROWN (1954)** ..... Associate Professor of Education  
B.S., M.A., University of Nebraska; Ed.D., Colorado State College.
- ROBERT D. BROWN (1965)** ..... Professor of English and  
Chairman of the Department  
A.B., M.A., Ph.D., Indiana University.
- WILLIAM C. BUDD (1953)** ..... Professor of Psychology and College Examiner  
B.A., Hamline University; B.S., M.A., Ph.D., University of Minnesota.
- WILLIAM A. BULTMANN (1965)** ..... Professor of History  
A.B., Ph.D., University of California, Los Angeles.
- HARVEY C. BUNKE (January, 1965)** ..... Professor of Economics and  
President of the College  
B.S., M.S., Ph.D., University of Illinois.
- NITA G. BUNNELL (1965)** ..... Instructor of English  
B.A., Louisiana State University; M.A., University of Oregon.
- DOROTHY BUTTON (1955)** ..... Assistant Professor of Education  
and Assistant Registrar  
B.A., University of California; University of Washington; M.Ed., Western Wash-  
ington State College.
- DONALD J. CALL (1958)** ..... Assistant Professor of Sociology  
B.A., M.A., University of Oregon.
- \*SENE R. CARLILE (1947)** ..... Professor of Speech and Chairman of the Department  
B.A., B.S., Fort Hays Kansas State College; M.A., Colorado State College; Ph.D.,  
University of Wisconsin; University of London.
- STEPHEN L. CARMEAN (1964)** ..... Assistant Professor of Psychology  
B.A., M.A., Ph.D., University of Illinois.

\*On leave Fall, 1965

- MEREDITH B. CARY (1964)** ..... **Instructor of English**  
B.A., Central Missouri State College; M.A.L.S., University of Michigan; M.A., Michigan State University.
- KATHERINE M. CARROLL (1958)** ..... **Associate Professor of Education**  
B.S., Salem State College; Ed.M., Ed.D., Boston University; Harvard University.
- KATHERINE M. CASANOVA (1932)** ..... **Associate Professor of Education**  
B.S., M.A., Teachers College, Columbia University; Stanford University; University of Washington.
- MOYLE F. CEDERSTROM (1935)** ..... **Professor of English**  
B.A., M.A., University of Minnesota; Ph.D., University of Washington.
- ROBIN CHANEY (1964)** ..... **Assistant Professor of Mathematics**  
B.S., Ph.D., Ohio State University.
- SEA BONG CHANG (1964)** ..... **Assistant Professor of Chemistry**  
B.S., Armed Forces College, Korea; M.A., Duke University; Ph.D., Massachusetts Institute of Technology.
- EDNA CHANNER (1940)** ..... **Associate Professor of Industrial Arts**  
B.A., University of Washington; M.A., University of Iowa; Oregon State College; Claremont Graduate School.
- ROBERT CHRISTMAN (1960)** ..... **Associate Professor of Geology**  
B.S., M.S., University of Michigan; Ph.D., Princeton University.
- EDWIN R. CLAPP (1960)** ..... **Professor of English**  
A.B., Stanford University; M.A., Ph.D., Harvard University.
- NITA CLOTHIER (1964)** ..... **Lecturer in Humanities**  
B.A., M.Ed., Western Washington State College.
- JAY W. CONQUEST (1962)** ..... **Assistant Professor of Education**  
B.S., University of Idaho; M.S.Ed., University of Pennsylvania; Colorado State College; University of Hawaii.
- HOWARD J. CRITCHFIELD (1951)** ..... **Professor of Geography and**  
B.A., M.A.; Ph.D., University of Washington. **Chairman of the Department**
- LOWELL T. CROW (1962)** ..... **Assistant Professor of Psychology**  
B.S., M.A., University of South Carolina; Ph.D., University of Illinois.
- \*FRANK L. D'ANDREA (1945)** ..... **Professor of Music and Chairman of the Department**  
B.S., M.A., New College, Teachers College, Columbia University; Royal Academy of Music, and Mary Datchlor School, London, England; Ed.D., Teachers College.
- STANLEY M. DAUGERT (1962)** ..... **Professor of Philosophy and**  
A.B., M.A., Ph.D., Columbia University. **Chairman of the Department**
- CAROL J. DIERS (1963)** ..... **Associate Professor of Psychology**  
B.A., B.A. in Ed., Western Washington State College; M.A., University of British Columbia; Ph.D., University of Washington.

\*On leave spring quarter, 1966

- ARTHUR DIMOND (1965)** ..... Instructor of Music  
B.A., Willamette University.
- WILLIAM J. DITTRICH (1951)** ..... Assistant Professor of Physics  
B.S., M.S., University of Washington.
- LAWRENCE DOUGLAS (1964)** ..... Assistant Professor of Sociology  
B.A., M.A., University of British Columbia; Ph.D., University of London.
- MAURICE A. DUBE (1963)** ..... Assistant Professor of Biology  
B.S., Washington State University; M.S., Ph.D. Oregon State University.
- DON J. EASTERBROOK (1959)** ..... Associate Professor of Geology and  
B.S., M.S., Ph.D., University of Washington      Chairman of the Department
- LOWELL P. EDDY (1957)** ..... Associate Professor of Chemistry  
B.S., M.S., Oregon State College; Ph.D., Purdue University.
- PETER J. ELICH (1961)** ..... Associate Professor of Psychology  
B.A., University of Washington; M.Ed., Western Washington State College; Ph.D.,  
University of Oregon.
- FREDERICK E. ELLIS (January, 1965)** ..... Associate Professor of Education  
B.A., Reed College; B.A. in Ed., Western Washington State College; M.Ed., Ed.D.,  
Harvard University.
- ROSS C. ELLIS (1962)** ..... Associate Professor of Geology  
B.A., Occidental College; Ph.D., University of Washington.
- WILLIAM E. ELMENDORF (1958)** ..... Assistant Professor of Russian and Spanish  
B.S., University of Puget Sound; M.A., University of Washington.
- JOHN E. ERICKSON (1964)** ..... Assistant Professor of Biology  
B.A., University of Omaha; A.M., Indiana University; Ph.D., University of Oregon.
- EUNICE DAY FABER (1959)** ..... Lecturer in French and Spanish  
B.A., Howard University; M.A., Catholic University of America.
- LELAND W. FARLEY (1965)** ..... Instructor of English  
A.B., Whitman College; M.A., Montana State University.
- J. KAYE FAULKNER (1962)** ..... Assistant Professor of Economics  
B.S., Ph.D., University of Utah.
- F. RICHARD FERINGER (1962)** ..... Director of Extension Services  
B.S., University of Minnesota; Ed.D., University of California, Los Angeles.
- DONALD A. FERRIS (1947)** ..... Associate Professor of Education and  
Coordinator of Space and Schedules  
B.A., M.A., University of Washington; Teachers College, Columbia University;  
Colorado State College.
- ROBERT FIGY (1965)** ..... Instructor of Geography  
B.A., Michigan State University; University of Minnesota.
- MORRIS FINDER (1963)** ..... Associate Professor of English  
M.A., Ph.D., University of Chicago.



