

**GENERAL
EXTENSION
DIVISION
BULLETIN**

**Portland State
Extension Center**

Portland, Oregon

**CATALOG
I S S U E
1954-55**

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BULLETIN

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**GENERAL EXTENSION
DIVISION**

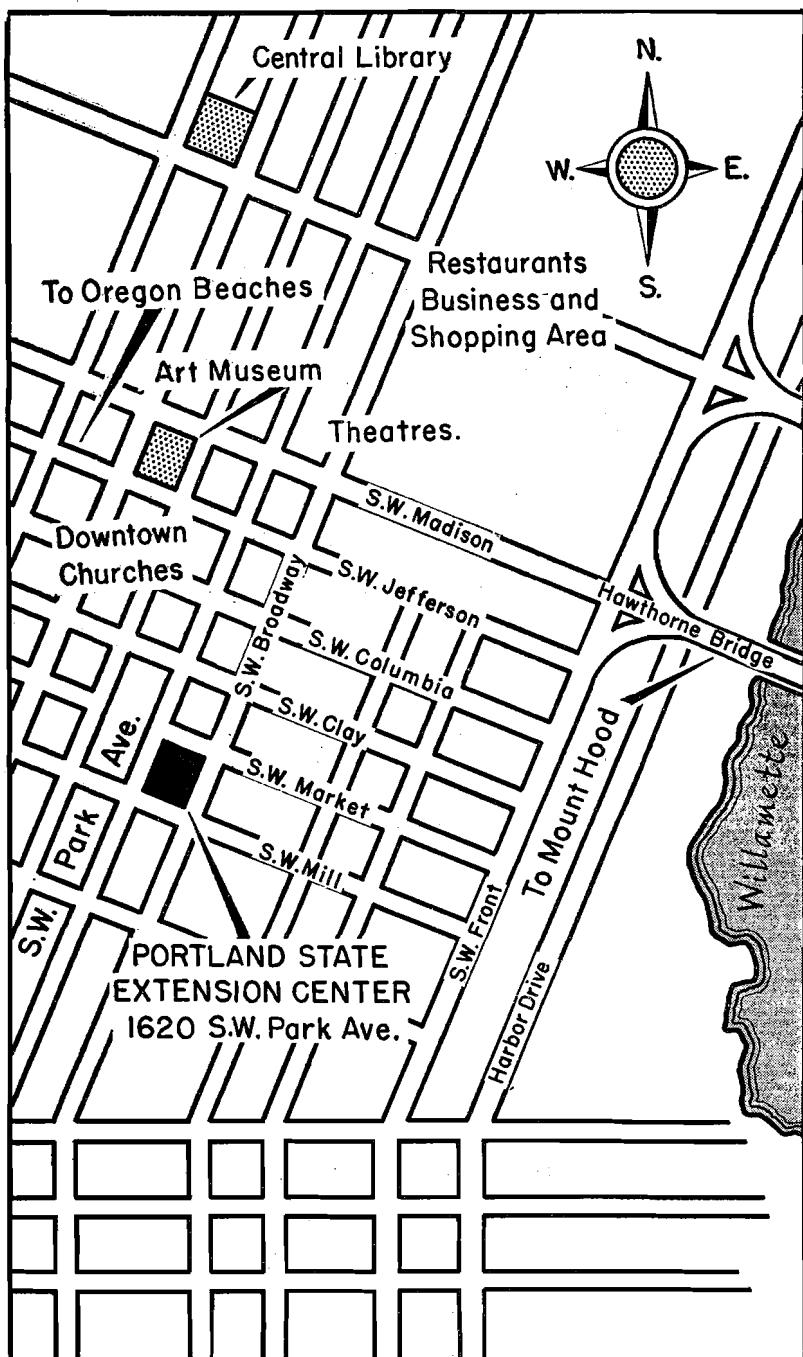
BULLETIN

Portland State Extension Center

**University of Oregon
Oregon State College
Oregon Colleges of Education**

**ANNOUNCEMENTS
1954-55**

**1620 S. W. Park Avenue
Portland 1, Oregon
Telephone CApitol 4251**



Oregon State System of Higher Education

The Oregon State System of Higher Education, as organized in 1932 by the State Board of Higher Education following a survey of higher education in Oregon by the U. S. Office of Education, includes all the state-supported institutions of higher education. The several institutions are elements in an articulated system, parts of an integrated whole. The educational program is so organized as to distribute as widely as possible throughout the state the opportunities for general education and to center on a particular campus specialized, technical, and professional curricula closely related to one another.

The institutions of the State System of Higher Education are the University of Oregon at Eugene, Oregon State College at Corvallis, Oregon College of Education at Monmouth, Southern Oregon College of Education at Ashland, and Eastern Oregon College of Education at La Grande. The University of Oregon Medical School, and the Dental School are located in Portland.

Each of the institutions provides the general studies fundamental to a well-rounded education. At the three colleges of education, students who do not plan to become teachers may devote their time to general studies or (at Southern Oregon and Eastern Oregon colleges of education) to approved lower-division programs in certain semiprofessional fields.

At the University and the State College two years of unspecialized work in liberal arts and sciences are provided on a parallel basis in the lower-division. Major curricula, both liberal and professional, are grouped on either campus in accordance with the distinctive functions of the respective institutions in the unified State System of Higher Education.

An interinstitutional booklet, *Your Education*, which outlines the curricula of the several institutions and contains other information, is available. For a copy, write to Division of Information, Board of Higher Education, Eugene, Oregon.

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Table of Contents

	<i>Page</i>
OREGON STATE SYSTEM OF HIGHER EDUCATION.....	3
STATE BOARD OF HIGHER EDUCATION.....	4
CALENDAR.....	6
FACULTY.....	7
GENERAL INFORMATION.....	20
DAY PROGRAM.....	26
EVENING PROGRAM.....	55
GRADUATE WORK.....	56
GENERAL EXTENSION DIVISION.....	95
OFFICERS OF ADMINISTRATION.....	99
INDEX.....	101

Academic Calendar 1954-55

Fall

	Day Classes	Evening Classes
Counseling.....	Sept 20-23	Sept 20-25
Registration.....	Sept 23-24	Sept 7-Oct 2
Classes begin.....	Sept 27	Sept 27-Oct 1
Late fee begins.....	Sept 27	Oct 4
Last day for registration or addition of new courses.....	Oct 9	Oct 9
Last day for dropping a course or withdrawing without responsibility for grades.....	Nov 6	Nov 6
Thanksgiving vacation.....	Nov 25-28	Nov 25-28
Examinations.....	Dec 13-18	Dec 13-18
Term ends.....	Dec 18	Dec 18

Winter

Registration.....	Jan 3	Jan 3-8
Classes begin.....	Jan 4	Jan 3-8
Late fee begins.....	Jan 4	Jan 10
Last day for registration or addition of new courses.....	Jan 15	Jan 15
Last day for dropping a course or withdrawing without responsibility for grades.....	Feb 12	Feb 12
Examinations.....	Mar 14-19	Mar 14-19
Term ends.....	Mar 19	Mar 19

Spring

Registration.....	Mar 28	Mar 28-Apr 2
Classes begin.....	Mar 29	Mar 28-Apr 1
Late fee begins.....	Mar 29	Apr 4
Last day for registration or addition of new courses.....	Apr 9	Apr 9
Last day for dropping a course or withdrawing without responsibility for grades.....	May 7	May 7
Memorial Day.....	May 30	May 30
Examinations.....	June 6-11	June 6-11
Term ends.....	June 11	June 11

SEPTEMBER 1954

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OCTOBER

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31						

NOVEMBER

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DECEMBER

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JANUARY 1955

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JUNE

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24	25	26	27	28	29	30

Portland Summer Session

Registration.....	June 20
Classes begin.....	June 21
Examinations.....	Aug 11-12
Term ends.....	Aug 12

Portland State Extension Center

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B.S. (1933), M.S. (1939), Oregon; D.Ed. (1950), Colorado State College of Education.
- CLARA PIERSON, M.S., Instructor in Botany, General Extension Division.
B.S. (1938), M.S. (1940), Oregon State.

* On leave 1954-55.

- *LEROY R. PIERSON, Ed.M., Instructor in Education, General Extension Division.
B.A. (1940), Pacific; Ed.M. (1950), Oregon State.
- MILOSH POPOVICH, M.S., Professor of Mechanical Engineering; Chairman of Department, Oregon State College.
B.S. (1939), M.S. (1941), Oregon State.
- ALFRED POWERS, A.B., Professor Emeritus of Creative Writing, General Extension Division.
- W. DWAIN RICHINS, Ph.D., Assistant Professor of Business Administration, University of Oregon.
B.A. (1936), Brigham Young; M.B.A. (1938), Louisiana State; Ph.D. (1950), Washington.
- EDWIN C. ROBBINS, JR., M.B.A., Instructor in Economics, University of Oregon.
B.A. (1938), Oregon; M.B.A. (1943), Harvard.
- PHILIP CARL ROBERTI, Ph.D., Instructor in Chemistry, General Extension Division.
B.S. (1944), M.S. (1949), University of Portland; Ph.D. (1953), Oregon State.
- FRANK L. ROBERTS, Ph.M. Assistant Professor of Speech, General Extension Division.
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- JOHN ALEXANDER SCHARBACH, M.A., Instructor in English, General Extension Division.
B.A. (1932), University of Notre Dame; M.A. (1941), Washington.
- RICHARD R. SCHULTZ, M.A., Instructor in English, General Extension Division.
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- STUART BRUCE SEATON, M.S., Associate Professor of Business Administration, Oregon State College.
B.S. (1933), Central State (Oklahoma); M.S. (1941), Oklahoma A and M College.
- MARGARET M. SHARP, Associate Professor Emeritus of Extension Teaching, General Extension Division.
- MILTON CONWELL SHEELY, B.S., Professor of Industrial Engineering and Industrial Arts, Oregon State College.
B.S. (in M.E.) (1939), Oregon State.
- JAMES WILSON SHERBURNE, Ph.D., Professor of Psychology; Head of Department, Oregon State College.
A.B. (1927), Greenville College; M.A. (1928), Michigan; Ph.D. (1938), Ohio State.
- JESSIE M. SMITH, M.A., Assistant Professor of Business Administration, University of Oregon.
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B.B.A. (1926), Boston University; Ed.M. (1933), University of New Hampshire; Ed.D. (1942), Harvard.
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- CLARK PAUL SPURLOCK, M.S., Assistant Professor of History, General Extension Division.
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- EUGENE CARL STARR, B.S. E.E., Professor of Electrical Engineering, Oregon State College.
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- JOHN H. STEHN, M.S., Professor of Music; Head of Music Studies, General Extension Division.
A.B. (1925), Grinnell; M.S. (1927), Iowa.
- HENRY EUGENE STEVENS, D.Ed., Professor of Education, General Extension Division.
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- ROBERT E. SUMMERS, M.A., Assistant Professor of Journalism, University of Oregon.
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- ROY TERANISHI, B.S., Instructor in Chemistry, General Extension Division.
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B.S. (1939), Bowling Green State University; M.A. (1939), Ohio State University; Ed.D. (1952), New York University.
- J. MARSHALL WAITE, B.S., Instructor in Engineering and Mathematics, General Extension Division.
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B.A. (1943), Oregon State.
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J. G. PATRICK, B.S., Corps of Engineers.
DAVID S. PATTULLO, B.A., C.P.A., LL.B., Accountant and Attorney at Law.
DERROL E. PENNINGTON, Ph.D., Instructor in Bacteriology.
HELGA C. PETERS, Maturus, Instructor in German.
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HARRY D. SKELTON, C.P.A., Certified Public Accountant.
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HARVEY TROUT, B.S., Lieutenant, Portland Police Department.
ROBERT L. TYLER, Ph.D., Instructor in History.
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GARDNER B. WALKER, Ed.D., Psychological Services Center.
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ROBERT WIEGMAN, D.Ed., Assistant Professor of Education, University of Portland.
LUCIA WILEY, M.F.A., Instructor in Drawing and Painting, Museum Art School.

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- A. VERNE WILSON, M.S., Assistant Supervisor of Music, Portland Public Schools.
- HOWARD E. YOUNG, Met. Engr., Metallurgical Engineer, Aluminum Company of America.
- MARIAN ZOLLINGER, M.A., Supervisor of Language Arts, Portland Public Schools.

General Information

Portland State Extension Center offers both undergraduate and graduate collegiate instruction. It is operated by the General Extension Division which is the part of the State System of Higher Education serving the people of Oregon through extension classes, short courses, correspondence study, visual instruction, radio programs, summer sessions and special activities.

Action of the State Board of Higher Education in 1952 merged two extension centers serving the Portland area into an integrated program offering both day and evening work. Evening classes had been provided by the former Portland Extension Center since 1917. A lower-division, day-time program had been provided by Vanport Extension Center since 1946. Portland State Extension Center, which combines these services, has operated as a unit of the State System of Higher Education since September, 1952.

In 1953 the state legislature authorized four-year programs in elementary and secondary teacher training with accompanying general studies at Portland State Extension Center. The third year of elementary education will be added beginning fall term, 1954-55, and the third year of secondary education beginning fall term, 1955-56.

The *Day Program* offers undergraduate work to full-time students. Entrance requirements, instructional programs and co-curricular activities are similar to those offered at one or another of the campus institutions within the Oregon State System of Higher Education.

The *Evening Program* offers approximately 250 courses in more than 30 departments and professional schools. Both undergraduate and graduate classes are scheduled and work of these classes is of standard college or university grade.

Accreditation. Portland State Extension Center's accreditation parallels that of the institutions whose courses it offers. As one of the correlated units of the Oregon State System of Higher Education, it draws upon resources, curricula, and facilities of all state higher educational institutions.

Portland State Extension Center does not grant degrees, but credits earned at the Center are accepted as residence credit toward a degree when transferred to University of Oregon, Oregon State College, or any of the three Oregon Colleges of Education providing credits have been earned as a part of a planned degree program. If transferred outside Oregon, credits earned at the center may be accepted on the same basis as credits transferred from other schools in the Oregon State System of Higher Education.

A limited number of courses in the day program carry the statement "terminal credit." These are for students who plan to attend college only two years. Such courses may not be acceptable in some colleges to meet requirements of a four-year degree program.

Veterans

Portland State Extension Center is approved by the Veterans Administration for training veterans under P. L. 346 and P. L. 550, World War II and "Korean" G. I. Bills and under P. L. 16 and P. L. 894, the latter two being for disabled veterans. Detailed information on educational eligibility and entitlement under these Acts may be obtained from the Veterans Administration, 208 S. W. 5th Avenue (telephone AT9131) Portland, Oregon.

Portland Guidance Center of the Veterans Administration is housed in the Portland State Extension Center building. Veterans are eligible for counseling and guidance services of this facility.

The State of Oregon also has legislation affording educational assistance to veterans. The State Department of Veterans Affairs, State Office building, 1400 S. W. 5th Avenue (telephone CO 2161) Portland, Oregon, will provide information.

Fee Schedule

Fees and deposits in all state institutions of higher education are charged according to a uniform plan, varying on different campuses according to differences in conditions or nature of work offered. The State Board of Higher Education reserves the right to change the schedule of tuition and fees without notice.

A. DAY CLASSES—PORTLAND STATE EXTENSION CENTER

1. Full-Time Students (7 credit hours or more)

<i>Item</i>	<i>Per Term</i>	<i>Per Year</i>
Tuition	\$ 10.00	\$ 30.00
Laboratory and Course fee.....	20.00	60.00
Incidental fee.....	17.00	51.00
Building fee.....	5.00	15.00
Total for Oregon residents.....	\$ 52.00	\$156.00
Additional fee for nonresidents.....	60.00	180.00
Total for nonresidents.....	\$112.00	\$336.00

Regulations Governing Nonresident Fee. The Oregon State Board of Higher Education has ruled that any person who comes into the state of Oregon for the purpose of attending one of the institutions under the control of the Board, and who for any reason is not qualified for classification as a resident of the state of Oregon, shall pay the nonresident fee, except:

(1) a student who holds a degree from an accredited college or university and is registered in a curriculum other than professional dentistry, law, or medicine.

(2) a student attending summer session.

(3) a student paying part-time fees.

(4) a student whose parent is a regular employee of the federal government stationed in Oregon.

(5) a student whose father is domiciled in the state of Oregon as defined under (1) below.

The residence or domicile of a student is normally that of his father; if his father is not living, it is normally that of his mother. In case of parents' divorce, the domicile of a student is generally determined by the residence of the parent to whom custody is granted by the court. The domicile of a wife is normally that of her husband; if both are students, the wife's residence status is determined by that of her husband. The domicile of a student who is independent of the relations mentioned above is determined by rule (1) below. An alien cannot begin to establish residence until he has obtained his first citizenship papers.

The Board has established the following rules to be observed in determining the residence status of students:

(1) Residence and domicile are synonymous and domicile shall be considered to be a fixed permanent residence to which the student has the intention of returning. The fixed permanent residence must normally have been maintained for at least twelve months prior to the school term for which resident classification is sought, and must be a bona fide residence which the student has no intention

of changing when the school period has expired. Proved actual residence and intention to remain must exist simultaneously. Factors used in determining intent include age and family status of the student, residence of near relatives, place of voting, ownership of property, sources of financial support, length of time within the state, record of employment and schooling (intent cannot be demonstrated by school attendance alone.)

(2) A student whose official records show his own or his parent's domicile to be outside of Oregon is prima facie a nonresident, and burden is upon the student to prove the contrary. If his official transcripts of academic record show attendance at a school outside of Oregon, he may be required to furnish further proof of Oregon domicile.

(3) A nonresident at the time of enrollment is held to that classification throughout his attendance as a student, except where he can prove that his or his parent's previous domicile has been abandoned and a new one established in Oregon in accordance with these regulations. A resident student will be reclassified as nonresident at any time his Oregon domicile is lost.

2. Part-Time Students (6 credit hours or less)

Undergraduates, Graduates and Auditors, per credit hour.....\$ 6.00
Minimum charge for 1 or 2 credit hours for any student.....\$12.00

Day class students are entitled to services of the health service, gym suit service, and educational and athletic activities. Students registered for 6 term hours or less do not pay the nonresident fee.

B. EVENING CLASSES—PORTLAND STATE EXTENSION CENTER

<i>Item</i>	<i>Per Term</i>
Regular registration and course fees, tuition not included, applicable to undergraduates, graduates and auditors.	
Per credit hour rate.....	\$ 6.00
Minimum charge for 1 or 2 credit hours for any student.....	12.00
Charge for students carrying 7 credit hours or more.....	52.00

Evening class students are not entitled to health service, gym suit service and educational and athletic activities. Students registered for 6 term hours or less do not pay the nonresident fee. Laboratory service, or course fees are charged in some cases, as indicated in course descriptions, on basis comparable with State-Wide Evening Classes.

C. COMBINATION DAY AND EVENING CLASSES—PART-TIME STUDENTS AND FULL-TIME STUDENTS

Students carrying 7 credit hours or more in the day, evening, or any combination are considered to be full-time students and pay a total fee of \$52.00.

Students carrying 4 credit hours or more in day classes together with any number of evening classes are considered to be day students.

Students carrying 3 credit hours or less of any day classes together with any number of credit hours of evening classes are considered to be evening students.

D. SPECIAL FEES AND CHARGES—Day and Evening Classes

Late registration fee, for day classes, per day.....\$ 1.00
Late registration fee, for evening classes, per week, (\$3.00 first week, plus \$1.00 each week thereafter).....\$3.00-1.00

If registration charges are met by a N.S.F. check, the late registration fee will apply.

Change of Program Fee

(Assessable for each change of program after last day to add courses)....\$	1.00
Reinstatement Fee	2.00
Transcript Fee .....	.50-1.00
(The first transcript of a student's record will be furnished by the registrar without charge. Thereafter a fee of \$1.00 will be charged for each transcript furnished, except that for the second and additional copies requested at the same time, \$.50 each is charged.)	
Graduate Qualifying Examination Fee.....	1.00-15.00
Staff Fee, per credit hour.....	3.00

(Available with a five-credit hour limitation per quarter and by approval of the Dean to full-time academic and non-academic employees. Staff members on leave may obtain a waiver of the credit hour limitation but not of the fee. Subject to the approval of the Dean's Office, retired employees may obtain a waiver of both credit hour limitation and fee. Registrants under the staff fee are not entitled to privileges of the incidental fee.)

Fee Refunds

Students who withdraw from Portland State Extension Center and who have complied with regulations governing withdrawals are entitled to certain refunds of fees paid, depending on the time of withdrawal. The refund schedule has been established by the State Board of Higher Education and is on file in the Business Office. All refunds are subject to the following regulations:

- (1) Any claim for refund must be made in writing before the close of the term in which the claim originated.
- (2) Refunds in all cases are calculated from the date of application for refund and not from the date when the student ceased attending classes, except in unusual cases when formal withdrawal has been delayed through causes largely beyond the control of the student.

Library Fines and Charges

The following regulations govern library fines and charges:

- (1) A fine of 5 cents per day is charged for all overdue books other than reserve books.
- (2) The following fines are charged for violation of rules governing reserve books and material circulated by special permission: (a) For overdue books, a regular fine of 25 cents for the first hour and 5 cents for each succeeding hour, or fraction thereof, until the book is returned or reported lost. A maximum charge of \$1.00 an hour may be made in cases of flagrant violation of the rule. (b) For failure to return books to proper department desk, a fine of 25 cents.
- (3) Books needed for use in the Library are subject to recall at any time. A maximum fine of \$1.00 a day may be imposed for failure to return promptly.
- (4) A service charge of 10 cents is added to all fines reported to the Business Office for collection.
- (5) Borrowers losing books are charged the replacement cost of the book, plus the amount of fine incurred up to the time the book is reported missing. In addition, a charge of \$1.00 is made to cover the cost of cataloging and processing the replacement copy.
- (6) When a lost book, for which the borrower has been billed, is returned before a replacement has been ordered, a refund not exceeding the replacement cost plus the \$1.00 cataloging and processing charge may be made at the discretion of the librarian. In cases where a replacement has been ordered, refunds to the borrower may be made at the discretion of the librarian.

(7) Borrowers are issued a library card for use in the electric charging machine. A replacement fee of \$.25 is charged if this card is lost.

Note: The library card is issued upon presentation of the student's tuition receipt. This receipt should therefore be preserved, even when payment of tuition is by check. Students who hold a card from a previous quarter must have it validated for the summer session.

A YEAR SEQUENCE consists of three closely articulated courses extending through three terms of the academic year.

A CURRICULUM is an organized program of study arranged to provide integrated cultural or professional education.

A TERM HOUR* is synonymous with a "quarter hour" and a "credit hour." It is the unit by which a student's progress is measured and recorded. Usually, it represents a minimum of three clock hours of the student's time each week for one term. This time may be assigned to work in classroom or laboratory or to outside preparation. The number of lecture, recitation, laboratory or other periods per week for any course may be found in the course descriptions given in this Bulletin.

A GRADE is a mark used to measure quality of a student's work in an academic course: *A*, exceptional accomplishment; *B*, superior; *C*, average; *D*, inferior; *F*, failure; *Inc*, incomplete; *W*, withdrawn. When a course has not been completed for reasons acceptable to the instructor, a report of *Inc* may be made and additional time granted. A student who discontinues attendance in a course without officially withdrawing through the Registrar's Office within the time designated on the academic calendar receives a grade of *F* in the course.

A limited number of courses are designated "non-credit" and certain others as "no-grade" in the course description. Students in no-grade courses are rated "pass" (*P*) or "not-pass" (*NP*) in the term grade reports. Non-credit and no-grade courses are not considered in computing the grade-point average.

A GRADE POINT is a numerical expression of the quality of a student's work. Grade points are calculated on the basis of 4 points for each term hour of *A* grade; 3 for *B*; 2 for *C*; 1 for *D*; and 0 for *F*. Marks of *Inc* and *W* are disregarded. The grade point average (GPA) is determined by dividing the total of grade points earned by the total number of hours for which the student has been registered. The grade point average which marks the standard of acceptable scholarship is computed on all work for which the student receives credit, including work for which credit is transferred, correspondence study and work validated by special examination.

A GROUP REQUIREMENT refers to basic courses listed under three classifications: (I) Arts and Letters, (II) Social Science and (III) Science and Mathematics. Any year sequence listed under one of these groups may be taken to satisfy that group requirement. See page 29.)

Course Numbering System. Courses are numbered in accordance with the course numbering system of the Oregon State System of Higher Education.

Lower-division (freshman and sophomore) courses are numbered from 1 to 299; 100-110, 200-210 are survey or foundation courses that satisfy lower-division group requirements in arts and letters, social science and science and mathematics groups; 111-199, 211-299 are other courses offered at first-year and second-year levels.

Upper-division (junior and senior) courses are numbered from 300 to 499. Courses numbered from 400 to 499 are primarily for seniors, but certain of these

* Term hours ("quarter hours") may be converted to semester hours by multiplying the number of term hours by $\frac{2}{3}$. Semester hours may be converted to term hours by multiplying the number of semester hours by $1\frac{1}{2}$.

courses may be taken for graduate credit, in which case the course is designated (G) if approved for graduate major credit or (g) if approved for graduate minor credit.

Graduate courses are numbered from 500 to 599.

Other General Extension Division Facilities and Services

Department of State-Wide Services. These services consist of State-Wide evening classes, correspondence study courses, conferences and workshops. Any community in Oregon may become an extension class center if a satisfactory meeting place is provided and sufficient enrollment is guaranteed to cover actual operating costs. A schedule of correspondence courses is available to enable students to continue their program of study when not in residence. Conferences are conducted for business and professional groups. In-service institutes and workshops are organized to assist school districts.

Visual Instruction. The Department of Visual Instruction of General Extension Division provides glass and film slides, microscopic slides, and 16 mm. motion picture films suitable for use by schools, community clubs and other organizations. A special catalog is published listing materials available. Located on the campus of Oregon State College in the Coliseum at Corvallis, the department is maintained jointly by General Extension Division and Federal Cooperative Extension Service.

