

UNIVERSITY OF OREGON
GRADUATE SCHOOL

EUGENE, OREGON

CATALOG ISSUE
1964-65

BULLETIN



OREGON STATE SYSTEM OF HIGHER EDUCATION

UNIVERSITY
OF OREGON
GRADUATE
SCHOOL

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UNIVERSITY OF OREGON BULLETIN
NUMBER 126 NOVEMBER 1964

Entered as second-class matter, January 18, 1950, at the post office at Eugene, Oregon, under act of August 24, 1912. Issued eight times a year, in February, March, May, June, July, August, September, and November.

EUGENE, OREGON

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Oregon State System of Higher Education

The Oregon State System of Higher Education was 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. Member institutions are elements of 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 University at Corvallis, Portland State College at Portland, Oregon College of Education at Monmouth, Southern Oregon College at Ashland, Eastern Oregon College at La Grande, and Oregon Technical Institute at Klamath Falls. The University of Oregon Medical School and the University of Oregon Dental School are located in Portland. The Division of Continuing Education, representing all the institutions, has offices in Ashland, Corvallis, Eugene, La Grande, Monmouth, Portland, and Salem.

At Oregon College of Education, Southern Oregon College, and Eastern Oregon College, students may complete major work in teacher education or general studies or enroll in a preprofessional program. Southern Oregon College also offers a major program in business.

Portland State College offers major work in general studies, liberal arts, and selected professional fields, as well as certain preprofessional programs.

At the University of Oregon and Oregon State University, 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.

Oregon Technical Institute offers technological curricula leading to associate degrees in technical and semiprofessional areas.

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 Publications, Board of Higher Education, P.O. Box 5175, Eugene, Oregon 97403.

Oregon State System of Higher Education Officers

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Office of the State Board of Higher Education
Post Office Box 5175
Eugene, Oregon 97403

Board members are appointed to six-year terms by the Governor of
Oregon with confirmation by the State Senate.

Calendar

Summer Session, 1965

June 21, <i>Monday</i>	Registration
June 22, <i>Tuesday</i>	Classes begin
July 16, <i>Friday</i>	Last day to apply for degree for summer session Commencement
July 16, <i>Friday</i>	Last day for submitting doctoral theses to committee
July 26, <i>Monday</i>	Last day for submitting master's theses to committee
August 6, <i>Friday</i>	Last day for master's and doctor's final oral examinations
August 14, <i>Saturday</i>	Summer-session Commencement

Fall Term, 1965-66

August 31, <i>Tuesday</i>	Last day to apply for fall-term admission without penalty
September 21-25, <i>Tuesday-Saturday</i>	Regular registration
September 27, <i>Monday</i>	Classes begin
October 8, <i>Friday</i>	Last day to register or change program
November 12, <i>Friday</i>	Last day to apply for degree for December Commencement
November 5, <i>Friday</i>	Last day for submitting doctoral theses to committee
November 19, <i>Friday</i>	Last for submitting master's theses to committee
December 3, <i>Friday</i>	Last day for master's and doctor's final oral examinations
December 10, <i>Friday</i>	Fall-term Commencement

Winter Term, 1965-66

January 3, <i>Monday</i>	Regular registration
January 4, <i>Tuesday</i>	Classes begin
January 14, <i>Friday</i>	Last day to register or change program
February 11, <i>Friday</i>	Last day to apply for degree for March Commencement
February 4, <i>Friday</i>	Last day for submitting doctoral theses to committee
February 18, <i>Friday</i>	Last day for submitting master's theses to committee
March 4, <i>Friday</i>	Last day for master's and doctor's final oral examinations
March 11, <i>Friday</i>	Winter-term Commencement

Spring Term, 1965-66

March 28, <i>Monday</i>	Regular registration
March 29, <i>Tuesday</i>	Classes begin
April 8, <i>Friday</i>	Last day to register or change program
May 13, <i>Friday</i>	Last day to apply for degree for June Commencement
May 6, <i>Friday</i>	Last day for submitting doctoral theses to committee
May 20, <i>Friday</i>	Last day for submitting master's theses to committee
June 3, <i>Friday</i>	Last day for master's and doctor's final oral examinations
June 12, <i>Sunday</i>	Spring-term Commencement

University of Oregon

Officers of Administration

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FRED C. ANDREWS, Ph.D.....	Associate Dean
FRANK FARNER, Ph.D.....	Associate Dean
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General Information

The Graduate School, coordinating the graduate efforts of six professional schools and the departments of the College of Liberal Arts, exists to further the University of Oregon's fundamental objective of discovering, conserving, and disseminating knowledge. Its program provides opportunity for scholarly specialization, for mastery of a particular field, for study in depth as will complement the breadth of preparatory college education and enrich both professional and cultural life.

The Graduate School of the University of Oregon, together with its land-grant counterpart, the Graduate School of Oregon State University, stands at the apex of the system of publicly supported education in the state of Oregon. Within the Oregon State System of Higher Education it has sole responsibility for graduate education in all fields represented by its social-science and humanities departments and by all its professional schools except education. It shares with Oregon State University advanced study and research in education, geology, physics, chemistry, mathematics, and biology.

With an enrollment of 2,214 students in the regular sessions and 2,905 in the summer sessions, the Graduate School is large enough to provide competitive stimulation and cooperative exchanges, yet small enough to maintain a close professor-student relationship in classes, seminars, laboratories, and in advanced study and research. The University takes pride in its ability to maintain this relationship.

Of the total number of degrees conferred by the University of Oregon in June and August 1964, almost a third were graduate degrees. More than half of its graduate students come from outside the state of Oregon and two-thirds of them receive their bachelor's degrees at institutions other than the University of Oregon. A quarter of the total are planning to earn the Ph.D., D.Ed., or D.B.A. degrees, with three-quarters of these in the Ph.D. group.

History of Graduate School

The Graduate School was organized in 1900. Prior to that time, honorary master's and doctor's degrees were conferred in the 1880s and two master's degrees, with definite residence requirements, were conferred in 1899. After two decades of concentration on the master's degree, the Graduate School announced requirements for the Doctor of Philosophy degree in 1920. The first degree under these standards was granted in 1926. Of the fields in which the Ph.D. degree is now authorized, eight have been added in the last decade.

University Campus

The University of Oregon is fortunate in its location, equidistant from the Pacific Ocean and the Cascade Mountains—at the head of the Willamette Valley, 109 miles south of Portland, on the main line of the Southern Pacific Railroad and on the Pacific Highway. Its easy accessibility is also enhanced by the service of United Air Lines and West Coast Air Lines. The city of Eugene, with a population of approximately 67,396, lies in a rapidly developing metropolitan area of more than twice the city's population. The Willamette Valley enjoys a mild climate, with moderate winters and cool summers. The average rainfall is less than 38 inches, and is concentrated in the winter months.

The University campus is noted for the beauty of its landscaping. It occupies 187 acres in the eastern section of Eugene. Since World War II, the following facilities of particular interest to graduate students have been added to the campus: Commonwealth Hall (business administration and the social sciences), the University Theater and remodeled Villard Hall (speech), the Science Building (biology, physics, chemistry, geology), Prince Lucien Campbell Hall (English, history, philosophy, sociology), an addition to the Library, the Student Union, Eric Allen Hall (journalism), a new wing for the School of Music, Lawrence Hall, architecture and allied arts), several residence halls, and housing for married students, reconstructed Friendly Hall (foreign languages), reconstructed Deady Hall (mathematics), remodeled Condon Hall (psychology, geography), new quarters for the Department of Anthropology and the Museum of Natural History, the Paleocology Building, and a Graduate Student Center in Susan Campbell Hall.

Libraries

The organization of the University of Oregon Library into three broad subject divisions—Humanities, Social Science, and Science—supplemented by the General Reference Division, the Special Collections Division, and the Audio-Visual Department, is particularly well suited to the requirements of graduate study. Each of these divisions and departments is manned by specialists competent to give bibliographical advice and assistance to students. Physical facilities for study and research are housed in a modern building, which will accommodate 1,400 readers and approximately 800,000 books.

Holdings on the Eugene campus now total 906,161 volumes; 11,887 serials are currently received. The University of Oregon Library is a member of the Pacific Northwest Bibliographic Center, and has ready access to resources of other major libraries in this region and elsewhere through a system of interlibrary loan.

The University Library has been a depository for U.S. Government Documents for many years and has an almost complete file of the Congressional Serial Set. Beginning with January 1953, all nondepository Federal government publications are now received in microprint. League of Nations and United Nations publications are well represented.

The Special Collections Division, with some 800,000 manuscripts and 111,000 photographs chiefly relating to Oregon and the Pacific Northwest, in addition to a large collection of printed material, is a valuable resource for regional research.

Individualized Study

Graduate students may, at the discretion of the several schools or departments, arrange for directed study and research on an individualized basis. Research (501) and Reading and Conference (505) are courses especially designed for this purpose, as is also Thesis (503). The student is placed on his own resources, in a particular project, under the guidance of a professor with special competence in the field of study being pursued.

Such study, coupled with the seminars (507), constitute a major share of the graduate work in many University departments and schools. The University of Oregon has generally discouraged the practice of proliferating graduate courses under a host of specialized titles in the Catalog. It has, instead, placed reliance on seminars, research, and directed study under "open content" numbers in the course listings.

Summer Sessions

Courses and research opportunities are available to degree candidates in the summer. Supplemented by individualized study arrangements, the summer offerings enable the graduate student to make uninterrupted progress toward his degree.

Summer opportunities are unusually extensive for students in all phases of professional education. Visiting professors and special lectures enrich the program especially designed to meet the needs of teachers and educational administrators. Teachers who wish subject-matter concentration are accommodated through courses from all segments of the curriculum and through a special interdisciplinary program leading to the master's degree.

Foreign Students

Graduate students from foreign lands are welcome at the University of Oregon. They are eligible for assistantships and fellowships and are otherwise considered as an integral part of the graduate student body. Foreign students who have special problems connected with their alien status, such as visas, government regulations, employment, and general orientation, are invited to use the services of the Foreign Student Adviser, a member of the staff of the Office of Student Affairs.

Fees and Deposits

Regular fees and tuition for students in the Graduate School total \$110.00 a term. Students holding graduate or research assistantships or fellowships which involve teaching or research duties pay a special reduced fee of \$32.00 a term. The nonresident fee does not apply to students enrolled in the Graduate School. For 7 term hours of work or less, students pay the regular part-time fee, ranging from a minimum of \$28.00 for 2 term hours to a maximum of \$98.00 for 7 term hours. Payment of full-time or part-time fees entitles a graduate student to all services maintained by the University for the benefit of students.

Graduate students must make a \$15.00 deposit once each year at the time of first registration, as a protection to the University against the loss of or damage to institutional property.

A special fee of \$20.00 is paid by all students who are granted the Ph.D., D.B.A., or D.Ed. degree, to cover the cost of the reproduction of their theses on microfilm or microcards.

Living Accommodations

Graduate students may live in the dormitories, which accommodate 3,143 students, in facilities for married students, accommodating 650 families; or in rooms in private homes. The University maintains five dining halls for students.

Board is available at \$60.00 a month. Room rent in the dormitories averages \$87.00 a term in multiple units and \$131.00 a term in single rooms. Room and board charges are payable in two or three installments each term, the first installment paid when the student arrives at the dormitory at the beginning of the term.

Dormitory applications should be made as early as possible before the opening of the school year, on an official form supplied by the Housing Department, University Business Office, and must be accompanied by a room deposit of \$50.00.

When dormitory reservations are cancelled, the room deposit will be refunded if cancellation is made by August 1 if reservations are made for the fall term, or, if reservations are made for the winter or spring term, at least two weeks before the opening of the term.

Facilities for married students include a wide variety of accommodations. The rents range from \$42.50 to \$76.00. Applications should be made to the Housing Department, University Business Office.

The Office of Student Affairs maintains a file of rooms available in private homes in Eugene.

Assistantships, Scholarships, Fellowships

Teaching and research assistantships, scholarships, and fellowships are awarded to graduates of accredited colleges and universities who have superior records in their undergraduate work. Applications should be made before March 1.

All persons holding these positions are expected to enroll in the Graduate School, and to become candidates for advanced degrees. A student enrolled for "postbaccalaureate study" (see page 17) may hold an assistantship while completing his first 12 term hours of graduate work, but loses his eligibility if he does not then qualify for transfer to graduate-degree status.