- MARK W. FLANDERS (1952)** ..... Assistant Professor of Speech  
B.A., Iowa State Teachers College; M.A., State University of Iowa.
- A. HUGH FLEETWOOD (1962)** ..... Assistant Professor of Philosophy  
A.B., M.A. University of Michigan.
- CHARLES J. FLORA (1957)** ..... Professor of Zoology  
and Academic Dean  
B.S., Purdue University; M.Ed., Ed.D., University of Florida; University of British  
Columbia.
- JONE A. FOSS (1957)** ..... Assistant Professor of Art  
B.S., M.A.A., Montana State College; University of Washington; M.F.A., University  
of Oregon.
- RICHARD J. FOWLER (1965)** ..... Assistant Professor of Industrial Arts  
B.A., M.S., Washington State University; Texas A&M.
- ANDREW J. FRANK (1962)** ..... Associate Professor of Chemistry and  
B.S., M.S., Ph.D., University of Illinois. Chairman of the Department
- THOMAS FRAZIER (1964)** ..... Assistant Professor of Library Science  
B.A., M.A., M.L.S., University of Washington. and Head Catalog Librarian
- PAT H. FREDEMAN (1963)** ..... Instructor of English  
B.A., University of Oklahoma; M.A., University of British Columbia.
- BERNADETTE M. GADZELLA (1962)** ..... Assistant Professor of Education  
B.Ed., University of Alberta; M.Ed., Ph.D., University of Ottawa.
- HARVEY M. GELDER (1948)** ..... Associate Professor of Mathematics  
B.A., Colorado State College; M.A., University of Missouri; University of Wash-  
ington; University of Illinois.
- JEROME GLASS (1955)** ..... Associate Professor of Music  
B.S., New York University; M. Mus., University of Southern California.
- HAROLD A. GOLTZ (1957)** ..... Assistant to the President  
B.A., Macalester College; M.A., University of Minnesota.
- NEIL R. GRAY (1964)** ..... Assistant Professor of Mathematics  
B.A., San Francisco State College; University of Washington.
- THOMAS H. GROVE (1962)** ..... Assistant Professor of Education  
B.A., M.A., Ph.D., University of Washington.
- DAVID A. GUSTAFSON (1965)** ..... Instructor of Speech  
B.A., Knox College; University of Oregon.
- MONICA C. GUTCHOW (1960)** ..... Assistant Professor of Physical Education  
B.S., University of Oregon; M.F.A., University of North Carolina; Texas Women's  
University.
- BYRON E. HAGLUND (1956)** ..... Associate Professor of Economics  
B.B.A., M.A., University of Minnesota; C.P.A., Washington, D. C., and State of  
Washington.

- C. CORINNE HAMILTON (1965)** ..... Director of Placement in Business and Government  
B.A., State College of Iowa; M.A., State University of Iowa.
- ALTA J. HANSEN (1961)** ..... Associate Professor of Physical Education  
B.S., Pacific University; M.S., Ph.D., University of Oregon.
- LAWRENCE HANSON (1963)** ..... Instructor of Art  
B.A., M.F.A., University of Minnesota.
- \*CHARLES W. HARWOOD (1953)** ..... Professor of Psychology and  
B.S., M.S., Ph.D., University of Washington. Chairman of the Department
- JOSEPH HASHISAKI (1962)** ..... Professor of Mathematics and  
Chairman of the Department  
B.A., Montana State University; M.A., Ph.D., University of Illinois.
- WILLIAM T. HATCH (1962)** ..... Financial Aids Officer  
B.A. in Ed., Western Washington State College; M.A., Claremont Graduate School.
- NINA B. HAYNES (1965)** ..... Instructor of English  
A.B., Duke University; M.A., University of North Carolina.
- HERBERT R. HEARSEY (1941)** ..... Associate Professor of Library Science  
and Public Services Librarian  
B.A., Ed.M., Tufts College; B.S. in L.S., M.A. in L.S., University of Illinois.
- WALLACE G. HEATH (1962)** ..... Assistant Professor of Biological Sciences  
B.S., Ph.D., University of Arizona.
- JOHN J. HEBAL (1962)** ..... Associate Professor of Political Science  
Ph.B., University of Wisconsin; M.A., University of Alabama; Ph.D., University  
of Minnesota.
- PAUL E. HERBOLD (1952)** ..... Associate Professor of Speech  
B.A. in Ed., Western Washington State College; M.A., University of Washington;  
Ph.D., University of Minnesota.
- MILDRED HERRICK (1945)** ..... Associate Professor of Library Science  
and Technical Services Librarian  
B.A., Michigan State Normal College; B.A. in L.S., M.A. in L.S., University of  
Michigan.
- ARTHUR HICKS (1933)** ..... Professor of English  
B.A., M.A., University of Oregon; Ph.D., Stanford University.
- C. MAX HIGBEE (1962)** ..... Associate Professor of Education  
B.A., Simpson College; M.S., Washington State University; Ph.D., State University  
of Iowa.
- JAMES L. HILDEBRAND (1952)** ..... Associate Professor of Mathematics  
B.A., M.A., North Texas State University; University of Iowa; Columbia University;  
University of Washington.
- CLAUDE HILL (1964)** ..... Instructor of Industrial Arts  
A.B., University of Washington.