Radio Station KOAC. Station KOAC is Oregon's state-owned station of which the State Board of Higher Education is managing agency. The station is located at Corvallis on the campus of Oregon State College, the licensee and operator of the physical plant. General Extension Division of the State System of Higher Education directs the program service. Program talent is drawn from Oregon State College, University of Oregon, the three Oregon Colleges of Education, Portland State Extension Center and from various departments of state government. Many other public agencies, organizations and individuals contribute frequently to broadcasts. KOAC operates with 5,000 watts power on a frequency of 550 kilocycles by authority of the Federal Communications Commission. The station is operated in the interest of the Oregon public and programs are free of commercialism. Program schedules are issued periodically and will be furnished on request. Studios are located at Corvallis, Eugene, Monmouth, Portland and Salem. "Tapes for Teaching" are provided for schools of Oregon as a special service.

Portland Summer Session. The summer session is a day program only, offering a selection of both graduate and undergraduate courses from University of Oregon, Oregon State College and the three Oregon Colleges of Education. Particular emphasis is placed on elementary and secondary teacher education.

Day Program

See pages 55 to 94 for Evening Program

See pages 20 to 25 for General Information

Courses of instruction at Portland State Extension Center are divided into two broad programs of Day and Evening classes.

This catalog is divided into two sections for convenience of students.

Day Program

(All students are expected to be familiar with regulations and requirements given in the section of this Bulletin entitled "General Information." They apply to both day and evening program students.)

The day program of Portland State Extension Center offers undergraduate work which is the practical equivalent of courses currently available elsewhere in institutions of the State System of Higher Education. Other courses and curricula authorized by the State Board of Higher Education are added to the program. Accordingly, a student at the Center may complete the first two years of work in many fields. Four-year programs are authorized in elementary and secondary education with accompanying general studies by action of the 1953 state legislature. Third-year courses in elementary education will be offered beginning fall term, 1954-55 and in secondary education beginning fall term, 1955-56. Fourth-year courses in elementary education will begin in 1955-56 and secondary education fourth-year courses in 1956-57.

Preprofessional fields include business administration, business and technology, liberal arts, dairy husbandry, dairy products industries, prelaw, science, social science, preengineering, preforestry, prenursing, and prepharmacy. Terminal fields requiring two years or less and which may thus be completed at the Center include secretarial science, courses for dental and medical assistants, merchandising and police training.

Students find Portland State Extension Center affords them many advantages. The metropolitan location makes possible a combination of inexpensive living costs and excellent opportunities for part-time employment.

Services

Student Loans. Students who need short term loans may borrow from Portland State Extension Center Loan Fund made available from gifts and from such organizations as Portland State Mothers' Club and Portland State Cooperative.

Scholarships. The Oregon State System of Higher Education awards a limited number of scholarships annually. These are open both to new and previous students. Awarded on the basis of financial need and academic achievement, the scholarship pays \$90 for the academic year for each recipient. Scholarships also are awarded by The Oregon Congress of Parents and Teachers and other organizations.

Health and Medical Plan. All full-time students are covered by a plan which provides hospital, medical and nursing care. The health office in the Center is maintained by a registered nurse and visited by a physician. Students are encouraged to consult with the school nurse regarding extent of coverage offered by the health and medical plan. Regular fees paid by students cover cost of the health service.

Student Employment. Assistance through the Center's Placement Service is given students who need employment to meet their financial requirements while attending Portland State Extension Center. Full- and part-time jobs are listed in the Counseling Office. Work opportunity in the metropolitan area usually assures a wide selection of available jobs.

Housing. A list of available housing in the area is maintained for the benefit of students needing assistance in securing living accommodations.

Activities

Athletics. Athletics include the major sports of baseball, football, basketball, track and wrestling and a wide variety of minor sports such as golf, skiing and tennis. Freshmen may qualify for varsity participation. The varsity "P" is awarded to those who earn letters in major or minor sports. An intramural sports program for all students includes football, basketball, baseball, tennis, gymnastics, golf and others. Intramural sports and physical education are available for women as well as men.

Military Training. The day program does not require military training of its students. However, many opportunities are open to Portland State students in the Portland area on a voluntary basis. These include the Naval Reserve, Army, Air Force, Marines, Coast Guard and National Guard. Qualified students interested in officer training will find a number of opportunities available.

Publications. Students publish a weekly newspaper, "The Vanguard" and a yearbook, "The Viking." Those interested in writing and journalism may become staff members of these two publications.

Cocurricular Activities. A definite and essential part of the day program, cocurricular activities include Forestry, Education, Engineering and Speech clubs and social and service clubs. Dramatics, music and opportunity for participation in student government are open to all students.

Academic Regulations

Admission Requirements. To be admitted to Portland State Extension Center a student must be of good moral character and must present evidence of acceptable preparation for work at the college level. Every person wishing to be admitted to the regular day sessions of the Center must file with the registrar: (a) an application on an official Center form, and (b) certified official transcripts of all high school and college records. For lack of complete records, the Center may cancel the student's registration.

Admission to Freshman Standing. Graduation from a standard high school is required for admission to freshman standing. Residents of the state of Oregon who are graduates of standard high schools, and who have not been previously registered in any collegiate institution, are admitted as freshmen when complete records have been received in the office of the registrar. Nonresidents with comparable qualifications are admitted if the Center has facilities for them.

Admission with Advanced Standing. Advanced standing is granted to students transferring with acceptable records from accredited institutions. Because the Center requires its students to maintain a scholastic average of C (grade point average of 2.00) for satisfactory progress, it also requires that students, regardless of residence, transferring to the Center from other collegiate institutions present records of C average scholastic work and evidence of honorable dismissal. In certain instances, those who cannot meet this standard may petition for admission on a probationary status.

Admission of Special Students. Students qualified by maturity and ability to do satisfactory college work, but who fail in some respect to meet the requirements for regular standing, may apply for admission as special students. Such applicants must file with the registrar evidence sufficient to prove their ability to pursue the subjects desired. Students may not continue for more than 45 term hours of college work under special student classification without permission, and may become degree candidates only for qualifying as a regular student. (In case

a regular student changes to special status, work done while a special student will not apply toward a degree.)

Applications and transcripts should be filed several weeks before the applicant intends to enter the Portland State Extension Center

Credit Hour Load. In the day program a student normally enrolls for not more than 17 term hours. Students whose grade point average is 3.00 or better may petition to take an additional one or two hours. *No student will be permitted to take more than 19 term hours of any combination of credit, non-credit and no-grade courses.*

A student must obtain permission in advance to take courses at other educational institutions. If such courses are taken without permission, Portland State Extension Center reserves the right to withhold credit for courses in which the student is currently enrolled.

Registration. Day program students register each term in accordance with the schedule designated on the academic calendar.

Two-Year Courses. Terminal curricula—that is, programs designed to be completed in one or two years—are offered to improve the vocational proficiencies and the general cultural background. Terminal courses include such fields as engineering, secretarial science and business.

Foreign Language Requirements. The foreign language requirements depend upon whether or not a student intends to be graduated from a four-year institution; and, if so, on the degree and the institution granting that degree. In the Oregon State System of Higher Education a foreign language is required for the Bachelor of Arts degree but not for the Bachelor of Science degree. Many graduate degrees require a reading knowledge of one or more foreign languages. Students should consult an adviser on this subject.

Entrance Examinations. If a student is a graduate of a standard high school, no examination is required to determine eligibility for entrance. However, placement and other examinations are given to help the student plan a course of study. The placement examination taken depends upon the course and the student's individual needs.

Selection of Major Field. Many students select their major field long before they enter college. Others complete a year or more of varied college work to determine their interests. Even after a choice is made, students may change majors as their college experiences reveal new abilities and interests. Most students unsure of their interests or of their abilities in a specific field enroll as liberal arts majors, because subjects in this field are helpful in general development, and many of the courses are required for entrance into professional schools or for graduation in a specific major.

Scholarship Regulations. The faculty committee on Academic Requirements has the authority within the faculty regulations to suspend or place on probation any students *not* achieving satisfactory progress toward graduation (a minimum grade-point average of 2.00 or C for both the term and cumulative record). Application of this rule results in the following practices:

Probation. Students achieving a grade-point average below 2.00 or C either for a term or cumulative may be placed on probation or suspended.

Release from Probation. Any student on probation may achieve good standing by earning both term and cumulative 2.00. This statement applies to college work taken both at Portland State and other colleges.

Suspension. A student is subject to suspension (dismissal from school) any

time it is apparent that he is not satisfactorily meeting graduation requirements.

Suspension regulations are formulated by the Academic Requirements Committee for approval of the faculty. These regulations are available to students concerned in the counseling and registrar's offices.

Requirements for Junior Standing. Upper-division standing is required in institutions of the Oregon State System of Higher Education in order to pursue a major curriculum leading to a degree. A student may fulfill the requirements for upper-division standing during two years at Portland State Extension Center. The requirements are:

- (1) Term Hours: Minimum, 93. (96 in some majors).
- (2) Grade-Point Average: Minimum, 2.00.
- (3) English:
 - (a) Freshmen must take and pass a course designated *Wr 10* unless excused on the basis of a high rating in the English Placement examination required upon entrance.
 - (b) English Composition: 9 term hours (*Wr 111, 112, 113*) unless excused. A student whose work is of unusually high quality may, with the consent of the supervisor of English studies, be excused at the end of any term from further required written English.
- (4) Physical Education: 5 terms in activity courses, unless excused. (Veterans may be excused.)
- (5) Health Education: HE 250 will satisfy the requirement for men or women. (Veterans may be excused.) Men take HE 150, Health Education, in place of HE 250 to meet the requirement.
- (6) Group Requirements: A prescribed amount of work selected from three "groups" representing comprehensive fields of knowledge. The three groups are: (I) Arts and Letters, (II) Social Science, and (III) Science and Mathematics. Courses that satisfy group requirements are numbered from 100 to 110 and from 200 to 210. The group requirements are:
 - (a) At least 9 approved term hours in each of the groups and at least 9 additional approved term hours in courses numbered 200 to 210 in any of the three groups.

Students should study the Bulletin of the institution to which they plan to transfer to be sure that all of its requirements for upper-division standing are met. Particular note should be made that *degree-granting institutions normally require a student to earn a minimum of 45 term hours after lower-division requirements have been cleared.*

Group Courses

Year sequences applicable in meeting group requirements are listed below. These courses may also be taken as electives. Descriptions of the courses are given in this catalog.

(I) Arts and Letters*

ENGLISH

Eng 101, 102, 103. Survey of English Literature. 3 hours each term.

* The third year of a foreign language may be offered to meet this group requirement. Students should consult their advisers about foreign-language requirements for upper-division and graduate courses and for requirements of other institutions.

Eng 104, 105, 106. **Appreciation of Literature.** 3 hours each term.

Eng 107, 108, 109. **World Literature.** 3 hours each term.

Eng 201, 202, 203. **Shakespeare.** 3 hours each term.

(II) Social Science Group

ANTHROPOLOGY

Anth 207, 208, 209. **Introduction to Cultural Anthropology.** 3 hours each term.

ECONOMICS

Ec 201, 202, 203. **Principles of Economics.** 3 hours each term.

GENERAL SOCIAL SCIENCE

SSc 101, 102, 103. **Background of Social Science.** 3 hours each term.

GEOGRAPHY

Geog 105, 106, 107. **Introductory Geography.** 3 hours each term.

Geog 201, 202, 203. **Regional Economic Geography.** 3 hours each term.

HISTORY

Hst 101, 102, 103. **History of Western Civilization.** 3 hours each term.

Hst 201, 202, 203. **History of the United States.** 3 hours each term.

Hst 204, 205. **History of the Far East.** 3 hours each term.

Hst 207, 208, 209. **English History.** 3 hours each term.

Hst 209. **The World Since 1914.** 3 hours.

PHILOSOPHY

Phl 201. **Elementary Logic.** 3 hours.

Phl 202. **Problems of Philosophy.** 3 hours.

Phl 203. **Elementary Ethics.** 3 hours.

POLITICAL SCIENCE

PS 201, 202, 203. **American Governments.** 3 hours each term.

PS 204 or PS 205 may be substituted for PS 203.

PSYCHOLOGY

Psy 201, 202. **General Psychology.** 3 hours each term.

Psy 204. **Psychology of Adjustment.** 3 hours.

Psy 205. **Applied Psychology.** 3 hours.

SOCIOLOGY

Soc 204, 205, 206. **General Sociology.** 3 hours each term.

(III) Science Group

BOTANY

Bot 201, 202. **General Botany.** 3 hours each term.

Bot 203. **Field Botany.** 3 hours.

CHEMISTRY

Ch 104, 105, 106. **General Chemistry.** 4 hours each term.

Ch 204, 205. **General Chemistry.** 5 hours each term.

Ch 206. **Qualitative Analysis.** 5 hours.

GEOLOGY

G 201, 202, 203. **Geology.** 3 hours each term

MATHEMATICS*

- Mth 100. **Intermediate Algebra.** 4 hours.
 Mth 101, 102, 103. **Elementary Analysis.** 4 hours each term.
 Mth 104, 105, 106. **Mathematics of Business and Industry.** 3 hours each term.
 Mth 105. **College Algebra.** 4 hours.
 Mth 106. **Plane Trigonometry.** 4 hours.
 Mth 107. **Analytic Geometry.** 4 hours.
 Mth 108. **Mathematics of Finance.** 4 hours.
 Mth 109. **Elements of Statistics.** 4 hours.
 Mth 201, 202, 203. **Differential and Integral Calculus.** 4 hours each term.

PHYSICS

- Ph 101, 102, 103. **Essentials of Physics.** 3 hours each term.
 Ph 201, 202, 203. **General Physics.** 4 or 5 hours each term.

SCIENCE

- GS 101, 102, 103. **Biological Science Survey.** 4 hours each term.
 GS 104, 105, 106. **Physical Science Survey.** 4 hours each term.

ZOOLOGY

- Z 201, 202, 203. **General Zoology.** 3 hours each term.

Courses of Study in Terminal Fields

The Day Program offers the following selection of terminal courses which may be completed in the time indicated.

Such programs are designed for students who do not plan to work toward a baccalaureate or professional degree. Certain specified courses may not be acceptable to some institutions for a regular degree program.

Terminal

<i>Curriculum</i>	<i>Years Required</i>
Medical and Dental Secretaries.....	2
Merchandising	2
Secretarial Science, A.....	2
Secretarial Science, B.....	1
(For students with high-school typing and shorthand)	
Police Training	2

The following table lists major fields offered to students of Portland State Extension Center and state institutions offering the remaining years leading to a degree.†

* Any three of the following meet the science requirement: Mth 100, 101, 102, 103, 105, 108, 109. Students should check with advisers for approved combinations of mathematics courses.

† NOTE: In some fields evening courses are available which make it possible to obtain one or more additional years.

<i>Field</i>	<i>Number of years work offered at Portland State Extension Center</i>	<i>State System institution offering remaining years leading to a degree</i>
Preagriculture	1	State College
Prearchitecture and Allied Arts	1	University
Biology-Botany	2	State College-University
Business Administration	2	University
Business and Technology	2	State College
Secretarial Science	2	State College
Chemistry	2	State College-University
Elementary Education	4*	
Secondary Education	4*	
English	2	University
History	2	University
Industrial Arts Education	2	State College
Industrial Arts	2	State College
Chemical Engineering	1	State College
Civil Engineering	2	State College
Dairy Husbandry	2	State College
Dairy Products Industries	2	State College
Electrical Engineering	2	State College
Industrial Engineering	2	State College
Mechanical Engineering	2	State College
Preforestry	1	State College
Prelaw	2	University
Arts & Letters	4†	
Mathematics	2	State College-University
Prejournalism	2	University
Premedical	3	University-State College
Predental	2	Dental School
Music	2	University
Prenursing	2‡	University Medical School
Prepharmacy	2	State College
Psychology	2	University
Prephysical Education (men and women)	2	University-State College
Physics	2	State College-University
Political Science	2	University
Sociology	2	University
Speech	2	University
Zoology	2	State College-University

* Legislation passed by the 1953 Oregon legislature authorizes four-year programs in elementary and secondary education and accompanying general studies. These programs will be in full operation on or before 1956 in time to serve entering 1954 freshmen. Students in these programs may take their degrees at the state college, university or one of the colleges of education with as little as one quarter or one summer session of resident work.

† Legislation passed by the 1953 Oregon legislature authorizes four-year programs in elementary and secondary education and accompanying general studies. These programs will be in full operation on or before 1956 in time to serve entering 1954 freshman. Students in these programs may take their degrees at one of the state colleges of education in general studies or the university in liberal arts with as little as one quarter or one summer session of resident work.

‡ Five quarters.

Description of Courses

Day Program

The descriptions which accompany the following courses are designed to show the purpose and scope of the course. Students should note they cannot register in certain courses until a more basic course has been completed. This more basic course or prerequisite is usually indicated in the description of the more advanced course.

An explanation of the course numbering system has been given on page 24. The hours indicated following the course title represent the term hours of credit which the course affords.

The courses offered by the Center are approved by the State Board of Higher Education for one or more of the institutions of the state system.

Portland State Extension Center reserves the right to cancel or discontinue any listed course for lack of sufficient enrollment or for other reasons.

Anthropology

Lower-Division Courses

Anth 207, 208, 209. Introduction to Cultural Anthropology. 3 hours each term.

The meaning of culture; its significance for human beings; its diverse forms and degrees of elaboration among different groups of men; its processes of growth and expansion.

Art and Architecture

Lower-Division Courses

AA 160, 161. Color and Composition. 3 hours each term.

Studio classes in the everyday use of the principles of composing or creating with lines, colors, and textures. The course fulfills the art requirements of the School of Home Economics.

AA 195. Basic Design. 2 hours any term.

No-grade course. Through individual projects in a series of studio assignments, the student achieves an understanding of design in the basic visual arts, and a familiarity with all the professional fields of the school.

AA 201, 202, 203. Introduction to the Visual Arts. 3 hours each term.

Designed to develop insight into the actual work of art, and breadth in the understanding of diverse works of art. Introduction to the principal visual arts as related to daily living; sociological and geographical factors in relation to the visual arts. Required for all professional majors; open to non-majors.

A 217. Lettering. 1 hour.

Lettering, including a study of historic styles such as Roman, Gothic, Old English, as well as the modern decorative, manuscript, and poster types.

AA 223. Elements of Interiors. 2 hours.

Introduction to scope, aim, and technique of interior design intended to give understanding of professional field. All work done in drafting room. Open to nonmajor students with consent of instructor.

AA 290. Lower-Division Painting. 3 hours any term.

Instruction in the use of oil color, water color, and other media. Registra-

tion permitted any term, but it is desirable that the work be started in the fall. Six hours required for upper-division standing.

AA 291. Lower-Division Drawing. 3 hours any term.

Training in observation and selection of significant elements. Registration permitted any term, but it is desirable that the work be started in the fall. Six hours required for upper-division standing.

AA 293. Elementary Sculpture. 2 to 4 hours any term.

Introduction to materials. Elementary considerations of form; technical and compositional exercises in clay and plaster. Sections for preidental students and other nonmajors.

AA 295. Display Design. 2 or 3 hours each term, two terms.

Practical design experience in commercial art lettering layouts, packaging, and display advertising. Offered for Pharmacy, Agriculture, and Business and Technology students.

AA 298. Sketching. 1 hour any term.

No-grade course. Sketching from costumed models, to develop ability to observe clearly and record accurately. Offered especially for nonmajor students who have had no previous training in sketching or drawing.

Upper-Division Courses

AA 311, 312, 313. Creative Arts and Crafts for the Elementary Teacher. 3 hours each term.

Studio projects, discussions, and observations to give practical approach to arts and crafts instruction at pre-school and elementary-school levels.

Bacteriology

Lower-Division Courses

Bac 204, 205, 206. General Bacteriology. 3 hours each term.

Bac 204: Characteristics of bacteria, yeasts, molds, viruses and related organisms; elementary technique in cytology, taxonomy, and physiology. Bac 205: Application of microbiology to dairy, soils, industry, sanitation, and the home. Bac 206: Fundamental factors in growth and death of microorganisms; systematic identification of microorganisms and a study of their metabolisms. Prerequisite: one year of chemistry. Two lectures; 2 two-hour laboratory periods.

Biology

(See BOTANY AND ZOOLOGY)

Botany

Lower-Division Courses

Bot 201, 202. General Botany. 3 hours each term.

How plants get their food, grow, differentiate, and reproduce. 3 two-hour conference periods.

Bot 203. Field Botany. 3 hours spring.

Introductory taxonomy and ecology of native flowering plants. One lecture; 1 recitation; 2 two-hour laboratory periods.

Business Administration

Lower-Division Courses

BA 111. Introduction to Business and Industry. 3 hours fall.

Survey of business organization, operation, and management intended to orient the student in business and industry and to help him determine a field of major concentration.

- BA 113. Survey of Modern Industry.** 3 hours spring.
Representative industries within United States covering development, structure, competitive conditions, basic processes, and technology. Orientation to help the student choose minor in technology.
- BA 111, 112, 113. Constructive Accounting.** 3 hours each term.
Technique of account construction; preparation of financial statements. Application of accounting principles to practical business problems. Required of majors, prerequisite to advanced work in business.
- Mer 209. Merchandise-Apprenticeship.** 3 to 6 hours.
Actual selling experience, under appropriate supervision with directed corollary readings. Conducted through the cooperation of local merchants.
- BA 221. Elements of Organization and Production.** 4 hours any term.
Principles of management as applied to commercial and industrial concerns.
- BA 222. Elements of Finance.** 4 hours any term.
The financial problems of corporations. Organization of corporations; how they obtain long-term funds; management of working capital; distribution of securities. Required of all majors. Prerequisite: BA 111, 112, 113.
- BA 223. Elements of Marketing.** 4 hours any term.
Methods, policies, and problems. Private and cooperative channels, auctions, exchanges, middlemen; demand creation, assembly, standardization, packaging, financing, risk taking, distribution. Required of business administration majors.
- Mer 238. Salesmanship.** 3 hours winter.
Salesmanship as a factor in distribution and service; analysis of the customer and his wants; methods of obtaining and holding customers; wholesale and retail sales processes, services, and principles of selling.
- SS 256. Business Law.** 3 hours spring.
Application of fundamental legal principles to typical business situations illustrated by selected cases; formation, interpretation, discharge of contracts; law of agency, negotiable instruments, consideration, delivery, rights, liabilities of parties, real property mortgages; landlord, tenant, mechanics' lien law; personal property, sales, bailments, chattel mortgages.

Chemistry

Lower-Division Courses

- Ch 104, 105, 106. General Chemistry.** 4 hours each term.
Required for nursing-education and medical-technician students. One lecture; 2 recitations; 1 three-hour laboratory period.
- Ch 201, 202, 203. General Chemistry.** 3 hours each term.
Course content particularly adapted for students in engineering. One lecture; 1 recitation; 1 three-hour laboratory period.
- Ch 204, 205. General Chemistry.** 5 hours each term.
The basic principles of general chemistry for students majoring in chemistry, chemical engineering, or premedics, and for others requiring extensive knowledge of the subject. Two lectures; 1 recitation; 2 three-hour laboratory periods. Students registered for 4 credits take but one laboratory period.
- Ch 206. Qualitative Analysis.** 5 hours spring.
Chemistry of selected metallic elements and semi-micro qualitative analysis. A sequence with Ch 204 and 205. Two lectures; 1 recitation; 2 three-hour laboratory periods.
- Ch 226, 227, 228. Organic Chemistry.** 5 hours each term.
An intensive study of the carbon compounds of the aliphatic and aromatic series. Prerequisite: Ch 206. Two lectures; 1 recitation; 2 three-hour laboratory periods.

Ch 232, 233. **Quantitative Analysis.** 5 hours each term fall and winter.

Fundamental principles and laboratory practice. Prerequisite: Ch 206. Two lectures; 3 three-hour laboratory periods.

Ch 234. **Quantitative Analysis.** 5 hours spring.

Principles of gravimetric analysis, volumetric analysis, and H-ion concentration. Designed for pharmacy and premedical students and medical technicians. Prerequisite: Ch 205. 2 lectures; 3 three-hour laboratory periods.

Ch 241. **Chemical Theory.** 4 hours spring.

Theory and calculations in inorganic chemistry as a foundation for industrial chemistry. Prerequisite: Ch 206. Three lectures; 1 two-hour computation period.

Clothing, Textiles, and Related Arts

(See HOME ECONOMICS)

Drama

(See SPEECH)

Economics

Lower-Division Courses

Ec 201, 202, 203. **Principles of Economics.** 3 hours each term.

Principles that underlie production, exchange, and distribution, etc. Prerequisite: sophomore standing.

Ec 212. **Outlines of Economics.** 3 hours.

A rapid survey of the principles of economics and economic institutions. Restricted to science and upper-division professional-school students.

Ec 215. **Economic Development of the United States.** 3 hours.

Origin and development of economic institutions including industry, agriculture, commerce, transportation, labor, and finance. Analyzes the economic progress of the United States.

Education

Lower-Division Courses

*Ed 101. **Methods of Study.** 3 hours each term.

Specific methods of study as applied to various subject-matter fields; the general principles of note taking; study schedule; fixing study habits; reading technique; evaluation of the various broad fields of human learning. Laboratory work to be arranged.

Ed 111. **Education Orientation.** 3 hours.

This course is intended to assist prospective teachers to make effective adjustments to college and social needs through acquainting them with methods of study, use of library, time budgeting, and social and recreational opportunities. It will also provide opportunity for becoming acquainted with the demands and rewards of the teaching profession. Tests will be given in order that each student may understand how nearly his speech, hearing, vision, and personality fit him for teaching.

Upper-Division Courses

Ed 312. **Psychology of Learning and Teaching.** 3 hours each term.

A consideration of the nature of the learner, changes which occur in learning processes, conditions under which learning best takes place and the characteristics and methods of the teachers who direct learning in the school. Basic

* This is a service course, not a professional course, and will not count toward fulfillment of requirements for certification or for a major in education.

concepts of measurement are utilized to evaluate the changes which characterize learning. Field experiences supplement theoretical study.

Ed 344. Physical Education in the Elementary Grades. 3 hours each term.

Theory and practice in rhythm; singing games, group and folk dancing; stunts, games, self-testing activities, tumbling; materials; planning and evaluating programs with reference to basic principles of physical education.