Teaching Assistantships. A number of teaching assistantships are available to well-qualified graduate students in nearly all schools and departments. Stipends range from \$1,800 to \$2,600 for the academic year. Reappointments may be made for twelve months at proportionately higher stipends. Assistants are charged a special reduced fee of \$32.00 for each term of appointment. Teaching assistants are allowed to register for a maximum of 12 term hours of course work. Duties, which are limited to 15 hours a week, consist of reading papers, supervising laboratory and quiz sections, etc. All graduate assistants are expected to be registered for at least 8 term hours of credit.

Research Assistantships. A number of departments and schools employ research assistants, who work under the supervision of faculty members. Funds come from research grants and contracts. Stipends, fees, and enrollment limitations are the same as for teaching assistants; augmented service in the summer may substantially increase the annual stipend.

State Scholarships. A limited number of scholarships covering tuition and laboratory and course fees are available to graduate students. All applicants, to be eligible, must be in need of financial assistance, and must show evidence of superior scholarship. Application should be made to the chairman, Committee on Scholarships and Grants in Aid, on official blanks furnished by his office, and must be filed before March 1.

Special Fellowship Programs. Graduate students at the University of Oregon are eligible for fellowship awards granted by the National Science Foundation, the National Institutes of Health, the Woodrow Wilson Foundation, and other national agencies, and for fellowships awarded under the National Defense Education Act. The University participates in the National Science Foundation Cooperative Fellowship Program and in the National Science Foundation Program of Summer Fellowships for Graduate Assistants. Information concerning these programs may be obtained in the Graduate Office.

Postdoctoral Fellowships. The University of Oregon participates in several postdoctoral fellowship programs and provides facilities for postdoctoral study under faculty supervision.

Robert A. Booth Fellowship in Public Service. This fellowship, supported by a bequest from the late Robert A. Booth of Eugene, is awarded to an outstanding graduate of an accredited college or university. The value varies from \$250 to \$500. Selection is made on the basis of scholarship, character, personality, and interest in public service as a career.

Coca Cola Scholarship. This scholarship, at present approximately \$400, is awarded biennially to a graduating senior of the University of Oregon, as an aid to postgraduate study at the University. In choosing a scholar, a faculty committee gives consideration to scholastic record, character, good citizenship, and promise as a graduate student. The scholarship is endowed through a gift from John G. Foster of Eugene.

Thomas Condon Fellowship in Paleontology. This fellowship, normally carrying a stipend of \$500, is endowed through a bequest from the late Mrs. Ellen Condon McCornack and is named in memory of her father, Dr. Thomas Condon, member of the University faculty from 1876 until his death in 1906.

Haskins and Sells Teaching Fellowship in Accounting. A \$1,000 fellowship is awarded each year by the Haskins and Sells Foundation to a graduate student preparing for a career in college teaching of accounting. For eligibility, an applicant should have completed the requirements for a master's degree.

F. G. G. Schmidt Fellowship in German. This \$250 fellowship, supported by a gift from the late Dr. F. G. G. Schmidt, a member of the University faculty from 1897 until his death in 1945, is awarded annually to a worthy graduate student majoring in German.

Weyerhaeuser Fellowship. The Weyerhaeuser Company Foundation offers a \$2,000 fellowship to outstanding graduate students in business administration. The award is made through the Forest Industries Management Center to encourage advanced professional training in this field. Special consideration is given to students who have a background of technical studies or related employment experience.

Zimmerman Scholarship. The Joseph P. and Eva Zimmerman Scholarship, a \$500 award, is given annually to a senior student, and may be renewed for a year of graduate study. The scholarship is supported through a bequest of the late Miss Lois Zimmerman, graduate of the University in the Class of 1928, and is named in memory of her father and mother.

Loan Funds

The University of Oregon administers student loan funds totaling approximately \$425,000. These funds are available for two types of loans: regular loans for a period of six months to two years; and emergency loans of small amounts for a period of ninety days or less. Inquiry and applications should be made through the Office of Student Affairs.

Graduate students are also eligible for loans from funds provided under the National Defense Education Act.

Health Service

The regular Student Health Service of the University, including the hospital facilities of the Infirmary, is available to graduate students on the same terms as

other students. Before admission, each entering student is required to have a physical examination by a physician of his choice, and to present a record of this examination on a form provided by the University.

Placement Services

The University assists its students and graduates in obtaining employment, through a Student Employment Service for those seeking part-time and vacation positions, and a Graduate Placement Service for those seeking professional employment after graduation.

Cultural and Recreational Programs

The University of Oregon takes justifiable pride in the quality and comprehensiveness of its cultural and recreational programs, which it considers an intrinsic part of its educational function, for all students, graduate and undergraduate.

Lectures. The regular University curriculum is supplemented by University assemblies at which visiting speakers address the student body and by frequent public lectures by faculty members and visiting scholars.

Musical Activities. Graduate students automatically become members of the Eugene and University Civic Music Association, which brings to McArthur Court each year six or seven outstanding artists or musical groups.

The faculty and students of the School of Music also present a variety of musical programs each year.

The University Concert Band, the University Symphony Orchestra, the University Choral Union, the University Singers, and smaller ensembles provide membership for all who can qualify and wish to participate.

A circulating collection of records is maintained by the University. Listening devices are available in the Student Union and in the Douglass Room of the Library.

Theater. The University Theater players present programs ranging from the classical to Broadway hits and musical comedies in an excellent new, well-equipped theater. Students and townspeople are admitted by ticket. Summer productions are also provided. Graduate students are invited to participate in these dramatic productions.

Museums and Collections. The University maintains two museums, the Museum of Art and the Museum of Natural History. The Museum of Art houses the Warner Collection of Oriental Art. The Museum of Natural History has divisions of anthropology, botany, geology, paleontology, and zoology.

Loan exhibitions and student art work are shown in the Art Gallery in Lawrence Hall. Art exhibits are also shown in the gallery in the Student Union.

Sports. The facilities of the School of Health, Physical Education, and Recreation are available to all graduate students for a wide variety of gymnastic and sports activities. All charges are covered by the payment of regular tuition and fees.

Degrees and Regulations

Advanced Degrees

The University of Oregon offers through the Graduate School work leading to advanced degrees in the liberal arts and sciences, and in the professional fields of architecture and allied arts, business administration, dental sciences (at the Dental School in Portland), education, health, physical education, and recreation, journalism, medical sciences (at the Medical School in Portland), music, and nursing (at the School of Nursing in Portland). The degrees granted, and the fields in which programs of study leading to the respective degrees are currently offered, are listed below:

Doctor of Philosophy: anthropology, biology, chemistry, comparative literature, economics, education, English, geography, geology, Germanic languages, health, physical education, and recreation, history, mathematics, medical sciences, philosophy, physics, political science, psychology, Romance languages, sociology, speech.

Doctor of Business Administration: business administration.

Doctor of Education: education, health and physical education.

*Master of Arts: anthropology, art, biology, business administration, chemistry, Classical languages, economics, education, English, geography, geology, Germanic languages, health, physical education, and recreation, history, journalism, library science, mathematics, medical sciences, music, philosophy, physics, political science, psychology, Romance languages, sociology, speech.

*Master of Science: art, biology, business administration, chemistry, dental sciences, economics, education, geography, geology, health, physical education, and recreation, journalism, library science, mathematics, medical sciences, nursing, physics, political science, psychology, sociology, speech.

Master of Architecture: architecture, urban planning.

Master of Fine Arts: drawing and painting, sculpture, ceramics, weaving, creative writing.

Master of Business Administration: marketing and industrial management, finance and business economics, accounting and business statistics.

Master of Education: education.

Master of Landscape Architecture: landscape architecture, urban planning.

Master of Music: music education, performance and music literature, composition.

General Regulations

The University recognizes two classes of graduate students: (1) students enrolled in the Graduate School for work toward a graduate degree, and (2) students enrolled for postbaccalaureate study. Students of the first class follow programs organized in conformity with the rules stated below. Students of the second

class enroll for courses in which they are interested, with the understanding that the University is under no implied obligation to accept credit earned as credit toward a graduate degree. Whether a student is adequately prepared to enroll in any graduate course is determined by the instructor in charge and by the head of the department or school concerned.

Admission. Admission as a graduate student, either for work toward a graduate degree or for postbaccalaureate study, is dependent on the approval of the department or school in which the student wishes to work. The general University requirements for graduate admission, stated below, may be supplemented by special requirements of major departments and schools. An applicant should address inquiries concerning graduate admission to the department or school in which he plans to study, not to the Graduate School or the Office of Admissions.

General University requirements for graduate admission are as follows:

Admission for Work toward a Graduate Degree. Graduation from an accredited college or university with a cumulative undergraduate grade-point average of 2.75 or higher is required for admission for work toward a graduate degree. A student who has completed 12 or more term hours of graduate work at another institution with a GPA of 3.00 or higher is admitted without reference to his undergraduate GPA if the work is accepted by his major department or school as applicable toward a graduate degree.

Admission for Postbaccalaureate Study. A student who has earned a bachelor's degree but whose record does not meet the admission standards for work toward a graduate degree may be admitted for postbaccalaureate study. When such a student has earned 12 term hours of graduate credit, he is automatically transferred to graduate-degree status if his graduate GPA is 3.00 or higher. A postbaccalaureate student who has not earned a 3.00 GPA on completion of 12 term hours of graduate work may continue his postbaccalaureate studies, and is again eligible for transfer to graduate-degree status on the completion of 24 term hours of graduate work, if he has earned the required cumulative 3.00 GPA. A third, and final, opportunity to transfer to graduate-degree status is provided on the completion of 36 term hours of graduate work. Not more than 12 term hours of work taken by a student with postbaccalaureate standing may be counted toward a graduate degree, except that a student who is transferred to graduate-degree status on the completion of 12 term hours of graduate work may count credit in excess of 12 hours earned before the transfer is made.

An applicant for admission as a graduate student must submit: (1) two copies of an application on an official University form, and (2) two copies of an official transcript of his college record. One copy of these credentials should be sent to the Office of Admissions and the second copy to the department or school in which the applicant plans to study.

Students with degrees from nonaccredited institutions may be admitted to the University as special students, and may be granted graduate standing after the successful completion of one term of full-time graduate work.

Provisional graduate standing is occasionally granted, as a temporary classification, pending the submission of complete official records, if the applicant files evidence that he has a bachelor's degree and will be able to qualify for regular graduate standing.

Continuous Enrollment. A graduate student who has been admitted for work toward a graduate degree is required to enroll in the University each term during the regular academic year from the time of first enrollment until the completion of all degree requirements, including the submission of thesis or dissertation, the passing of all examinations, and the awarding of the degree. His enrollment is either as a student in residence or as a student on leave of absence.

Leave of absence is granted for a stated period of time, normally not to ex-

* See also "Interdisciplinary Master's Programs," pages 21-22

ceed one calendar year. A graduate student on leave of absence is expected neither to make use of University facilities nor to place demands upon the faculty, and therefore pays no fees during the leave period.

Failure to maintain continuous enrollment, either in residence or on leave of absence, is considered evidence that the student has withdrawn from the University. If he wishes to resume his studies, he must formally apply for readmission, and must satisfy requirements for admission in effect at the time of application.

The continuous-enrollment plan is effective with the opening of the fall term, 1965-66.

Preparation Required for Graduate Study. Preparation for a graduate major must be an undergraduate major in the same subject or a fair equivalent.

Preparation for a graduate minor must be at least a one-year sequence of upper-division work in addition to foundational courses in the subject. Graduate credit may not be earned in courses for which the student does not show proper preparation by previous record or special examination.

Reservation of Graduate Credit. The Graduate School encourages superior students to begin their graduate studies as early in their careers as feasible. A student at the University of Oregon who needs not more than 48 term hours in order to complete requirements for a bachelor's degree (i.e., who has senior standing) and who has a cumulative GPA of 3.00 may petition the dean of the Graduate School for the reservation of credit in specified graduate courses. A "Reservation of Credit" form, available in the office of the Graduate School, must be filed not later than two weeks after the beginning of the term in which the courses involved are taken. Credit may not be reserved for courses taken during a period of more than three terms. A student who has been granted reservation of credit is assigned a graduate adviser to assist him in planning his graduate work.

Course Registration Requirements. The maximum course load for a graduate student devoting all of his time to graduate study in a regular term or in an eleven-week summer session is 16 term hours; the maximum for a teaching or research assistant is 12 term hours. The maximum course load for an eight-week summer session is 13 term hours. Credit for work taken in excess of these maximums cannot be applied toward a degree.

All graduate students using campus facilities or studying under the supervision of a member of the faculty are required to register for a minimum of 3 term hours of course work.