\*On leave Spring, 1966

- HARLEY E. HILLER (1957)** ..... Associate Professor of History  
B.A., Westmar College; M.A., Ph.D., University of Minnesota.
- EVELYN M. HINDS (1960)** ..... Assistant Professor of Music  
B.A. in Ed., M. Ed., Western Washington State College.
- KAY W. HITCHCOCK (1963)** ..... Instructor of English  
B.A., M.A., University of Alaska.
- MABEL HODGES (1957)** ..... Assistant Professor of Education  
B.A., Western Illinois State University; M.A., Washington State University.
- THOMAS C. HORN (1964)** ..... Assistant Professor of History  
B.A., University of Pittsburgh; M.A., Ph.D., University of California, Berkeley.
- ANNIS J. HOVDE (1948)** ..... Associate Professor of English  
B.A., M.A., University of Washington; Stanford University.
- ROBERT HUFF (1964)** ..... Assistant Professor of English  
A.B., M.A., Wayne State University; Indiana University.
- DOROTHY HUMISTON (1965)** ..... Visiting Professor of Physical Education  
A.B., University of Minnesota; M.A., Teachers College, Columbia University;  
Ph.D., New York University.
- LESLIE HUNT (1942)** ..... Assistant Professor of English  
B.A. in Ed., Western Washington State College; M.A., Teachers College, Columbia  
University; University of Washington; University of Michigan; Arizona State  
University.
- ROBERT W. JAHNS (1964)** ..... Assistant Professor of Library Science  
and Acquisitions Librarian  
B.A., University of Iowa; B.D., Yale University; M.L.S., University of California,  
Berkeley.
- TOM E. JENNESS (1965)** ..... Instructor of Speech  
A.B., Brigham Young University.
- ALICE K. JOHNSON (1965)** ..... Instructor of Library Science  
and Documents Librarian  
B.A., Central Washington State College; M.L.S., University of Washington.
- ELLWOOD JOHNSON (1963)** ..... Instructor of English  
B.A., M.A., University of Washington.
- VIVIAN JOHNSON (1941)** ..... Associate Professor of Education  
B.A., M.A., University of Washington; Teachers College, Columbia University.
- ELVET G. JONES (1957)** ..... Associate Professor of Psychology  
B.A., M.A., University of British Columbia; Ph.D., University of Minnesota.
- HENRY W. JONES (1958)** ..... Assistant Professor of Education  
B.S., North Dakota State University; M.S., University of Wisconsin; Ed.D., Uni-  
versity of California, Los Angeles.

- HALLDOR C. KARASON (1949)** ..... Associate Professor of Education and of  
Philosophy and Director of General Studies  
B.A. in Ed., Western Washington State College; M.A., Ph.D., University of Wash-  
ington.
- SAMUEL P. KELLY (1965)** ..... Assistant Professor of Education  
B.A., B.A., in Ed., M.Ed., Western Washington State College.
- RUTH KELSEY (1948)** ..... Associate Professor of Art  
B.A., Washington State University; University of Oregon; M.A., University of  
California, Berkeley; University of Washington.
- EMELIA LOUISE KILBY (1956)** ..... Associate Professor of Physical Education  
B.S., The Mary Washington College, University of Virginia; M.A., New York  
University; Ph.D., University of Washington.
- ELEANOR KING (1953)** ..... Associate Professor of French and German  
B.A., University of British Columbia; M.A., University of Toronto; University of  
Munich, Germany; Ph.D., University of Wisconsin.
- B. L. KINTZ (1965)** ..... Assistant Professor of Psychology  
A.B., M.A., Ph.D., State University of Iowa.
- MARY G. KNIBBS (1963)** ..... Lecturer in History  
B.A. in Ed., M.Ed., Western Washington State College.
- \*FLORENCE J. KIRKPATRICK (1925)** ..... Associate Professor of Biological Science  
B.S., University of Washington; M.A., Mills College; University of California.
- HOWARD A. KLEIN (1963)** ..... Assistant Professor of Education  
B.A., Syracuse University; M.A., University of Michigan; Syracuse University.
- \*\*FRED W. KNAPMAN (1942)** ..... Professor of Chemistry  
B.A. in Ed., Western Washington State College; M.S., University of Washington;  
Ed.D., Teachers College, Columbia University; University of Washington; Uni-  
versity of London.
- GERALD F. KRAFT (1961)** ..... Assistant Professor of Zoology  
B.A., San Jose State College; M.S., Washington State University; Ph.D., Oregon  
State University.
- MERLE S. KUDER (1937)** ..... Professor of Education and of Psychology  
and Dean of Students  
B.A., University of Arizona; M.A., Ph.D., Teachers College, Columbia University.
- MAURICE M. LA BELLE (1965)** ..... Instructor of English  
B.A., Washington State University.
- ARNOLD M. LAHTI (1955)** ..... Professor of Physics  
B.A., B.A. in Ed., Western Washington State College; Ph.D., University of  
Minnesota.

.....  
\*On leave Fall Quarter, 1965

\*\*On leave Spring Quarter, 1966

- WILLIAM J. LAIDLAW (1965)** ..... Assistant Professor of Psychology  
B.A., Fairleigh Dickinson University; M.A., Ed.D., Columbia University.
- GEORGE S. LAMB (1965)** ..... Associate Professor of Education  
A.B., Macalester College; M.A., University of Washington.
- ROGER LAMB (1965)** ..... Assistant Professor of Philosophy  
A.B., Hastings College; University of Rochester.
- GARY M. LAMPMAN (1964)** ..... Assistant Professor of Chemistry  
B.S., University of California, Los Angeles; Ph.D., University of Washington.
- CHARLES F. LAPPENBUSCH (1933)** ..... Associate Professor of Physical Education  
B.S., M.A., University of Washington; Whitworth College; Boston University;  
University of Washington.
- EDITH B. LARRABEE (1957)** ..... Assistant Professor of Home Economics  
B.S., East Texas State College; M.A., Colorado State College.
- \*\*\*GOLDEN L. LARSEN (1956)** ..... Associate Professor of English  
B.S., M.S., Utah State University; Ph.D., University of Washington.
- W. ROBERT LAWYER (1960)** ..... Assistant Professor of English  
B.A., Ph.D., University of Washington.
- LAWRENCE LEE (1962)** ..... Assistant Professor of English  
B.A., M.A., Ph.D., University of Utah.
- HUGH S. LEHMAN (1963)** ..... Assistant Professor of Philosophy  
A.B., Union College; A.M., Ph.D., Harvard University.
- JANICE R. LENO (1964)** ..... Instructor of Home Economics  
B.S., South Dakota State College; M.S., Oklahoma State University.
- STANLEY J. LEPROTTI (1964)** ..... Associate Professor of Physical Education  
B.A., San Francisco State College; M.A., California State Polytechnic College.
- MERRILL LEWIS (1962)** ..... Instructor of English  
B.A., M.A., University of Oregon; University of Utah.
- RICHARD H. LINDSAY (1961)** ..... Associate Professor of Physics  
B.S., University of Portland; M.S., Stanford University; Ph.D., Washington State  
University.
- \*FREDERICK M. LISTER (1954)** ..... Associate Professor of Mathematics  
B.S., Tufts University; M.A., University of Michigan.
- JAMES R. LOUNSBERRY (1959)** ..... Associate Professor of Physical Education  
B.A. in Ed., Central Washington State College; M.S., Ed.D., University of Wash-  
ington.

-----  
\*On leave 1965-66.

\*\*\*On leave 1965-66.