***Ed 351. Health Education.** 2 hours each term.

Teaching of health education with emphasis on health knowledge, health attitudes, and health habits of school children, and the development of a health-service program. Special study of the state health-education program. Prerequisite: Sc 101, 102, 103, HE 150, or consent of instructor.

Ed 357. Methods in Reading. 3 hours.

The place of reading in the modern elementary school. Trends and practices in reading instruction and prevention of reading difficulties. A study of appropriate materials and methods. Prerequisite: Ed 311, 312, and Psy 311.

Ed 358. Methods in Science and Mathematics. 3 hours.

Science and mathematics in the elementary schools. Methods in the area of science include experiments, demonstrations, trips, and instructional materials. Trends and practices in the teaching of mathematics. Emphasis will be placed upon basic principles, research studies, problem solving, and the utilization of life situations. Prerequisite: Ed 311, 312, and Psy 311.

Ed 359. Methods in Language Arts and Social Studies. 3 hours spring.

Trends and practices in listening, speaking, spelling, handwriting and English. Educational objectives of social studies and social problems of elementary school pupils. Organization and planning of the instructional program for the elementary grades. Attention will be given to appropriate methods and materials in language arts and social studies. Prerequisite: Ed 311, 312, and Psy 311.

Engineering

General Engineering

Lower-Division Courses

GE 101, 102, 103. Engineering Problems. 2 hours each term.

Lectures and elementary problems dealing with the general fields of civil, electrical, industrial and mechanical engineering to train the student in engineering habits of work. One lecture; 2 two-hour computation periods.

GE 104, 105, 106. Engineering Fundamentals. 3 hours each term.

Basic concepts and principles of physical science; elementary technical problems, algebraic composition; training in use of the slide rule. One lecture; 2 three-hour computation periods. Terminal credit.

GE 115. Engineering Drawing. 3 hours.

Fundamental principles and rules of composition of the graphic language of industry. For forestry students only. One lecture; 3 two-hour periods.

GE 116. Lettering. 1 hour.

Engineering and other descriptive styles of lettering; use of mechanical lettering devices. 2 one-hour periods.

GE 121, 122. Engineering Drawing. 3 hours each term.

Fundamentals of graphic composition with particular emphasis on reading and interpretation of line drawings, charts, and diagrams. Two-term course for students in business and technology. One lecture; 3 two-hour periods.

* This is a service course, not a professional course, and will not count toward fulfillment of requirements for certification or for a major in education.

GE 123. Descriptive Geometry. 3 hours.

Theory and problems on the projection of points, lines, surfaces, and solids; applications of graphical solution of engineering problems. Prerequisite: GE 121, 122. One lecture; 3 two-hour periods.

GE 201, 202, 203. General Engineering. 4 hours each term.

Courses designed for technical terminal students and nonprofessional degree students. Application of the basic principles of science to general problems of engineering. One lecture; 1 recitation; 2 three-hour computation periods. Terminal credit.

GE 211. Structural Drafting. 3 hours.

Timber, steel, and concrete details; conventions and marking systems; connections and truss details; plotting and earthwork cross sections and profiles. Three three-hour laboratory periods. Terminal credit.

GE 212. Elementary Machine Drafting. 3 hours.

Simple mechanisms and advanced working drawings; shop practices and requirements; reproduction methods. Three three-hour laboratory periods. Terminal credit.

Chemical Engineering

Lower-Division Courses

ChE 111, 112, 113. Chemical and Mineral Industry. 1 hour each term.

The profession of chemical engineering; engineering procedures and methods. One lecture; 1 two-hour computation period.

ChE 211. Chemical Technology. 2 hours.

Fundamentals of chemical engineering; graphical analysis; instrumentation; control of process variables; applications in the solution of typical problems. Two lectures; 1 recitation.

ChE 212. Industrial Stoichiometry. 2 hours winter.

Quantitative interpretation and application of physical and chemical data to various industrial chemical processes. Two lectures; 1 recitation.

ChE 213. Industrial-Chemical Calculations. 2 hours spring.

Application of physical and chemical principles to industrial problems. Introduction to chemical engineering thermodynamics. Two lectures; 1 recitation period.

Civil Engineering

Lower-Division Courses

CE 201, 202, 203. Introduction to Civil Engineering. 2 hours each term.

Fundamentals of graphic analysis, descriptive geometry, structural and topographic drafting, including field curves, in relation to the practice of structural, hydraulic, highway, and sanitary engineering. Two three-hour laboratory periods.

CE 212. Mechanics (Statics). 3 hours.

Forces and force systems with reference to rigid bodies; applied mechanics. Prerequisite; differential calculus. One recitation; 2 two-hour computation periods.

CE 213. Mechanics (Dynamics). 3 hours.

Continuation of CE 212. Principles and problems in kinetics; force as a factor causing motion. Prerequisite: CE 212. One recitation; 2 two-hour computation periods.

CE 221. Plane Surveying. 3 hours.

Theory and use of engineer's transit, tape and level; evaluation of effect of er-

rors on observation; application of surveying methods to problems in construction and area surveys. Prerequisite: GE 111; Mth 101. One recitation; 2 three-hour periods field work.

CE 222. Plane Surveying. 3 hours.

Surveying problems relating to construction and land surveying; special computation problems in map projection; control surveys; and earthwork; tests and adjustment of engineer's transit and level. Prerequisite: CE 221. One recitation; 2 three-hour field and computation periods.

CE 223. Plane Surveying. 3 hours.

Control surveys; computation of state-wide coordinates; topographic mapping; theory and use of stadia and plane table; field astronomy. Prerequisite: CE 222. One recitation; 1 six-hour field period.

CE 226. Plane Surveying. 3 hours.

Theory and use of engineer's transit, tape, and level; application of surveying methods to problems in construction and area survey. Prerequisite: Mth 101. One recitation; 2 three-hour periods field work.

Electrical Engineering

Lower-Division Courses

EE 201, 202, 203. Introduction to Electrical Engineering. 4 hours each term.

Fundamentals of magnetic and electric fields and associated circuits, and electric circuit theory. Prerequisite: Mth 103, Ph 103, GE 103, or instructor's approval. Two lectures; 2 two-hour recitations; 1 three-hour laboratory period.

RE 150. Radio Code. 1 hour.

Prepares student to take the government code test for amateur or commercial operator's license. Instruction up to 6 W.P.M.

RE 151. Radio License. 1 hour.

Rules, regulations, and radio operations to help prepare student to pass Federal Communication Commission test for amateur or commercial operator's license.

Industrial Engineering

Lower-Division Courses

***IE 111. Pattern Making. 3 hours.**

Fundamentals of pattern making; relation of pattern making to drafting, design, foundry and machine-shop operation. One lecture; 6 hours of laboratory.

***IE 240. Foundry Practices. 2 hours.**

Introductory course covering constitution, properties, and design limitations of castings in iron and steel; foundry methods. One lecture; 1 four-hour laboratory period.

IE 250. Forging and Welding. 2 hours.

Forging, forming, and heat-treating of steel, followed by gas and electric-arc welding; flame-cutting, brazing, and resistance-welding operations. Attention is given throughout the course to practical applications of these processes in engineering construction and industrial fabrication. One lecture; 1 four-hour period.

IE 260, 261. Machine Tool Practices. 2 hours each term.

Basic and advanced operations of machine tools on prescribed projects illustrative of industrial operations. Correlation of engineering and manufacturing problems and processes. One lecture; 1 four-hour laboratory period.

*In addition to the regularly scheduled meetings in this course, the student attends three general lectures to be arranged during the term.

IE 290. Introduction of Scientific Management. 3 hours.

History, development, and scope of scientific management. Laws of scientific management as applied to manufacturing.

Mechanical Engineering**Lower-Division Courses****ME 216. Engineering Materials.** 3 hours.

Production, mechanical properties, and their control as applied to materials of machine and building construction. Corrosion resistance and other service requirements. Service course for nonmajors.

ME 217, 218, 219. Mechanics of Materials. 3 hours each term.

Forces and force systems with reference to the equilibrium of rigid bodies. Principles of mechanics applied to the elements of engineering structures to determine their strength and fitness. Study of stresses in curved beams, impact stresses, eccentric loading, and theories of failure. Numerous problems. Prerequisite: Differential Calculus.

ME 241. Introduction to Aeronautics. 2 hours.

Brief descriptive survey of principles of flight, engine and propeller operations; navigation and meteorology; governmental aeronautical aids and regulations. Prerequisite: consent of instructor.

English**Literature****Lower-Division Courses*****Eng 101, 102, 103. Survey of English Literature.** 3 hours each term.

From Beowulf to the present. Fall: Beowulf to Milton; Winter: Milton to Byron; Spring: Byron to the present.

***Eng 104, 105, 106. Appreciation of Literature.** 3 hours each term.

The aim is to stimulate enjoyment and understanding of literature through study of outstanding works in prose and poetry, selected from all periods, including the twentieth century; includes works in English and translations from other literatures.

Eng 107, 108, 109. World Literature. 3 hours each term.

A sequence in narrative prose, drama, and poetry. Complete books are studied so that the student may be familiar with some of the masterpieces in Western world literature.

Eng 201, 202, 203. Shakespeare. 3 hours each term.

Study of the important plays—comedies, histories, and tragedies. Required for majors.

Eng 261, 262, 263. Survey of American Literature. 3 hours each term.

American literature from its beginning to the present day. Two consecutive terms required to satisfy the high-school teaching-field requirement in English.

Writing**Lower-Division Courses****Wr 10. Corrective English.** 1 hour any term.

No-grade course. One-term course in the mechanics of English, required of freshmen who receive low ratings in the entrance placement examination. For such students Wr 10 is a prerequisite for any other work in written English.

* A student may register for only one of the two sequences: Eng 101, 102, 103 or Eng 104, 105, 106.

Wr 111, 112, 113. **English Composition.** 3 hours any term.

The fundamentals of English composition; frequent written themes. Special attention to correctness in fundamentals and to the organization of papers.

Wr 114, 115, 116. **Vocabulary Building.** 2 hours each term.

Designed to expand the student's vocabulary and otherwise improve the use of English. A study of words: new words, the right word; diction, pronunciation; an effective program for acquiring and using the forms of writing.

Wr 211, 212, 213. **Advanced Writing.** 3 hours each term.

Practice in a variety of literary forms, including fiction. Prerequisite: Wr 111, 112, (with *A* or *B* grade), and Wr 113 (with *B*), or consent of instructor.

Wr 214. **Business English.** 3 hours.

Study of modern practices in business correspondence, primarily for students in the business fields. Analysis and writing of the principal types of correspondence. Prerequisite: Wr 111, 112, 113.

Wr 227. **Technical Report Writing.** 3 hours any term.

Application of principles to specific needs and interests of students having papers in progress. Prerequisite: Wr 113 or equivalent.

Eng. 211. **Vocabulary Building.** 3 hours.

Through analysis of words and meanings in context, seeks to increase vocabulary, reading comprehension and effective use of language.

Upper-Division Course

Eng 388. **Children's Literature and Library.** 3 hours each term.

Designed to give an acquaintance with good books and magazines for children and procedures in introducing them to children. Experience with and knowledge of school library procedures.

Foods and Nutrition

(See HOME ECONOMICS)

Foreign Languages

German

Lower-Division Courses

GL 1, 2, 3. **First-Year German.** 4 hours each term.

Provides a thorough grammatical foundation and an elementary reading knowledge of German, as well as an understanding of the spoken language.

GL 101, 102, 103. **Second-Year German.** 4 hours each term.

Review of grammar and composition. Reading of modern German authors. Conversation.

Spanish

Lower-Division Courses

RL 11, 12, 13. **First-Year Spanish.** 4 hours each term.

An introduction to Spanish, stressing speaking and reading. Exercises in elementary composition.

Forestry

Lower-Division Courses

F 111. **General Forestry.** 3 hours.

Preliminary survey of the entire field of forestry including the development

of forestry in the United States and the origin and distribution of our public domain. May be elected by non-majors.

F 213. Introduction to Forestry. 3 hours.

Operation of various forest agencies in the United States. Not open to forestry students.

F 260. Conservation of Natural Resources. 3 hours.

Nature, extent, and importance of organic resources of United States and methods of conserving them; forest, forage, recreation, wildlife, soil, water aspects.

FP 211. Wood Products. 3 hours.

A survey of wood utilization, with special emphasis on West Coast manufacturing processes and economic problems; principal products, material requirements, residue utilization, trends and industry problems are covered. One 3 hour class period. Prerequisites: F 213 or F 111.

Geography

Lower-Division Courses

Geog 105, 106, 107. Introductory Geography. 3 hours each term.

A general introduction to the field of geography, in sequence as follows: Geog 105, physical elements; Geog 106, earth resources; Geog 107, cultural elements. Three lectures; 1 two-hour laboratory period.

Geog 105, 106, 107. Introductory Geography. 3 hours each term.

World survey of geographic fundamentals emphasizing human adjustments to climatic conditions and physical environment; geographical regions in relation to man's productive occupations; geography of international trade.

Geog 201, 202, 203. Regional Economic Geography. 3 hours each term.

A study of the major types of production and their geographic background.

Geog 205. Regional Geography of North America. 3 hours.

Regional analysis of North America, including Canada and Alaska but not Mexico. Prerequisite: Geog 105 or permission of instructor.

Geog 211. Regional Geography of Pacific Northwest. 3 hours.

Analysis of human and economic geography of Pacific Northwest with special attention to Oregon. Includes field study. Prerequisite: Geog 105 or consent of instructor.

Upper-Division Courses

Geog 313s. Geography of Oregon. 2 hours.

A study of place geography of Oregon, together with the land-use regions and the social and economic problems of Oregon people. Attention given to the current work in land planning in Oregon. Opportunity for special study of the problems of home vicinities, with consideration of their relationships to the great national problems. Oregon beauty spots and the general physiographic landscape interpreted.

Geog 326. Geography of Europe. 3 hours.

The geographic backgrounds of European civilization; present-day regional and political adjustments to environmental conditions; geographical aspects of European colonial expansion; analysis of the geographic individualities of the major countries, and the relations between human life and natural environment.

Geog 329. Geography of North America. 3 hours.

A course providing a basic understanding of economic and social activities in the major human-use regions of the home continent; description, analysis, and interpretation of the present occupancy pattern of the major regions of the United States; brief survey of Canada, Mexico, and the Caribbean regions.

Geog 330. Geography of South America. 3 hours.

A course dealing with the economic and social development of the countries of South America; raw materials; potential markets; inter-American relations.

Geog 331. Geography of Asia. 3 hours.

A study of the economic and social development of the countries of Asia; the economic bases of human life; problems of population pressure; trends in economic and political exploitation; and the geographic backgrounds of oriental and occidental interrelations.

Geog 332. World Problems in Political Geography. 3 hours.

Current problems relative to territorial expansion and integrity of nations analyzed in light of racial and historical influences, population distribution, distribution of natural resources, and commercial interests; political problem areas of Europe, Africa, and Asia studies in detail; basic policies of the world powers relative to these matters interpreted; movements toward colonial self-rule. Intended to familiarize students with problems affecting international harmony.

Geology

Lower-Division Courses

G 201, 202, 203. Geology. 3 hours each term.

Processes of nature by which earth's surface has been built up, deformed, and torn down; natural history and occurrence of common rocks and useful minerals; outline of history of earth and life.

G 204, 205, 206. Geology Laboratory. 1 hour each term.

Laboratory and field work to accompany G 201, 202, 203 for all students desiring a more intimate knowledge of geology. One two-hour laboratory period.

Health Education

(See PHYSICAL EDUCATION)

History

Lower-Division Courses

Hst 101, 102, 103. History of Western Civilization. 3 hours each term.

Origins and development of Western civilization from ancient times to the present.

Hst 201, 202, 203. History of the United States. 3 hours each term.

From colonial times to the present day.

Hst 201, 202, 203. United States History and Government. 3 hours each term.

From colonial times to the present day. Attention is given to the factual and causal functions of its government, and to the adaptations that have been made to changing social and economic conditions.

Hst 204, 205. History of the Far East. 3 hours each term.

Aim is to introduce students to the history, civilization, and political, economic, cultural, and social problems of China, Japan, India, and the Pacific Islands. Hst 205 applies toward group requirement in social science.

Hst 207, 208, 209. English History. 3 hours each term.

A general survey, covering political, economic, social, intellectual, and religious developments.

Hst 209. The World Since 1914. 3 hours.

Origins, backgrounds, and courses of the first and second World Wars; prob-

lems of American war mobilization; war aims and postwar planning. Prerequisite: Hst 101, 102, 103 or special consent of instructor.

Upper-Division Courses

Hst 350. Modern Russia. 3 hours.

Aims to enrich student's knowledge of political, diplomatic, economic, and social development of Russia from the revolution of 1905 to the present. Prerequisite: Hst 101, 102, 103 or special consent of instructor.

Hst 377. History of Oregon. 3 hours

Aims to present a fairly detailed survey of the political, economic, social, and cultural development of Oregon and the Pacific Northwest from the beginning to the present.

Home Economics

Clothing, Textiles, and Related Arts

Lower-Division Courses

CT 211. Clothing (Selection). 3 hours.

Artistic and economic factors in the selection of adult clothing; wardrobe need of the college girl. Prerequisite: AA 160. Two lectures; 1 two-hour laboratory period.

CT 231. Home Furnishing. 3 hours.

Elective for students other than home economics majors. Aims to develop appreciation of beauty and suitability in home furnishings; materials and processes involved. Three two-hour laboratory periods.

CT 250. Textiles. 3 hours.

Properties, uses, selection and care of textile fibers and fabrics. No prerequisite, but chemistry is desirable. Two lectures; 1 two-hour laboratory period.

Family Life and Home Administration

Lower-Division Courses

FL 222. Marriage. 2 hours any term.

Mate selection; factors in a successful marriage; husband-wife relationships. Open to men and women.

FL 223. Family Living. 2 hours winter.

For men and women. Survey of personal relationships within family; child development; management of resources. Limited to students not in home economics degree curricula.

HAd 239. Home Management. 3 hours.

Problems in management of home; management of money, time, and energy in relation to family living. For students not in home-economics degree curricula.

Foods and Nutrition

Lower-Division Courses

FN 205. Nutrition. 3 hours any term.

Nutritive value of foods from the standpoint of newer scientific investigations; selection of an optimal diet for health, present-day problems in nutrition; recent trends in American dietary habits.

HEc 225. Principles of Dietetics. 2 hours.

The nutritive value of food; the selection of a proper diet for health, based

on dietetic principles. Open to men and women. Required of physical education majors.

Industrial Arts

(See ENGINEERING)

Journalism

Lower-Division Courses

J 191. Journalism Practice. 1 hour each term.

Six hours maximum credit. Restricted to students working on school publications.

211. Introduction to Journalism. 3 hours.

An introduction to the newspaper and other media of mass communication, including news, editorial, pictorial, business, and advertising aspects.

Law Enforcement (Police Training)

Lower-Division Courses

***LE 011. Police and Society.** 2 hours.

A study of the purpose, function, and brief history of the agencies dealing with the administration of justice. Survey of requirements for entering police service. Origin and evolution of law enforcement agencies. Discussion of crime; the criminal, traffic, and vice as social and police problems; function of the courts; prosecuting and defense attorneys; correctional and penal institutions; probation and parole; American and foreign policy systems.

***LE 012. Organization and Administration of Law Enforcement Agencies.** 2 hours.

Application of the principles of organization and administration to law enforcement agencies of federal, state, and municipal levels. Continuation of discussion of the principles of organization and administration as pertaining to service.

***LE 013. Elements of Law for Police Officers.** 2 hours.

Overview of salient elements of law which have special application to police work, including criminal law, law of arrests, court procedures, automobile law, laws of search, seizure and evidence, and elements of crime.

***LE 021. Police Techniques I. (Evidence).** 2 hours.

Study and laboratory work in the collection and preservation of evidence, statements and confessions, observation and description, notes and sketches, surveillance and interrogation.

***LE 022. Police Techniques II. (Identification).** 2 hours.

Identification, including toxicology, photography, handwriting, *moulage*, scientific lie detecting, and ballistics.

***LE 023. Police Techniques III. (Traffic Control and field work.)** 2 hours.

Problems of traffic control, traffic laws, radio communication, and field work in police training.

Library

Lower-Division Course

Lib 117. Use of the Library. 1 hour.

Training in the use of the card catalog, periodical indices, and reference books; experience in the preparation of bibliographies. As far as possible, problems are coordinated with the individual student's study program.

*Terminal Professional courses which may not be counted toward a college degree or transferred to another institution.

Mathematics**Lower-Division Courses****Mth 10. Elementary Algebra.** 4 hours.

For students entering with less than one year of elementary algebra. Open to others only on recommendation of the department. May not be taken for credit after completion of higher courses in college mathematics.

Mth 20. Elementary Geometry. 4 hours.

For students entering with less than one year of high-school geometry.

Mth 100. Intermediate Algebra. 4 hours.

Prerequisite: one year of high-school algebra, or Mth 10.

Mth 101, 102, 103. Elementary Analysis. 4 hours each term.

Trigonometry, graphs, algebra, elements of calculus, and analytic geometry. Prerequisite: Mth 100 or equivalent.

Mth 104, 105, 106. Mathematics of Business and Industry. 3 hours each term.

Algebra and mathematics of finance. A maximum of 4 term hours credit will be given for Mth 10 and Mth 104, and for Mth 100 and Mth 105.

Mth 105. College Algebra. 4 hours

Prerequisite: One and one-half years of high school algebra or Mth 100.

Mth 106. Plane Trigonometry. 4 hours.

Prerequisite: Mth 105.

Mth 107. Analytic Geometry. 4 hours.

Prerequisite: Mth 106.

Mth 108. Mathematics of Finance. 4 hours

Simple and compound interest and discount, annuities, periodic-payment plans, bonds, depreciation, and other topics related to business. Prerequisite: Mth 101 or Mth 105.

Mth 109. Elements of Statistics. 4 hours.

Elementary statistics in the application to problems in psychology, social science, business, and education.

Mth 201, 202, 203. Differential and Integral Calculus. 4 hours each term.

First term: basic differentiation; introductory work in integration with applications to mechanics. Second term: some further applications of differentiation; methods of integration, application. Third term: series, Taylor's theorem; partial differentiation; multiple integrals with application. Prerequisite: Elementary Analysis or equivalent.

Upper-Division Course**Mth 311. Foundations of Mathematics.** 3 hours.

Treatment of historical aspects of mathematics, social uses and relationships, mathematical principles and relationships, grade placement of content materials, appraisal of texts, workbooks and tests, development of problem-solving ability, and proficiency in the fundamental skills of mathematical processes.

Medical and Dental Assistantship**Lower-Division Course****MD 290. Office Apprenticeship.** 3 hours.

Practical work experience under appropriate supervision, with directed corollary readings. Conducted through cooperation of local physicians and dentists. Terminal credit.

Music

Lower-Division Courses

Mus 111, 112, 113. **Theory.** 3 hours each term.

Music fundamentals, scales, key relationships, intervals, triads; harmonizations of various triad and seventh chords in all positions; nonchord tones, free harmonization and simple modulation; keyboard work, chord recognition, sight-singing, and analysis correlated with written work. 5 periods.

Mus 190. **Applied Music.** 1 hour any term.

Freshman year. Individual instruction in organ, piano, violin, cello, harp, voice, orchestra and band instruments. Prerequisite: consent of instructor.

Mus 195. **Band.** 1 hour each term.

Six hours maximum credit.

Mus 196. **Orchestra.** 1 hour each term.

Six hours maximum credit.

Mus 197. **Choral Union.** 1 hour each term.

Six hours maximum credit.

Mus 201, 202, 203. **Introduction to Music and Its Literature. (Appreciation of Music)** 3 hours each term.

A non-technical study of the development of music, stressing the elements of musical understanding; study of representative compositions, with emphasis on their musical and historical significance.

Mus 211, 212, 213. **Music Theory II.** 3 hours each term.

For description, see Mus 111, 112, 113. Prerequisite: Mus 111, 112, 113.

Mus 214, 215, 216 **Keyboard Harmony.** 1 hour each term.

Application of theoretical principles to the keyboard; exercises in modulation, transposition, and development of extempore playing. Prerequisite: Mus 111, 112, 113.

MusE 235, 236, 237. **Wind and Percussion Instruments I.** 1 hour each term.

A study of the wind and percussion instruments of the orchestra and band; for music-education students only. Two recitations a week.

Mus 290. **Applied Music.** 1 hour any term.

Sophomore year. Continuation of Mus 190, which is prerequisite.

Upper-Division Courses

Mus 381, 382, 383. **Music Fundamentals.** 3 hours each term.

Mus 390. **Applied Music.** 1 to 4 hours any term.

Junior year. Individual instruction in organ, piano, violin, cello, harp, voice, orchestra and band instruments. For music majors. One or two lessons a week. Attendance at class sessions and recitals required. Prerequisite: Mus 290 or equivalent and qualifying examination for upper-division standing.

Mus 395. **Band.** 1 hour each term.

Six hours maximum credit.

Mus 396. **Orchestra.** 1 hour each term.

Six hours maximum credit.

Mus 397. **Choral Union.** 1 hour each term.

Six hours maximum credit.

Mus 433. **Choral Conducting.** 2 hours.

The organization and direction of choruses and the selection of material for choruses in the elementary grades.

Nursing Education

Lower-Division Course

Nur 230. Home Nursing. 2 hours.

Home care of the sick; demonstration of ordinary nursing techniques under home conditions; improvising equipment. Designed primarily for students who are not preparing for professional nursing. An elective for both men and women. One lecture; 3 hours laboratory.

Nutrition

(See HOME ECONOMICS)

Philosophy

Lower-Division Courses

Phl 201. Elementary Logic. 3 hours.

An introduction to the study of argument, reasoning, proof. How to recognize, analyze, criticize, and construct the main types.

Phl 202. Problems of Philosophy. 3 hours.

An introduction to the study of some of the persistent problems of philosophy.

Phl 203. Elementary Ethics. 3 hours.

An introduction to problems which mark the philosophical study of morality, e.g., right and wrong, free will and determinism, morals and society, etc.