All graduate students holding half-time teaching or research assistantships are required to register for a minimum of 6 term hours of course work; students holding three-tenths-time assistantships are required to register for a minimum of 9 term hours of course work.

Students working for a master's degree with thesis are required to register for a minimum of 9 term hours in Thesis (503) before completing the program for the degree. Students working for a doctor's degree are required to register for a minimum of 18 term hours in Thesis before completing the program for the degree. (This regulation is effective for students who receive their degrees after September 1, 1966.)

Grade Requirement. A graduate student is required to earn at least a B grade average to qualify for a graduate degree. A grade-point average of less than 3.00 at any time during the student's graduate studies is considered unsatisfactory, and may result in disqualification by the dean of the Graduate School after consultation with the student's major department or school. Disqualification means reduction to postbaccalaureate standing. A course in which the student earns a grade of D will not carry graduate credit, but will be included in the computation of the student's GPA. F grades will also be included in the GPA computation.

In all divisions except the School of Law, Research (501) and Thesis (503)

are classified as no-grade courses, and are disregarded in the calculation of the student's GPA.

Graduate students are subject to disciplinary action by the Scholastic Deficiency Committee.

Graduate Courses. All courses numbered in the 500s carry graduate credit, as do those in the 400s which have been approved by the Graduate Council. Approved courses in the 400s are designated in this Catalog by (G) or (g) following the course title. Courses designated (G) may form a part of either a major or a minor; courses designated (g) may be taken toward a minor only. Graduate students taking courses in the 400s are expected to do work of a higher order and broader scope than the work of undergraduate students in the same courses. Undergraduate enrollment in the 400 courses designated (G) is generally restricted to seniors; undergraduate enrollment in 400 courses designated (g) is generally restricted to juniors and seniors.

Courses numbered in the 500s and designated (p) represent instruction offered at a level of intellectual maturity suitable for graduate students who have earned a bachelor's degree in a field other than their professional field. Such courses carry credit toward a master's degree, but this credit may not be counted toward the minimum requirement of 30 term hours in the major.

Off-Campus Graduate Courses. Graduate students at the University of Oregon may, with the consent of their advisers, take courses carrying graduate credit at Oregon State University and at the Oregon College of Education. Students register for these courses on the Eugene campus. Grades are transmitted by the instructor to the University Registrar and recorded on the student's University of Oregon transcript.

Degree Requirements

For chronological outlines of procedures for the satisfaction of requirements for graduate degrees, see pages 87-88.

Master of Arts, Master of Science

Credit Requirements. For the M.A. or M.S. degree, the student must complete an integrated program of study totaling not less than 45 term hours in courses approved for graduate credit. Integration may be achieved either through a departmental major or through a program of interdisciplinary studies (see pages 21-22).

For the master's degree with a departmental major, a minimum of two-thirds of the work (30 term hours) must be in the major. One-third (15 term hours) may be in: (1) a related minor; (2) appropriate service courses; (3) suitable complementary courses in the major; or (4) some combination of (2) and (3). The student's program must include at least 30 term hours of work in subjects having no direct connection with his thesis. A strong minor is recommended, especially for candidates for the M.S. degree.

Residence Requirement. The residence requirement for the M.A. and M.S. degrees (and all other master's degrees except the M.B.A. and M.Ed.) is 30 term hours of work on the Eugene campus or at the Medical School, Dental School, or School of Nursing in Portland.*

* Candidates for the M.S. degree with a major in health, physical education, and recreation may apply, toward the satisfaction of the residence requirement, a maximum of 18 term hours earned in courses in the Portland summer session taught by members of the University faculty.

Transferred Credit. Credit earned at other accredited institutions, or in the Division of Continuing Education of the Oregon State System of Higher Education, may be counted toward the master's degree under the following conditions: (1) the total of transferred credit may not exceed 15 term hours; (2) the courses must be relevant to the degree program as a whole; (3) the transfer must be approved by the student's major department and the Graduate School; (4) the grades earned must be A or B. Graduate credit is not allowed for correspondence courses. Credit granted for work done at another institution is tentative until validated by work in residence (see also "Time Limit" below).

Language Requirements. For the M.A. degree, the student must show, by examination or by adequate undergraduate courses (completion of the second-year college course), a reading knowledge of French, German or Russian. By petition to the dean of the Graduate School, a student may be permitted to substitute another language, if it is equally relevant to his program of graduate studies. A foreign student whose native language is not English may petition to substitute a reading and speaking knowledge of English for satisfaction of the language requirement. For the M.S. degree there is no foreign-language requirement, unless a language is required by the school or department.

Course Requirements. For the M.A. or M.S. degree with a departmental major, at least one year sequence in the 500-599 series (normally of seminar or research nature and carrying approximately 3 hours of credit per term) is required.

Time Limit. All work toward the master's degree (including work for which credit is transferred from another institution, thesis, and the final examination) must be completed within a period of seven years.

Qualifying Examination. To become a candidate for a master's degree, the student must pass a qualifying examination designed to test his basic training and his ability to pursue studies at the graduate level in his chosen field. This examination may be oral or written or both, and may cover any work done at another institution for which transfer credit is requested. It is expected that the examination be taken before the student has completed 15 term hours of graduate work. If satisfactory knowledge and ability are demonstrated, the student is formally advanced to candidacy for the degree sought, subject to the approval of the dean of the Graduate School.

A graduate of the University of Oregon who has taken the bachelor's degree with honors in the field of his graduate major is ordinarily exempt from the qualifying examination.

Thesis. In some fields, all candidates for the M.A. or M.S. degree are required to present a thesis; in others the thesis is optional.

If a thesis is presented, the student must file in the Graduate Office, not less than two weeks before the date of his final oral examination, six copies of a thesis abstract not exceeding 500 words in length. Three clear copies of the complete thesis, including the original copy, approved and signed by the adviser, must be distributed by the candidate to the members of his examining committee two weeks before date of his final examination. At the conclusion of the final examination, these copies are filed unbound in the Graduate Office, and are bound at the expense of the University. Two copies are deposited in the Library, and one becomes the property of the major department. One of the Library copies is available for general circulation.

Full information concerning the prescribed style for theses may be obtained in the Graduate Office. Copies of theses will not be accepted by the Graduate School unless they meet satisfactory standards of form and style.

Students are not allowed to register for the final hours of Thesis unless it is very probable that the thesis will be completed within the term.

The University participates in the University Microfilms program for the microfilming of selected master's theses and publication of 150-word abstracts in *Masters Abstracts*, issued by University Microfilms. These are selected on the basis of the recommendation of the candidate's examining committee. Candidates whose theses are selected may obtain a Certificate of Approval from the Graduate Office; after receipt of the certificate, they are responsible for making arrangements for microfilming with the Audio-Visual Department of the University Library. A fee of \$15.00 is charged for microfilm and abstract publication. Publication is, however, not required.

Final Examination. A final examination is required of every candidate for a master's degree. For students presenting a thesis, the examination is oral and of not less than two hours' duration. For students not presenting a thesis, an oral examination of not less than one hour and a written examination are required.

The examining committee consists of from three to five members, nominated by the student's adviser, subject to the approval of the dean of the Graduate School, who is ex officio a member of all examining committees. The committee must include at least two members from the student's major field and one member from a department or school outside of the major field.

A student passing a final examination with exceptional merit may, by vote of the examining committee, be awarded a master's degree with honors.

Interdisciplinary Master's Programs

In addition to specialized graduate work in the traditional fields of learning, the University provides opportunities for integrated interdisciplinary studies leading to the M.A. or M.S. degree—including both programs planned in the light of the individual student's interests and established programs of interdisciplinary studies organized and administered through interdepartmental faculty committees.

Graduate students pursuing a program of interdisciplinary studies may supplement courses offered by the several departments and schools with individualized studies, for which they may enroll under the following course numbers:

ISt 501. **Research.** Hours to be arranged.

ISt 503. **Thesis.** Hours to be arranged.

Established interdisciplinary programs have been approved by the Graduate Council in the following fields: international studies, overseas administration, Asian studies, juvenile correction, teaching, public administration, and industrial and labor relations.

The requirements for an M.A. or M.S. degree in interdisciplinary studies are the same as those for the departmental master's degree, except those requirements relating to major or minor fields.

The program is supervised by the Committee on Interdisciplinary Studies, of which Dr. Joel V. Berreman, professor of sociology, is chairman.

Graduate Program for Teachers. A special program of graduate study for students working toward the satisfaction of the Oregon state requirement of a fifth year of college work for final high-school teacher certification is offered as one of the University's programs of interdisciplinary studies. Enrollment is open to any person eligible for admission to the Graduate School; the student must, however, have a reasonable background of undergraduate study in the fields in which he proposes to work, and must complete prerequisites for specific courses. The requirements for a master's degree in the program for teachers are as follows:

(1) A total of between 45 and 51 term hours in graduate courses, distributed in accordance with (a) and (b) below:

(a) A total of 36 term hours in subject fields (work in liberal arts depart-

ments or professional schools other than education), distributed in accordance with one of the following options:

- Option 1. Between 15 and 21 term hours in each of two subject fields.
- Option 2. A minimum of 36 term hours in any field in which the University offers major work toward the master's degree.
- Option 3. A minimum of 36 term hours in the composite field of social studies or the composite field of science. A program in social studies may include work in the fields of anthropology, economics, geography, history, political science, psychology, and sociology. A program in science may include work in the fields of biology, chemistry, geology, mathematics, and physics.

In each of the options listed above, at least 6 term hours of work must be taken in 500 courses. The student's program must be planned to provide well-rounded knowledge, and must not be made up of scattered, unrelated courses.

For options 1 or 2, 18 term hours in each of the subject fields involved must be presented as an undergraduate prerequisite. For Option 3, the prerequisite is 36 term hours in the composite field involved.

(b) Between 9 and 15 term hours in graduate courses in the field of education, the number of hours to be determined on the basis of the amount of work in education completed by the student as an undergraduate.

(2) Satisfaction of the regular requirements of the Graduate School, except that no thesis is required. The combined total of work transferred from other accredited institutions and work done in the Division of Continuing Education of the Oregon State System of Higher Education cannot exceed 15 term hours.

Master of Business Administration

The requirements for the degree of Master of Business Administration are listed on page 35.

Master of Education

The Master of Education is a professional degree in the field of education. Programs of study leading to this degree are designed to provide graduate training for teachers in either the elementary or the secondary schools. At the discretion of the faculty of the School of Education, the candidate may be required to submit a report of a field study. A written comprehensive final examination in the student's field of specialization is required.

The residence requirement for the M.Ed. degree is 24 term hours of graduate work on the University campus or in the Portland summer session of the General Extension Division.

Master of Fine Arts

The degree of Master of Fine Arts is granted for attainments and proven creative ability in the arts. The primary requirement is the satisfactory completion of a creative project of high quality. All candidates must, however, satisfy minimum requirements of residence and study.

Early in his M.F.A. program, the student takes a qualifying examination as prescribed by the major school or department. This examination may cover any work done at another institution which is to be part of the candidate's M.F.A. program.

The student plans his M.F.A. program with the assistance of a major adviser and such faculty members as may be designated by his school or department. The

program must include at least 18 hours in formal graduate courses dealing with the history and theory of his genre or with the critical investigation of its standard or classic works; this work may include related studies outside the student's major field; with the approval of the student's advisory committee, this requirement may be satisfied by comprehensive examinations.

For the M.F.A. degree, at least two years of full-time work beyond the bachelor's degree are required, of which at least one year must be spent in residence on the Eugene campus of the University of Oregon.

Every candidate for the M.F.A. degree must submit an extended creative work or project of high professional character. It is expected that the preparation of an acceptable project will require the greater part of an academic year. Three clear copies of the project or of a report on the project as prescribed by the candidate's major school or department and approved by the adviser, must be distributed by the student to the members of his examining committee not less than four weeks before the time set for his final examination; at the conclusion of the examination, these copies, with required revisions, if any, are deposited in the Graduate Office.

The final examination for the M.F.A. degree may be written in part, but must include an oral examination, open to all members of the faculty and to advanced graduate students. The date of the oral examination is publicly announced at least one week before it is held. The examining committee consists of the candidate's advisory committee and other members, including at least one not directly connected with the major department or school. The committee is nominated by the major department or school, subject to the approval of the dean of the Graduate School.

Master of Architecture

The requirements for the degree of Master of Architecture are listed on page 28.

Master of Landscape Architecture

The requirements for the degree of Master of Landscape Architecture are listed on page 28.

Master of Urban Planning

The requirements for the degree of Master of Urban Planning are listed on page 28.