- WILLIAM R. MacKAY (1962)** ..... Assistant Professor of Psychology  
A.B., Brown University; M.A., Ed.D., University of California, Berkeley.
- RICHARD C. McALLISTER (1961)** ..... Assistant Professor of Economics  
B.A., M.A., University of Washington; University of Florida; C.P.A., State of Washington.
- JAMES G. McAREE (1961)** ..... Associate Professor of History  
B.A., M.A., University of Southern California; Ph.D., University of Minnesota; University of London; University of Florence.
- BYRON McCANDLESS (1965)** ..... Professor of Mathematics  
B.S., Colorado State University; A.M., Ph.D., Indiana University.
- ROBERT A. McCracken (1963)** ..... Associate Professor of Education  
B.A., M.A., Ph.D., Syracuse University.
- CLYDE W. McDONALD (1946)** ..... Dean of Men  
B.A., M.S., University of Washington.
- \*DAVID McDONALD (1948)** ..... Associate Professor of Education and  
Director of Audio-Visual Center  
B.A., Bethany College; M.A., University of Southern California; Ed.D., University of Oregon; George Peabody College.
- JAMES E. McFARLAND (1960)** ..... Associate Professor of Mathematics  
B.S., Denison University; M.S., Ph.D., Oregon State University.
- HOWARD F. McGAW (1963)** ..... Professor of Library Science and  
Director of the Library  
A.B., Vanderbilt University; M.A., B.S. in L.S., George Peabody College for Teachers; Ed.D., Teachers College, Columbia University; Graduate Library School, University of Chicago.
- RUBY D. McINNES (1948)** ..... Associate Professor of Education  
B.A., University of Washington; M.A., Teachers College, Columbia University.
- RAYMOND G. McINNIS (1965)** ..... Instructor of Library Science  
and Reference Librarian  
B.A., University of British Columbia; M.L.S., University of Washington.
- DONALD B. McLEOD (1963)** ..... Instructor of English  
B.A., Whitman College; M.A., Montana State University.
- RAYMOND R. McLEOD (1961)** ..... Associate Professor of Physics and  
Chairman of the Department  
B.A., M.A., University of British Columbia; Ph.D., Purdue University.
- FLORENCE McNEIL (1965)** ..... Instructor of English  
B.A., University of British Columbia
- MASON D. McQUISTON (1965)** ..... Associate Professor of Psychology  
B.S., M.S., Ph.D., University of Oregon.

\*On leave, Winter, Spring, 1966

- STEPHEN MARGARITIS (1963)** ..... Associate Professor of Education  
B.A., University of Athens; M.A., Ph.D., University of Southern California.
- \*DAVID F. MARSH (1957)** ..... Associate Professor of Art  
B.A., Central Washington State College; M.S., University of Oregon; Fresno State College; University of Washington.
- JAMES S. MARTIN (1955)** ..... Professor of Botany  
B.S., M.S., Ph.D., University of Washington.
- EVELYN P. MASON (1959)** ..... Associate Professor of Psychology  
B.A., Mills College; M.A., Ph.D., Washington University.
- MIRIAM S. MATHES (1934)** ..... Associate Professor of Library Science  
B.A., New York College for Teachers, Albany; M.A., Teachers College, Columbia University; B.L.S., M.L.S., School of Library Service, Columbia University.
- CALVIN E. MATHEWS (1964)** Associate Registrar and Coordinator of College Relations  
B.A., Olivet Nazarene College; M.A., Colorado State College.
- ERWIN S. MAYER (1953)** ..... Professor of Economics and  
Chairman of the Department  
B.A., Hunter College; Ph.D., University of Washington.
- ROBIN C. MAYOR (1962)** ..... Assistant Professor of Art  
N.D.D. Drawing, Painting, Art History, St. Martin's School of Art, England.
- \*D. PETER MAZUR (1960)** ..... Associate Professor of Sociology  
B.A., Stetson University; M.A., University of Colorado; Ph.D., University of Washington.
- ROBERT MEADE (1965)** ..... Associate Professor of Psychology  
B.A., Indiana University; M.A., Ph.D., University of Pennsylvania.
- STEPHEN L. MERRILL (1963)** ..... Instructor of English  
A.B., Whitman College; M.A., Boston University; Indiana University.
- JANE MERRITT (1965)** ..... Instructor of English  
B.A., M.A., Texas Technological College.
- ROBERT R. MICHENER (1962)** ..... Assistant Professor of Art  
B.A., Hamline University; M.F.A., University of Minnesota.
- VLADIMIR MILICIC (1962)** ..... Instructor of Russian  
Certificate of Baccalaureate, Gymnasium for Boys in Belgrade; M.A., University of Chicago.
- \*ELBERT E. MILLER (1957)** ..... Associate Professor of Geography  
B.A. in Ed., Central Washington State College; University of Nebraska; M.A., Ph.D., University of Washington.
- MICHAEL K. MISCHAIKOW (1964)** ..... Associate Professor of Economics  
B.A., School of Commerce & Finance; Hochschule f. Welthandel (Bulgaria), M.B.A.; M.A., Ph.D., Indiana University.

.....  
\*On leave 1965-1966

- HOWARD E. MITCHELL (1955)** ..... Associate Professor of Economics  
B.A., Whitworth College; M.A., Ph.D., University of Washington.
- MERIBETH J. MITCHELL (1957)** ..... Associate Professor of Biology  
B.S., M.S., Northwestern University; University of Minnesota; Ph.D., Washington State University.
- KURT W. MOERSCHNER (1964)** ..... Assistant Professor of German  
B. Comm., B.A., Sir George Williams University; University of Heidelberg; M.A., (Psychology), M.A. (German), University of Colorado.
- JACQUES MOISSON (1965)** ..... Lecturer in French  
B.A. (Law), B.A. (Lettres), University of Paris.
- ROBERT L. MONAHAN (1955)** ..... Associate Professor of Geography  
B.A., University of Washington; M.A., University of Michigan; Ph.D., McGill University.
- DEBNATH MOOKHERJEE (1961)** ..... Assistant Professor of Geography  
B.S., M.Sc., University of Calcutta; Ph.D., University of Florida.
- GEORGE M. MULDROW (1960)** ..... Assistant Professor of English  
B.J., M.A., University of Missouri; Ph.D., Stanford University.
- WAYNE C. MULLER (1965)** ..... Instructor of Political Science  
B.A., Huron College; M.A., University of Minnesota.
- JAMES H. MULLIGAN (1961)** ..... Director of Public Information  
B.A., M.A., University of Washington.
- KEITH A. MURRAY (1946)** ..... Professor of History and  
Chairman of the Department  
B.A., Whitworth College; M.A., Ph.D., University of Washington.
- GEDIMINAS A. NAMIKAS (1962)** ..... Assistant Professor of Psychology  
B.A., Northwestern University; M.S., Ph.D., University of Wisconsin.
- THOMAS H. NAPIECINSKI (1965)** ..... Associate Professor of Speech  
B.A., M.A., Ph.D., University of Wisconsin.
- EDWARD F. NEUZIL (1959)** ..... Associate Professor of Chemistry  
B.S., North Dakota State College; M.S., Purdue University; Ph.D., University of Washington.
- GERALD G. NEWMAN (1965)** ..... Instructor of History  
B.A., M.A., University of Washington.
- ALDEN L. NICKELSON (1962)** ..... Assistant Professor of Education  
B.S., M.A., Ph.D., University of Washington.
- SYNVA K. NICOL (1937)** ..... Associate Professor of Education  
B.A., Fresno State College; M.A., Teachers College, Columbia University; University of California, University of Oslo.
- FRANK A. NUGENT (1961)** ..... Professor of Psychology and  
Director of Counseling Center  
B.S., New Jersey State Teachers College; M.A., Columbia University; Ph.D., University of California, Berkeley.