Physical Education

Service Courses

Lower-Division Courses

HE 150. Health Education (Men). 1 hour any term.

Study of personal health problems which confront the college student; the basic scientific principles of healthful living. Required of all freshman men. 1 period.

PE 180. Physical Education (Women). 1 hour each term, six terms.

A variety of activities taught for physiological and recreational values. Special sections for restricted and corrective work. A total of five terms required during the freshman and sophomore years for all women. 3 activity hours per week.

PE 190. Physical Education (Men). 1 hour each term, six terms.

A variety of activities taught for physiological and recreational values. Special sections for restricted and corrective work. A total of five terms required of all men during the freshman and sophomore years. Three activity hours per week.

HE 250. Personal Health (Women). 3 hours.

Exercise, nutrition, infection and resistance, special senses, mouth hygiene, sex hygiene, rest and sleep, fresh air and sunshine. Satisfies the health-education requirement.

HE 251. Community Health. 3 hours.

Water supply, food and milk sanitation, ventilation, sewage disposal, lighting, housing, health agencies, health laws, insect and rodent control.

HE 252. First Aid. 3 hours.

American Red Cross first aid; lectures, demonstrations, and practice leading to standard and advanced first-aid certificates.

Professional Courses**Lower-Division Courses**

- PE 121. **Introduction to Physical Education.** 2 hours fall.
Basic mechanics of movement, form, and skills in activities. Basic principles of physiology of exercise.
- PE 124, 125, 126. **Physical-Education Activities (Women).** 1 or 2 hours each term.
For majors. Instruction and practice. Fall: Fundamentals I, swimming I; Winter: Fundamentals II, tumbling; Spring: tennis, elementary dance.
- PE 127. **Fundamentals of Body Movement and Conditioning (Men).** 2 hours.
For majors.
- PE 128. **Elementary Tumbling and Apparatus (Men).** 2 hours.
For majors.
- PE 129. **Track and Field (Men).** 2 hours.
For majors. Basic principles of conditioning; skills of track and field events.
- PE 224, 225, 226. **Physical-Education Activities (Women).** 1 or 2 hours each term.
For majors. Instruction and practice. Fall: soccer and speedball, hockey; Winter: folk and square dancing; Spring: swimming II, track and field.
- PE 227. **Elementary Aquatics (Men).** 2 hours.
For majors. Elementary swimming, diving.
- PE 228. **Folk and Square Dancing (Men).** 2 hours.
For majors. Rhythmic fundamentals and dances.
- PE 229. **Team Sports (Men).** 2 hours.
For majors.

Upper-Division Courses

- PE 341, 342, 343. **Officiating Sports.** 1 hour each term.
Methods and techniques of officiating. Actual experience in intramural programs.
- PE 346. **Coaching of Basketball.** 2 hours.
Demonstration and discussion of the fundamentals, the individual skills, and methods of instruction.
- PE 347. **Coaching of Football.** 2 hours.
Demonstration and discussion of the fundamentals, team play, and rules; touch football; the developing and conducting of a sports program.
- PE 348. **Coaching of Baseball.** 2 hours.
Discussion and demonstration of the fundamentals of play in each position, the rules, and team play.
- PE 349. **Coaching of Track and Field.** 2 hours.
Track and field events; the organization and administration of a track and field program.

Physics**Lower-Division Courses**

- Ph 101, 102, 103. **Essentials of Physics.** 3 hours each term.
Fundamental principles of physics, intended for students not majoring in science; requires less mathematical preparation than Engineering or General Physics. Prerequisite: Mth 10.

Ph 101, 102, 103. Engineering Physics. 4 hours each term.

Studies in general physics adapted to students in engineering. Sequence is started each term if demand is sufficient. Prerequisite: Mth 100 or equivalent. Two lectures; one recitation; 2 one-hour laboratory periods.

Ph 161. Rudiments of Photography. 2 hours.

Intended for students interested in photography as an avocation. One lecture; 1 three-hour laboratory period. No prerequisite.

Ph. 201, 202, 203. General Physics. 4 or 5 hours each term.

Standard first-year college physics, 3 or 4 lectures and recitations; 1 three-hour laboratory period. Prerequisite: Mth 102, or consent of instructor.

Ph 204, 205, 206. Astronomy. 3 hours each term.

Descriptive treatment. Coordinate system; astronomical instruments; the solar system; star types and groupings. One recitation; 2 two-hour laboratory periods.

Upper-Division Courses**Ph 311, 312, 313. Analytical Mechanics.** 3 hours each term.

Applied statics, dynamics of a particle, dynamics of rigid bodies. Three lectures. Prerequisite: General Physics and Calculus. *Not offered during 1954-55.*

Ph 311, 312, 313. Introduction to Modern Physics. 3 hours each term.

Kinetic theory, the electron, radioactivity; photoelectricity, thermionic emission, X-rays, electronic devices, gaseous conduction, cosmic rays, nuclear physics. Prerequisite: Ph 103 or Ph 203. Two lectures; 1 two-hour laboratory period.

Ph 361. Photography. 3 hours any term.

The hand camera, developing, printing, toning, enlarging. Prerequisite: college chemistry or physics or previous photographic experience, with consent of instructor. One lecture; 2 two-hour laboratory periods.

Ph 362. Commercial Photography I. 3 hours any term.

View camera; photographic solutions; copying, photography of small objects, lighting, photo-sketching, lantern slides. Prerequisite: Ph 361. One lecture; 2 two-hour laboratory periods.

Ph. 363. Commercial Photography II. 3 hours spring.

Continuation of Ph 362. Composition; exteriors, interiors, flashlights, telephoto lenses, infrared. One lecture; 2 two-hour laboratory periods.

Police Training

(See LAW ENFORCEMENT)

Political Science**Lower-Division Courses****PS 201, 202, 203. American Governments.** 3 hours each term.

Fall and Winter: national government. Spring: state and local governments.

PS 204. European Governments. 3 hours.

A survey of the constitutions and governmental operations of selected democratic and nondemocratic governments in Europe, including the governments of Britain, France, and the Soviet Union.

PS 231, 232, 233. Current Affairs. 2 hours each term.

Designed to acquaint students with current political, economic, and sociological problems and developments that arise on both domestic and international levels, and to encourage objective analysis and discussion of these events in order to mold responsible citizens. Open to freshmen and sophomores only.

Upper-Division Courses

PS 380, 381, 382. **Comparative Governments.** 3 hours each term.

Study of organization of functions of local, county, and state governments with special attention to Oregon. National government. Comparative study of governments of selected foreign nations.

Psychology**Lower-Division Courses**

Psy 201, 202. **General Psychology.** 3 hours each term.

Introductory study of behavior and conscious processes. Survey of experimental studies with reference to motivation, learning, thinking, perceiving, and individual differences.

Psy 204. **Psychology of Adjustment.** 3 hours.

The nature and origins of differences in personality; means of making desired changes. Prerequisites: Psy 201, 202.

Psy 205. **Applied Psychology.** 3 hours.

A survey of the ways in which psychology is applied in advertising, salesmanship, market research, measurement of opinion, occupational placement, development of personal efficiency. Prerequisite: Psy 201, 202.

Psy 208, 209, 210. **General Psychology Laboratory.** 1 hour each term.

Introduction to experimental methods. Laboratory work coordinated with Psy 201, 202, Psy 204, Psy 205. One laboratory period each week.

Upper-Division Course

Psy 311. **Human Development.** 3 hours.

Consideration of the child as an individual and as a member of social groups. Included is a study of the kinds of home and school environment essential to the best intellectual, physical, and emotional development of the child. Prerequisite: Psy 201.

Public Speaking

(See SPEECH)

Religion**Lower-Division Courses**

R 111, 112, 113. **Introduction to Religious Thought.** 3 hours each term.

Introduction to religious problems and to methods of studying these problems. Religion in different cultures. Consideration of some of the common questions men have asked about God, the soul, immortality, good and evil, the religious fellowship and society, the nature and destiny of man. Criteria for evaluating religion.

Rhetoric

(See ENGLISH)

Science

(See also BOTANY, CHEMISTRY, PHYSICS, ZOOLOGY)

Lower-Division Courses

GS 101, 102, 103. **Biological Science Survey.** 4 hours each term.

The fundamental principles of biology as they apply to both plants and animals. For general students and those majoring in fields other than biology. Three lectures; 1 two-hour laboratory period.

GS 104, 105, 106. Physical Science Survey. 4 hours each term.

Fundamental principles of physics, chemistry, astronomy, and geology; development and application of the scientific method. For students majoring in fields other than the physical sciences who wish a broad view of the principles of several physical sciences. Three lectures; 1 two-hour laboratory-recitation period.

Sc 101, 102, 103. Biological Science Survey. 3 hours each term.

Place of man in relation to other forms of life, with particular reference to heredity, nervous systems, organic evolution; importance of animal and plant forms as sources of food, shelter, clothing, and medicines and as sources of disease. Two lectures; 1 two-hour laboratory period.

Sc 201, 202, 203. Foundations of Physical Science. 3 hours each term.

A course in the elements of the branches of physical science, i.e., astronomy, chemistry, geology, meteorology, and physics. Study of the development of these fields from their earliest historical beginnings to their present-day positions and effects on society. Particular emphasis is placed on the development of scientific attitudes. Two lectures; 1 two-hour laboratory period.

Secretarial Science**Lower-Division Courses****SS 111, 112, 113. Stenography.** 3 hours each term.

Theory of shorthand; practical applications in sentence dictation. SS 121, 122, 123 must be taken concurrently unless the student has had the equivalent. Students with one year of shorthand are not permitted to take course SS 111 for credit. 4 recitations.

SS 121, 122, 123. Typing. 2 hours each term.

Theory and practice of touch typing; rhythmical drills, dictation exercises; writing paragraphs; punctuation and mechanical arrangement of business correspondence, legal forms, tabulating, manifold, speed practice. Students with at least one year of typing are not permitted to take SS 121 for credit. 5 periods laboratory work.

SS 131. Business Forms and Reports. 2 hours spring.

Planning and typing business papers, manuscripts, statistical tables, and reports. Speed typing is emphasized.

SS 211, 212, 213. Applied Stenography. 3 hours each term.

Advanced principles and phrases; dictation and transcripts covering vocabularies of representative businesses; legal forms; newspapers and magazine articles. Prerequisite: SS 113, 123 or equivalent. 3 recitations; 3 one-hour laboratory periods.

SS 241, 242. Office Practice. 3 hours each term fall and winter.

General survey course of all office problems and procedures, including typing, filing, statistical work and personnel. No shorthand required.

SS 243. Office Practice (Machines). 3 hours.

Use and operation of various office equipment and machines.

Social Science

(See also ANTHROPOLOGY, ECONOMICS, EDUCATION, HISTORY, POLITICAL SCIENCE, PSYCHOLOGY, AND SOCIOLOGY)

Lower-Division Courses**SSc 101, 102, 103. Background of Social Science.** 3 hours each term.

A factual and interpretive study of man, his culture, and his institutions. A brief survey of contemporary political, economic, and social situations and problems, with their relationship to historical periods. A year sequence furnishing the background for all social sciences and laying a basis for under-

standing contemporary socio-economic problems. Challenges the analytical and critical faculties of students in preparation for more detailed studies, such as courses in economics, political science, and sociology.

SSc 111. Orientation. 1 hour.

A course in effective adjustments to college and social needs. Effective means and methods of study; use of the library; time budgeting; importance and spacing of reviews; the amount and type of recreation suitable; social adjustments for happy and effective living; means and methods of modifying personality deficiencies.

Sociology

Lower-Division Courses

Soc 204, 205, 206. General Sociology. 3 hours each term.

The basic findings of sociology concerning the individual, culture, group life, social institutions, and factors of social change. Prerequisites: sophomore standing or consent of instructor.

Soc 212. General Sociology. 3 hours.

An abridgement of Soc 201, 202. Not open to students who have taken Soc 201, 202, 203.

Speech and Drama

Lower-Division Courses

Sp 111, 112, 113. Fundamentals of Speech. 3 hours each term.

Projects in extempore speaking. Primary emphasis on content and organization, with attention also to the student's adjustment to the speaking situation, effective delivery, audience motivation, and language of the speech.

Sp 114. Voice and Diction. 3 hours fall or spring.

Study and practice of the principles of tone production. Phonetic analysis of English sounds as a basis for correct and effortless diction. Intended for students who have slight deviations in voice and diction.

Sp 211. Interpretation. 2 hours winter.

The application of the principles of oral reading to literature.

Sp 221. Public Discussion. 2 hours fall or winter.

Preparation of speeches for delivery before public audiences.

Sp 232. Group Discussion. 3 hours spring.

Techniques and practice in preparing, leading, and participating in the many types of discussion used by extension workers, club leaders, teachers, and all business, technical, and professional people, such as conferences, socialized recitations, panels, lecture forums, and symposiums. Prerequisite: Sp 111.

Sp 251. Elements of Acting. 2 hours fall or spring.

Elementary principles of acting technique.

Sp 251. Workshop Theater. 1 to 3 hours any term.

For participation in campus plays, credit totaling not more than 6 hours is given on recommendation of the instructor. Prerequisite: consent of the instructor.

Sp 261, 262, 263. Theater Principles. 1 hour each term.

Laboratory for Production Workshop.

Sp 264, 265, 266. Production Workshop. 2 or 3 hours each term.

Planning and construction of stage settings and properties; principles of lighting; mechanics of the physical stage. Practical experience in connection with the production of plays.

Sp 267, 268, 269. **Appreciation of Drama.** 2 hours each term.

Study of design, acting, playwriting, criticism. Appreciation of drama, motion picture, and radio plays as art forms.

Writing

(See ENGLISH)

Zoology

Lower-Division Courses

Z 201, 202, 203. **General Zoology.** 3 hours each term.

For premedical, predental, prenursing, pharmacy, physical education, psychology, fish- and game-management students, and others. Two lectures; 1 recitation; 1 two-hour laboratory period.

Upper-Division Courses

Z 324, 325. **Comparative Vertebrate Anatomy.** 4 hours each term.

Gross dissection and comparison of organ systems in representative vertebrate forms. Prerequisite: Z 201, 202, 203. Two lectures; 2 three-hour laboratory periods.

Z 326. **Comparative Vertebrate Embryology.** 4 hours.

Comparative study of the development of several representative vertebrate forms. Prerequisite: Z 203. Two lectures; 2 three-hour laboratory periods.

Z 331, 332. **Physiology.** 3 hours each term.

Especially for students majoring in home economics, pharmacy, and zoology or minoring in physical education. Prerequisite: Z 203, or consent of instructor. Two lectures; 1 two-hour laboratory period.

Evening Program

See pages 26 to 54 for Day Program

See pages 20 to 25 for General Information

Evening Program

(All students are expected to be familiar with regulations and requirements given in the section of this Bulletin entitled "General Information." They apply to both day program and evening program students.)

The evening program of Portland State Extension Center is a well-balanced schedule of related undergraduate and graduate courses in almost all major fields of study. Every effort is made to serve the widest general vocational and avocational interests and the greatest needs of students in meeting lower-division, upper-division and graduate requirements toward academic degrees.

A survey of the approximately 250 courses offered during the 1953-54 evening program indicates the extent to which these purposes may be fulfilled. Of the more than 600 term hours available in course offerings during the year 30 per cent represented lower-division work, 50 per cent upper-division work, and 28 per cent graduate work.

The number of term hours available in each of such fields as art, accounting and business administration, engineering, English, geography and geology, history, psychology, the natural sciences, sociology and education ranged from at least 12 to about 200.

The foregoing figures may become more expressive when related to the fact that a student's major usually requires a concentration of about 36 term hours in the chosen field within a total requirement of 186 term hours for most degrees.

Academic Regulations.

ADMISSION REQUIREMENTS. The purpose of the evening program is to serve all who wish to take courses and who are able to profit by them. There are no formal requirements for admission except for those working toward degrees. A considerable number of persons register as audit students, taking courses for their cultural and practical value, but not for credit. However, in any course, the instructor may require evidence that prerequisite work has been done.

Permission of the instructor is required for admission to classes for credit after the first meeting of the class. *Admission for credit is not allowed after the third meeting.*

REGISTRATION. Evening program students may register during the day in accordance with the schedule designated on the academic calendar, and until 8:30 p.m. during the first week of each term.

Attention of students is directed to the fact that late registration fees are assessed after the first week of each term.

CREDIT HOUR LOAD. In the evening program a student may not normally take more than 6 term hours if employed full time. High school graduates, veterans and others who are able to give adequate time to study and who are unable for financial or other reasons to enroll in regular work on one of the campuses, may petition to register for more than 6 term hours. In no case may graduate students who are employed full time register for more than 6 term hours of graduate credit.

If a student takes two or more courses which duplicate each other, even in part, he will receive credit for only one of them.

CAMPUS RESIDENCE REQUIREMENT. The minimum residence requirement for baccalaureate and graduate degrees is 12 term hours. In fields and

professional schools where course offerings are available a student may complete all except 12 term hours of the total program through Portland State Extension Center.

Graduate Degree Programs

Graduate work in certain fields, leading to degrees from University of Oregon, Oregon State College or any of the three Oregon Colleges of Education, may be taken in the evening program of Portland State Extension Center.

CREDIT TOWARD GRADUATE DEGREES. In Portland State Extension Center and in other departments of General Extension Division a graduate student may complete all work required for the *Master of Education* degree except twelve hours, which must be completed in residence either at University of Oregon or Oregon State College. For the *Master of Science in Education* from one of the Oregon Colleges of Education all work except twelve term hours may be done at Portland State Extension Center and other departments of General Extension Division. All or the greater portion of work toward the *Master of Arts in General Studies** may be completed in Portland.

Fifteen term hours of work toward the *Master of Arts (departmental)*, *Master of Science* or *Master of Science in General Studies* degree may be completed in Portland with approval of the candidate's major department at the degree-granting institution.

The *Master of Education* (M.Ed.) is regarded as a professional teaching degree and not necessarily as a research degree. No thesis or field study is required, but a thesis or field study is expected of majors in school administration. A well-integrated program is planned for each individual candidate in order to improve his educational service as a teacher, supervisor or administrator. Each program embraces: (1) a common core of required courses; (2) an area of concentration which provides a complex of courses organized to meet special interests and needs of students. Both the qualifying and final examinations are written. Graduate work for the degree of *Master of Education* may be pursued with specialization in either elementary or secondary fields. For the *Master of Science in Education* from one of the Oregon Colleges of Education a core of eighteen professional hours and nine hours of general courses is included in requirements. The foregoing patterns are based on the assumption that teaching is a developing profession which requires a properly organized series of carefully planned courses together with some opportunity for elective work.

Graduate students enrolling in Portland State Extension Center who wish to apply their Oregon credits toward advanced degrees at an institution within the State System of Higher Education should make application for admission to the graduate school selected and take the qualifying examination at the earliest opportunity. *Students are warned that a mere accumulation of credits does not establish candidacy for graduate degrees.*

ADMISSION TO GRADUATE SCHOOLS. A graduate of an accredited college or university is admitted to the Graduate School by the Registrar of the institution from which he wishes to receive a master's degree upon filing an application for admission and submitting an official transcript of his undergraduate credits. However, such admission does not entitle a student to become a candidate for a degree.

* Master of Arts in General Studies is a research degree open only to those individuals who possess a research interest and whose broad academic background makes them eligible for graduate work embracing several major departments. A thesis is required. The degree may be taken at either University of Oregon or Oregon State College. Under favorable circumstances all work toward this degree at Oregon State College may be taken in Portland. University of Oregon requires that candidates earn at least fifteen term hours in on-campus enrollment.

Candidacy is conditioned by a qualifying examination which each student working toward a master's degree is required to take.* Arrangements for the examination should be made through the graduate adviser before completion of one-third of the work for the degree.

Transferred credit, of which not more than 15 graduate term hours can be transferred from another institution, is provisional until the qualifying examination is taken and the student is admitted to candidacy. Transferred credit does not reduce residence requirements of individual institutions within the State System.

For a graduate major, the equivalent of an undergraduate major in the same subject is required. Preparation for a graduate minor must be at least a one-year sequence of upper-division work in addition to foundation courses in the subject.

A seven-year maximum period is allowed for completing all work for a master's degree including work for which credit is transferred.

GRADE REQUIREMENTS. An accumulation of 9 term hours of grades below *B* in the major field disqualifies a student for further graduate work toward the master's degree at the University; a student must present 45 term hours of graduate work with grades of *A* or *B*.

At Oregon State College and at Oregon Colleges of Education a grade-point average of 3.00 (a *B* average) is required for all graduate degrees. Grades below *C* are not accepted for graduate credit at the State College and Oregon Colleges of Education, nor are grades of *C* accepted in transferred credit.

FOREIGN LANGUAGE. A reading knowledge of one foreign language, preferably French or German, must be demonstrated by examination or by the undergraduate record for the Master of Arts (departmental) degree. There is no foreign language requirement for the Master of Science degree, Master of Education degrees or the Master of Arts in General Studies degree.

THESIS AND FINAL EXAMINATION. Thesis must be filed in the graduate office two weeks before final examination and must be submitted in the form required by the graduate office at the institution where the degree is to be taken. Examinations are given on the campus of the institution granting the degree.

Graduate students should see an adviser at Portland State Extension Center before registering for any graduate program.

Teacher Programs

CERTIFICATION PROGRAMS. Portland State Extension Center is authorized to offer all work required for both elementary and secondary certificates in Oregon with the exception of supervised teaching. However, Portland Summer Session offers supervised teaching at the secondary level and makes some provision to assist experienced elementary teachers in meeting the supervised-teaching requirement. No more than three term hours of credit in supervised teaching is offered in a given summer session.

Teachers and administrators seeking to fulfill requirements for various certificates, including administrator's certificates and certificates to teach handicapped children, should consult an adviser or refer to *Oregon Rules and Regulations Governing the Certification of Teachers*, an annual publication of the Superintendent of Public Instruction, Salem, Oregon.

* Qualifying examinations will be administered during the year at times and places to be announced.

Cooperative Programs

Registered Nurses. A program leading to the Master of Arts in General Studies degree, designed specifically to meet the requirements of registered nurses, is offered in cooperation with the Department of Nursing Education, University of Oregon Medical School and with the Graduate School, Oregon State College.

Museum Art School. A number of courses are offered by Portland State Extension Center in cooperation with the Museum Art School of the Portland Art Association. The courses are scheduled at the Museum Art School, and the enrollment is limited by the facilities of the studios. Registration for the fall term opens September 20, 1954, at the Museum Art School, S. W. Park at Madison Street.

In-Service Training. An extensive list of courses is offered as part of the in-service training program of the Portland Public Schools and Multnomah County Schools. These classes are open to any qualified students. The courses carry college or university credit, and the fees are the same as for the regular evening courses.

In-service and other courses scheduled for afternoon outside Portland State Extension Center building are limited to 2 term hours of credit. Those scheduled for evenings may be offered for 3 term hours of credit.

Participation with Industry, Labor, Trades, and Professions. Portland State Extension Center will cooperate with industry, unions, and trade and professional groups in planning and in providing instructional staff and facilities for classes designed to meet special needs. This service may be offered to the sponsors at a fee based on the cost to General Extension Division.

Description of Courses

Evening Program

Descriptions which accompany the following courses are designed to show purpose and scope. Degree students should note they cannot register in certain courses until a more basic course has been completed. This more basic prerequisite or course is usually mentioned with the description of the more advanced course. Mature, non-degree students may register in advanced courses after securing consent of the instructor.

An explanation of the course numbering system has been given on page 24. The hours indicated following the course title represent term hours of credit which may be earned in the course.

CLASS SCHEDULE. Classes meet one evening a week unless otherwise noted in the course descriptions or in the class schedule.

Two-hour classes meet from 7:15 to 9:00 p.m.

Three-hour classes meet from 6:45 to 9:25 p.m.

Four-hour classes usually meet two evenings a week from 7:15 to 9:00 p.m.

Some deviations are necessary and will appear in the course descriptions or in the class schedule.

Portland State Extension Center reserves the right to change the meeting hour or day of any listed course, or to cancel or discontinue any listed course for lack of sufficient enrollment or for other reasons.

Anthropology

Instructor: FRANTZ

Acting Assistant Professor: MARSHALL

Upper-Division Courses

Anth 317, 318, 319. The American Indian. 3 hours each term.

Indian life in North, Central, and South America before white contact; contemporary Indian life where groups still survive. Prerequisite: upper-division standing. Tuesday.

Anth 405. Reading and Conference. Terms and hours to be arranged.

Anth 450, 451, 452. Cultural Dynamics. (G) 3 hours each term.

Evaluation of approaches to the problem of cultural changes; analysis of invention and intergroup cultural borrowing; agents and conditions promoting change; mechanics of cultural growth; application of techniques for inducing change. Prerequisite: Anth 207, 208, 209, or consent of instructor. Wednesday. Marshall.

Art

Associate Professor: REYNOLDS

Instructors: BUNCE, GIVLER, IZQUIERDO, KENNEDY, LITTMAN, LYNCH, McLARTY, RUSSO, VOORHIES, WILEY.

The following classes are given in cooperation with the Museum Art School. The registration fee is \$12.00 per term for each class, plus a special course fee as indicated in some of the courses. (However, in no case will students registering for work in the Museum Art School and the day or evening program at Portland

State Extension Center building pay more than \$52.00). Students register at the Museum Art School, S. W. Park Avenue at Madison Street, where the classes are held.

Lower-Division Courses

AA 201a, 201b, 201c. **Introduction to the Visual Arts.** 1 hour each term.

For beginners and laymen. A survey of many aspects of the arts, with discussion and practice in drawing, composition, painting, and sculpture, for the purpose of increasing the student's powers of observation and expression and leading to a better understanding of the arts. 7:30-9:30. Section I: Tuesday. Section II: Wednesday. Section III: Thursday. Course fee, \$4.00 in addition to registration fee. Izquierdo, McLarty.

*AA 255. **Lower-Division Ceramics.** 1 hour any term.

Creative approach to ceramics, including knowledge of various clays, building forms by hand, and experience with glazes. Section I: Tuesday. Section II: Wednesday. Section III: Thursday. Course fee, \$4.00 in addition to registration fee. 7:30-9:30. Kennedy.