Master of Music

The requirements for the Master of Music degree are listed on page 66.

Doctor of Philosophy

General Requirements. The degree of Doctor of Philosophy is granted primarily for attainments and proven ability. Requirements of time and credit are secondary; but no candidate will be recommended for the degree until he has satisfied the minimum requirements of residence and study.

A student whose academic work, both undergraduate and graduate, has been primarily at the University of Oregon will ordinarily be required to take graduate work at another institution before being accepted as a candidate for the Ph.D. degree. Exceptions to this rule may be made by the dean of the Graduate School upon recommendation of the major school or department.

Qualifying Examination. Early in his doctoral program, the student takes a qualifying examination as prescribed by the major school or department. This examination may cover any work done at another institution for which transferred credit is requested. An exceptionally good performance on the final examinations for the master's degree may be accepted as satisfying the qualifying-examination requirement.

Doctoral Program. The student plans his doctoral program with the assistance of his major adviser. As soon as he has passed his qualifying examination, his program is presented for approval to an advisory committee, appointed by the dean of the Graduate School. The committee determines the amount of work the student is expected to do outside his major school or department, in light of his background and objectives.

Residence. For the Ph.D. degree, at least three years of full-time work beyond the bachelor's degree are required, of which at least one year (usually the last) must be spent in residence on the Eugene campus of the University of Oregon or at the University of Oregon Medical School in Portland.

Language Requirement. For the Ph.D., the student must demonstrate by formal examinations a reading knowledge of two languages other than his native language. Normally the languages are selected from French, German, and Russian; languages other than French, German, or Russian may be approved only on petition to the Graduate School. A foreign student whose native language is not English may petition to substitute a reading and speaking knowledge of English for one of the two required languages.

Comprehensive Examinations. The student working toward the Ph.D. degree must pass a group of comprehensive examinations (oral or written or both) not less than one academic year before he expects to complete work for the degree. These examinations are expected to cover all areas of concentration and may cover any supporting area if this seems desirable to the advisory committee. Advancement to candidacy is contingent on passing these examinations. The student is not eligible to take the examinations until he has satisfied the language requirement and has taken substantially all the course work for the degree.

The final examination for a doctor's degree must be taken not later than three calendar years after advancement to candidacy. Failure to complete requirements for the degree within this period will result in invalidation of the student's comprehensive examinations. This provision is effective for all doctoral students taking their comprehensive examinations after August 31, 1962, and will become effective for all other doctoral students on August 31, 1965.

Thesis. Every candidate for the Ph.D. degree must submit a thesis embodying the results of research, and showing evidence of originality and ability in independent investigation. The thesis must be a real contribution to knowledge, based on the candidate's own investigations. It must show a mastery of the literature of the subject, and be written in creditable literary form. It is expected that the preparation of an acceptable thesis will require at least the greater part of an academic year.

Three clear copies of the thesis, including the original copy, approved and signed by the adviser, must be distributed by the student, unbound, to the members of his examining committee not less than four weeks before the time set for his final examination; at the conclusion of the examination, these copies with required revisions, if any, are deposited in the Graduate Office. Copies of the thesis will not be accepted by the Graduate Office unless they meet satisfactory standards of form and style. Seven copies of an abstract of the approved thesis (not longer than 600 words) must be filed in the Graduate Office four weeks before the examination.

Final Examination. The final examination for the Ph.D. degree may be written in part, but must include an oral examination, usually of three hours' duration. The oral examination is open to all members of the faculty and to advanced graduate students. The date of the oral examination is publicly announced at least one week before it is held. The examining committee consists of the candidate's advisory committee and other members, including at least one not directly connected with the major department. The committee is nominated by the major department or school, subject to the approval of the dean of the Graduate School.

In the oral examination the candidate is expected to defend his thesis and to show a satisfactory knowledge of his major field. The written examination, if given, is expected to cover aspects of the major field with which the thesis is not directly concerned.

Doctor of Business Administration

The requirements for the degree of Doctor of Business Administration are listed on page 36.

Doctor of Education

General Requirements. The degree of Doctor of Education is granted in recognition of mastery of theory, practice, and research in professional education or in health and physical education. In addition to a primary area of specialization, the student's plan of study should include work in supporting areas of education, foundation areas, a research area, and some noneducation courses related to his program. There is no specific foreign language requirement for the D.Ed. degree; however, a student whose fields of training or whose research project call for a reading knowledge of one or more foreign languages may be required to demonstrate the needed linguistic ability. With the exceptions indicated in this section, the general requirements with respect to the qualifying examination, residence, comprehensive examinations, thesis, and final examinations for the D.Ed. degree are the same as those listed above for the Ph.D. degree.

Thesis. The doctoral dissertation may be either a report of research which makes an original contribution to knowledge or a study in which the student deals with knowledge already available and produces a constructive result of importance and value for educational practice. The dissertation proposal should be developed early in the doctoral program.

Advancement to Candidacy. Advancement to candidacy for the D.Ed. degree is based on proficiency shown in comprehensive examinations and the recommendation of a doctoral advisory committee. The comprehensive examinations may be taken only after the student has (1) been admitted to the degree program, (2) completed approximately two-thirds of the total course work in his program, (3) obtained approval of his dissertation proposal by his advisory committee, and (4) received the consent of his adviser to take the examinations.

Instruction

Anthropology

Professors: ALBERT C. SPAULDING (department head), DAVID F. ABERLE, HOMER G. BARNETT, LUTHER S. CRESSMAN (emeritus), THEODORE STERN.

Associate Professors: E. KATHLEEN GOUGH ABERLE, VERNON DORJAHN, ALFRED G. SMITH.

Assistant Professors: HAROLD B. BARCLAY, DON E. DUMOND, PAUL E. SIMONDS, DWIGHT T. WALLACE.

Instructor: ANN J. GIBSON SIMONDS.

Graduate work leading to the M.A. and the Ph.D. degree is offered with choice of specialization in archaeology, cultural anthropology, ethnology, linguistics, and physical anthropology. All degrees are in anthropology; this means that the student must demonstrate basic competence in archaeology, cultural anthropology, ethnology, linguistics, and physical anthropology, and will then choose a field for specialization based on this broad foundation. Old World archaeology is not offered as a special field at the Ph.D. level.

Ordinarily two years are required for completion of the work leading to the master's degree and four for the Ph.D. The Ph.D. candidate may bypass the master's degree, if he shows a superior performance on an appraisal examination taken near the completion of the third term of graduate study.

Field work is ordinarily expected of all students as the basis for theses. Summer field work in archaeology, cultural anthropology, and linguistics is usually offered during the summer session. This work is frequently integrated with a faculty research project and provides an opportunity for selected students to receive supervised early training in various field methods.

The department's osteology and serology laboratories are excellently equipped for instruction and research.

The presence in Oregon of Indian reservations and nonreservation Indian groups provides convenient facilities for field work. The changing status of the Indian populations on these reservations offers opportunities for research in problems of cultural and social dynamics, as well as for work in conventional areas of interest. Oregon also offers a rich field for students of archaeology, which is being exploited in the research and instructional program.

A detailed statement of requirements and procedures for graduate students in anthropology will be furnished upon request to the department.

Anth 407. **Seminar.** (g) Hours to be arranged.

Anth 408. **Field Work in Anthropology.** (G) Hours to be arranged.

Anth 411, 412, 413. **World Prehistory.** (g) 3 hours each term. Wallace.

Anth 414. **Race and Culture.** (G) 2 hours. P. Simonds.

Anth 415. **Socialization in Primitive Society.** (G) 2 hours. P. Simonds.

Anth 416. **History of Anthropology.** (G) 2 hours. Stern.

Anth 417, 418, 419. **The American Indian.** (G) 3 hours each term. Stern.

Anth 423, 424, 425. **Peoples of the Pacific.** (G) 3 hours each term. Smith.

Anth 426, 427, 428. **Peoples of Africa.** (G) 3 hours each term. Dorjahn.

Anth 435, 436. **Peoples of the Near East.** (G) 3 hours each term, fall and winter. Barclay.

ARCHITECTURE AND ALLIED ARTS

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Anth 437. **Peoples of Interior Asia.** (G) 3 hours spring. D. Aberle.

Anth 438, 439, 440. **Peoples of Southern and Eastern Asia.** (G) 3 hours each term. Stern, A. Simonds, K. Aberle.

Anth 444. **Religion and Magic of Primitives.** (G) 3 hours fall. Stern.

Anth 445. **Folklore and Mythology of Primitives.** (G) 3 hours winter. Stern.

Anth 446. **Art Among Primitives.** (G) 3 hours spring. Stern.

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

Anth 453. **Primitive Value Systems.** (G) 3 hours. Barnett.

Anth 454. **Applied Anthropology.** (G) 3 hours. Barnett.

Anth 455. **Anthropology and Native Administration.** (G) 3 hours. Barnett.

Anth 456, 457, 458. **Language, Culture, and Behavior.** (G) 3 hours each term. Smith.

Anth 501. **Research.** Hours to be arranged.

Anth 502. **Research Methods in Anthropology.** Hours to be arranged. Smith.

Anth 503. **Thesis.** Hours to be arranged.

Anth 505. **Reading and Conference.** Hours to be arranged.

Anth 506. **Special Problems.** Hours to be arranged.

Anth 507. **Seminar.** Hours to be arranged.

Theory and Method in Archaeology: Spaulding, Wallace. *Culture and Personality:* Aberle. *Field Methods in Ethnology:* Barnett. *Innovation:* Barnett. *Anthropological Theory:* Barnett. *The Negro in the New World:* Dorjahn.

Anth 511. **Culture, Society, and the Individual.** 3 hours. Barnett.

Anth 512. **The Beginnings of Civilization.** 3 hours. Wallace.

Anth 514. **Primitive Social Organization.** 3 hours. Aberle.

Anth 515. **Primitive Political Systems.** 3 hours. Dorjahn.

Anth 516. **Primitive Economic Systems.** 3 hours. Dorjahn.

Anth 520, 521, 522. **Advanced Physical Anthropology.** 4 hours each term. Simonds.

Bi 522. **Advanced Genetics.** 2 hours.

Anth 523, 524, 525. **Archaeology of the New World.** 3 hours each term. Spaulding, Wallace.

Anth 526, 527, 528. **Linguistics.** 3 hours each term. Smith, Stern.

Architecture and Allied Arts

Professors: WALTER CREESE (dean), GEORGE F. ANDREWS, WALLACE S. BALDINGER, HOWARD BUFORD, FREDERICK A. CUTHBERT, ROBERT FERENS, FREDERICK T. HANNAFORD, WALLACE S. HAYDEN, GEORGE M. HODGE, GEORGE S. JETTE, DAVID McCOSH, MARION D. ROSS, WALLACE M. RUFF, ANDREW M. VINCENT, JACK WILKINSON.

Associate Professors: THOMAS O. BALLINGER, JOHN BRISCOE, STANLEY BRYAN, JOHN W. BURGNER, DAVID FOSTER, BROWNELL FRASIER, ROBERT JAMES, DONLYN LYNDON, EARL E. MOURSUND, C. MAX NIXON, CHARLES B. RYAN, JAN ZACH.

Assistant Professors: STEPHEN BOCHKOR, ROBERT BOSWORTH, PAUL BUCKNER, PHILIP DOLE, JANE GEHRING, PHILIP GILMORE, LUCILE GOLSON, PETER GYGAX, HARLOW HUDSON, JON KEMP, JOHN KENYON, EDITH KRAMER, M. D.

LATOURELL, PATRICIA LAWRENCE, JERRY NIELSON, JULIO SAN JOSE, RICHARD SMITH, JAY V. SOEDER, JOHN E. STAFFORD.

Graduate work in the School of Architecture and Allied Arts is offered in each of the eight divisions of the school: architecture, landscape architecture, interior architecture, drawing and painting, sculpture, applied design, art education, and art history.

Programs combining work in two or more divisions of the school are encouraged. Programs may also include related courses given by other University schools or departments.

All graduate study in the creative field is conducted on an individual basis. Enrolment in seminars and research courses is restricted to small groups, usually of not more than ten students. In all cases where the student works toward completion of a terminal creative project, a multiple-staff assignment is made. For example, in the field of architecture, not less than two faculty members are assigned to each graduate student at the earliest stage of his program; through this arrangement, a breadth of criticism is assured throughout the student's work on his terminal creative project.

An applicant for graduate study in a creative field may be asked to send photographs of his recent work. When accepted, he should bring with him a small exhibit of original material to facilitate discussions with his adviser on the scope of his graduate program.