- JOE E. NUSBAUM (1963)** ..... **Business Manager**  
B.A., University of Minnesota
- JAMES H. OBRIEN (1946)** ..... **Associate Professor of English**  
B.A., Seattle University; M.A., University of Washington; University College, Dublin, Ireland; Ph.D., University of Washington.
- PATRICIA O'BRIEN (1964)** ..... **Lecturer in Education**  
B.A., Oberlin College; M.S., University of Washington.
- EVELYN ODOM (1936)** ..... **Associate Professor of English**  
B.A., Winthrop College; M.A., Teachers College, Columbia University; University of Washington, University of Minnesota.
- \*FRED A. OLSEN (1961)** ..... **Assistant Professor of Industrial Arts**  
B.A., University of Washington; M.S., Stout College, Wisconsin; Ph.D., Ohio State University.
- B. EUGENE OMEY (1964)** ..... **Director of Admissions**  
B.A., Washington State University.
- WILLIAM J. O'NEIL (1950)** ..... **Registrar**  
B.A. in Ed., M.Ed., Western Washington State College; Washington State University.
- THOMAS OSBORN (1962)** ..... **Assistant Professor of Music**  
B.A., Princeton University; B.M., M.M., Yale University; D.M.A., University of Southern California.
- VILIS PAECLIS (1961)** ..... **Instructor of Library Science and Catalog Librarian**  
Mag. Phil., University of Latvia; M.A.L.S., University of Michigan.
- HAROLD O. PALMER (1956)** ..... **Professor of Business Education**  
B.A., College of Emporia, Kansas; Ed.M., University of Oregon; Ed.D., Oregon State University.
- DAVID M. PANEK** ..... **Assistant Professor of Psychology**  
B.A., Beloit College; M.S., University of Wisconsin; Washington State University.
- DICK S. PAYNE (1961)** ..... **Associate Professor of Political Science**  
A.B., M.P.A., Ph.D., Harvard University.
- MIRIAM L. PECK (1946)** ..... **Associate Professor of Art**  
B.A., M.A., M.F.A., University of Washington; Cranbrook Academy of Art.
- ROBERT A. PETERS (1964)** ..... **Associate Professor of English**  
B.A., Ohio State University; M.A., Western Reserve University; Ph.D., University of Pennsylvania.
- FLORAMAE PHILLIPS (1965)** ..... **Assistant Professor of Library Science and Education Librarian**  
B.A., University of Puget Sound; M.L.S., University of Washington.
- SAM R. PORTER (1962)** ..... **Assistant Professor of Industrial Arts**  
A.B., Iowa State Teachers College; M.A., Teachers College, Columbia University, University of Missouri.

\*On leave, 1965-1966.

- LORRAINE POWERS (1941)** ..... **Dean of Women**  
B.A., University of Wisconsin; M.A., State University of Iowa; University of Washington.
- FRANK N. PUNCHES (1948)** ..... **Associate Professor of Education and  
Director of Educational Placement and Alumni Relations**  
B.A., University of Washington; M.A., Washington State University.
- ELIZABETH B. PURTILL (1965)** ..... **Lecturer in Mathematics**  
B.Ed., Duquesne University; M.A., Michigan State University, University of Chicago.
- RICHARD L. PURTILL (1962)** ..... **Assistant Professor of Philosophy**  
B.A., M.A., University of Chicago; Ph.D., University of California, Los Angeles.
- AUGUST RADKE (1953)** ..... **Professor of History**  
B.A., M.A., Ph.D., University of Washington.
- DOROTHY RAMSLAND (1949)** ..... **Associate Professor of Home Economics  
and Chairman of the Department**  
Luther College; B.S., University of Wisconsin; M.S., Michigan State University.
- CHARLES R. RANDALL, JR. (1962)** ..... **Assistant Professor of Physical Education**  
B.A., Eastern Washington State College; M.A., Washington State University.
- MARY RANK (1965)** ..... **Instructor of English**  
A.B., M.A., University of Michigan.
- \*JOHN R. REAY (1963)** ..... **Associate Professor of Mathematics**  
B.A., Pacific Lutheran University; M.S., University of Idaho; Ph.D., University of Washington.
- BERNARD W. REGIER (1945)** ..... **Professor of Music**  
B.S.M., Kansas State Teachers College, Emporia; M.Mus., University of Michigan; D.M.A., University of Southern California.
- RICHARD C. REYNOLDS (1960)** ..... **Director of Student Activities**  
B.S., M.Ed., University of Oregon; University of Minnesota, Oregon State University
- WILLARD P. RIDDLES (1962)** ..... **Assistant Professor of Education**  
B.A., M.A., Arizona State University; Ed.D., University of Colorado.
- WALTER L. ROBINSON (1960)** ..... **Associate Professor of German and  
Chairman of the Department of Foreign Languages**  
B.A., M.A., Ph.D., University of Texas; University of Innsbruck, Austria; University of Vienna.
- ALFRED L. ROE (1962)** ..... **Assistant Professor of History**  
B.A., St. Olaf College; University of Minnesota.
- CHARLES A. ROSS (1964)** ..... **Assistant Professor of Geology**  
B.A., University of Colorado; M.S., Ph.D., Yale University.