*AA 290. **Lower-Division Painting.** 1 hour any term.

Problems of the individual student; instruction in the use of a variety of mediums. 7:30-9:30. Section I: Tuesday. Voorhies. Section II: Wednesday. Bunce. Section III: Thursday. Wiley.

*AA 291. **Lower-Division Drawing.** 1 hour any term.

Life drawing; emphasis on drawing from live models. 7:30-9:30. Section I: Wednesday. Wiley. Section II: Thursday. Russo.

*AA 293. **Elementary Sculpture.** 1 hour any term.

Experience with modeling from the figure and from imagination and practice in casting. Progressive series of problems in sculpture. 7:30-9:30. Section I: Tuesday. Section II: Thursday. Course fee, \$3.00 in addition to registration fee. Littman.

Upper-Division Courses

AA 401. **Special Studies.** 1 hour any term.

Lettering and calligraphy. Tuesday, 7:30-9:30. Reynolds.

AA 480. **Graphic Arts.** 1 hour any term.

Design and technical problems in the graphic arts fields. Lithography, etching, woodblock, and silk screen printing. Wednesday, 7:30-9:30. Course fee \$2.00 in addition to registration fee. Givler.

A 0313. **Commercial Design.** No credit, any term.

Commercial design including posters, cartoons, and book jackets. Prerequisite: previous training. Wednesday, 7:30-9:30. Lynch.

Art Education

Assistant Professor: WASSON

Instructor: HALVORSEN

Lower-Division Courses

A 127. **Art Appreciation.** 3 hours fall.

Designed to develop insight into the actual work of art and breadth in the understanding of diverse works of art. Introduction to the principal visual arts as related to daily living to include some experience with materials. Wednesday.

* Students who have met the prerequisites of 15 hours in either AA 255, 290, 291, and 293 may petition to be allowed to take these courses for upper-division credit.

AA 178. House Planning and Architectural Drawing. 3 hours fall.

Aim is to stimulate appreciation and criticism of domestic architecture. Small house planning and drawing with particular reference to the needs of individual students. Friday. Wasson.

*A217. **Lettering.** 1 hour. Registration by arrangement.

*A 219. **Ceramics.** 2 hours. Registration by arrangement.

*A 220. **The Print.** 2 hours. Registration by arrangement.

Upper-Division Courses**AA 311, 312, 313. Creative Arts and Crafts for the Elementary Teacher.** 3 hours each term.

Studio projects, discussions, and observations to give practical approach to arts and crafts instruction at pre-school and elementary-school levels. Section I: Monday. Section II: Tuesday.

*A 316. **Clay Modeling.** 2 hours. Registration by arrangement.

*A 317. **Head and Figure Construction.** 2 hours. Registration by arrangement.

*A 318. **Painting.** 2 hours. Registration by arrangement.

A 447, 448, 449. Crafts for Teachers. 2 hours each term.

Application of original designs to glass, metal and wood etchings; foil metal tapping and plastic carving; work with leather, stencil, plastics, wood, art metal and sheet metal; selection and organization of curricular content of industrial arts as an expressional medium, giving motivation to other elements of the curriculum and serving as an integrating agency. Thursday. Halvorsen.

Bacteriology

Instructor: ROBERTI

Lower-Division Courses**Bac 204, 205. General Bacteriology.** 3 hours each term.

Bac. 204. Characteristics of bacteria, yeasts, molds, viruses and related organisms; elementary technique in cytology, taxonomy, and physiology.

Bac 205. Application of microbiology to dairy, soils, industry, sanitation and the home. Two lectures; 2 two-hour laboratory periods. Lecture: Tuesday, 6:45-9:25. Laboratory: Thursday, 6:45-9:15.

Botany

Instructor: Pierson

Lower-Division Courses**Bot 201, 202. General Botany.** 3 hours each term fall and winter.

How plants get their food, grow, differentiate, and reproduce. Bot 201, seed plants; Bot 202, lower plants with emphasis on parasitism. Three two-hour conference periods. Monday and Wednesday, 7:15-9:00.

Bot 203. Field Botany. 3 hour spring.

Introductory taxonomy and ecology of native flowering plants. One lecture; 1 recitation; 2 two-hour laboratory periods. Monday and Wednesday, 7:15-9:00.

* See Elementary Education adviser.

Business Administration

Professors: BALLAINE, COLLIER, JANNEY

Associate Professor: ZIEBARTH

Assistant Professors: FORD, JOHNSON, PARKER, RICHINS, SMITH,
SUMMERS, TRUEBLOOD

Instructors: CHAPPEL, CONKLING, EKLEM, PATTULLO, SKELTON, STOUT,
WALSINGER.

Accounting

Lower-Division Courses

BA 111, 112, 113. Constructive Accounting. 3 hours each term.

Technique of account construction; preparation of financial statements. Application of accounting principles to practical business problems. Required of majors; prerequisite to advanced work in business.

FALL: BA 111, Monday. Skelton.
BA 111, Tuesday. Skelton.
BA 113, Thursday. Parker.

WINTER: BA 111, Wednesday. Wallsinger.
BA 111, Thursday. Parker.
BA 112, Monday. Skelton.
BA 112, Tuesday. Skelton.

SPRING: BA 111, Tuesday. Skelton.
BA 112, Thursday. Parker.
BA 113, Monday. Skelton.

Upper-Division Courses

BA 312. Principles of Cost Accounting. 3 hours winter.

Basic principles of cost accounting; departmentalization; expense allocation; designed primarily for students interested in general accounting. Prerequisite: BA 111, 112, 113. Thursday.

BA 313. Analysis of Financial Statements. 3 hours spring.

Managerial accounting for effective management and control of industrial and trading concerns. Preparation, analysis, and interpretation of balance sheets and operating reports. Prerequisite: BA 111, 112, 113. Thursday.

BA 419, 420. C. P. A. Problems. 2 hours each term fall and winter.

Intensive study of problems and questions asked by examining boards and in the American Institute of Accountants examinations. Training in correct analysis and correct form and in speed in solving problems. Monday.

BA 479, 480. Income-Tax Procedure. 3 hours each term fall and winter.

Income-tax laws of the United States and the State of Oregon. Facts involved in making up the various returns; use of the various sources of information. Prerequisite: senior standing in BA 483, 484, 485, or equivalent. Thursday. Pattullo.

BA 483, 484, 485. Accounting Theory and Practice. 3 hours each term.

The theory of accounting records and statements; statements of affairs, depreciation, analysis of profit-and-loss accounts, receiverships, balance-sheet construction and problems. Required of students majoring in accounting. Tuesday. Janney.

BA 489, 490, 491. Advanced Accounting Theory and Practice. 3 hours each term.

Application of the technical phases of accountancy. Professional training in practical accounting theory and auditing. Prerequisite: BA 483, 484, 485. Required of accounting majors. Monday. Janney.

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General Business Courses

Lower-Division Courses

- BA 221. Elements of Organization and Production.** 3 hours fall.
Principles of management as applied to commercial and industrial concerns. Friday. Ziebarth.
- BA 222. Elements of Finance.** 3 hours spring.
The financial problems of corporations. Organizations of corporations; how they obtain long-term funds; management of working capital; distribution of securities. Required of all majors. Prerequisite: BA 111, 112, 113 or consent of instructor. Thursday. Ballaine.
- BA 223. Elements of Marketing.** 3 hours winter.
Methods, policies, and problems. Private and cooperative channels, auctions, exchanges, middlemen; demand creation, assembly, standardization, packaging, financing, risk taking, distribution. Required of all majors. Thursday. Ballaine.

Upper-Division Courses

- BA 323. Office Organization and Management.** 2 hours spring.
Elements of office organization, office management, office records and systems. Special study of the office manager as an executive, and his qualifications. Prerequisite: consent of instructor. Monday. Wallsinger.
- BA 339. Principles of Advertising.** 3 hours fall.
Advertising as a factor in the distribution process; the advertising agency; the "campaign"; the function of research and testing; the selection of media—newspapers, magazines, broadcasting, outdoor advertising, direct mail, Thursday. Summers.
- BA 407, 507. Seminar in Business Problems: Credit Unions.** (G) 3 hours spring.
An introductory course in credit union management and operation technique. History of credit union development. The position of credit unions in current economic development. Basic differences between federal and state charters. Examination of typical by-laws. Organization procedures under federal and state charters. Duties and responsibilities of officers. Bookkeeping procedure. Preparation of monthly and annual reports. Figuring interest in a credit union. A non-technical course with seminar for officers and directors of existing credit unions who desire to discuss advanced projects in connection with their present operations. Wednesday. Stout.
- BA 411. Business Public Relations.** 3 hours fall.
Public relations of business firms; tools and techniques for determining public reactions; methods of securing good public relations. Open to non-majors with consent of instructor. Tuesday. Chappel.
- BA 412. Personnel Management.** (G) 3 hours fall.
The place and significance of personnel management in the modern business organizations; personnel policies and practices conducive to good relations with employees. Personnel problems of small organizations. Prerequisite: BA 222, 223, or consent of instructor. Friday. Ford.
- BA 413. Wage and Salary Administration.** (G) 3 hours winter.
Systematic wage and salary program as an essential part of an efficient personnel program. Basic methods for determining individual wage rates and wage structures; job evaluation. Prerequisite: BA 412. Wednesday. Ford.
- BA 414. Problems in Personnel Management.** (G) 3 hours spring.
Specific personnel problems at various organization levels. Each student proposes solutions, and group solutions are attempted through class discussion, in the light of various viewpoints and sound personnel principles. Prerequisite: BA 411, BA 412, and consent of instructor. Monday. Ford.

BA 416, 417, 418. Business Law. 3 hours each term.

Application of fundamental legal principles to typical business situations; illustrated by selected cases. The following topics are considered: contracts, bankruptcy, insurance, suretyship, sales, agency, personal property, real property, business organizations, partnerships, corporations, associations, trusts, joint stock companies, negotiable instruments. Section I: Tuesday. Section II: Wednesday. Collier.

BA 421. Principles of Business Education. (G) 3 hours spring.

Aims and objectives of business education; history, trends, issues; curriculum construction at high-school and junior-college levels; instructional problems; research in business education. Prerequisite: senior standing and consent of instructor. Thursday. Smith.

BA 425. Real-Estate Fundamentals. (G) 3 hours fall.

Problems relating to the purchase, transfer, lease, and financing of land and buildings; home building, site selection, principles of house-and-lot evaluation. Open to non-majors. Thursday. Johnson.

BA 426. Real-Estate Practice. (G) 3 hours spring.

Application of the principles of land and building management from the standpoint of the broker and owner-operator; real-estate practices and institutions. Prerequisite: BA 425. Thursday. Johnson.

BA 427. Real-Estate Appraising. (G) 3 hours winter.

Specific factors affecting the value of land and buildings; the effect of city structure, zoning and city planning; demonstrations of various techniques in appraising; preparation of an appraisal report. Prerequisite: BA 425. Thursday. Johnson.

BA 429. Production Management. (G) 3 hours winter.

Nature and scope of production processes; economics, technological, regional, and managerial organization of production; plant location; design and layout; control of plant investment; working-capital investment and labor costs; planning production operations. Prerequisite: BA 111, 112, 113; BA 222, 223. Friday. Ziebarth.

BA 435. Sales Management. (G) 3 hours fall.

Structure of sales organizations; sales policies; control of sales operations; sales planning; market analysis; coordination of production and sales; section, training, and management of salesmen. Prerequisite: BA 223 or consent of instructor. Friday. Richins.

BA 436. Retail Store Management. (G) 3 hours winter.

Retail policies and problems. Stock-control systems, buying, methods of sales promotion, plant operation, personnel, credit, turnovers, pricing, expense classification and distribution. Prerequisite: BA 223 or consent of instructor. Friday. Richins.

BA 437. Credits and Collections. (G) 3 hours fall.

The credit and collection policies of wholesale concerns, retail firms, and banks. The sources of credit information, the use of agency reports, interpretation of financial statements; collection tools and their uses. Prerequisite: BA 222, 223, or consent of instructor. Thursday. Ballaine.

BA 441. Radio-Television Advertising. (G) 3 hours spring.

A study of the principles of radio and television advertising and of the techniques involved. The place of radio and television in modern advertising; methods of measuring circulation, planning campaigns, writing copy, checking results. Prerequisite: BA 339 or consent of instructor. Friday.

BA 442. Principles of Salesmanship. (G) 3 hours spring.

Principles and techniques of personal salesmanship; selling reactions. From the standpoints of seller and buyer. Prerequisite: BA 223 or consent of instructor. Friday. Richins.

BA 453. Business Policy. (G) 3 hours spring.

Coordination of the specialized work given in the school; the interdependence of different departments of a business concern. Open to upper-division majors who have had or are taking business law. Prerequisite: BA 222, 223; Ec 201, 202, 203. Friday. Ziebarth.

BA 454. Casualty Insurance. (G) 3 hours spring.

Organization of companies, risks covered, and contracts, in accident insurance of all types. Automobile, plate glass, elevator, public liability, steam boiler, burglary, robbery, forgery, etc. Wednesday. Trueblood.

BA 455. Life Insurance. (G) 3 hours fall.

Types of life insurance, contracts, rate making, reserves, selections of risks, life insurance and the state. Prerequisite: consent of instructor. Wednesday. Trueblood.

BA 456. Property Insurance. (G) 3 hours winter.

Nature of coverage, types of underwriters, types of contracts; analysis of the policy contract, special endorsements and factors determining rates and adjustment of losses. Prerequisite: consent of instructor. Wednesday. Trueblood.

BA 463, 464, 465. Investments. 3 hours each term.

Methods for evaluating various kinds of investment securities; formulation of an investment policy. Detailed study of the special phases of investments including taxation, brokerage services, and security markets. Application of investment principles to the analysis of specific securities in the industrial, public-utility, and railroad fields. Monday. Eklem.

BA 467. Public-Utility Management. (G) 3 hours fall.

Production, distribution, and finance problems of public utilities; rates, accounting methods, flotation of securities, public relations, and consolidations. Prerequisite: BA 222, 223 or consent of instructor. Wednesday. Conkling.

BA 497. Human Relations in Business and Industry. (g) 3 hours spring.

Relationships among managerial, supervisory and other workers; actual cases used to help develop attitudes, frames of reference, and approaches which will be useful in solving human relations problems in business. Prerequisite: senior standing or consent of instructor. Monday. Ford.

See Also:

Ec 201, 202, 203. **Principles of Economics** (under Economics).

Wr 214. **Business English** (under English—Writing).

Sp 225, 226. **Public Speaking for Business and Professional Men and Women** (under Speech).

Chemistry

Associate Professor: JOHNSON

Lower-Division Courses

Ch 104, 105, 106. General Chemistry. 4 hours each term.

Standard first-year college chemistry. Prerequisite: adequate background in mathematics. Lecture: Wednesday, 6:45-9:25. Laboratory: Thursday, 6:45-9:15.

Ch 232, 233. Quantitative Analysis. 4 hours each term winter and spring.

Fundamental principles and laboratory practice. Prerequisite: one year of chemistry. Lecture: Tuesday, 6:45-9:25. Laboratory: Thursday, 6:45-9:15.

Drama

(See SPEECH)

Economics

Professor : NELSON

Assistant Professors : CAMPBELL, HALLEY, WATTLES

Instructor : ROBBINS

Lower-Division Courses

Ec 201, 202, 203. Principles of Economics. 3 hours each term.

Principles that underlie production, exchange, distribution, etc. Prerequisite: sophomore standing. Wednesday.

Upper-Division Courses

Ec 318. Money and Banking. 3 hours fall.

Operations of commercial banks, the Federal Reserve System, and the Treasury which affect the United States monetary system. Prerequisite: Ec 201, 202, 203 or consent of instructor. Tuesday. Nelson.

Ec 319. Public Finance. 3 hours winter.

Principles and problems of government financing. Expenditures, revenues, debt, and financial administration. Prerequisite: Ec 201, 202, 203 or consent of instructor. Tuesday. Nelson.

Ec 320. International Finance. 3 hours spring.

The nature of foreign-exchange markets; techniques of international payments; exchange rates and their determination; problems of an international monetary standard; international banking facilities; economic aspects of major international organizations. Prerequisite: Ec 201, 202, 203 or consent of instructor. Thursday. Wattles.

Ec 375, 376, 377. Economic Theory. 3 hours each term.

Systematic study of the concepts and methods of current economic analysis, with special attention to the neoclassical school. Includes work in the fields of value and distribution, fluctuations, employment, etc. Required of all majors. Prerequisite: Ec 201, 202, 203. Wednesday. Halley.

Ec 450, 451. Comparative Economic Systems. (g) 3 hours winter.

An analytical comparison of capitalism and other economic systems. Prerequisite: Ec 201, 202, 203. Thursday. Wattles.

Ec 451, 452. Comparative Economic Systems. (g) 3 hours spring.

An analytical comparison of capitalism and other economic systems. Prerequisite: Ec 201, 202, 203. Thursday. Campbell.

Education

Professors : CAUGHLAN, EPLER, KILLGALLON, JACOBSON, SPALDING, ZERAN.

Associate Professors : BERNARD, FERRIER, HUMMEL, PHELPS.

Assistant Professors : ANDERSON, BREWER, CHENEY, HUDSON, LEAVITT, WAGNER.

Instructors : GREENSLADE, LEŽAK, LOTTICK, MORRISON, SCHAPER, TAYLOR.

Upper-Division Courses

Ed 311. The School in American Life. 3 hours fall.

Introduction to the field of education, including a historical survey of the American public-school system; importance of public education in the life of the republic; relation of the school to other professions; opportunities for service in the principal fields of educational work; current issues in American education; and the desirability of having a working philosophy of education. Friday.

Ed 312. Psychology of Learning and Teaching. 3 hours winter or spring.

A consideration of the nature of the learner, changes which occur in learning processes, conditions under which learning best takes place and the character-

istics and methods of the teachers who direct learning in the school. Basic concepts of measurement are utilized to evaluate the changes which characterize learning. Field experiences supplement theoretical study. Winter: Friday. Spring: Thursday. Bernard.

Ed 313. Principles of Teaching. 3 hours spring.

Different methods of presentation of subject-matter; values and weaknesses of each method; individual and group differences; extracurricular activity programs; measuring the results of teaching. Prerequisite: Ed 311, 312. Friday. Phelps.

Ed 316. Oregon School Law and System of Education. 2 hours any term.

Analysis of the Oregon school system and of the laws on which the system is based. Problems of Oregon schools, plans proposed for their solution, and trends in educational development in the state. Fall and Winter: Friday. Spring: Wednesday.

Ed 344. Physical Education in the Elementary Grades. 3 hours spring.

Theory and practice in rhythm; singing games, group and folk dancing; stunts, games, self-testing activities, tumbling; materials; planning and evaluating programs with reference to basic principles of physical education. Monday. Hudson.

Ed 351. Health Education. 2 hours winter.

Teaching of health education with emphasis on health knowledge, health attitudes, and health habits of school children, and the development of a health-service program. Special study of the state health-education program. Prerequisite: Sc 101, 102, 103; H 150, or consent of instructor. Monday. Greenslade.

Ed 357. Methods in Reading. 3 hours fall.

The place of reading in the modern elementary school. Trends and practices in reading instruction and prevention of reading difficulties. A study of appropriate materials and methods. Prerequisite: Ed 311, 312, and Psy 311. Tuesday. Phelps.

Ed 358. Methods in Science and Mathematics. 3 hours winter.

Science and mathematics in the elementary schools. Methods in the area of science include experiments, demonstrations, trips, and instructional materials. Trends and practices in the teaching of mathematics. Emphasis will be placed upon basic principles, research studies, problem solving, and the utilization of life situations. Prerequisites: Ed 311, 312, and Psy 311. Tuesday. Leavitt.

Ed 359. Methods in Language Arts and Social Studies. 3 hours spring.

Trends and practices in listening, speaking, spelling, handwriting and English. Educational objectives of social studies and social problems of elementary school pupils. Organization and planning of the instructional program for the elementary grades. Attention will be given to appropriate methods and materials in language arts and social studies. Prerequisites: Ed 311, 312, and Psy 311. Tuesday.

Ed 405. Reading and Conference. Terms and hours to be arranged.

Ed 406. Problems in Education. (Story Telling). 2 hours spring.

Materials, techniques, and principles underlying the presentation of poetry and stories for very young children, with actual practice under supervision in their presentation. Thursday.

Ed 406. Problems in Education. (Play Therapy). 3 hours spring.

See Ed 506.

Ed 407. Education Seminar: Survey of the Radio and Television Field. 3 hours fall.

See Ed 507.

Ed 408. Special Teaching Methods. 1to 3 hours any term.

Six hour maximum allowed toward education requirement for certification. Not more than 3 hours credit may be earned in any one field. Prerequisite: Ed 311, 312, 313.

Ed 410. Methods and Research Materials. (G) 3 hours.

Emphasis for graduate students will be placed upon recent research and literature dealing with instructional materials, methods, and facilities, including the completion of a special project. Maximum 6 hours undergraduate and 9 hours graduate credit.

Arithmetic. Fall. Wednesday.

Reading. Fall or spring. Monday. Phelps.

Science. Winter. Wednesday.

Social Science. Spring. Wednesday. Schaper.

Ed 424. Measurement in Education. (G) 3 hours fall or spring.

Use and interpretation of informal and standardized tests as supervisory and guidance instruments for the diagnosis, analysis, evaluation, and improvement of instruction in the elementary and secondary schools. Test planning, item writing, essay testing, administration and scoring, analysis of scores and grade assignment. Simple statistics of test interpretation. Tuesday.

Ed 435. Audio-Visual Aids. (G) 3 hours winter.

The development and use of audio-visual aids in education. Emphasis on actual learning situations in which radio, recordings, films, slides, pictures, maps, charts, etc., are utilized. Sources of materials and equipment; administration of audio-visual program. Friday. Section I: Brewer. Section II: Lottick.

Ed 451. Preprimary Education. (G) 3 hours fall.

An evaluation of the preprimary period in terms of the opportunities it affords to build up good attitudes toward school life, to help the child adjust himself to the group, to build up good habits of work, and to develop a readiness for subjects in the first-grade curriculum, such as reading, numbers, and language. Thursday.

Ed 460. Psychology of Infancy and Childhood (G)

(Dropped from Curriculum) *See* Psy 460.

Ed 461. Psychology of Adolescence (G).

(Dropped from Curriculum) *See* Psy 461.

Ed 462. Psychology of Exceptional Children. (G) 3 hours spring.

Survey of characteristics and problems of all types of exceptional children, with special emphasis on those with sensory handicaps; consideration of essential educational adaptations. Monday. Taylor.

Ed 463. The Maladjusted Child. (G) 3 hours winter.

The discovery and treatment of the emotionally and socially maladjusted child; the home, school, and community in relation to the child's mental health. Wednesday.

Ed 464. The Mentally Handicapped Child. (G) 3 hours spring.

Identification and guidance of the mentally deficient, the slow learner, and the gifted. Wednesday. Morrison and staff.

Ed 465. Diagnostic and Remedial Techniques. (G) 3 hours winter.

See Ed 468.

Ed 467. Applied Mental Hygiene. 3 hours fall or spring.

A study of the development of personality, personality conflicts, mechanisms of adjustment, and the basic principles of mental hygiene. Emphasis is placed on application of mental hygiene principles to personality development of teachers and of children. Wednesday. Bernard.

- Ed 468. Diagnostic and Remedial Instruction in Reading.** (G) 3 hours winter.
Opportunities for experienced teachers to consider the typical causes of difficulty in the reading program and to evaluate procedures to be used in remedial classes by means of lectures, demonstrations, readings, and case studies. This course is essentially the same as Ed 465. Students may register for Ed 465 if they prefer. Thursday. Phelps.
- Ed 471. School Finance.** (G) 3 hours winter.
See Ed 575.
- Ed 472. Principles and Practices in Curriculum Construction.** (G) 3 hours winter.
See Ed 566.
- Ed 473. Administration of the Elementary School.** (G) 3 hours fall.
See Ed 554.
- Ed 474. Supervision of the Elementary School.** (G) 3 hours spring.
See Ed 574.
- Ed 478. Improvement of Instruction in Reading.** (G) 3 hours fall or spring.
See Ed 537.
- SEd 481. Alcohol Studies in the School Curriculum.** (G) 3 hours winter.
Incorporation of scientific information about alcohol in the school curriculum; physiological, psychological, sociological, and legal aspects of alcoholism. Thursday. Ferrier.
- Ed 484. Junior High School.** (G) 3 hours winter.
Development of the junior high school, its purposes and objectives. The general organization of the school; courses of study; present practices in leading representative junior high schools; the direction of classroom activities; provision for individual differences; pupil guidance, and socialization. Monday. Leavitt.
- Ed 485. Principles and Practices of Guidance Services.** (G) 3 hours fall.
Overview of guidance and personnel work. Attention given to vocational, educational, health, social, personality, recreational, and other aspects of individual development. Participation of teachers, counselors, administrators, parents, and community organizations in a program of guidance. For all teachers and administrators. Students specializing in guidance should begin with this course. Prerequisite: senior standing. Tuesday. Zeran.
- Ed 486. Occupational and Educational Information.** (G) 3 hours winter.
Materials available regarding occupations; interpretations of present trends; value and usefulness for high-school and college students. Prerequisite: senior standing. Tuesday. Cheney.
- Ed 487. Counseling Techniques.** (G) 3 hours spring.
Mental, achievement, trade, and other tests; administration of such tests; classifications, methods in educational and vocational counseling. Prerequisite: Ed 485. Tuesday.
- Ed 490. Social Education.** (G) 3 hours winter.
Structure and functioning of society, as a background for the study and evaluation of education in its varied forms; the contribution of sociological principles and findings to the improvement of educational practices. Wednesday. Epler.

Graduate Courses

- Ed 501. Educational Research.** Terms and hours to be arranged.
Prerequisite: graduate standing in education; consent of instructor. The Master of Education candidate will work with an instructor assigned by the Dean upon recommendation of his major adviser.