After the student has passed a qualifying examination and after his project and general program have been approved by the graduate committee and the student's adviser the adviser appoints a final committee of five faculty members to serve as a jury and consulting body during the development of the student's program. One of the five members of this committee must be from outside the faculty of the School of Architecture and Allied Arts and one member may be selected by the candidate.

Work done by the student during the period before the qualifying examination is acceptable for graduate credit either in whole or in part, depending upon the student's academic deficiencies or his need for greater background in certain creative areas. After the qualifying examination has been passed and the project outlined accepted, the minimum further time required to complete all degree requirements is three terms. Graduate assistants and other part-time students spend proportionately longer time.

The graduate program of the school falls into three general categories:

(1) For students who enter graduate work from any one of the regular five-year undergraduate curricula having strictly professional content:

(a) *Master of Architecture*. (i) For original work in architectural design, requiring completion of a terminal creative project in design that involves a complex and broad problem; the project is selected, initiated, developed, and publicly presented by the student; more than one student may collaborate on such a project. (ii) For completion of original research in some special phase of the building industry, construction methods, structural design, building types, etc.; the results of the research are presented in the form of a thesis.

(b) *Master of Landscape Architecture*. For original work in landscape design, requiring presentation of a terminal creative project in design, selected and developed by the student; this project may be integrated with a parallel architectural project, or a group of students in landscape architecture may collaborate on the project.

(c) *Master of Science (in Urban Planning)*. (i) For creative design in city or regional planning; requiring the selection, development, and public presentation of a project in design. (ii) For research in some phase of regional or urban plan-

ning; this type of program normally requires presentation of a thesis. (When appropriate, two or more students having common interests may collaborate on a single design project or research problem.)

(2) For students who enter graduate work from any one of the regular four-year undergraduate curricula and who wish to do advanced creative work:

Master of Fine Arts. For creative work only, requiring completion of a terminal creative project in painting or drawing, graphic arts, mural design, sculpture, or applied design. The M.F.A. degree may also be awarded upon completion of a project involving work in more than one of these fields. For example, a student whose major concentration is in sculpture may include in his project some work in ceramics, in order to investigate glazes and firing as they apply to problems in ceramic sculpture. Development of such secondary interests is encouraged. The candidate may be required to hold a comprehensive public showing of his work in galleries and exhibition areas on the campus. Two examples of each student's work may be retained by the School of Architecture and Allied Arts for its permanent records and for future exhibition. All other work is returned to the student after the exhibit is closed. (See also page 49.)

(3) For students who enter graduate work from any of the regular four-year undergraduate curricula and who desire to do work that is not necessarily creative:

(a) *Master of Arts*. For graduate study with emphasis on the history of art and architecture or on theoretical aspects of any of the visual arts.

(b) *Master of Science*. For completion of other approved programs, usually involving special combinations of interest in professional and nonprofessional areas.

(c) *Master of Science (in Art Education)*. For programs of advanced study planned especially for teachers. Graduate work is available to meet the needs of junior-high, senior-high, and junior-college teachers.

(d) *Master of Science in General Studies*. For graduate work in art education where a distributed major is desirable, chiefly where the student desires to satisfy the Oregon state requirement of fifth-year college work for regular high-school teacher certification. In programs leading to this degree, attention may also be given to the art needs of recreational directors, occupational therapists, etc.

A reference library of 5,000 volumes, covering interests of all divisions, is permanently housed in the school. Two research librarians are available. The school collection of lantern slides numbers over 59,000, and is recognized as one of the best in the region. Photographic laboratory, wood shop, gallery workroom, and other supplemental facilities are available.

Visiting lecturers and critics in all professional areas are frequent guests of the school and are available for consultation by graduate students.

Architecture

AA 469, 470, 471. **Theory of Structures II.** (G) 3 hours each term. Hannaford.

AA 472, 473, 474. **Theory of Structures III.** (G) 4 hours each term. Hannaford.

AA 501. **Special Studies.** Hours to be arranged.

AA 505. **Reading and Conference.** Hours to be arranged.

AA 507. **Seminar.** Hours to be arranged.

AA 509. **Terminal Creative Project.** Hours to be arranged. Andrews, Dole, Ferens, Hayden.

AA 529. **Ethics and Practice (Architecture).** 2 hours fall or spring. Stafford.

AA 587. **Architectural Design.** 1 to 12 hours any term. Hayden.

Interior Architecture

AA 501. **Special Studies.** Hours to be arranged.

AA 505. **Reading and Conference.** Hours to be arranged.

AA 507. **Seminar.** Hours to be arranged.

AA 509. **Terminal Creative Project.** Hours to be arranged.

AA 530. **Ethics and Practice (Interior).** 2 hours. Frasier.

AA 588. **Interior Design.** 1 to 12 hours any term. Frasier.

Landscape Architecture and Urban Planning

AA 411, 412, 413. **Parks, School Grounds, and Recreational Areas.** (g) 3 hours each term.

AA 430, 431, 432. **Plant Composition.** (G) 3 to 6 hours any term. Cuthbert.

AA 433, 434, 435. **Ethics and Practice (Landscape).** (G) 1 hour each term. Cuthbert, Jette, Ruff.

AA 459. **Landscape Field Practice.** (G) 3 hours. Ruff.

AA 460, 461. **Landscape Construction II.** (G) 3 hours each term. Ruff.

AA 499. **City Planning II.** (G) 1 to 6 hours any term.

AA 501. **Special Studies.** Hours to be arranged.

AA 505. **Reading and Conference.** Hours to be arranged.

AA 507. **Seminar.** Hours to be arranged.

AA 508. **Seminar in Planning and Housing.** 2 to 3 hours any term. Cuthbert.

AA 509. **Terminal Creative Project.** Hours to be arranged. Cuthbert, Jette, Ruff, Bochkor.

AA 589. **Landscape Design.** 1 to 12 hours any term. Cuthbert, Jette, Ruff, Bochkor.

Drawing, Painting and Graphic Arts

AA 480. **Lithography.** (g) 2 to 4 hours any term. McCosh.

AA 490. **Advanced Painting.** (g) 2 to 4 hours any term. McCosh, Vincent.

AA 491. **Advanced Drawing.** (g) 1 to 4 hours any term. McCosh.

AA 492. **Composition and Visual Theory.** (G) 2 to 4 hours any term. Wilkinson.

AA 493. **Visual Continuity.** (G) 1 to 3 hours any term.

AA 501. **Special Studies.** Hours to be arranged.

AA 505. **Reading and Conference.** Hours to be arranged.

AA 507. **Seminar.** Hours to be arranged.

AA 509. **Terminal Creative Project.** Hours to be arranged. Vincent, Wilkinson, McCosh.

AA 580. **Graduate Studies in Print Making.** Hours to be arranged. McCosh.

AA 590. **Graduate Studies in Painting, Drawing, and Design.** Hours to be arranged. Vincent, Wilkinson, McCosh.

Sculpture and Applied Design

AA 455. **Advanced Ceramics.** (G) 2 to 4 hours any term. Ross.

AA 456. **Advanced Weaving.** (G) 2 to 4 hours any term. Nixon.

AA 457. **Advanced Jewelry and Metalsmithing.** (G) 2 to 4 hours any term. Nixon.

AA 458. **Textile Printing.** (G) 2 to 4 hours.

AA 494. **Advanced Sculpture.** (G) 2 to 4 hours any term. Zach.

AA 496. **Ceramic Sculpture.** (G) 2 hours any term.

AA 501. **Special Studies.** Hours to be arranged.

AA 505. **Reading and Conference.** Hours to be arranged.

AA 507. **Seminar.** Hours to be arranged.

AA 509. **Terminal Creative Project.** Hours to be arranged.

Art History

AA 440. **American Architecture.** (G) 3 hours. Ross.

AA 446, 447, 448. **History of Oriental Art.** (G) 3 hours each term. Baldinger.

AA 450, 451, 452. **Art in Latin America.** (G) 3 hours each term. Ross.

AA 476, 477, 478. **Background of Modern Art.** (G) 3 hours each term.

AA 501. **Special Studies.** Hours to be arranged.

AA 503. **Thesis.** Hours to be arranged.

AA 505. **Reading and Conference.** Hours to be arranged.

AA 507. **Seminar.** Hours to be arranged.

Art Education

ArE 409. **Practicum.** (g) Hours to be arranged. Gehring.

ArE 411. **Methods and Research Materials: Art in Elementary Schools.** (G) 3 hours. Burgner.

ArE 414. **Art in the Senior High School.** (G) 3 hours. Ballinger.

ArE 501. **Special Studies.** Hours to be arranged.

ArE 505. **Reading and Conference.** Hours to be arranged.

ArE 507. **Seminar.** Hours to be arranged.

ArE 532. **Supervision of Children's Art Laboratory.** 3 hours any term. Burgner.

ArE 535. **Art and Architecture for the School Administrator.** 3 hours.

Biology

Professors: EDWARD NOVITSKI, (department head), CLARENCE W. CLANCY, PETER FRANK, GRAHAM HOYLE, RALPH R. HUESTIS (emeritus), AARON NOVICK, PAUL L. RISLEY, BRADLEY T. SCHEER, ARNOLD L. SODERWALL, FRANKLIN W. STAHL.

Associate Professors: ANDREW BAJER, MELVIN J. COHEN, LEROY E. DETLING, JAMES KEZER, ROBERT W. MORRIS, J. ARNOLD SHOTWELL, WILLIAM R. SISTROM, JACOB STRAUS, GEORGE STREISINGER, SANFORD S. TEPPER, DONALD E. WIMBER.

Assistant Professors: RICHARD W. CASTENHOLZ, STANTON A. COOK, JANE GRAY, BAYARD H. MCCONNAUGHEY, FREDERICK W. MUNZ.

Instructor: PRISCILLA J. KILBOURN.

Graduate work leading to the degrees of M.A., M.S., and Ph.D., is offered in the fields of botany (plant morphology, cytology, anatomy, taxonomy, and physiology), ecology, (plant and animal), genetics, marine biology, microbiology, molecular biology, physiology (comparative, general, and mammalian), and zoology (cytology, embryology, invertebrate, and vertebrate).

Candidates for a master's degree are expected to have met undergraduate major requirements or their equivalents (determined by examination) before or as soon as possible after beginning graduate study. These requirements include: general biology, including both zoology and botany; invertebrate and vertebrate zoology, including anatomy and embryology; plant morphology and systematics; cellular physiology; genetics; general chemistry, organic chemistry, and quantitative analysis; general physics; one year of college mathematics and elementary statistics; two years of French, German, or Russian.

Facilities for research and study include the Museum of Natural History, an herbarium containing large collections from the Pacific area, an aquarium room, a greenhouse, controlled-temperature rooms, photographic dark rooms, and laboratories equipped for mammalian, comparative, plant, and general physiology. Animal colonies of *Drosophila*, with an extensive stock of mutant types, and of mutant and feral *Peromyscus* are maintained for genetic experiment. Stocks of *Cricetus* and *Mus* are available for physiological research. In a rich collecting area on the Oregon coast, the University operates an Institute of Marine Biology, which provides instructional and research facilities for all the institutions of the State System of Higher Education. The Institute of Molecular Biology is equipped for work in virus genetics and related biochemical and biophysical studies, and provides a graduate program in areas of mutual interest to biologists, chemists, and physicists.

- Bi 408. **Laboratory Projects.** (G) Hours to be arranged.
 Bi 414, 415, 416. **General and Comparative Physiology.** (G) 4 hours each term.
 Bi 417. **Introduction to Mammalian Physiology.** (g) 4 hours (summer sessions).
 Bi 422. **Introduction to Genetics.** (g) 3 hours. Clancy.
 Bi 423. **Genetics Laboratory.** (G) 2 hours. Clancy.
 Bi 424. **Human Genetics.** (G) 3 hours. Novitski.
 Bi 426. **Evolution.** (G) 3 hours. Peacock.
 Bi 428, 429. **Cytology.** (G) 4 hours each term. Wimber.
 Bi 432. **Fungi.** (G) 4 hours.
 Bi 433. **Algae.** (G) 4 hours. Castenholz.
 Bi 434. **Plant Anatomy and Microtechnique.** (G) 4 hours. Bajer.
 Bi 439. **Field Botany.** (G) 4 hours (summer sessions).
 Bi 441. **Plant Physiology.** (G) 4 hours. Straus.
 Bi 455. **Histology.** (G) 4 hours. Kezer.
 Bi 459. **Field Ornithology.** (G) 3 hours (summer sessions).
 Bi 461, 462. **Invertebrate Zoology.** (G) 4 hours each term (marine institute).
 Bi 463. **Parasitology.** (G) 4 hours. McConnaughey.
 Bi 467. **Marine Invertebrate Types.** (g) 3 hours (marine institute).
 Bi 468. **Invertebrate Embryology.** (G) 4 hours (marine institute).