.....  
\*On leave, 1965-66

- J. ALAN ROSS (1964)** ..... Professor of Education and of Psychology; Dean  
of Graduate Studies and of the Summer Sessions  
B.A. in Ed., Western Washington State College; University of Chicago; M.A.,  
Ph.D., Yale University.
- AJIT S. RUPAAL (1964)** ..... Assistant Professor of Physics  
M.Sc., Panjab University; Ph.D., University of British Columbia.
- MARJORIE RYAN (1961)** ..... Associate Professor of English  
A.B., M.A., University of Michigan; Ph.D., University of Minnesota.
- PAUL T. RYGG (1962)** ..... Associate Professor of Mathematics  
B.A., Montana State University; M.S., Ph.D., Iowa State University.
- TRUE SACKRISON (1964)** ..... Assistant Professor of Music  
Diploma, Curtiss Institute of Music.
- DONOVAN F. SANDERSON (1963)** ..... Assistant Professor of Mathematics  
B.S., M.S., Ph.D., Iowa State University.
- DAVID B. SCHAUB (1953)** ..... Associate Professor of Music  
B.A., Mus.B., Lawrence College; M.A., Harvard University; Ph.D., University of  
California, Berkeley.
- ERHART A. SCHINSKE (1957)** ..... Associate Professor of Speech  
B.A., Hamline University; M.A., Ph.D., University of Minnesota.
- THOMAS SCHLOTTERBACK (1965)** ..... Assistant Professor of Art  
B.F.A., M.F.A., University of Kansas.
- CARL U. SCHULER (1959)** ..... Associate Professor of History  
B.S., M.A., Ph.D., University of Wisconsin.
- RAY A. SCHWALM (1949)** ..... Professor of Industrial Arts  
B.S., Millersville State College; M.S., Ed.D., Oregon State University.
- DONALD J. SCHWEMMIN (1960)** ..... Associate Professor of Biology  
B.S., M.S., Ph.D., University of Michigan.
- WILLIAM H. O. SCOTT (1960)** ..... Assistant Professor of Library Science  
A.B., A.M., A.M.L.S., University of Michigan. and Circulation Librarian
- JEAN-CHARLES SEIGNEURET (1961)** ..... Assistant Professor of French  
B.A., University of British Columbia; M.A., Ph.D., University of California,  
Los Angeles.
- CLYDE M. SENGER (1963)** ..... Associate Professor of Biology  
B.A., Reed College; M.S., Purdue University; Ph.D., Utah State University.
- EDWARD H. SHAFFER (1965)** ..... Assistant Professor of Economics  
B.A., M.A., University of Michigan.
- STANLEY SHIEBERT (1963)** ..... Instructor of Classics  
B.A., University of Nebraska; University of Washington
- BYRON E. SIGLER (1963)** ..... Assistant Professor of Speech  
B.A., M.F.A., Tulane University; Ph.D., Stanford University.

- \*DELBERT R. SIMON (1962)** ..... Assistant Professor of Music  
B.M.E., Simpson College; M.M., Miami University, University of Michigan.
- BEARNICE SKEEN (1947)** ..... Professor of Education  
B.S., M.S., University of Oregon; Ed.D., Washington State University.
- KNUTE SKINNER (1962)** ..... Lecturer in English  
A.B., Colorado State College; M.A., Middlebury College; Ph.D., State University of Iowa.
- IRWIN L. SLESNICK (1963)** ..... Associate Professor of Biology  
B.A., M.S., Bowling Green University; M.S., University of Michigan; Ph.D., Ohio State University.
- JAMES A. SMITH (1965)** ..... Assistant Professor of Physical Education  
B.S., Portland State College; M.Ed., University of Oregon.
- PHILIP T. SPAULDING (1960)** ..... Assistant Professor of Sociology  
B.A., University of Alaska; M.A., University of Oregon; University of Washington.
- DONALD I. SPRAGUE (January, 1965)** ..... Assistant Professor of Physics  
B.S., M.S., University of Washington
- THADDEUS H. SPRATLEN (1961)** ..... Assistant Professor of Economics  
B.S., M.A., Ph.D., Ohio State University
- DORAINE STANDLEY (1964)** ..... Instructor of English  
B.A., M.A., Ohio University.
- RICHARD O. STARBIRD (1962)** ..... Associate Professor of Education and  
Director of Educational Field Services  
B.A., Heidelberg College; M.A., Columbia University; Ed.D., Teachers College, Columbia University.
- PAUL H. STONER (1961)** ..... Associate Professor of Music  
B.M., University of Kansas; M.A., University of Iowa; D.M.A., University of Southern California.
- JAMES H. STRAUGHAN (1964)** ..... Associate Professor of Psychology  
B.A., University of Florida; Ph.D., Indiana University.
- HERBERT C. TAYLOR, Jr. (1951)** ..... Professor of Anthropology and  
Associate Dean, Research  
B.A., M.A., University of Texas; Ph.D., University of Chicago.
- RONALD TAYLOR (1964)** ..... Assistant Professor of Biology  
B.A., Idaho State College; M.A., University of Wyoming; Ph.D., Washington State University.
- ROBERT W. TESHARA (1965)** ..... Assistant Professor of Geography  
B.A., B.A. in Ed., Western Washington State College; University of Washington.
- DAVID L. THOMAS (1964)** ..... Assistant Professor of Sociology  
B.S., Florida State University; M.A., Ph.D., State University of Iowa.
- LESLIE J. THOMAS (1962)** ..... Assistant Professor of History  
B.A., St. Olaf College; M.S., Ph.D., University of Wisconsin.

\* On leave 1965-66.

- RALPH H. THOMPSON (1950)** ..... **Professor of Education and Chairman of the Department**  
B.A., Dickinson College; M.A., University of Delaware; Ed.D., University of Illinois.
- ROBERT G. TIPTON (1965)** ..... **Instructor of English**  
B.A., M.A., University of Nebraska.
- WILLIAM A. TOMARAS (1961)** ..... **Associate Professor of Physical Education, Director of Athletics, and Chairman of the Department**  
B.A., M.S., University of Illinois; Ed.D., University of Oregon.
- MILTON TOWNE (1964)** ..... **Lecturer in Education and Principal of the Campus School**  
B.A. in Ed., M.Ed., Western Washington State College.
- MARTIN TUCKER (1961)** ..... **Assistant Professor of Art**  
B.S., State University of New York; M.S., M.F.A., University of Wisconsin.
- COLIN E. TWEDDELL (1965)** ..... **Associate Professor of Anthropology**  
B.A., M.A., Ph.D., University of Washington.
- VERNON O. TYLER, Jr.** ..... **Assistant Professor of Psychology**  
B.S., University of Washington; M.A., State University of Iowa; Ph.D., University of Nebraska.
- ALBERT VAN AVER (1939)** ..... **Professor of English**  
B.A., Reed College; M.A., Claremont College; Fellow, State University of Iowa, University of Washington; Ph.D., University of Cincinnati.
- MARGARETHA J. van VOORST VADER (1964)** ..... **Lecturer in French**  
Candidate's title, University of Amsterdam.
- STEWART VAN WINGERDEN (1951)** ..... **Assistant Professor of Education**  
B.A. in Ed., Western Washington State College; M.A., Colorado State College; Washington State University.
- JIRI J. VEIT (1963)** ..... **Assistant Professor of Physics**  
B.Sc., University of London; M.Sc., University of Birmingham; Ph.D., University of London.
- MANFRED VERNON (1964)** ..... **Professor of Political Science and Chairman of the Department**  
LL.B., University of Cologne; J.D., University of Berlin; Ph.D., Stanford University.
- GENE E. VIKE (1962)** ..... **Assistant Professor of Art**  
B.A. in Ed., B.A., Western Washington State College; M.S., Pratt Institute.
- GOLDIE VITT (1962)** ..... **Lecturer in Education**  
B.S., Eastern Montana College of Education; M.S., Montana State University.
- \*PAUL R. WALDO (1961)** ..... **Instructor of Speech**  
B.S., Portland State College; M.A., University of Michigan, University of Oregon.
- ADA G. WALTER (1961)** ..... **Assistant Professor of Business Education**  
B.S., Winthrop College; M.B.A., University of Denver.