Adult Education	Caughlan
Curriculum.....	Leavitt, Spalding
Educational Psychology.....	Bernard
School Administration.....	Hummel, Leavitt, Phelps, Spalding
Secondary Education.....	Hummel, Spalding
Elementary Education.....	Leavitt, Phelps

Ed 501. Educational Research (Field Study). Terms and hours to be arranged.

(See Ed 501 Educational Research for areas.)

Field study for graduate students who plan to take the Master of Education degree from the University of Oregon. Staff.

Ed 503. Thesis. Terms and hours to be arranged.

Ed 505. Reading and Conference. Terms and hours to be arranged.

Ed 506. Special Individual Studies. Maximum of 6 hours. Terms and hours to be arranged.

(See Ed 501 Educational Research for areas.)

Registration only after adviser's approval of student's project.

Ed 506. Play Therapy. 3 hours spring.

An introduction to the theory and methods of play therapy. Emphasis on the observation, analysis, and interpretation of children's behavior both in and out of play situations to help the student develop skill in awareness and understanding of emotional expression. By consent of instructor only. Monday. Lezak.

Ed 507. Education Seminar. 3 hours.

Problems of Public School Administration. Spring. Monday. Spalding.

Problems of Public School Supervision. Fall. Monday. Spalding.

Special Education. Spring. Thursday. Killgallon.

Unit Construction. Winter. Monday. Spalding.

Survey of the Radio and Television Field. Fall. Friday. Brewer.

Ed 512. Research Procedures in Education. 3 hours fall or spring.

Methods, techniques, and tools for doing research work; meaning of scientific method; ways of locating and formulating problems; necessary statistical tools; collections and interpretation of data; preparation of research reports. Friday. Fall: Leavitt.

Ed 518. Public and Professional Relations. 3 hours winter.

A consideration of the professional responsibilities and ethics of teachers as related to the lay public, related social agencies, and to the education profession. Procedures in group dynamics, public relations, advisory councils, working with parents and parent groups. Emphasis upon means of achieving the professionalization of teaching. Wednesday. Spalding.

Ed 522. Secondary-School Curriculum. 3 hours winter.

An advanced course for experienced teachers. The school in the community; guidance activities in the school; extra class activities; the role of the school in contemporary society; the teacher in the local community. Monday. Jacobson.

Ed 523. School Activities. 3 hours fall.

Theories involved in extra class activities; objectives organization, and supervision; student participation in social control; major and minor activities; problems of coordination, finance, and teacher personnel. Monday. Hearn.

Ed 526. High-School Counseling. 3 hours spring.

The purposes, techniques, and processes of counseling. Dynamics of adjustment and personality change. Methods of promoting emotional, educational, and occupational adjustment. Tuesday.

Ed 527. Secondary-School Administration and Supervision. 3 hours fall.

The secondary-school principalship; principles of administration, staff rela-

tionships, public relations, and professional growth; business administration; administration of guidance services, curriculum, and school activities; evaluation of the secondary school. Thursday.

Ed 529. Advanced Educational Psychology. 3 hours spring.

Review of some modern viewpoints in educational psychology; discussion of useful experimental material. Prerequisite: graduate standing in education. Tuesday.

Ed 534. Science in the Elementary School. 3 hours winter.

The place of science in the elementary school, with particular reference to the value of science in the lives of children. Selecting and organizing content; coordinating science with the elementary-school activities; methods and materials; rooms and equipment. Wednesday.

Ed 535. Social Studies in the Elementary School. 3 hours spring.

Social-education objectives; children's social problems; unit development; work-study skills; organization of the program, materials; research findings basic to the social education of children. For experienced teachers. Wednesday. Schaper.

Ed 537. Reading in the Elementary School. 3 hours fall or spring.

Nature of the reading process, objectives, organization of a desirable reading program; reading readiness, reading skills; procedures and materials for developing children's reading abilities; methods of diagnosing difficulties and evaluating progress; research findings concerning the teaching of children to read. This course is essentially the same as Ed 478. Students may register for Ed 478 if they prefer. Monday. Phelps.

Ed 538. Mathematics in the Elementary School. 3 hours fall.

Number abilities needed by children; research findings in mathematics education; designing number experiences; theories of teaching, desirable teaching procedures; selection and use of materials. Wednesday.

Ed 543. History of American Education. 3 hours winter.

Intellectual development of America with special reference to education. Prerequisite: graduate standing in education. Monday. Anderson.

Ed 546. Philosophy of Education. 3 hours fall.

Study of the broad fundamental principles and problems of education as evaluated by the various schools of philosophical thought. Monday.

Ed 552. Elementary-School Problems. 3-4 hours spring.

Selected current problems; issues and theories of elementary education; characteristics of modern teaching; major trends in elementary education, Tuesday. Leavitt.

Ed 553. Elementary-School Curriculum. 3-4 hours winter.

A systematic study of the elementary-school curriculum, including pupil needs in everyday life situations, objectives, essentials of a good program, varying curriculum designs, organization of learning experiences, evaluation of learning, and appraisal of newer curriculum practices. Tuesday.

Ed 554. Elementary-School Supervision and Administration. 3-4 hours fall.

The role, duties, needs, and problems of modern supervision, including the evaluation and improvement of the teaching-learning situation. Tuesday. Leavitt.

Ed 565. Curriculum Foundations. 3 hours fall.

Implication of basic social, philosophical, and psychological factors in curriculum planning and organization; historical background; techniques of curriculum planning. Wednesday. Spalding.

Ed 566. Curriculum Construction. 3 hours winter.

Survey and appraisal of curriculum patterns; state and city programs; courses of study in major subject areas; techniques of course-of-study planning. Thursday. Wagner.

Ed 567. Curriculum Materials. 3 hours spring.

Effective use and organization of curriculum materials; text and reference books, supplementary pamphlet material, films and slides, records and recordings, pictures, radio, etc.; techniques of unit construction and community survey. Thursday.

Ed 572. Public-School Administration. 3 hours fall.

Duties and responsibilities of school administrators. Relationships with board, staff, and community. Consideration of the professional and nonprofessional problems of school administration. Thursday. Spalding.

Ed 573. Public-School Organization. 3 hours winter.

The organizational patterns and programs of both elementary and secondary schools. Details of administration, including scheduling, records, and accounts, public accounting, personnel and guidance programs, activity programs, etc. Thursday. Spalding.

Ed 574. School Supervision. 3 hours spring.

Purposes and techniques of school supervision, as applied to both elementary and secondary schools. The organization of supervisory programs and diagnosis of both teacher and pupil difficulties. Monday. Leavitt.

Ed 575. School Finance. 3 hours winter.

The problems of school finance and business management; sources of school income, relationship to the state financial structure; budgeting and accounting, as effected by the school program. Construction of a budget is a part of the course. Tuesday. Hummel.

Ed 576. School Buildings. 3 hours fall.

A study of the problems involved in planning, financing, and construction of school buildings; the care and maintenance of buildings; problems of equipment. An analysis of problems in a specific district is a part of the course. Tuesday. Hummel.

Ed 587. Adult Education. 3 hours fall.

History and philosophy of the adult-education movement; its aims, ranging from the specifically vocational to the cultural. Representative work and methods in adult education. Wednesday.

In-Service Training Courses

PORTLAND PUBLIC SCHOOLS

Instructors: BENTALL, DOBSON, HALVORSEN, HAMILTON, HENRIKSEN, HICKS, HILL, JENNE, LOGAN, MCGILL, MEADOR, O'REILLY, STOTLER, TRENHOLME, WILSON, ZOLLINGER.

The following courses, arranged in cooperation with the Portland Public Schools, are given for in-service training of Portland teachers. They also are open to other qualified students. Unless otherwise indicated, all the classes are held Tuesday afternoon, from 4:30 to 6:15.

Lower-Division Courses

Mus 127. Introduction to Music Literature (Appreciation of Music). 2 hours winter.

A non-technical study of the development of music, stressing the elements of musical understanding, study of representative compositions with emphasis on their musical and historical significance. (This course is designed for elementary homeroom teachers and secondary teachers who teach music appreciation at the 9th grade level.)

Ph 161. Rudiments of Photography. 2 hours spring.

Planned for beginners in photography. The topics covered include cameras,

printing, enlarging, developing, composition, materials, and lighting. Opportunities for field trips and print clinics will be provided. Limited to 20. Trenholme.

PE 283. Dance for the Elementary School. 2 hours any term.

Programs of dance for kindergarten and primary school children. Locomotor skills, imitative movements, singing games, simple folk dances, dramatizations, and creative dance studies. Fall: Richmond; Winter: Shattuck; Spring: Ockley Green. Hill.

Upper-Division Courses

AA 311. Creative Arts and Crafts for the Elementary Teacher. 2 hours spring.

Studio projects, discussions, and observations to give practical approach to arts and crafts instruction at pre-school and elementary-school levels. Halvorsen.

A 318. Painting. 2 hours winter.

Instruction in use of oil or water color. Study in light, color, texture, and space relations. Prerequisite: consent of instructor. Halvorsen.

A 352. Art in Environment. 2 hours fall.

Halvorsen.

Ed 316. Oregon School Law and System of Education. 2 hours winter or spring.

Analysis of the Oregon School System and of the laws on which the system is based. Problems of Oregon schools, plans proposed for their solution, and trends in educational development in the state. Required for teacher's certificate in Oregon.

Ed 351. Health Education. 2 hours winter or spring.

Teaching of health education with emphasis on the health knowledge, health attitudes, and health habits of school children, and the development of a health service program. Special study of the state health education program. Logan.

***Ed 357a. Methods in Reading.** 2 hours fall.

***Ed 357b. Methods in Reading.** 1 hour winter. (Total of 3 hours required).

Designed to acquaint students with modern teaching procedures and materials, and to provide opportunity for application of sound psychological principles to guidance of children's learning. Class discussion, observations in the training schools, and organization of teaching materials. Prerequisite: Ed 354 or Ed 311, or consent of instructor. Hamilton and staff.

***Ed 358. Methods in Science and Mathematics.** 2 hours spring.

Designed to acquaint students with modern teaching procedures and materials, and to provide opportunity for application of sound psychological principles to guidance of children's learning. Class discussion, observations in the training schools, and organization of teaching materials. Prerequisite: Ed 354 or Ed 311, or consent of instructor. Hamilton and staff.

***Ed 359a. Methods in Language Arts and Social Studies.** 1 hour winter.

***Ed 359b. Methods in Language Arts and Social Studies.** 2 hours spring. (Total of 3 hours required).

Designed to acquaint students with modern teaching procedures and materials, and to provide opportunity for application of sound psychological principles to guidance of children's learning. Class discussion, observations in the training schools, and organization of teaching materials. Prerequisite: Ed 354 or Ed 311, or consent of instructor. Hamilton and staff.

* To complete elementary methods certification requirements students will need a total of eight hours of elementary methods as follows: Ed 357—3 hours; Ed 358—2 hours; Ed 359—3 hours.

- Ed 407. Education Seminar: Organization and Administration of Instructional Materials (For Instructional Materials Coordinators).** 2 hours fall.
Problems and methods in selecting and organizing materials for classroom teacher use. Emphasis will be placed on research and the class will be expected to complete a special project. Limited to 20 and consent of instructor. Department of Instructional Materials. Trenholme.
- Ed 407. Education Seminar: Teaching of High School English.** 2 hours winter.
Emphasis on literature. Zollinger.
- Ed 408. Methods and Materials in Industrial Arts.** 2 hours winter or spring.
Problems and methods in selecting and organizing materials for instruction; comparison and evaluation of methods, laboratory techniques, supplies, equipment; economy of time and materials. Glenhaven School. Henriksen.
- Ed 408. Methods and Materials: Driver Education.** 2 hours fall.
An informational approach to driver education, including the basic materials, methods, and objectives for teaching classroom driver education at the high school level. Intended for mature teachers, already experienced in general teaching methods and in safe operation of the automobile. Class meets on Thursday, 7:15 p.m., Curriculum Laboratory, School Administration Building, 631 N. E. Clackamas Street. Leader of group—Logan. Assisted by a staff of specialists under the direction of Mr. Paul Warren, state supervisor of driver education.
- Ed 410. Methods and Research Materials. (G)** 2 hours.
Emphasis for graduate students will be placed upon recent research and literature dealing with instructional materials, methods, and facilities, including the completion of a special project.
Physical Education. Fall. At Jefferson. Jenne.
Primary Mathematics. Winter.
Primary Music. Winter.
Social Studies. (Elementary). Winter.
Intermediate, Upper, High School Mathematics. Spring.
Physical Education. Spring. At Cleveland. Jenne.
Social Studies (Secondary). Spring.
- Ed 435. Audio-Visual Aids. (G)** 2 hours winter.
The development and use of audio-visual aids in education. Emphasis on actual learning situations in which radio, recordings, films, slides, pictures, maps, charts, etc., are utilized. Source of materials and equipment; administration of audio-visual program. Limited to 20. Trenholme.
- Ed 468. Diagnostic and Remedial Instruction in Reading.** 2 hours winter.
Opportunities for experienced teachers to consider the typical causes of difficulty in the reading program and to evaluate procedures to be used in remedial classes by means of lectures, demonstrations, readings, and case studies. Bentall.
- Ed 478a. Improvement of Instruction in Reading. (G)** 2 hours fall.
- Ed 478b. Improvement of Instruction in Reading. (G)** 1 hour winter. (Total of 3 hours required.)
Intensive study of the classroom teacher's responsibility in the teaching of reading in the elementary grades. General plan developed for teaching children of a given grade as a unit. Attention directed to the smaller groups which compose the unit, such as: mentally and scholastically retarded; the neglected and unadjusted; children with physical handicaps. Stress will be placed on readiness at each level, and use of phonics, children's interest, selection of material, diagnostic and remedial procedures for classroom use. (May be used by teachers who have completed four hours of either Ed 358 or Ed 359 and need additional hours for certification.) Hamilton and staff.
- Ed 485. Principles and Practices of Guidance Services. (G)** 2 hours winter.
Overview of guidance and personnel work. Attention given to vocational, edu-

cational, health, social, personality, recreational, and other aspects of individual development. Participation of teachers, counselors, administrators, parents, and community organizations in a program of guidance. For all teachers and administrators. Students specializing in guidance should begin with this course. Prerequisite: Senior standing. Dobson and McGill.

Ed 507. Seminar: Intermediate Science. 2 hours winter.

Problems in science will be selected by the group and the problem-solving approach will be used. Materials will be available and teachers may work on an aspect of the problem at their level of teaching. Curriculum Center, Administration Building. Stotler and staff.

Ed 507. Seminar: Upper Grade Science. 2 hours spring. Stotler.

Ed 508. Curriculum Workshop. 2 hours fall.

There will be a city-wide workshop for elementary teachers. Groups will be organized for each grade level. A Home Economics Workshop will be offered fall term. Hamilton and staff.

H 358. First Aid. 2 hours fall or spring.

First aid for emergency treatment of injuries, with emphasis on the use of knowledge as applied in everyday life and in school situations. Red Cross certificates are given. Class will meet on Thursday, 4:15 p.m. Lincoln High School. Hicks.

HE 358. Safety Education. 2 hours fall or spring.

Designed to develop competencies in skills and knowledge for meeting individual and mass emergency situations; also to prepare teachers to present this unit in their classes. Safety problems in the community; first aid procedures; emergency procedures; safety phases of civil defense program. Minimum: 20 students. Meador and staff.

HEd 507. Seminar: Home and Community Experiences. 2 hours spring.

Developing techniques for tying together school, home and community experiences in the Home Economics instructional program. Action research activities by individual teachers paralleling in-class activities. O'Reilly.

HEd 507. Seminar: Evaluation of Homemaking Instruction. 2 hours winter.

Evaluation in homemaking education. Planning evaluation as an integral part of the homemaking instructional program; identifying significant evidences of desirable growth; developing instruments to implement continuous, comprehensive evaluation; collecting and systematically recording evidences; studying implications of evidences of growth for guiding pupil learning. O'Reilly.

Hst 377. Oregon History. 2 hours winter or spring.

Brief survey of the building of civilization in the Oregon Country. Required for teacher's certificate in Oregon.

Mu E 332. Stringed Instruments. 1 hour winter.

A study of the stringed instruments of the Symphony Orchestra. (This course is offered especially for vocal teachers who are interested in qualifying themselves for full-time combination vocal and instrumental positions in elementary schools.) Wilson.

PE 386. Dance and Physical Education Laboratories. 2 hours winter.

Instruction and practice in intermediate and upper-grade elementary and high school rhythms. Holladay Auditorium. Jenne.

MULTNOMAH COUNTY SCHOOLS

Instructor: MARTIN

The following courses, arranged in cooperation with the Multnomah School Health Agency, will be offered at Russellville school, 124 S. E. 102nd Avenue, Portland and East Gresham Grade school, Spruce and Metzger streets, Gresham.

All classes will meet from 4:00 to 6:45 p.m. Classes at Russellville will meet on Tuesday. Classes at Gresham will meet on Thursday.

Upper-Division Courses

- Psy 460. Psychology of Infancy and Childhood.** (g) 3 hours fall.
(See Psychology offerings for description.)
- Psy 461. Psychology of Adolescence.** (g) 3 hours winter.
(See Psychology offerings for description.)
- Ed 462. Psychology of Exceptional Children.** (G) 3 hours spring.
(See Education offerings for description.)

Engineering

Professor: HOLCOMB

Assistant Professor: CLAYTON

Lower-Division Courses

- GE 011. Graduate Engineers Review.** Non-credit. Fall.
Designed to prepare civil and electrical engineering graduates for examinations administered by the Board of Engineering Examiners of Oregon. 6:45-9:25. Section I: (Civil Engineers) Wednesday. Clayton. Section II: (Electrical Engineers) Monday.
- GE 104, 105, 106. Engineering Fundamentals.** 3 hours each term.
Basic concepts and principles of physical science; elementary technical problems, algebraic composition; training in use of slide rule. One lecture; 2 three-hour computation periods. Tuesday and Thursday, 6:45-9:25.

Upper-Division and Graduate Courses

- CE 382a, 382b. Structural Analysis.** 2 hours each term fall and winter.
Graphical and algebraic analysis of statically determinate structures. *Students may register for one additional hour of CE 405, Reading and Conference (Structural Analysis) concurrently.* Wednesday. Holcomb and staff.
- CE 405. Reading and Conference (Structural Analysis).** 1 hour each term fall and winter.
Wednesday. Holcomb and staff.
- CE 405. Reading and Conference.** Subjects and hours to be arranged.
- EE 405, 505. Reading and Conference.** Subjects and hours to be arranged.
- IE 405, 505. Reading and Conference.** Subjects and hours to be arranged.
- ME 405, 505. Reading and Conference.** Subjects and hours to be arranged.
See Also: CHEMISTRY, PHYSICS, MATHEMATICS.

English

Professors: COLLIER, FRANCHERE, POWERS

Associate Professors: DAHLSTROM, HENKLE, OLIVER

Assistant Professors: BOGGS, GAUPP, LITCHFIELD

Instructors: SCHARBACH, SCHULTZ

Literature

Lower-Division Courses

- Eng 041, 042, 043. Literature for Business and Professional Men and Women.** Non-credit each term.
Readings and discussions of significant literature, both past and present. Wednesday, 6:45-9:25. Franchere.

Eng 101, 102, 103. Survey of English Literature. 3 hours each term.

From Beowulf to the present. Fall: Beowulf to Milton; Winter: Milton to Byron; Spring: Byron to the present. Thursday. Franchere.

Eng 107, 108, 109. World Literature. 3 hours each term.

A sequence in narrative prose, drama, and poetry. Complete books are studied so that the student may be familiar with some of the masterpieces in Western world literature. Saturday, 9:00-11:40 a.m. Boggs.

Eng 201, 202, 203. Shakespeare. 3 hours each term.

Study of the important plays, comedies, histories, and tragedies. Required for majors. Tuesday. Dahlstrom.

Eng 261, 262, 263. Survey of American Literature. 3 hours each term.

American literature from its beginning to the present day. Two consecutive terms required to satisfy the high-school teaching field requirement. Monday. Oliver.

Upper-Division Courses

Eng 388. Children's Literature and Library. 3 hours fall.

Designed to give an acquaintance with good books and magazines for children and procedures in introducing them to children. Experience with and knowledge of school library procedures. Friday. Henkle.

Eng 391, 392, 393. American Novel. 3 hours each term.

Development of the American novel from its beginnings to the present. Wednesday. Oliver.

Eng 398, 399. Contemporary Drama. 3 hours each term winter and spring.

First term: English and continental romantic drama, the new stage realism, melodrama, and the triumph of naturalism with Ibsen and the Russians; second term: English and American dramatists from Wilde, Shaw, and Galsworthy to O'Neill, Robert Sherwood, Thornton Wilder, and Christopher Fry. Tuesday. Franchere.

Eng 405. Reading and Conference. Terms and hours to be arranged.

Eng 430, 431, 432. Literature of the Renaissance. (g) 3 hours each term.

Fall: Renaissance thought; Winter: Renaissance epic and prose narrative; Spring: English lyric from Wyatt to Herrick. Thursday. Dahlstrom.

Eng 488. Literature for Teachers. (g) 3 hours fall.

For students interested in teaching high-school English. Training in comprehension and analysis of representative literary works. Readings from English and American literature, selected in part from state-adopted high-school texts. Will not apply toward the satisfaction of the minimum requirements for a major in English. Tuesday. Franchere.

Graduate Course

Eng 505. Reading and Conference. Terms and hours to be arranged.

Writing

Lower-Division Courses

Wr 111, 112, 113. English Composition. 3 hours each term.

The fundamentals of English composition and rhetoric; frequent written themes. Special attention to correctness in fundamentals and to the organization of papers.

FALL: Wr 111. (Section I) Monday. Collier.
Wr 111. (Section II) Tuesday. Scharbach.
Wr 111. (Section III) Wednesday. Boggs.
Wr 111. (Section IV) Thursday. Schultz.

WINTER: Wr 111. (Section I) Thursday. Schultz.
 Wr 112. (Section I) Monday. Collier.
 Wr 112. (Section II) Tuesday. Scharbach.
 Wr 112. (Section III) Wednesday. Boggs.

SPRING: Wr 112. (Section I) Thursday. Schultz.
 Wr 113. (Section I) Monday. Collier.
 Wr 113. (Section II) Tuesday. Scharbach.
 Wr 113. (Section III) Wednesday. Boggs.

Eng 211. Vocabulary Building. 3 hours fall.

Through analysis of words and meanings in context, seeks to increase vocabulary, reading comprehension, and effective use of language. Thursday. Collier.

Wr 214. Business English. 3 hours winter or spring.

Study of modern practices in business correspondence, primarily for students of business administration. Analysis and writing of the principal types of correspondence. Prerequisite: Wr 111, 112, 113. Thursday. Collier.

Upper-Division Courses

Wr 321, 322, 323. Play Writing. 3 hours each term.

Creative experiment in the writing of plays, with incidental study of models. Analysis and discussion of student work. Prerequisite: consent of instructor. Monday. Gaupp.

Wr 324, 325, 326. Short-Story Writing. 2 hours each term.

For students interested in creative writing, or in professional writing for magazines. Prerequisite: consent of instructor. Wednesday. Powers.

Wr 354, 355. Advanced Creative Writing. 2 hours each term fall and winter.

Writing in the various forms to provide increased ease, certainty, and force in written expression. A continuation, with emphasis on effectiveness and craftsmanship, for those who have taken lower-division courses in rhetoric. Prerequisite: consent of instructor. Thursday. Powers.

Wr 451. Projects in Writing. 3 hours spring.

For students who desire advanced instruction and practice in writing in the short-story, novel, or nonfiction form. Prerequisite: consent of instructor. Thursday. Powers.

Foreign Languages

Instructors: HERMAN, KRAFT, KRIVOSHEIN, PETERS

French

Lower-Division Courses

RL 1a, 1b, 2a. First-Year French (First Course). 2 hours each term.

Provides an introduction to grammar and practice in reading modern prose; considerable practice in pronunciation and opportunity for understanding the spoken language. Monday.

RL 2b, 3a, 3b. First-Year French (Second Course). 2 hours each term.

Reviews and extends the knowledge of grammatical principles and the irregular verbs. Exercise in pronunciation and study of idioms used in conversation. Reading of simple texts and sight work to develop in the student ability to read easy French without recourse to English. Wednesday.

RL 101a, 101b, 102a. Second-Year French (First Course). 2 hours each term.

Study of selected texts of representative authors; review of grammar; considerable attention to oral use of the language. Thursday.

German**Lower-Division Courses****GL 1a, 1b, 2a. First-Year German (First Course).** 2 hours each term.

Provides a thorough grammatical foundation and an elementary reading knowledge of German, as well as an understanding of the spoken language. Tuesday. Peters.

GL 2b, 3a, 3b. First-Year German (Second Course). 2 hours each term.

This course extends the study of grammar. Translation of prose and poetry; conversation and composition. Wednesday. Peters.

Russian**Lower-Division Courses****SL 11a, 11b, 12a. First-Year Russian (First Course).** 2 hours each term.

Reading of simple prose with adequate study of grammar for reading comprehension. Wednesday. Krivoshein.

SL 12b, 13a, 13b. First-Year Russian (Second Course). 2 hours each term.

Rapid review of elementary Russian. Emphasis on simple conversation and easy reading. Conducted as far as possible in Russian. Thursday. Krivoshein.

Spanish**Lower-Division Courses****RL 11a, 11b, 12a. First-Year Spanish (First Course).** 2 hours each term.

Provides an introduction to grammar and practice in reading modern prose; considerable practice in pronunciation and opportunity for understanding the spoken language. Monday. Herman.

RL 107a, 107b, 108a. Second-Year Spanish (First Course). 2 hours each term.

Intensive oral and written exercises designed to help the student acquire accurate and fluent use of Spanish. Study of selected texts of representative authors. Monday. Kraft.

General Science

Associate Professors : HOPSON, LANGE

Assistant Professor : WINCHELL

Instructor : DART

Lower-Division Courses**Sc 101, 102, 103. Biological Science Survey.** 3 hours each term.