- Bi 471, 472, 473. **Principles of Ecology.** (G) 4 hours each term. Cook, Frank.
 Bi 475. **Aquatic Biology.** (G) 3 hours. Castenholz, Frank.
 Bi 476. **Biology of Marine Organisms.** (G) 8 hours (marine institute).
 Bi 477. **Planktonology.** (G) 4 hours (marine institute).
 Bi 478. **Marine Ecology.** (G) 4 hours (marine institute).
 Bi 481, 482. **Microbiology.** (G) 4 hours each term.
 Bi 491, 492, 493. **Historical Biogeography.** (G) 3 hours each term. Shotwell.
 Bi 494. **Laboratory and Field Methods in Biology.** (G) 4 hours.
 Bi 501. **Research.** Hours to be arranged.
 Bi 502. **Supervised College Teaching.** Hours to be arranged.
 Bi 503. **Thesis.** Hours to be arranged.
 Bi 505. **Reading and Conference.** Hours to be arranged.
 Bi 507. **Seminar.** Hours to be arranged.
Animal Physiology. Cryptogamic Botany. Ecology. Fish Biology. Plant Morphology. Plant Physiology. Radiation Biology.
 Bi 510. **Endocrinology Laboratory.** 1-3 hours.
 Bi 511. **Vertebrate Endocrinology.** 3 hours. Soderwall.
 Bi 512. **Physiology of Reproduction.** 3 hours. Soderwall, Risley.
 Bi 513. **Comparative Endocrinology.** 3 hours.
 Bi 515. **Physiology of Membrane Processes.** 3 hours.
 Bi 516, 517. **Neurophysiological Basis of Behavior.** 3 hours each term. Cohen, Hoyle.
 Bi 519. **Neurophysiological Laboratory.** 3 hours. Cohen, Hoyle.
 Bi 520, 521, 522. **Advanced Genetics.** 2 hours each term. Novitski.
 Bi 526. **Developmental Genetics.** 3 hours. Clancy.
 Bi 531. **Experimental Plant Morphogenesis.** 4 hours.
 Bi 537, 538, 539. **Advanced Systematic Botany.** 3 hours each term. Detling.
 Bi 541. **Advanced Plant Physiology.** 3 hours.
 Bi 544. **Plant Physiology Laboratory.** 2 or 3 hours. Straus.
 Bi 545. **Physiology and Ecology of Algae.** 3 hours. Castenholz.
 Bi 551. **Biology of Fishes.** 4 hours. Morris.
 Bi 565. **Experimental Embryology.** 4 hours. Risley.
 Bi 597, 598, 599. **Advanced Biology.** 4 hours each term. Novitski.

Business Administration

Professors: RICHARD W. LINDHOLM (dean), WESLEY C. BALLAINE, EDWIN F. BEAL, JOHN C. CLENDENIN, MARK R. GREENE, CHARLES E. JOHNSON, SIOMA KAGAN, ARTHUR MACE, JOHN B. MINER, EDWARD W. REED, WILLIAM J. ROBERT, STANLEY C. VANCE.

Associate Professors: DAVID A. BAERNCOFF, EDWIN H. CAPLAN, DALE S. HARWOOD, STUART U. RICH, W. DWAIN RICHINS, ROY J. SAMPSON, FREDERICK J. SEUBERT, KEITH D. SKELTON, JOHN W. SOHA, DONALD A. WATSON, CHARLES F. ZIEBARTH.

Assistant Professors: CLYDE E. BROWNING, GEORGE A. CHRISTY, ABRAHAM K. KORMAN, ARNO L. PEETERSON, KENNETH RAMSING, DANIEL P. REMINGTON, NORMAN R. SMITH, ARTHUR L. THOMAS, DONALD L. THOMPSON.

The School of Business Administration provides: (1) basic professional business education for entering graduate students who have had little or no undergraduate work in business administration; (2) advanced work in general management and in business specialties for students who have completed an undergraduate major in business administration; (3) studies planned to invigorate and modernize the business skills of experienced business managers; and (4) preparation for careers in college teaching and research.

Instruction is offered in the fields listed below. In all fields, instruction in the School of Business Administration is supported by courses in cognate fields offered by other divisions of the University.

- Accounting—public, industrial and government, control theory.
- Business Statistics—quantitative analysis for business decisions.
- Finance—banking, investments, real estate, finance management.
- Forest Industries Management—management of forest products industries (lumber, plywood, pulp and paper, construction and housing).
- Managerial Economics—economic principles of business management, business planning, forecasting, business fluctuations.
- International Business—finance, trade, management, foreign commercial law.
- Risk and Insurance—risk management, personal and property insurance, pensions and group insurance, social insurance.
- Marketing—marketing theory, marketing research, market communications, price and product policy, consumer behavior.
- Business Organization Theory—management functions, organizational conflict and change, leadership, group behavior.
- Transportation—industrial traffic management, highway, rail, air, and ocean transportation, public utilities.
- Production—operations research, production programming, industrial management, industrial structure and policy.
- Personnel—selection, training, wage and salary administration, labor relations.

Master's Program. The School of Business Administration offers a two-year program leading to the Master of Business Administration, Master of Science, or Master of Arts degree. For students entering with little or no undergraduate work in business, a total of 75 term hours of work is required, including a 30-hour first-year core program, all or part of which may be waived for students who have had equivalent work as undergraduates.

Admission. For admission to the master's program, the student must satisfy the general requirements for admission to the Graduate School. Admission to 500 courses may, however, be restricted to students with a grade-point average of 2.75 or higher. Formal admission to candidacy for a master's degree is granted only after a qualifying examination following the student's first term of graduate study.

Core Programs. The first year of the master's program includes a series of core seminars and two terms of work in Principles of Economics, planned especially for students whose undergraduate studies have been in fields other than business administration. For these students, the first-year core program is required; all or part of the requirement may be waived for students who have had equivalent instruction as undergraduates at the University of Oregon or another institution. The first-year core requirement is as follows:

	Term Hours
Accounting in Administration (Ac 511, 512).....	6
Statistics for Business Decisions (BS 511).....	3
Financial Environment (FBE 514).....	3
Financial Management (FBE 516).....	3
Legal Environment of Business (FBE 517).....	3
Industrial Administration (PIM 511).....	3
Administration of Marketing Function (MIT 511).....	3
Principles of Economics (Ec 201, 202).....	6
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The second year of the master's program also includes a group of core courses, providing an understanding of management science and of the utilization of functional areas of business in the application of management principles. The second-year core courses are:

	Term Hours
Theory of Business Organization (PIM 531).....	3
Administrative Controls (Ac 540).....	3
Managerial Economics (FBE 530).....	3
Problems in Business Finance (FBE 522).....	3
Seminar: Legal & Social Philosophy of Business (FBE 507).....	3
Seminar: Quantitative Analysis for Business Decisions (BS 507).....	3
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Master of Business Administration. The program leading to the M.B.A. degree emphasizes the development of breadth of understanding of business problems and of general management skills; the program is especially adapted to the needs of students who have earned their bachelor's degree in the social sciences, humanities, sciences, or engineering.

The requirements are: (1) completion of the first-year core program or equivalent; (2) completion of the full second-year core program; (3) a maximum of 18 term hours in a field of business specialization. A thesis is not required; if the student elects to submit a thesis, thesis credit (9 term hours) is counted as part of the 18-hour maximum in his field of specialization.

All candidates for the M.B.A. degree are required to take a final written comprehensive examination, covering (1) the second-year core program and (2) the field of specialization.

Candidates for the M.B.A. degree may complete the 18-hour second-year core program in the Portland Continuation Center of the Oregon State System of Higher Education. They may also satisfy in Portland the 18-hour specialization requirement, in fields in which faculty and library resources are available. Candidates who complete their course work in Portland are required to write a thesis, in consultation with advisers on the Eugene campus.

Instruction providing the equivalent of the first-year core program is also offered in the Portland Center.

Students enrolled in the Portland M.B.A. program may take supporting work in graduate engineering courses offered by the School of Engineering at Oregon State University through the Portland Center.

Master of Science or Master of Art. The program leading to the M.S. or M.A. degree allows more specialization than the M.B.A. program, and is especially adapted to the needs of students interested in careers in accounting, business statistics and research, and industrial management.

The requirements are: (1) completion of the first-year core program or equivalent; (2) 9 term hours of work selected from the second-year core program in consultation with the candidate's adviser; (3) completion of a major in a specialized field of business, normally 15 term hours; (4) a thesis, 9 term hours; (5) completion of a minor in the school or in a cognate field (minimum, 12 term hours); (6) for the M.A. degree, competence in a foreign language.

Candidates for the M.S. or M.A. degree are required to take a final written comprehensive examination covering the major field of specialization and the minor, and an oral examination on the thesis.

Minor in Business Administration. A master's candidate with a major in another field may elect a minor in business administration. The minor may consist of (1) 15 term hours of work selected from the second-year core program or (2) 15 term hours in one general field of specialization. The adequacy of the candidate's preparation is reviewed by the school before admission to work for a minor.

Foreign Students. The work of foreign graduate students (other than Canadian) during their first year of residence is considered probational. A foreign student will be admitted to candidacy for a master's degree only after the faculty has had an opportunity to judge the adequacy of his background in business education, his facility in the English language, and his ability to adjust to an unfamiliar educational environment.

Doctoral Program. The School of Business Administration offers a program of advanced graduate study and research leading to the degree of Doctor of Business Administration, to careers in college teaching and administration, and to responsible research positions in business and government.

Admission. For admission to the doctoral program, the student must (1) satisfy the admission requirements of the Graduate School, and (2) have the background of graduate work required for a master's degree in business administration.

Degree Requirements. The requirements for the D.B.A. degree are as follows:

(1) Completion of a minimum of 63 term hours of work above the level expected for a master's degree in business administration.

(2) Completion of studies in each of the following five areas:

	Term Hours
Business organization theory & policy—minimum.....	9
A major functional area of business (accounting, finance, marketing, production—programs in other areas may be arranged)—minimum.....	9
Statistics & quantitative control—minimum.....	9
Advanced Economic Theory (Ec 458, 459, 460).....	9
A field of study other than business—minimum.....	9

(3) Submission of a thesis presenting an original and major contribution to the understanding of the thesis subject, for a minimum of 18 term hours of credit (the student must enroll for 3 term hours in Thesis in each term the thesis is uncompleted after he has passed his comprehensive examinations, up to a maximum of 36 term hours).

(4) Examinations, including: (a) a qualifying examination, normally taken during the student's second term of doctoral studies; (b) written comprehensive examinations, not less than one academic year before the student expects to complete work for the degree, covering the required five areas of study—see (2), above; (c) a final oral examination on the thesis.

Reading knowledge of foreign languages is not required.

Accounting and Business Statistics

Accounting

Ac 411, 412, 413. **Income-Tax Procedures.** (G) 2 hours each term. Peiterson.

Ac 420, 421. **Management Information Systems.** (G) 3 hours each term. Harwood.

Ac 430. **Fund Accounting.** (G) 3 hours. Harwood.

Ac 440, 441. **Accounting Verification.** (G) 3 hours each term. Thomas, Peiterson.

Ac 450, 451. **Special Topics in Accounting.** (G) 3 hours each term. Johnson.

Ac 480, 481. **Advanced Accounting Problems.** (G) Hours to be arranged. Thomas.

Ac 501. **Research.** Hours to be arranged.

Ac 503. **Thesis.** Hours to be arranged.

Ac 507. **Seminar.** Hours to be arranged.

Accounting in Administration: Harwood. *Financial Accounting:* Luneski. *Managerial Cost Analysis:* Harwood. *Accounting Trends:* Soha.

Ac 508. **Workshop.** Hours to be arranged (summer session and extension).

Ac 511, 512. **Accounting in Administration.** (p) 3 hours each term.

Ac 540. **Administrative Controls.** 3 hours. Harwood.

Ac 542. **Auditing Concepts.** 3 hours. Soha.

Ac 552. **Accounting Theory.** 3 hours. Johnson.

Ac 562. **Cost Analysis and Interpretation.** 3 hours. Harwood.

Business Statistics

BS 432. **Quantitative Analysis of Business Decisions.** (G) 3 hours.

BS 433. **Special Topics in Business Statistics.** (G) 3 hours.