- DON C. WALTER (1947)** ..... Associate Professor of Music  
Iowa State Teachers College; B.A., Wartburg College; M.A., Colorado State College; Ed.D., University of Oregon.
- MARY W. WATROUS (1957)** ..... Professor of Education  
A.B., University of Nebraska; M.A., Gonzaga University; Ed.D., University of Washington; Southampton University, England.
- LOREN I. WEBB (1965)** ..... Assistant Professor of Speech  
B.S., University of California, Berkeley; M.A., Redlands University; University of Washington.
- WALTER F. WEGNER (1961)** ..... Assistant Professor of Art  
B.S., University of Wisconsin; M.F.A., State University of Iowa.
- HOMER WEINER (1964)** ..... Professor of Art and Chairman of the Department  
B.F.A., Bradley University; M.F.A., State University of Iowa.
- \*RUTH WEYTHMAN (1924)** ..... Professor of Physical Education  
B.S., University of Washington; M.A., Teachers College, Columbia University; University of California, Berkeley; University of Tennessee.
- ROBERT WHITCOMB (1963)** ..... Associate Professor of Music  
B. Mus., M. Mus., College of Music of Cincinnati; A.M.D., Eastman School of Music of University of Rochester
- JOHN C. WHITMER (1965)** ..... Assistant Professor of Chemistry  
B.S., University of Rochester; M.S., University of Michigan.
- STEPHEN L. WILKINSON (1965)** ..... Instructor of Economics  
B.B.A., M.B.A., University of Iowa.
- DON W. WISEMAN (1962)** ..... Assistant Professor of Physical Education  
B.A., Idaho State University; M.S., Washington State University; University of Oregon.
- GEORGE E. WITTER (1955)** ..... Associate Professor of Mathematics  
B.A., M.A., Miami University; University of Washington, University of Michigan, University of California, Los Angeles.
- GRANT R. WOOD** ..... Assistant Professor of Industrial Arts  
A.B., College of Southern Utah; B.S., M.S., Utah State University; University of Missouri.
- PAUL D. WOODRING (1939)** ..... Distinguished Service Professor of the College  
B.S.Ed., Bowling Green State University; M.A., Ph.D., Ohio State University; Honorary degrees—L.H.D. Kalamazoo College; Ph.D., Coe College; Litt.D., Ripon College; L.H.D. Bowling Green State University.
- EILEEN T. WU (1964)** ..... Assistant Professor of Mathematics  
B.S., Seattle University; M.S., Ph.D., University of Washington.
- JOHN J. WUEST (1960)** ..... Professor of Political Science  
B.S., M.S., University of Southern California; Ph.D., University of California, Los Angeles.

\* On leave 1965-66.

\* On leave fall quarter, 1965.

- ANDRÉ LOUIS YANDL (1965)** ..... Associate Professor of Mathematics  
B.S., M.A., University of Washington.
- FREDERICK H. YOUNG (1964)** ..... Professor of Mathematics  
B.A., M.A., Oregon State College; Ph.D., University of Oregon.
- RAYMOND A. YOUNG (1961)** ..... Associate Professor of Spanish  
B.A., University of British Columbia; M.Lib., University of Washington; Ph.D.,  
University of Madrid.
- EDNA ZOET (1965)** ..... Instructor of Business Education  
A.B., Stanford University; M.Ed., Western Washington State College.

### AFFILIATED TEACHERS OF MUSIC

- RALPH BURRIER** ..... Voice  
B.M., M.M., Westminster Choir College; B.S. in Mus. Ed., Columbia University;  
Fullbright Scholarship to Austria.
- NANCY BUSSARD** ..... Piano  
A.B., Whitman
- KENNETH A. CLOUD** ..... Trombone, Trumpet  
B.A. Mus. Ed., University of Washington, First Trombone, Seattle Symphony  
since 1939; Trombone instructor at the University of Washington and Seattle  
Pacific College.
- NONIE STONEHOUSE** ..... Wind Instruments  
B.M.E., Northwestern University.
- ARTHUR THAL** ..... Violin  
Study under Felix Winternitz, New England Conservatory of Music, Boston; and  
under Scott Willits, American Conservatory, Chicago; special study with members  
of the Budapest String Quartet.
- DOLORES J. WICKS** ..... Piano  
B.A., Western Washington State College; Juilliard School of Music Diploma.

### CONSULTANT

- BUELL C. KINGSLEY (1963)** ..... Consultant, Counseling Center  
B.A., Dartmouth College; M.D., University of Oregon.

### CAMPUS SCHOOL ASSOCIATES

- MARY R. IRVIN** ..... Teaching Associate  
B.A. in Ed., Western Washington State College.
- THEODORE A. MORK (1964)** ..... Teaching Associate  
B.A. in Ed., Western Washington State College.
- MICHAEL MURPHY (1964)** ..... Teaching Associate  
B.S., Washington State University; M.A., Western Washington State College.
- LELIA McCOY (1961)** ..... Campus School Librarian  
B.A. in Ed., Western Washington State College; M.L.S., University of Washington.
- KAREN OLSON (1965)** ..... Teaching Associate  
B.A., Western Washington State College; University of Washington.

### RESEARCH ASSOCIATES

- WARREN A. CHAPMAN (1963)**  
B.S., Massachusetts Institute of Technology; M.D., University of Chicago School  
of Medicine.
- JAMES d'ARGAVILLE CLARK (1964)**  
B.Sc., Capetown; B.Sc., University of London; Ph.D., Institute of Paper Chemistry,  
Lawrence College
- JUNE P. ROSS (1965)**  
B.Sc., Ph.D., University of Sydney, Australia.