Place of man in relation to other forms of life, with particular reference to heredity, nervous systems, organic evolution; importance of animal and plant forms as sources of food, shelter, clothing, and medicines, and as sources of disease. Two lectures: 1 two-hour laboratory period. Thursday, 5:45-9:45. Winchell.

Sc 201, 202, 203. Foundations of Physical Science. 3 hours each term.

A course in the elements of the branches of physical science, i.e., astronomy, chemistry, geology, meteorology, and physics. Study of the development of these fields from their earliest historical beginnings to their present-day positions and effects on society. Particular emphasis is placed on the development of scientific attitudes. Two lectures; one 2-hour laboratory period. Monday. Lange.

NR 261, 262, 263. Cartography. 3 hours each term.

Study and practice in techniques of cartography, field mapping, and repro-

duction methods essential to professional workers. Map layout and field sketching; projections, color, and advanced mapping. Tuesday. Dart.

Upper-Division Courses

GS 311, 312, 313. **Natural History of Oregon.** 3 hours each term.

The earth and life history of Oregon; kinds and distribution of contemporary plant and animal life; man and his relation to the environment; conservation of natural resources. Prerequisite: upper-division standing and a year sequence in general biology, or consent of instructor. Tuesday. Hopson.

GS 407, 507. **Seminar: Natural Resources of the United States.** 3 hours spring. Thursday. Hopson.

GS 411, 412, 413. **History of Science.** (G) 2 hours each term.

The development of science from the beginnings, with emphasis on the scientific method and spirit. Prerequisite: eighteen hours of upper-division science, or equivalent. *Not offered 1954-55.*

Graduate Courses

Sc 511, 512. **Contemporary Developments in the Sciences and Mathematics.** 3 hours each term winter and spring.

Emphasis upon the more important phases of contemporary developments in the natural sciences and mathematics. Evaluation in terms of historical background, the true aims of science, and the effect upon society. Review of related regional problems and resources. Selected readings. Tuesday. Lange.

General Social Science

Professor: HAINES

Graduate Course

SSc 511. **Contemporary Developments in the Social Sciences.** 3 hours spring.

Considerations of main developments, trends, and thinking of leaders in the various social science areas. Study of processes through which logical conclusions concerning problems of society can be formulated. Readings from selected articles and books highlighting current thinking. Wednesday.

General Studies

Portland State Extension Center Adviser: DR. JAMES C. CAUGHLAN.

University Committee: DR. JOEL V. BERREMAN, Chairman.

State College Committee: DR. E. A. YUNKER, Chairman

Graduate Courses

GSt 501. **Research in General Studies.** Terms and hours to be arranged.

GSt 503. **Graduate Thesis.** Terms and hours to be arranged.

GSt 505. **Reading and Conference.** Terms and hours to be arranged.

Geography

Instructors: DART, NEWHOUSE

Lower-Division Courses

Geog 105, 106, 107. **Introductory Geography.** 3 hours each term.

A general introduction to the field of geography in sequence as follows: Geog 105, physical elements; Geog 106, earth resources; Geog 107, cultural elements. Tuesday. Newhouse.

Upper-Division Courses

- Geog 316. **Geomorphology**. 3 hours fall.
Systematic study of land forms. Field trips. 1 two-hour laboratory period.
Prerequisite: one year of geology or consent of instructor. Thursday. Dart.
- Geog 317. **Geomorphology of the United States**. 3 hours winter.
Continuation of Geog 316. Detailed study of the geomorphology of the United States. Thursday. Dart.
- Geog 323. **Geography of the Pacific Northwest (Oregon)**. 3 hours spring.
A study of the land forms, climates, population, resources, products, and lines of communication of the Pacific Northwest. Thursday. Dart.
- Geog 405. **Reading and Conference**. Terms and hours to be arranged.
- Geog 427. **Geography of the Soviet Union**. (G) 3 hours spring.
Regional geography of the Soviet Union; its resources, peoples, and world position. Prerequisite: Geog 105, 106, 107 or Geog 201, 202, 203 or consent of instructor. Monday. Newhouse.
- Geog 431. **Geography of Asia**. (G) 3 hours winter.
Physical geography of the continent; the main economic, social and political problems viewed in relation to geography. Prerequisite: Geog 105, 106, 107 or Geog 201, 202, 203 or consent of instructor. Monday. Newhouse.
- Geog 432. **Geography of Africa**. (G) 3 hours fall.
Physical geography of the continent; the main economic, social, and political problems viewed in relation to geography. Prerequisite: Geog 105, 106, 107 or Geog 201, 202, 203. Monday. Newhouse.

Graduate Course

- Geog 505. **Reading and Conference**. Terms and hours to be arranged.

See Also:

- NR 261, 262, 263. **Cartography** (under General Science).

Geology

Associate Professor: HOPSON

Instructor: MASON

Lower-Division Courses

- G 201, 202, 203. **Geology**. 3 hours each term.
Processes of nature by which earth's surface has been built up, deformed, and torn down; natural history and occurrence of common rocks and useful minerals; outline of history of earth and life. Monday. Mason.

Upper-Division Courses

- G 350. **Rocks and Minerals**. 3 hours fall.
This course gives opportunity to become acquainted with rocks and minerals without having to meet the requirements of the more technical courses. Especially useful to students expecting to teach general science. Prerequisite: upper-division standing. Two lectures; one 2 hour laboratory period. Thursday. Hopson.
- G 352. **Geology of Oregon**. 3 hours winter.
Affords opportunity to obtain a general knowledge of the geology of the state without having to meet the technical requirements imposed for a professional geology major. Prerequisite: upper-division standing. Thursday. Hopson.
- G 405. **Reading and Conference**. Terms and hours to be arranged.

Graduate Course

G 505. Reading and Conference. Terms and hours to be arranged.

Health and Physical Education

Professor : BERGSTROM, WASHKE

Associate Professor : SPRAGUE

Assistant Professors : HOLLAND, HUDSON

Instructors : GREENSLADE, MEADOR

Lower-Division Course

HE 252. First Aid. 3 hours winter.

American Red Cross first aid; lectures, demonstration, and practices leading to standard and advanced first-aid certificates. Tuesday. Holland.

Upper-Division Courses

PE 341, 342, 343. Officiating Sports. 1 hour each term.

Rules, fundamentals, and team play, as well as methods of instruction, for the various sports. Monday, 7:15-9:00. Staff.

PE 343. Organization and Administration of Physical Education. 3 hours spring.

Planning and organizing the use of buildings, grounds, and recreational areas for the physical-education program; purchase and care of equipment; budgeting equipment and operating costs. Wednesday. Holland.

HE 358. Safety Education. 3 hours winter.

Basic principles of safety education; current safety programs as they apply to the school, home and community. Designed to develop competencies in skills and knowledge for meeting individual and mass emergency situations; also to prepare teachers to present this unit in their classes. First aid procedures; emergency procedures; safety phases of civil defense program. Minimum: 20 students. Friday. Meador, Holland and staff.

HE 411, 412, 413. Health-Education Workshop. (g) 3 hours each term. Tuesday. Greenslade.

HE 411. Structure and functions of the human body, first aid and safety. Choice and use of health and health products.

HE 412. Personal hygiene (including effects of alcoholic drinks, stimulants, and narcotics), nutrition, community health, and sanitation.

HE 413. Physiology of exercise, communicable and non-communicable disease, and mental health (including family-life education).

PE 411, 412, 413. Physical-Education Workshop. (g) 3 hours each term.

A workshop for physical-education teachers in the public schools. Each teacher works out and organizes the complete program for his school in light of the objectives, standards, and purposes of the Oregon physical-education program. Open to men and women. (May be substituted for College of Education Ed 344.) Content of the course is as follows:

PE 411. Rhythmics and folk dancing.

PE 412. Games of low organization.

PE 413. Individual team sports and games. Wednesday. Hudson.

PE 431. Current Trends and Problems. (g) 3 hours fall.

Study of present trends in health, physical education and recreation and their underlying forces; recent developments and their implications for administrative responsibility and planning for programs in schools and colleges. Prerequisite: PE 412 or consent of instructor. Thursday. Bergstrom.

HE 450. Elementary-School Health Education. (g) 3 hours spring.

The purposes and requirements of the school health service program, with emphasis on organization and procedures for the school health examination. Organization and presentation of teaching materials based on the health needs of the child, community needs, and school health services. Tuesday. Holland.

Graduate Courses**PE 507. Seminar: Administration of Physical Education.** 3 hours spring. Wednesday. Sprague.**PE 515. History and Theories of Physical Education.** 3 hours winter.

The history of physical education from the Greeks to modern times. Special emphasis on modern developments, and on current professional organization and relationships. Thursday. Washke.

*See Also:***Ed 344. Physical Education in the Elementary School** (under Education).**Ed 351. Health Education** (under Education).**History**

Associate Professors: G. HOFFMANN, P. HOFFMAN

Assistant Professor: SPURLOCK

Instructors: JOHANSEN, WIDMAYER

Lower-Division Courses**Hst 101, 102, 103. History of Western Civilization.** 3 hours each term.

The development of Western civilization from early beginnings to the present time; political, social, and cultural factors; present conditions and problems. The three terms constitute a sequence but may be taken separately. Friday.

Hst 201, 202, 203. United States History and Government. 3 hours each term.

From colonial times to the present day. Attention is given to the factual and causal functions of its government and to the adaptations that have been made to changing social and economic conditions. Friday.

Upper-Division Courses**Hst 405. Reading and Conference.** Terms and hours to be arranged.**Hst 445. Europe Since 1939.** (g) 3 hours winter.

Origins and course of World War II; postwar developments in the European states. Thursday. G. Hoffmann.

Hst 448. Soviet Union. (g) 3 hours spring.

The revolution of 1917; Russian domestic and foreign policies from 1917 to the present. Wednesday. Widmayer.

Hst 469. Recent England. (G) 3 hours fall.

Social, political, economic, and intellectual changes in Great Britain in the twentieth century. Thursday. G. Hoffmann.

Hst 470, 471, 472. American Political Parties and Leaders. (G) 3 hours each term.

American leaders who have been outstanding in their periods. Wednesday. Johansen.

Hst 473, 474, 475. American Foreign Relations. (g) 3 hours each term.

The origins, character, and consequences of American foreign policies from the Revolutionary War to the present. Monday. P. Hoffman.

Hst 476. History of the West (G) (First Term) 3 hours spring.

The American frontier. First term: the early American frontier. Thursday. G. Hoffmann.

Hst 478. History of the Pacific Northwest. (G) 3 hours any term.

Detailed study of the building of civilization in the Pacific Northwest. Prerequisite: Hst 201, 202, 203 or Hst 378, 379 or consent of instructor.

Fall: (Section I) Monday. Spurlock.
(Section II) Tuesday.

Winter: (Section I) Monday. Spurlock.

Spring: (Section I) Monday. Spurlock.
(Section II) Tuesday. Johansen.

Hst 492. World Problems. 3 hours winter.

Consideration given to current and significant political, economic and social problems of the nations in relation to American culture. *Not open to students who have taken SSc 411.* Tuesday.

Graduate Course**Hst 505. Reading and Conference.** Terms and hours to be arranged.**Home Economics**

Assistant Professor: WASSON

Instructor: O'REILLY

Lower-Division Courses**AA 178. House Planning and Architectural Drawing. 3 hours fall.**

Aim is to stimulate appreciation and criticism of domestic architecture. Small-house planning and drawing with particular reference to the needs of individual students. Friday. Wasson.

CT 250. Textiles. 3 hours winter.

Properties, uses, selection and care of textile fibres and fabrics. No prerequisite, but chemistry is desirable. Friday. O'Reilly.

Upper-Division Courses**CT 331. Home Furnishing. 3 hours winter.**

Furnishing a small home from standpoint of comfort, beauty, and economy; influence of historic design. Prerequisite: CT 212, 250, AA 161, 178, or consent of instructor. Friday. Wasson.

CT 431. Home Furnishing. (G) 3 hours spring.

Consumer study of home furnishing, fabrics, furniture, rugs, china, silver and ceramics. Particular attention paid to contemporary designers and materials and to prices and manufacturers. Prerequisite: CT 331, upper-division standing, or consent of instructor. Friday. Wasson.

Horticulture

Professor: BOUQUET

Lower-Division Course**Hrt 111. Elements of Horticulture. 2 hours fall.**

Lectures, discussions, and demonstrations dealing with horticultural crops about the home—vegetables, small fruits, tree fruits, and flowers. Emphasis on principles and fundamentals of growth, propagation, soil management and fertility, garden planning, pest control, irrigation. Special problems

concerned with important crops. Greenhouse and frame management in gardening. Demonstrations during class meetings. Tuesday.

See also: Landscape Architecture.

Journalism

Assistant Professor: SUMMERS

Instructor: LARSON

Lower-Division Courses

J 111, 112. Elementary Journalism. 3 hours each term fall and winter.

Journalistic style of writing; workings of the press, both general and technical. Monday. Larson.

J 211. Copyediting. 3 hours spring.

Copy reading, head writing, proof reading, and make-up; actual experience in editing copy. Prerequisite: J 111. Two lectures; 1 laboratory period. Monday. Larson.

Upper-Division Courses

J 339. Principles of Advertising. 3 hours fall.

Advertising as a factor in the distributive process; the advertising agency; the "campaign"; the function of research and testing; the selection of media—newspaper, magazine, broadcasting, outdoor advertising, direct mail. Thursday. Summers.

J 441. Radio-Television Advertising. (G) 3 hours spring.

A study of the principles of radio and television advertising and of the techniques involved. The place of radio and television in modern advertising; methods of measuring circulation, planning campaigns, writing copy, checking results. Prerequisite: J 339 or consent of instructor. Friday. Summers.

Landscape Architecture

Associate Professor: MARTEL

Instructor: GERKE

Lower-Division Course

LA 279. Home-Ground Planning. 2 hours fall.

The principles of good design in home grounds; arrangement of the site for modern living, adapted particularly to this locality. Relationship between house and garden, space uses, study of materials which are used in garden development—plants, pavings, masonry, wood. Tuesday. Gerke.

Upper-Division Course

LA 326. Plant Materials. 3 hours spring.

Trees, shrubs, vines, and perennials and their uses in plant composition. Tuesday. Martel.

See also: Home Economics and Horticulture.

Mathematics

Associate Professor: PETERSON

Instructor: YEAROUT

Lower-Division Courses

Mth 011. Statistical Quality Control. Non-credit. Spring.

Statistical methods as applied to industrial and engineering experimentation and quality control. Tuesday, 6:45-9:25.

Mth 100. Intermediate Algebra. 3 hours winter.

Prerequisite: one year of high-school algebra. Thursday.

Mth 101, 102, 103. Elementary Analysis. 4 hours each term.

Trigonometry, graphs, algebra, elements of calculus, and analytic geometry. Tuesday and Thursday, 7:15-9:00. Yearout.

Mth 201, 202, 203. Differential and Integral Calculus. 4 hours each term.

Standard sequence for students of physical, biological, and social sciences. Prerequisite: Oregon State, Mth 101, 102, 103, or University of Oregon, Mth 200, or Mth 105, 106, 107. Monday and Wednesday, 7:15-9:00.

Upper-Division Courses**Mth 412, 413, 414. Higher Algebra.** (g) 3 hours each term.

Basic concepts of algebra, theory of equations, matrices, linear transformations, quadratic forms. Prerequisite: calculus or consent of instructor. Tuesday. Peterson.

Mth 425. Elements of Statistical Methods. (g) (First Term). 3 hours fall.

A basic course in statistical analysis. Presentation of data; sampling theory; tests of significance; analysis of variance and covariance; regression and correlation; sequential analysis; design of experiments; distribution-free techniques. Prerequisite: one year of high-school algebra; junior standing or consent of instructor. Thursday. Peterson.

Music

Professor: STEHN

Instructor: ALBERTSON

Lower-Division Courses**Mus 111, 112, 113. Theory.** 3 hours each term.

Music fundamentals, scales, key relationships, intervals, triads; harmonizations of various triad and seventh chords in all positions, nonchord tones, free harmonization and simple modulation; keyboard work, chord recognition, sight-singing, and analysis correlated with written work. Monday. Stehn.

Mus 127, 128, 129. Introduction to Music Literature. (Appreciation of Music.) 2 hours each term.

A nontechnical study of the development of music, stressing the elements of musical understanding; study of representative composition, with emphasis on their musical and historical significance. Wednesday.

Mus 196. Orchestra. 1 hour any term.

Six hours maximum credit. Tuesday. Stehn.

Upper-Division Courses**Mus 360, 361, 362. History of Music.** 3 hours each term.

A study of the development of music from primitive times to the present day. Thursday.

Mus 381, 382, 383. Music Fundamentals. 3 hours each term

Section I: Friday. Albertson.

Section II: Friday.

Mus 390. Applied Music. 1 hour any term.

Individual instruction. By arrangement. Stehn.

Nursing Education

Associate Professor: GREGERSON

Upper-Division Courses

Nur 427. Methods of Clinical Instruction. (G) 3 hours fall.

Consideration of the steps in planning and developing a program of clinical instruction, and of the methods of evaluating student achievements in clinical nursing practice. Emanuel Hospital, 2800 N. Commercial Avenue. Thursday, 2:30-5:10 p.m.

Nur 450. Personnel Administration in Nursing. (G) 3 hours winter.

The place of the head nurse; problems of planning effective assignments for all levels of personnel and promoting and maintaining cooperation toward the goal of high-quality nursing service. Tuesday.

Philosophy

Associate Professor: DAHLSTROM

Lower-Division Courses

Phl 201, 202, 203. Introduction to Philosophy. 3 hours each term.

Unified year sequence but work of three terms may be taken in any order. Phl 201 is a study of elementary problems of knowledge and nature in terms of historical development of philosophy; Phl 202, philosophy of ethics; Phl 203 considers social philosophy with special attention to philosophy of history. Wednesday.

Physical Education

(See HEALTH AND PHYSICAL EDUCATION)

Physics

Professor: NORRIS

Assistant Professor: WALTON

Lower-Division Courses

Ph 101, 102, 103. Engineering Physics. 4 hours each term.

Studies in general physics adapted to students in engineering. Prerequisite: mathematics required for engineering majors. Lectures: Monday and Friday. Laboratory: Wednesday. Sessions start 6:45. Staff.

Ph 161. Rudiments of Photography. 2 hours spring.

Planned for beginners in photography. The topics covered include cameras, printing, enlarging, developing, composition, materials, and lighting. Opportunities for field trips and print clinics will be provided. Lecture and laboratory: Tuesday, 6:20-10:00. Walton.

Ph 201, 202, 203. General Physics. 4 hours each term.

Standard first-year college physics. Mechanics, sound, heat, light, electricity, and magnetism. Prerequisite: Mth 102, or consent of instructor. Lecture: Monday and Friday. Laboratory: Wednesday. Sessions start 6:45. Staff.

Ph 204, 205, 206. Astronomy. 3 hours each term.

Descriptive treatment. Coordinate system; astronomical instruments; the solar system; star types and groupings. Two lectures; one 2-hour period of observation or laboratory. *Not offered 1954-55.*

Political Science

Professor: WENGERT

Assistant Professors: DIXON, KROLL

Instructors: CAPPER-JOHNSON, MUNK, WIDMAYER

Political Science courses offer an opportunity to study domestic government and politics, public administration, and international relations. Special programs have been organized in international relations and public administration. The program in public administration may lead to a Master of Arts degree in General Studies at the University. Emphasis in this program is on regional studies, administration, management, and public policies. (*See Sociology and Psychology.*) Dr. Morton Kroll is the adviser for the graduate program in Public Administration, and students who are interested in it should consult him before registering.

Upper-Division Courses

PS 314, 315, 316. Problems of State and Local Government. 3 hours each term.

A study of the major problems in the organization and function of state, county, city, and other local governments, with special attention to Oregon. Tuesday. Dixon.

PS 320, 321. World Politics. 3 hours each term fall and winter.

Basic principles of the modern state system; analysis of factors making for conflict and cooperation. Emphasis, during second term, on the foreign policies of the leading states, exclusive of the United States. Thursday. Fall: Widmayer. Winter: Munk.

PS 322. American Diplomacy. 3 hours spring.

Contemporary foreign relations of the United States; objectives, world and domestic factors affecting American foreign policy, governmental institutions concerned with development and execution of foreign policy, major issues and problems. Thursday. Widmayer.

PS 405. Reading and Conference. Terms and hours to be arranged.

PS 407, 507. Seminar: Problems of Human Behavior in Large-Scale Organizations. 3 hours fall.

Students may continue in related seminars in Sociology and Psychology during winter and spring terms. Thursday.

PS 411, 412. Introduction to Public Administration. (G) 3 hours each term fall and winter.

Study of the organization and activities of government in carrying out public policy, with special reference to the Federal government and to the government of Oregon. Monday. Kroll.

PS 416. Urban Politics. (G) 3 hours winter.

The consequences for politics and administration of urbanism, with particular reference to cities of the West and the Pacific Northwest. Urban social trends and urban living treated as factors basic to an understanding of public opinion, policy formation, the important policy issues in the urban community. Wednesday.

PS 419, 420. International Organization. (G) 3 hours each term, winter and spring.

A survey and analysis of the development of public international organization, with chief emphasis on the United Nations and its affiliated organizations; consideration of the leading problems of the United Nations; international administration. Wednesday. Capper-Johnson.

PS 440. Competing Ideologies in the World Today. (G) 3 hours fall.

An analysis of the most important political ideas and ideals in the world

today, including various democratic beliefs, various forms of communism, and the Indian and Moslem approaches. Wednesday. Widmayer.

PS 441. Area Tensions in the World Today. (G) 3 hours winter.

An analysis of ideological, political, economic, and other factors producing tensions in the major areas of the world. Thursday.

PS 483. The Executive in American Government. (G) 3 hours spring.

Study of the executive branch in American government, with particular emphasis on the part played by the executive, and agencies attached to it, in legislative and judicial matters. Monday. Kroil.

Graduate Course

PS 505. Reading and Conference. Terms and hours to be arranged.

Psychology

Professor: Sherburne

Associate Professors: BERNARD, BRODY, WILCOX

Assistant Professors: HEIST

Instructor: BOYD

Lower-Division Courses

Psy 201, 202. General Psychology. 3 hours each term.

Introductory study of behavior and conscious processes. Survey of experimental studies with reference to motivation, learning, thinking, perceiving, and individual differences.

Fall: Psy 201. (Section I). Tuesday. Wilcox.

Psy 201. (Section II). Thursday. Wilcox.

Winter: Psy 201. Tuesday. Wilcox.

Psy 202. Thursday. Wilcox.

Spring: Psy 201. Monday. Wilcox.

Psy 202. Thursday. Wilcox.

Psy 204. Psychology of Adjustment. 3 hours fall or spring.

The nature and origins of differences in personality; means of making desired changes. Prerequisite: Psy 201, Psy 202. Fall: Tuesday. Spring: Wednesday.

Psy 205. Applied Psychology. 3 hours winter.

A survey of the ways in which psychology is applied in advertising, salesmanship, market research, measurement of opinion, occupational placement, development of personal efficiency. Prerequisite: Psy 201, 202. Tuesday.

Upper-Division Courses

Psy 311. Human Development. 3 hours spring.

Consideration of the child as an individual and as a member of social groups. Included is a study of the kinds of home and school environment essential to the best intellectual, physical, and emotional development of the child. Wednesday.

Psy 405. Reading and Conference. Terms and hours to be arranged.

Psy 407, 507. Seminar: Problems of Human Behavior in Large-Scale Organizations. 3 hours spring. Thursday.

Psy 421, 422, 423. Clinical Methods in Psychology. (G) 2 hours each term.

Application of psychological methods to the study of the individual; survey of intelligence, achievement, special-aptitude, and personality tests; theoretical and statistical background for interpretation of test scores; training in diagnosis of actual cases. Must be taken in sequence. Prerequisite: General Psychology, Educational Psychology, Measurement in Education, and consent of instructor. Statistics course is desirable. Monday. Boyd.

Psy 424, 425, 426. Mental-Testing Laboratory. (G) 2 hours each term.

Supervised practice in the administration and scoring of individual and group intelligence tests and various tests of achievement, special aptitude, and personality. Two 2-hour laboratory periods. Prerequisite: Psy 421, 422, 423, and consent of instructor. Hours to be arranged. Boyd.

Psy 450. Abnormal Psychology. (g) 3 hours winter.

Various forms of unusual behavior, including anxiety states, hysteria, hypnotic phenomena, and psychoses. Normal motives and adjustment mechanisms as they are exaggerated in the so-called neurotic person. Wednesday.

Psy 460. Psychology of Infancy and Childhood. (g) 3 hours fall.

Growth of behavior during the prenatal period, infancy, and childhood. Development of muscular activities, perception, emotional adjustment, intelligence, language, and social behavior in childhood. Not open to students who have completed Ed 460. Thursday. Bernard.

Psy 461. Psychology of Adolescence. (g) 3 hours winter.

Study of the behavior changes during pre-adolescence, adolescence, maturity, and old age. Intended to follow Psy 460. Not open to students who have completed Ed 461. Thursday. Bernard.

Psy 471, 472, 473. Individual Differences. (g) 3 hours each term.

Theories in regard to individual differences; experimental evidence; importance in personal, educational, and social adjustment; guiding and directing normal development. Prerequisite: Psy 204 or 205, or consent of instructor. First two terms may be taken independently; the third term must be preceded by both the others. Monday. Fall and spring: Heist. Winter: Sherburne.

Graduate Courses**Psy 505. Reading and Conference.** Terms and hours to be arranged.**Psy 519. Research Studies in Child Development.** 3 hours fall.

Study of current research studies and experimental programs concerned with the physical, emotional, intellectual, and social development of children. Individual studies by students, case studies, and model experimental projects with children in the laboratory school will supplement library resources. Thursday. Brody.

Psy 520. Psychology of Learning. 3 hours spring.

Introduction to the major theories of learning current among psychologists doing research in the field. Experimentation and research underlying these theories will be studied and applied to modern educational practices. Includes learning theory and practices at all age levels through adulthood. Tuesday.

Public Speaking

(See SPEECH)

Science

(See: BACTERIOLOGY, BOTANY, CHEMISTRY, GENERAL SCIENCE, PHYSICS, ZOOLOGY)

Secretarial Science

Professor: YERIAN

Lower-Division Courses**SS 111, 112, 113. Stenography.** 3 hours each term.