BS 507. **Seminar.** Hours to be arranged.

Statistics for Business Decisions: Baerncopf. *Quantitative Analysis for Business Decisions:* Baerncopf.

BS 511. **Statistics for Business Decisions.** (p) 3 hours.

Business Education

BEd 407. **Seminar.** (g) Hours to be arranged.

BEd 421. **Foundations of Business Education.** (g) 3 hours. Jones.

BEd 442. **Business Education and the Community.** (g) 3 hours. Jones.

BEd 423. **Problems of Business Education.** (g) 3 hours. Jones.

BEd 508. **Workshop.** Hours to be arranged (summer sessions and extension).

Finance and Business Economics

FBE 415. **Commercial and Industrial Site Location.** (G) 3 hours.

FBE 418. **Advanced Business Law.** (G) 5 hours.

FBE 430. **Advanced Real Estate and Urban Land Use.** (G) 3 hours.

FBE 460. **Commercial Bank Management.** (G) 5 hours.

FBE 464. **Investments.** (G) 3 hours.

FBE 474. **Foreign Exchange and International Finance Management.** (G) 5 hours.

FBE 475. **Foreign-Trade Marketing.** (G) 5 hours.

FBE 476. **Foreign Business Operations.** (G) 5 hours.

FBE 501. **Research.** Hours to be arranged.

- FBE 503. **Thesis.** Hours to be arranged.
 FBE 507. **Seminar.** Hours to be arranged.
Legal and Social Philosophy of Business: Richins.
 FBE 508. **Workshop.** Hours to be arranged (summer sessions and extension).
 FBE 511. **Methods in Business Research.** 3 hours. Ballaine.
 FBE 512. **Problems in Business Forecasting.** 3 hours. Lindholm.
 FBE 514. **Financial Environment.** (p) Reed.
 FBE 516. **Financial Management.** (p) 3 hours.
 FBE 517. **Legal Environment of Business.** (p) 3 hours. Robert.
 FBE 522. **Problems in Business Finance.** 3 hours.
 FBE 525. **Foreign Commercial Law.** 3 hours.
 FBE 530. **Managerial Economics.** 3 hours. Ballaine.
 FBE 535. **Taxation and Business Management.** 3 hours. Lindholm.
 FBE 565. **Security Analysis.** 3 hours.
 FBE 566. **Investment Policy.** 3 hours.
 FBE 575. **The Money Market.** 3 hours. Reed.

Marketing, Insurance, and Transportation

- MIT 447. **Highway Transportation.** (G) 3 hours (extension).
 MIT 448. **Air Transportation.** (G) 3 hours (extension).
 MIT 451. **Transportation Regulatory Laws and Procedures.** (G) 3 hours.
 Sampson, Ziebarth.
 MIT 452. **Special Problems in Transportation and Traffic Management.** (G)
 3 hours. Sampson, Ziebarth.
 MIT 455. **Property and Liability Insurance.** (G) 5 hours. Greene.
 MIT 456. **Life and Health Insurance.** (G) 4 hours. Greene.
 MIT 458. **Social Insurance.** (G) 3 hours. Greene.
 MIT 467. **Public Utility Management.** (G) 3 hours. Sampson.
 MIT 501. **Research.** Hours to be arranged.
 MIT 503. **Thesis.** Hours to be arranged.
 MIT 507. **Seminar.** Hours to be arranged.
Marketing Theory: Remington. *Consumer Behavior:* Smith. *Marketing Communication:* Smith. *Risk Management:* Greene. *Industrial Marketing:* Rich. *Transportation Theory and Practice:* Sampson. *Management of Forest Products Companies:* Rich. *Marketing Research:* Remington.
 MIT 508. **Workshop.** Hours to be arranged (summer sessions and extension).
 MIT 511. **Administration of the Marketing Function.** (p) 3 hours.
 MIT 520. **Marketing Problems and Policies.** 3 hours. Greene, Smith.
 MIT 521. **Pricing Policies.** 3 hours. Rich, Remington.
 MIT 555. **Risk and Insurance Theory.** 3 hours. Greene.
 MIT 556. **Pensions and Group Insurance.** 3 hours. Greene.

Personnel and Industrial Management

- PIM 412. **Personnel Management.** (g) 3 hours. Beal.
 PIM 413. **Wage and Salary Administration.** (G) 3 hours. Beal.

- PIM 414. **Problems in Personnel Management.** (g) 3 hours. Beal, Korman.
 PIM 480. **Business History.** (G) 3 hours.
 PIM 501. **Research.** Hours to be arranged.
 PIM 503. **Thesis.** Hours to be arranged.
 PIM 507. **Seminar.** Hours to be arranged.
Research Design: Korman.
 PIM 511. **Industrial Administration.** (p) 3 hours. Seubert.
 PIM 530. **Production Programming.** 3 hours. Vance.
 PIM 531. **Theory of Business Organization.** 3 hours. Miner, Seubert.
 PIM 532. **Problems in Business Policies.** 3 hours. Vance.
 PIM 533. **Theory of the Industrial Work Group.** 3 hours. Miner, Korman.
 PIM 534. **Personnel Administration.** 3 hours. Beal.
 PIM 535. **Personnel Psychology.** 3 hours. Miner, Korman.
 PIM 536. **Industrial Conflict and Change.** 3 hours. Miner.

Chemistry

Professors: RICHARD M. NOYES (department head), VIRGIL C. BOEKELHEIDE, MARSHALL FIXMAN, TERRELL L. HILL, LEROY H. KLEMM, FRANCIS J. REITHEL, JOHN SCHELLMAN, WILLIAM T. SIMPSON, DONALD F. SWINEHART.

Associate Professors: SIDNEY A. BERNHARD, LLOYD J. DOLBY, EDWARD HERBERT, ROBERT M. MAZO, RAYMOND G. WOLFE.

Assistant Professors: THOMAS W. KOENIG, MARTIN L. SAGE.

Graduate work leading to the M.A., M.S., and Ph.D. degrees is offered in inorganic, analytical, organic, physical, and biochemistry. A well-qualified student may complete the requirements for the master's degree in one academic year of full-time work, or in one school year and one summer session if serving as an assistant. The master's degree may be earned with or without the presentation of a thesis. A qualified student may proceed directly to the Ph.D. without first taking the master's degree.

Course requirements for the Ph.D. degree are not rigidly specified. A program of study is developed by the student and an advisory faculty committee appointed to supervise his progress.

All entering graduate students are required to take three orientation examinations covering standard undergraduate work in physical, organic, and analytical-inorganic chemistry. These examinations are given during fall-term registration week and again in the spring. They serve both as a basis for student advising and as a qualifying examination for admission to candidacy for a graduate degree.

The University of Oregon is on the list of schools approved by the Committee on the Professional Training of Chemists of the American Chemical Society. The Department of Chemistry is housed in the modern Science Building, which has ample facilities for research and study, including an excellent machine shop with four skilled instrument makers and a glass blower, and an adjoining "student" shop (directly accessible to graduate students). Graduate students also benefit from the presence of several chemistry postdoctoral research fellows on the staff.

Teaching and research assistantships and postdoctoral fellowships are available. In addition the department awards several National Defense Education Act fellowships each year. Additional information on these awards may be obtained

at the time the student applies for admission. Although subject to variation, stipends of assistants and fellows, who usually have summer employment, range up to \$3,200 for the calendar year. During 1963-64 research projects in the Department of Chemistry were sponsored by the Army Research Office, the American Chemical Society, the Atomic Energy Commission, the National Institutes of Health, the National Science Foundation, and the Sloan Foundation.

Current research interests of the faculty include: enzyme purification and kinetics, intermediary and microbial metabolism, sugar phosphates, polynuclear carbocyclic compounds, chemistry of natural products, synthesis and fundamental chemistry of organic compounds, molecular rearrangements, stereochemistry and sterically hindered molecules, optical rotary power, structures of proteins, inorganic complex compounds, trace metal analysis, surface chemistry, physical biochemistry, kinetics of gas phase reactions, reaction at high temperatures, mass spectrometry, photochemistry, mechanisms of isotopic exchange reactions, diffusion controlled reactions in solution, thermodynamics of dilute electrolyte solutions, statistical mechanics.

A brochure on opportunities for graduate study in chemistry and requirements for degrees may be obtained on request to the department.

- Ch 409. **Special Laboratory Problems.** (G) Hours to be arranged.
- Ch 411, 412. **Physical-Inorganic Chemistry.** (G) 3 hours each term, fall and winter.
- Ch 414. **Advanced Inorganic Laboratory.** (G) 1 or 2 hours.
- Ch 416. **Kinetics in Solution.** (G) 3 hours.
- Ch 419. **Advanced General Chemistry.** (g) 4 or 5 hours (summer sessions).
- Ch 429. **Survey of Analytical Chemistry.** (g) 4 or 5 hours (summer sessions).
- Ch 439. **Survey of Organic Chemistry.** (g) 4 or 5 hours (summer sessions).
- Ch 441, 442, 443. **Physical Chemistry.** (g) 4 hours each term.
- Ch 446, 447, 448. **Physical-Chemical Measurements.** (g) 2 hours each term.
- Ch 461, 462, 463. **Biochemistry.** (G) 3 hours each term.
- Ch 464, 465, 466. **Biochemistry Laboratory.** (G) 1 hour each term.
- Ch 501. **Research.** Hours to be arranged.
- Ch 503. **Thesis.** Hours to be arranged.
- Ch 505. **Reading and Conference.** Hours to be arranged.
- Ch 507. **Seminar.** 1 hour each term.
- Ch 508. **Special Topics in Theoretical Chemistry.** 2 or 3 hours.
- Ch 531, 532, 533. **Advanced Organic Chemistry.** 3 hours each term.
- Ch 534. **Special Topics in Organic Chemistry.** 2 or 3 hours spring.
- Ch 537, 538, 539. **Advanced Organic Laboratory.** 2 hours each term.
- Ch 541, 542, 543. **Chemical Kinetics.** 3 hours each term.
- Ch 544, 545, 546. **Quantum Chemistry.** 2 or 3 hours each term.
- Ch 551, 552. **Chemical Thermodynamics.** 3 hours each term, fall and winter.
- Ch 553, 554. **Statistical Thermodynamics.** 3 hours each term, fall and winter.
- Ch 556, 557. **Molecular Spectra and Molecular Structure.** 2 hours.
- Ch 561, 562, 563. **Enzymes and Intermediary Metabolism.** 2 or 3 hours each term.
- Ch 564, 565, 566. **Physical Biochemistry.** 2 or 3 hours each term.

College Teaching

The University offers instruction and supervised experience in college teaching for graduate students who plan careers in higher education; including a seminar in higher education, conducted through the Institute for College Teaching (see page 86), and programs of supervised teaching in special fields conducted by the several instructional divisions.

ISt 507. **Higher Education Seminar.** 1 hour. Jones, staff.

Comparative Literature

The University offers a program of graduate study in the field of comparative literature, leading to the M.A. and Ph.D. degree. The program is administered by an interdisciplinary committee including members of the faculties of the Department of English and the Division of Modern and Classical Languages; Dr. Chandler B. Beall, professor of Romance languages, is chairman of the committee.

AL 407. **Seminar.** (g) Hours to be arranged.

AL 514, 515, 516. **Introduction to Comparative Literature.** 3 hours each term. Beall.

AL 586, 587. **Comparative Literary Criticism.** 3 hours each term. Beall.

Dental Sciences

The University of Oregon Dental School in Portland offers graduate work leading to the M.S. degree for students planning careers in dental education and research. Graduate major programs have been arranged in the fields of anatomy, bacteriology, biochemistry, dental materials, oral pathology, pedodontics, pharmacology, and physiology. For requirements and courses, see the Dental School Catalog.

Economics

Professors: ROBERT L. ALLEN, RICHARD M. DAVIS, CORWIN D. EDWARDS, PAUL L. KLEINSORGE, RAYMOND F. MIKESSELL, PAUL B. SIMPSON, MARSHALL D. WATTLES.

Associate Professors: ROBERT CAMPBELL (department head), H. T. KOPLIN, BARRY N. SIEGEL, ROBERT E. SMITH, JAMES N. TATTERSALL.

Assistant Professors: GERALD O. BIERWAG, MYRON A. GROVE, WILLIAM P. MCGREEVEY.

The Department of Economics offers graduate work leading to the M.A., M.S., and Ph.D. degrees. All graduate majors are expected to take the Graduate Record General Aptitude Examination and the Advanced Test in Economics before the end of their first term in residence.