## SUMMARY OF ENROLLMENT

**Resident**

Summer Quarter, 1964 .....	2538
Fall, Winter, Spring, 1964-65 .....	5067
(minus duplicate names)	

**Extension**

Correspondence .....	387
Evening classes (on campus) .....	1304
Extension classes (off-campus) .....	431
Total Extension Enrollment .....	2122

**Campus School**

Kindergarten through sixth grade, 1964-65 .....	188
Summer Session, 1964 .....	53

## Degrees and Certificates

**Degrees granted from August, 1964, to June, 1965, inclusive:**

Master of Education .....	92
Bachelor of Arts in Education .....	551
Bachelor of Arts .....	187
Total .....	830

**Teaching Certificates issued from August, 1964, to June, 1965, inclusive:**

Three-Year Elementary .....	16
Provisional .....	548
Total .....	564

**Others recommended for certification to the State Superintendent of Public Instruction:**

Standard Certificate .....	275
----------------------------	-----



## INDEX

Academic Advisement .....	28	Education, Department of .....	80
Academic Probation .....	41	Elementary Teachers .....	48
Academic Regulations .....	36	Employment, Part-Time .....	19, 20
Accreditation of the College .....	6	English .....	88
Activities, Student .....	30	Enrollment Summary, 1964-1965 .....	214
Administrative Officers .....	192	Entrance Tests .....	10
Admission — Freshmen .....	10	Examinations, Final .....	43
Admission — Transfers .....	11	Extension Services .....	32
Admission to Teacher Education .....	45	Faculty .....	194
Admissions Office .....	29	Faculty — Emeritus .....	193
Advanced Placement .....	13	Fees .....	15
Anthropology .....	180	Fees, Refund .....	16
Art .....	56	Fifth Year Program, Teacher Education .....	53
Arts and Sciences Program .....	51	Finances, Student .....	15
Assistantships, Graduate .....	21	Financial Assistance .....	18
Attendance Regulations .....	39	Foreign Languages .....	94
Audio-Visual Center .....	32	French .....	95
Auditors .....	15, 42	General Education .....	103
Bachelor of Arts in Education .....	45	General Science .....	177
Bachelor of Arts .....	51	Geography .....	104
Biology .....	62	Geology .....	109
Board of Trustees .....	192	German .....	97
Board and Room .....	17	Grade Points .....	40
Botany .....	65	Grade Reports .....	39
Business Education .....	78	Grading System .....	39
Buildings .....	8	Graduate Study .....	52
Calendar, Official .....	4	Graduation Requirements .....	43
Campus Map .....	2	Greek .....	98
Certificates Issued, 1964-1965 .....	214	Health Education .....	159
Certification, Teacher .....	45	Health Examination .....	13
Changes in Registration .....	37	Health Service .....	24, 29
Chemistry .....	68	Health Science .....	152
College Examiner .....	29	History .....	113
College Objectives .....	6	Home Economics .....	119
Computer Center .....	33	Honors Courses .....	123
Concert-Lecture Series .....	33	Honors Program .....	14, 52
Costs, Estimated Total .....	18	Housing, On-Campus .....	23
Costs, Living .....	17	Housing, Off-Campus .....	25
Counseling Center .....	29	Industrial Arts .....	124
Course Listings, Guide To ... Back Cover		Intramural Sports Program .....	31
Course Numbering System .....	55	Junior High Teachers .....	49
Credit by Examination .....	40	Latin .....	99
Credits, Definition of .....	38	Library .....	32
Dean of Students .....	29	Library Science .....	130
Deans of Men and Women .....	29	Living Costs .....	17
Deficiencies — English, Mathematics .....	36	Load, Academic .....	38
Deficiency Reports .....	40	Loans, Student .....	19, 20, 21
Degrees Granted, 1964-1965 .....	214	Majors and Minors, Arts and Sciences .....	51
Delinquent Accounts .....	17	Majors and Minors, Teacher Education .....	48
Deposit, Enrollment .....	12		
Discipline .....	13		
Economics .....	73		

## INDEX CONTINUED

Master of Education .....	52	Scholarships .....	19, 20, 21, 22
Master of Arts and Master of Science .....	52	Scholarship, Low .....	41
Mathematics .....	132	Science, Interdepartmental Offerings .....	177
Music .....	139	Science Education .....	177
Music Awards .....	139	Senior High Teachers .....	49
National Defense Education Act Loans .....	19	Sequence of Courses .....	44
Objectives of the College .....	6	Social Studies Education .....	179
Organizations, Student .....	30	Sociology .....	180
Orientation Program .....	28	Spanish .....	101
Philosophy .....	147	Speech .....	186
Physical Education .....	150	Student Activities .....	30
Physical Science .....	177	Student Affairs, Office of .....	29
Physics .....	161	Student Finances .....	15
Placement Offices .....	29	Student Living .....	23
Political Science .....	166	Student Organizations .....	30
Probation, Academic .....	41	Student Personnel Offices .....	29
Psychology .....	171	Student Personnel Services .....	28
Recreation .....	159	Supervised Teaching .....	80, 84
Refund of Fees .....	16	Teachers Certification, Washington....	45
Registrar .....	29	Teacher Education Curriculum .....	45
Registration .....	36	Termination of Enrollment .....	41
Registration, Late .....	37	Tests at Entrance .....	10
Repeating Courses .....	40	Transfer Programs .....	52
Research .....	33	Trustees, Board of .....	192
Reservations, Room .....	24	Tuition .....	15
Residences, Student .....	23	Warning, Low Scholarship .....	41
Russian .....	100	Withdrawal from College .....	37
Scholarship Donors .....	22	Withdrawal from Courses .....	37
		Zoology .....	66





# Index to Courses and Concentrations

	Page
Anthropology .....	180
Art .....	56
Biology .....	62
Botany .....	65
Business Education .....	78
Chemistry .....	68
Economics .....	73
Education .....	80
English .....	88
Foreign Languages .....	94
French .....	95
General Education .....	103
General Science .....	177
Geography .....	104
Geology .....	109
German .....	97
Greek .....	98
Health Education .....	159
Health Science .....	152
History .....	113
Home Economics .....	119
Honors .....	123
Industrial Arts .....	124
Latin .....	99
Library Science .....	130
Mathematics .....	132
Music .....	139
Philosophy .....	147
Physical Education .....	150
Physical Science .....	177
Physics .....	161
Political Science .....	166
Psychology .....	171
Recreation .....	159
Russian .....	100
Science Education .....	177
Social Studies Education .....	179
Sociology .....	180
Spanish .....	101
Speech .....	186
Zoology .....	66

## HOW TO USE

## THE

## MARGINAL INDEX

1. Find item desired in alphabetical list.
2. Grasping catalogue with both hands, bend back to expose left marginal marks.
3. Match the line from item in the list to parallel mark on the margin.
4. Open catalogue at marked page.