Theory of shorthand; practical applications in sentence dictation. SS 121, 122, 123 must be taken concurrently unless the student has had the equivalent. Students with one year of shorthand are not permitted to take SS 111 for credit. Tuesday.

SS 121, 122, 123. Typing. 2 hours each term.

Theory and practice of touch typing; rhythmical drills, dictation exercises; writing paragraphs; punctuation and mechanical arrangement of business correspondence, legal forms, tabulating, manifold, speed practice. Students with at least one year of typing are not permitted to take SS 121 for credit. Friday, 6:45-9:25.

Upper-Division Courses**SS 411. Secretarial Problems.** 3 hours fall

Duties and problems of the secretary in business and professions; relation to employer and fellow employees; office supervision. Thursday. Yerian.

SS 412. Secretarial Practice. 3 hours winter.

A continuation of SS 411. Thursday. Yerian.

Sociology

Assistant Professor: DRUM

Instructor: GOOD

Lower-Division Courses**Soc 204, 205, 206. General Sociology.** 3 hours each term.

The basic findings of sociology concerning the individual, culture, group life, social institutions, and factors of social change. Prerequisite: sophomore standing or consent of instructor. Tuesday.

Upper-Division Courses**Soc 302, 303. Criminology and Penology.** 3 hours each term fall and winter.

First term: The nature of crime, with reference to causative factors. *Second term:* Theories underlying punishment; the role of the police and the courts; history of punishment, recent penal developments. Wednesday. Drum.

Soc 334, 335. Social Psychology. 3 hours each term winter and spring.

Analysis of the psychological and sociological processes involved in personality formation and in various forms of group behavior. Particular attention to origin, function, ideologies, membership, and leadership. Prerequisite: Soc 204, Soc 205, or Psy 201, Psy 202. Tuesday.

Soc 338. Marriage and the Family. 3 hours any term.

The role of the family in the development of personality. Mate selection and courtship; marital discord and adjustment. Prerequisite: general sociology or general psychology, or consent of instructor. Tuesday. Drum.

Soc 346. Social Case Methods Applied to Nursing. 3 hours winter.

History and current concepts of case-work theory; social problems related to illness; principles of interviewing; relationships between nurses and social workers. University of Oregon Medical School. Monday. Good.

Soc 405. Reading and Conference. Terms and hours to be arranged.**Soc 407. Seminar.** Terms and hours to be arranged.**Soc 407, 507. Seminar: Social Welfare Resources and Organization.** (Use of Social Agencies by Teachers, Nurses, and Other Professionals). 3 hours spring. The various types of social welfare resources which teachers, nurses and other professionals can use to help people with social and emotional problems, methods of organizing these resources for the meeting of human needs. (Substitute for Soc 347 and Ed 429.) Thursday. Drum.**Soc 407, 507. Seminar: Problems of Human Behavior in Large-Scale Organizations.** 3 hours winter. Thursday.

Soc 417. Juvenile Delinquency. (G) 3 hours spring.

Nature and extent of delinquent behavior; contributing factors; current preventive and treatment programs. Prerequisite: general sociology or general psychology. Wednesday. Drum.

Soc 437. Sociology of Race Relations. (G) 3 hours fall.

The development of "race consciousness" and emergent problems of race-culture contacts. Prerequisite: introductory course in sociology, anthropology, or psychology. Tuesday.

Graduate Courses**Soc 505. Reading and Conference.** Terms and hours to be arranged.**Soc 507. Seminar.** Terms and hours to be arranged.**Graduate Courses in Social Work****SW 507. Seminar.** Terms and hours to be arranged.**SW 511, 512. Social Case Work.** 3 hours each term fall and winter.

Generic concepts of case work practices in different agency settings; diagnosis and analysis of cases, treatment problems. Tuesday, 4:00-6:00 and as arranged. Drum.

SW 516. Personality Development. 2 hours fall.

The growth of the individual with emphasis on emotional factors; the integration of psychiatric theory with case work; social factors that influence development. Thursday, 6:45-8:30. Drum.

SW 517. Personality Development. 2 hours winter.

Emotional problems commonly met in social agencies; the roles of the psychiatrist and caseworker in the study and treatment of the patient; special lectures and case studies. Prerequisite: SW 516 or consent of instructor. Thursday, 6:45-8:30. Drum.

SW 572. Community Organization for Social Welfare. 3 hours spring.

Problems involved in bringing about an adjustment between social welfare needs and resources; understanding the social forces of the community; methods used by public and private agencies to meet these needs; interpretation of agency problems to the community. Thursday. Drum.

SW 580. Introduction to Public Welfare. 3 hours fall.

History, philosophy and current theories of social welfare work; development of public and voluntary programs of social services. Monday.

SW 581. The Child and the State. 3 hours spring.

The development of the rights of the child in relation to those of the parents; the responsibilities of the state in safeguarding those rights; social services to children by public and voluntary agencies. Monday.

SW 582. Administration of Social Insurances. 3 hours winter.

The social insurance movement in the United States and selected foreign countries. Present legislation; administrative problems in unemployment compensation and in insurance for the aged, survivors, disabled, and sick. Prerequisite: SW 580 or consent of instructor. Monday.

Speech and Drama

Professor: COLLIER

Associate Professor: LILLYWHITE

Assistant Professor: GAUPP

Instructors: BLAKELEY, WOOD

Lower-Division Courses**Sp 111, 112, 113. Fundamentals of Speech.** 3 hours each term.

Projects in extempore speaking. Primary emphasis on content and organi-

zation, with attention also to the student's adjustment to the speaking situation, effective delivery, audience motivation, and language of the speech. Monday.

Sp 221. Public Discussion. 2 hours spring.

Public speeches on current questions with the addition of panel and round table discussions, and practice in chairmanship. Friday. Collier.

Sp 225, 226. Public Speaking for Business and Professional Men and Women. 2 hours each term fall and winter.

A practical course in actual speaking. Poise on the floor; improvement of diction and voice; organization of speech material and presentation in direct conversational style. Persuasion in speaking; sales talks. Study of motives that impel men to action and ways of reaching these motives. Friday. Collier.

Upper-Division Courses

Sp 351, 352, 353. Technique of Acting. 3 hours each term.

Principles of acting technique. Problems in the analysis and presentation of character. Friday. Gaupp.

Sp 364, 365, 366. Play Direction. 3 hours each term.

Sources of dramatic material, choice of play, casting and rehearsal of players, production organization. Practical experience in directing. Saturday, 9:00-11:40.

Sp 370. Phonetics. 3 hours fall.

Study of sounds used in speech. Determination of sounds; their symbolic nature; their production; physical and psychological problems involved in their perception, sectional differences. Tuesday. Lillywhite.

Sp 392. Principles and Techniques of Speech Correction. 3 hours winter.

A survey to afford classroom teachers an understanding of typical speech defects and of preventive and corrective techniques. Analysis of speech mechanics, recognition of defects, formation of sounds, application of testing devices, and parent-school cooperation are emphasized. Thursday.

Sp 407, 507. Seminar. 3 hours.

Fall: Anatomy and Physiology of the Ear. Thursday. Winter: Audiometric testing and Rehabilitation of the Hard of Hearing. Thursday. Spring: Methods of Teaching Lip Reading. Thursday.

Sp 481, 482. Speech Defects and Disorders. (G) 3 hours each term winter and spring.

Emphasis on cleft-palate and spastic speech, aphasia, stuttering, and neurological speech disorders. Registration by consent of instructor only. Each part available each term. Tuesday. Lillywhite.

Sp 484, 485, 486. Clinical Practice in Speech Correction. (G) 2 hours each term.

Actual case experience for student clinicians in the diagnosis and treatment of speech-defective children and adults, under supervision. Registration with consent of instructor only. Must be taken in sequence. Each part available each term. Monday. Staff.

Zoology

Associate Professor: MACNAB

Upper-Division Courses

Z 641. Genetics. 3 hours winter.

Lectures on the principles of heredity and their application to agriculture, medicine, and human eugenics; nature of gene action; genetics and evolution. Prerequisite: Z 200 or Z 203, or consent of instructor. Thursday.

Z 345. Evolution. 3 hours fall.

Evidences of evolution from comparative anatomy, embryology, physiology, geographic distribution, and paleontology; genetic mechanisms involved; natural selection. Prerequisite: Z 341 or consent of instructor. Thursday.

Z 456. Parasites of Man. (G) 3 hours spring.

Identification, bionomics, prophylaxis, treatment and geographic distribution of the parasites of man. Prerequisite: two years of biology. Laboratory periods to be arranged. Thursday.

Z 401, 501. Research in Bioecology. Terms and hours to be arranged.**Z 405, 505. Reading and Conference (Bioecology).** Terms and hours to be arranged.

General Extension Division

Administration

JOHN FRANCIS CRAMER, D.Ed., Dean, General Extension Division; Director of Summer Sessions; Professor of Education.

PHILIP G. HOFFMAN, Ph.D., Vice-Dean, General Extension Division, Associate Professor of History.

VIRON ALONZO MOORE, Ed.D., Assistant Dean, General Extension Division; Professor of Education.

JAMES CARL CAUGHLAN, Ph.D., Assistant Dean, General Extension Division; Professor of Education.

ERRETT E. HUMMEL, D.Ed., Administrative Assistant to the Dean; Associate Professor of Education.

HOWARD IMPECOVEN, Ed.D., Registrar; Assistant Professor of Education.

JEAN P. BLACK, Ph.D., Librarian, General Extension Division; Associate Professor of History.

LESLIE B. NEWHOUSE, M.B.A., Business Manager; Assistant Professor of Business Administration.

DONALD R. LARSON, B.A., Manager of Information Services; Instructor in Journalism.

HELEN R. WILDERMAN, B.A., Assistant Registrar; Instructor.

Department of State-Wide Services

VIRON ALONZO MOORE, Ed.D., Head of State-Wide Services; Professor of Education.

HOWARD JOHN AKERS, D.Ed., Administrative Assistant, State-Wide Services; Head of Correspondence Study; Associate Professor of Education.

JOHN A. SCHULZ, Ed.D., Field Representative; Associate Professor of Psychology and Education.

ROBERT J. GRIDLEY, Ed.M., Field Representative; Assistant Professor of Education.

MARJORIE ALBERTSON, M.M., Instructor in Music.

HAROLD W. BERNARD, Ph.D., Associate Professor of Education.

MILDRED ERICSON, B.S., Instructor in Biological Science.

W. KENNETH FERRIER, D.Ed., Associate Professor of Education.

RUTH HOPSON, Ph.D., Associate Professor of General Science.

JENNELLE MOORHEAD, M.A., Associate Professor of Health Education.

VICTOR N. PHELPS, Ed.D., Associate Professor of Education.

JEAN SUTHERLAND, B.A., Instructor in Art.

HERMAN C. VOELTZ, M.A., Assistant Professor of History.

Portland State Extension Center

JAMES CARL CAUGHLAN, Ph.D., Director of Evening Program; Professor of Education.

STEPHEN E. EPLER, Ph.D., Director of Day Program; Professor of Education.
CLARK P. SPURLOCK, M.S., Administrative Assistant; Assistant Professor of History.

Radio Station KOAC

JAMES M. MORRIS, B.S., Program Manager; Associate Professor of Radio Speech.
FRED A. BREWER, M.S., Assistant Professor of Radio Education.
GLADYS D. CHAMBERS, M.A., Director of Women's Programs; Instructor in Radio Speech.
ARNOLD EBERT, B.S., Director of Agricultural Programs; Assistant Professor of Agricultural Extension.
FREDERICK WALTER GLEESON, B.A., Producer-Announcer-Instructor.
ROBERT C. HINZ, B.A., News Editor and Announcer; Instructor in Radio Speech.
PHILIP B. KALAR, B.M., Music Director and Announcer; Assistant Professor.
ELIZABETH DOTSON PATAPOFF, B.S., Director of KOAC School of the Air; Instructor.
D. GLENN STARLIN, Ph.D., Production Director, University Radio Studios; Associate Professor of Speech.
DUANE E. TUCKER, M.A., School Specialist in Radio Education and Announcer; Assistant Professor of Radio Speech.

Visual Instruction

WILLIAM CURTIS REID, Ph.D., Head of Department; Professor of Visual Instruction.

Portland Summer Session

JAMES CARL CAUGHLAN, Ph.D., Director; Professor of Education.

Institute of International Affairs

E. DEAN ANDERSON, M.A., Executive Secretary; Assistant Professor of Education.

Enrollment Report

July 1, 1952-June 30, 1953

General Extension Classes and Correspondence Study

Extension Classes	Undergraduates		Graduates		Audit and Non-credit	Total
	Men	Women	Men	Women		
PSEC EVENING CLASSES.....	726	1074	928	1317	836	4881
PSEC DAY CLASSES.....	1251	412	0	0	.....	1663
STATE-WIDE:						
Albany	15	113	38	29	.....	195
Arlington	1	6	3	2	.....	12
Astoria	10	65	32	30	.....	137
Baker	4	33	28	11	.....	76
Bandon	1	8	6	7	.....	22
Beaverton	0	33	0	0	.....	33
Bend	34	33	8	5	.....	80
Burns	5	18	1	3	.....	27
Canby	0	15	0	0	.....	15
Canyonville.....	1	26	0	0	.....	27
Central Point	4	26	0	0	.....	30
Chiloquin	0	5	1	1	.....	7
Condon	3	18	0	0	.....	21
Coos Bay	17	83	17	16	.....	133
Coquille	2	27	10	10	.....	49
Corvallis	25	92	28	35	.....	180
Cottage Grove	12	62	0	0	.....	74
Dallas	1	20	16	12	.....	49
Drain	2	11	0	0	.....	13
Enterprise	1	18	0	0	.....	19
Eugene	161	329	81	85	.....	656
Forest Grove	7	52	7	11	.....	77
Fossil	1	8	6	4	.....	19
Gold Beach	2	10	8	7	.....	27
Grants Pass	27	76	8	17	.....	128
Halsey	1	14	0	0	.....	15
Harrisburg	1	14	0	0	.....	15
Heppner	13	22	0	0	.....	35
Hermiston	1	41	4	5	.....	51
Hillsboro	2	45	1	8	.....	56
Hood River	4	22	9	3	.....	38
John Day	3	12	6	6	.....	27
Klamath Falls	34	91	22	18	.....	165
La Grande	4	23	0	0	.....	27
Lakeview	11	6	0	0	.....	17
Lebanon	18	92	7	15	.....	132
Madras	9	15	0	0	.....	24
Malin	0	11	0	0	.....	11
McMinnville	3	39	9	9	.....	60
Medford	30	81	4	13	.....	128
Milwaukie	0	17	7	6	.....	30
Molalla	0	14	0	0	.....	14
Moro	3	13	0	0	.....	16
Myrtle Creek	0	18	7	8	.....	33
Newberg	0	14	8	13	.....	35
Newport	7	68	0	0	.....	75
North Bend	2	44	5	8	.....	59
Nyssa	1	11	16	3	.....	31
Oakridge	4	15	3	8	.....	30
Ontario	20	48	15	3	.....	86
Oregon City	0	18	3	5	.....	26
Pendleton	17	48	33	30	.....	128
Port Orford	1	8	4	7	.....	20
Prineville	0	9	6	4	.....	19
Raleigh Hills	1	10	3	7	.....	21
Redmond	9	38	33	24	.....	104
Roseburg	33	135	30	34	.....	232
Salem	103	192	26	37	.....	358
Seaside	1	48	9	16	.....	74
St. Helens	1	29	4	10	.....	44
Sweet Home	6	58	7	3	.....	74

Taft	2	32	8	8	.....	50
Tillamook	8	56	24	26	.....	114
Vale	21	49	0	0	.....	70
Veneta	0	20	0	0	.....	20
Willamina	2	32	0	0	.....	34
Woodburn	0	6	4	3	.....	13
TOTAL STATE-WIDE.....	712	2765	615	625	753	5470
COMMUNITY COLLEGE	43	134	0	0	.....	177
CORRESPONDENCE STUDY						
New registrants.....	1204	1283	0	0	.....	2487
Old registrants.....					.....	2600*
TOTAL ALL EXTENSION CLASSES						
AND CORRESPONDENCE STUDY.....	3936	5668	1543	1942	1589	17278

Veteran Enrollment

July 1, 1952-June 30, 1953

	<i>PSEC-Evening</i>		<i>PSEC-Day</i>		<i>State-Wide</i>		<i>Community College</i>		<i>Total</i>
	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	
Public Law No. 346	383	45	63	3	88	10	2	0	594
Public Law No. 16	0	2	6	0	0	0	0	0	8
Public Law No. 550	35	1	231	5	1	0	0	0	273
Public Law No. 894	0	0	0	0	0	0	0	0	0
State Aid	122	3	20	0	77	0	7	1	230
TOTALS	540	51	320	8	166	10	9	1	1105

* Not included in cross totals.

Oregon State System of Higher Education

CHARLES D. BYRNE, Ed.D., Chancellor

FREDERICK M. HUNTER, Ed.D., LL.D., Honorary Chancellor

* O. MEREDITH WILSON, Ph.D.
President, University of Oregon

AUGUST L. STRAND, Ph.D.
President, Oregon State College

DAVID W. E. BAIRD, M.D., LL.D.
Dean, University of Oregon Medical School

ROBEN J. MAASKE, Ph.D.
President, Oregon College of Education

ELMO N. STEVENSON, Ed.D.
President, Southern Oregon College of
Education

FRANK B. BENNETT, Ed.D.
President, Eastern Oregon College of
Education

J. F. CRAMER, D.Ed.
Dean, General Extension Division

HAROLD J. NOYES, D.D.S., M.D.
Dean, Dental School

Office of the Chancellor

JOHN R. RICHARDS, Ph.D. Vice-Chancellor

RICHARD L. COLLINS, M.A., C.P.A. Budget Director

TRAVIS CROSS, B.A. Assistant to the Chancellor
and Director of Information

Office of the Comptroller

HERBERT A. BORK, M.S., C.P.A. Comptroller and Bursar

JOHN L. WATSON, B.B.A., C.P.A. Assistant Comptroller

HAROLD ROWLEY, B.S. Chief Accountant

WILLIAM R. STOVALL Assistant Chief Accountant

THOMAS F. ADAMS, B.S. Administrative Assistant

JOHN I. HUNDERUP, M.B.A., C.P.A. Administrative Assistant

General Extension Division

PHILIP G. HOFFMAN, Ph.D. Vice-Dean of General Extension

VIRON A. MOORE, Ed.D. Assistant Dean of General Extension

JAMES C. CAUGHLAN, Ph.D. Assistant Dean of General Extension

Libraries

WILLIAM H. CARLSON, M.A. Director of Libraries

BESSIE G. TRESSLER, A.B., B.S. in L.S. Head of Orders Department

IMOGENE CUSAC, B.A., B.A. in L.S. Cataloger for Union Catalog

High School-College Relations Committee

E. DEAN ANDERSON, M.A. Executive Secretary

* Appointment effective March 1954. Victor P. Morris, Ph.D., served as acting president from September 15, 1953.

Oregon State System of Higher Education

CHARLES DAVID BYRNE, Ed.D., Chancellor, State System of Higher Education; Dean; Professor.

B.S. (1921), M.S. (1922), Wisconsin; Ed.D. (1940), Stanford. With System since 1929, chancellor since 1950.

JOHN REESE RICHARDS, Ph.D., Vice-Chancellor and Secretary of the Board, State System of Higher Education; Professor.

B.A. (1929), M.S. (1931), Pennsylvania State; Ph.D. (1936), Chicago. With System since 1953, vice-chancellor since 1953.

E. DEAN ANDERSON, M.A., Executive Secretary, High School-College Relations Committee; Assistant Professor of Education.

B.A. (1936), Reed; M.A., (1941), Oregon. With System since 1948, executive secretary, High School-College Relations since 1948.

DAVID W. E. BAIRD, M.D., LL.D., Dean of Medical School; Professor of Medicine. M.D. (1926), Oregon; LL.D. (1946), Portland. With System since 1927, dean, Medical School since 1943.

FRANK BROWN BENNETT, Ed.D., President, Eastern Oregon College of Education; Professor.

B.A. (1921), Willamette; M.A. (1933), Oregon; Ed.D. (1948), Willamette. With System since 1952, president, Eastern Oregon since 1952.

HERBERT ARNOLD BORK, M.S., C.P.A., Comptroller and Bursar, State System of Higher Education; Dean; Professor.

B.A. (1924), Wisconsin; C.P.A. (1926); M.S. (1940), Oregon State. With System since 1934, comptroller since 1934.

WILLIAM HUGH CARLSON, M.A., Director of Libraries, State System of Higher Education; Professor of Education.

A.B. (1924), Nebraska; M.A. (1937), California. With System since 1945, director of libraries since 1945.

RICHARD LYLE COLLINS, M.A., C.P.A., Budget Director, State System of Higher Education; Professor.

B.B.A. (1927), Oregon; C.P.A. (1931); M.A. (1940), Columbia. With System 1927-29 and since 1932, budget director since 1948.

JOHN FRANCIS CRAMER, D.Ed., Dean, General Extension Division, Professor of Education.

A.B. (1920), Willamette; A.M. (1921), M.Ed., (1932), D.Ed., (1937), Oregon. With System since 1944, dean, General Extension since 1944.

(WILLIAM) TRAVIS CROSS, B.A., Assistant to the Chancellor and Director of Information; Assistant Professor.

B.A. (1949), Stanford. With System since 1950, assistant to chancellor since 1953.

ROBEN JOHN MAASKE, Ph.D., President, Oregon College of Education; Professor.

B.A. (1927), Nebraska; M.A. (1936), Oregon; Ph.D. (1938), Minnesota. With System since 1939, president, Oregon College since 1950.

HAROLD J. NOYES, D.D.S., M.D., Dean of Dental School; Professor of Dentistry; Clinical Professor of Dental and Oral Medicine and Head of Division, Medical School.

Ph.B. (1923), M.D. (1933), Chicago; B.S. (1928), D.D.S. (1928), Illinois. Dean, Dental School since 1946.

ELMO NALL STEVENSON, Ed.D., President, Southern Oregon College of Education; Professor.

A.B. (1927), San Jose State; A.M. (1929), Ed.D. (1938), Stanford. With System since 1929, president, Southern Oregon since 1945.

AUGUST LEROY STRAND, Ph.D., President, Oregon State College; Professor.

B.S. (1917), Montana State; M.S. (1925), Ph.D. (1928), Minnesota. With System since 1942, president, Oregon State since 1942.

O. MEREDITH WILSON, Ph.D., President, University of Oregon; Professor.

B.A. (1934), Brigham Young; Ph.D. (1943), California. With System since 1954, president, University since 1954.

Index

- Academic Calendar, 6
Academic Regulations, 27, 55
Accounting, 62
Admission Requirements, 27, 55
Administration, 7
Anthropology, 33, 59
Application for Admission, 27, 55
Architecture, Landscape, 85
Art and Architecture, 33, 59
Art Education, 60
Astronomy. *See* PHYSICS
Athletics Program, 27
- Bacteriology, 34, 61
Biology. *See* BOTANY and ZOOLOGY
Botany, 34, 61
Business Administration, 34, 62
- Calendar, Academic, 6
Campus, 20
Certificates, 57
Chemistry, 35, 65
Chemical Engineering, 38
Civil Engineering, 38, 76
Clothing, Textiles, and Related Arts, 44, 84
Cooperative Program, 58
Course-Numbering System, 24
- Day Program, 26
Definitions, 24
Description of Courses, 33, 59
Drama. *See* SPEECH
- Economics, 36, 66
Education, 36, 66
Electrical Engineering, 39, 76
Employment, Part-time, 26
Engineering, General, 37, 76
Engineering, Civil, 38, 76
Engineering, Electrical, 39, 76
Engineering, Industrial, 39, 76
Engineering, Mechanical, 40, 76
Engineering Physics, 50, 87
English, 40, 76
Entrance Examinations, 28
- Evening Program, 55
Expenses, 21
Extension Division Enrollment 1952-53, 97
Extension Division, General, 95
Extension Services, 25
- Faculty, 7
Family Life and Home Administration, 44
Fees and Refunds, 21
Foods and Nutrition, 44
Foreign Languages, 41, 78; 57
Foreign Language Requirement, 28, 57
Forestry, 41
Freshman Standing, 27
- Geography, 42, 80
Geology, 43, 81
Grading System, 24
Graduate Degree Program, 56
Group Courses, 29
Group Requirements, 29
- Health Education. *See* PHYSICAL ED.
History, 43, 83
Home Economics, 44, 84
- Industrial Arts. *See* ENGINEERING
Industrial Engineering, 39, 76
In-Service Training, 58, 72
- Journalism, 45, 85
Junior Certificate, 57
Junior Standing, 29
- Landscape Architecture, 85
Law Enforcement, 45
Library Course, 45
Literature, 40, 76
- Major Fields, 32
Map, 2
Mathematics, 46, 85
Mechanical Engineering, 40, 76
Medical and Dental Assistantship, 46
Music, 47, 86

Nonresident Fee, 21
Nursing Education, 48, 87
Nutrition. *See* HOME ECONOMICS

Oregon State Board of Higher
Education, 4
Oregon State System of Higher
Education, 5
Oregon State Officers, 90

Philosophy, 48, 87
Physical Education, 48, 87
Physics, 49, 87
Police Training, 45
Political Science, 50, 88
Psychology, 51, 89
Publications, 27
Public Speaking. *See* SPEECH

Radio Station KOAC, 25
Registration, 28, 55
Regulations, Academic, 27, 55
Religion, 51

Requirements for Admission, 27, 55
Rhetoric. *See* ENGLISH

Scholarships, 26, 28
Science, 51, 90
Secretarial Science, 52, 90
Social Science, 57
Social Case Work, 92
Sociology, 53, 91
Special Staff, 16
Speech, 53, 92
State System of Higher Education, 5
State-Wide Extension Classes, 25, 97
Summer Sessions, 25

U.S. Military Services, 27

Veterans, 20
Visual Instruction, 25

Writing, 54

Zoology, 54, 93