All candidates for graduate degrees must have a knowledge of statistics. This requirement may be satisfied with Elements of Statistical Methods (Mth 425, 426, 427); or Introduction to Business Statistics (BE 232), Elementary

Inference in Business Statistics (BS 233); *or* Statistics for Business Decisions (BS 511); *or* a satisfactory grade in the final examinations in one of these sequences.

Master's Degree. Economic Theory (Ec 375, 376, 377) *or* Advanced Economic Theory (Ec 458, 459, 460) are required preparation for work toward a master's degree in economics.

The master's candidate must prepare himself in a special field of economics, including 9 term hours of work in 500-level courses or seminars. The department offers work in the following special fields: economic theory, economic development, economic history, history of economic thought, industrial organization and control, international economics, labor economics, money and credit, public finance, quantitative economics, regional economics.

For the master's degree, the writing of a thesis is optional. If a thesis is written, the student is examined orally on economic theory, his special field, and his thesis. In lieu of a thesis, the student may write a research paper; the student electing to write a research paper takes written and oral examinations on economic theory, his special field, and his paper (the preliminary examinations for the Ph.D. may be substituted for the written examination).

Ph.D. Degree. The following courses are required of all candidates for the Ph.D. degree: (1) Income and Employment Theory (Ec 561, 562, 563), Price and Distribution Theory (Ec 575, 576, 577); (2) Quantitative Economic Analysis (Ec 464, 465, 466) *or* a satisfactory grade in the final examinations in the sequence; (3) Development of Industrial Economics (Ec 490, 491, 492). The departmental graduate committee may waive any of these requirements on submission of documentary evidence of the completion of equivalent work. The Ph.D. candidate is also expected to have a general knowledge of the historical development of economic thought; a reading list in the field is available in the departmental office. The student is expected to complete these requirements during his first year of graduate study *or* as soon thereafter as possible.

A student working toward the Ph.D. must take preliminary examinations in economic theory (normally after the completion of the first full year of graduate work), and in three additional special fields. Ec 561, 562, 563, Ec 575, 576, 577 provide preparation for the examination in economic theory—see (1), above. As a part of his preparation for examination in each of the three optional fields, the student must take 9 term hours of course or seminar work at the 500 level. The optional fields in economics are: economic development, economic history, history of economic thought, industrial organization and control, international economics, labor economics, money and credit, public finance, quantitative economics, regional economics. The student may select one of the optional fields outside the department; the student who elects such a field works out his program in consultation with the departmental graduate committee.

The Ph.D. dissertation may be written in economic theory *or* in one of the optional fields listed above.

Ec 407. **Seminar.** (g) Hours to be arranged.

Ec 411, 412, 413. **Monetary and Banking Theory.** (G) 3 hours each term. Siegel.

Ec 414, 415, 416. **Regional Economics.** (G) 3 hours each term. Tattersall, Allen.

Ec 417. **Contemporary Economic Problems.** (g) 3 hours fall. Campbell.

Ec 418. **Economy of the Pacific Northwest.** (g) 3 hours spring. Simpson, Tattersall.

Ec 429, 430, 431. **Taxation and Fiscal Policy.** (G) 3 hours each term. Grove.

Ec 432, 433, 434. **The Economics of Public Policy.** (G) 3 hours each term. Allen.

Ec 440, 441, 442. **International Economics.** (G) 3 hours each term. Wattles.

Ec 444. **Labor Economics.** (G) 3 hours. Kleinsorge, Smith.

Ec 445. **Organized Labor.** (G) 3 hours. Kleinsorge, Smith.

Ec 446. **Labor Legislation.** (G) 3 hours. Kleinsorge, Smith.

Ec 447, 448, 449. **Collective Bargaining.** (G) 2 hours each term. Kleinsorge.

Ec 450, 451, 452. **Comparative Economic Systems.** (g) 2 hours each term. Wattles, Allen.

Ec 454, 455, 456. **Economic History of Modern Europe.** (G) 3 hours each term.

Ec 458, 459, 460. **Advanced Economic Theory.** (G) 3 hours each term. Koplin, Siegel, Bierwag.

Ec 461. **Government Control of Private Business.** (G) 3 hours. Edwards, Smith.

Ec 462. **Economics of Public Utilities and Transportation.** (G) 3 hours. Edwards, Smith.

Ec 463. **Economics of Competitive Industries.** (G) 3 hours. Edwards, Smith.

Ec 464, 465, 466. **Quantitative Economic Analysis.** (G) 3 hours each term. Simpson.

Ec 470, 471, 472. **History of Economic Thought.** (G) 3 hours each term. Campbell.

Ec 480, 481, 482. **Mathematical Economics.** (G) 3 hours each term. Simpson.

Ec 483, 484, 485. **National Income and Business Cycles.** (G) 3 hours each term. Simpson.

Ec 487, 488, 489. **American Economic History.** (G) 3 hours each term.

Ec 490, 491, 492. **Development of Industrial Economics.** (G) 3 hours each term.

Ec 501. **Research.** Hours to be arranged.

Ec 503. **Thesis.** Hours to be arranged.

Ec 505. **Reading and Conference.** Hours to be arranged.

Ec 507. **Seminar.** Hours to be arranged.

Industrial Organization and Control: Edwards, Smith. *Economic History:* Tattersall. *History of Economic Thought:* Campbell. *Labor Economics:* Kleinsorge. *International Economics:* Mikesell. *Money and Credit:* Siegel. *Quantitative Economics:* Simpson, Bierwag. *Regional Economic Analysis:* Allen, Tattersall.

Ec 514, 515, 516. **Regional Economic Analysis.** 3 hours each term. Allen, Tattersall.

Ec 524, 525, 526. **Economic Growth and Development.** 3 hours each term. Mikesell.

Ec 529, 530, 531. **Fiscal Theory and Policy.** 3 hours each term. Grove.

Ec 561, 562, 563. **Income and Employment Theory.** 3 hours each term. Davis.

Ec 575, 576, 577. **Price and Distribution Theory.** 3 hours each term. Davis, Koplin.

Education

Professors: P. B. JACOBSON (dean), H. H. CLARKE, JACK V. EDLING, KEITH GOLDHAMMER, GRACE GRAHAM, RAY HAWK, ARTHUR C. HEARN, CLARENCE HINES, CARL W. HINTZ, PAUL E. KAMBLY, RAYMOND N. LOWE, ROBERT E. NYE, MILES C. ROMNEY, J. FRANCIS RUMMEL, ADOLPH A. SANDIN, P. B. SIMPSON, DONALD E. TOPE, HUGH B. WOOD.

Associate Professors: MARTIN H. ACKER, THOMAS O. BALLINGER, DOROTHY M. CANDLAND, RICHARD O. CARLSON, JACK A. CULBERTSON, JOHN E. DE JUNG, EUGENE W. DILS, FRANK FARNER, ELIZABETH FINDLY, LAWRENCE D. FISH, WALTER R. HILL, SILVY KRAUS, JOHN LALLAS, LLOYD LOVELL, ROBERT C. MATTSON, ARTHUR MITTMAN, VERNICE T. NYE, OSCAR SCHAAF, JOHN E. SUTTLE, RUTH A. WILLARD, MILDRED WILLIAMS.

Assistant Professors: THOMAS C. ANDERSON, MELVIN B. BERRYHILL, HARRY J. CARLSON, OSCAR C. CHRISTENSEN, JR., STERLING G. ELLSWORTH, KNUTE ESPESETH, LEO A. HAMERLYNCK, JOHN H. HANSEN, MARGARET LANE, SUSAN J. MILLER, ROBERT E. MYERS, ROY P. NELSON, IONE PIERRON, CLARENCE W. SCHMINKE, CHARLES THOMAS, JORDAN B. UTSEY, KENNETH WEGNER, HARRY F. WOLCOTT.

Graduate work in the School of Education is offered for the preparation of teachers, supervisors, counselors, administrators, and other educational specialists, and leads to the M.A., M.S., M.Ed., Ph.D., and D.Ed. degrees.

Candidates for advanced degrees should plan to specialize in the field of their professional interest, preparing for some line of professional activity and at the same time securing a mastery of an organized body of knowledge. The programs of study in the various fields of concentration are somewhat flexible, allowing a graduate student, in consultation with his adviser, to place emphasis on those aspects of the field of education which represent his special interests and his professional objective.

The fields of concentration are: general school administration, elementary education, secondary education, education of exceptional children, health and physical education, business education, higher education, curriculum and instruction, counseling and remedial education, educational psychology, music education, art education, and library science. Members of the faculty of the school who teach courses that fall within a particular field serve as advisers to students who have selected that field of concentration.

Master's Degree. In the master's degree programs all students are expected to complete, as early in their programs as possible, at least one course in each of the following foundational areas: psychological foundations; research and measurement; historical, philosophical, and social foundations.

Each student has complete freedom to elect the area of education in which he desires to specialize. However, within each selected area the student is expected to take a basic core of specified courses. The remaining courses for the completion of graduate work for a master's degree may be elected, but they must be selected with the aid of an adviser in order to provide for a rationally unified program of study. The requirement of a research project, field study, or thesis is optional, at the discretion of the adviser, depending on the student's area of specialization.

Work leading to the master's degree is offered in several areas of education. Students should write to the personnel director of the School of Education for specific information about requirements in these areas and the procedures for initiating graduate programs.

Doctor's Degree. In the programs leading to the doctor's degree, students are required to complete the equivalent of three years of full-time work beyond the bachelor's degree. Candidates for a doctor's degree are expected to organize their programs in conference with an adviser in their field of specialization. While there is considerable flexibility in the development of a program to meet the specific needs of each individual in terms of his professional objective, each program is expected to include work in the areas of study listed below. In all areas many courses outside the School of Education are recommended to the student to supplement and buttress his academic program in education.

Candidates for the doctor's degree are required to be in full-time residence

for three consecutive terms. The satisfaction of the residence requirement begins with the term in which an approved program has been developed and filed in the Personnel Office of the School of Education.

Primary Areas. A core of work in a primary area consisting of a minimum of 45 term hours must be included in the doctoral program. It is important that a student take as much of this work as possible on campus, since the comprehensive written examination in the primary area will be based upon the content of the campus courses. Before taking off-campus courses in the primary or supporting areas, the student should secure the approval of his adviser.

At the present time the doctoral program provides for a choice of primary areas of concentration as follows:

General Administration and Supervision	Educational Psychology
Curriculum and Instruction	Education of Exceptional Children
Elementary Education	Counseling Psychology
Secondary Education	Remedial Education
Music Education	College Personnel Administration
Health and Physical Education (administered through the School of Health, Physical Education, and Recreation)	

Supporting Area. A supporting core of course work consisting of a minimum of 30 term hours must be included in the doctoral program. This supporting core of work may be drawn from within the School of Education, from one of the areas listed above, or areas such as higher education, art education, educational foundations, business education, music education, speech education, or other professional school areas, or an appropriate liberal arts area.

Foundation Area. A minimum of one course from each of the following foundational areas is required: psychological theories and processes in education; structure and function of society in relation to education; nature of the American educational system; history and philosophy of education.

Research Area. The following are required: work in research techniques (a minimum of 9 hours for the Ph.D. and 3 hours for the D.Ed.); thesis seminar (minimum of three terms for the Ph.D. and one term for the D.Ed.); doctoral dissertation (15 hours may be granted for the dissertation).

The doctoral dissertation may be either a report of the result of research which makes a substantial contribution to knowledge (for the Ph.D. or D.Ed. degree), or a study in which the student deals effectively with knowledge already available and produces a constructive result of importance and value to educational practice (for the D.Ed. degree).

Complete information concerning the organization of graduate study in education may be secured from the personnel director of the School of Education.

General Education

- Ed 407. **Seminar.** (G) Hours to be arranged.
- Ed 435. **Audio-Visual Aids.** (G) 4 hours.
- Ed 440. **History of Education.** (G) 3 hours.
- Ed 441. **History of American Education.** (G) 3 hours.
- Ed 445. **Modern Philosophies of Education.** (G) 3 hours.
- Ed 475. **Parent-Teacher Organizations.** 2 hours. (extension and summer sessions).

- Ed 476. **School Law and Organization.** (G) 2 hours any term.
 Ed 478. **Improvement of Instruction in Reading.** (G) 3 hours (extension).
 Ed 491. **Social Education.** (G) 3 hours. Graham.
 Ed 501. **Research.** Hours to be arranged.
 Ed 503. **Thesis.** Hours to be arranged.
 Ed 505. **Reading and Conference.** Hours to be arranged.
 Ed 507. **Seminar.** Hours to be arranged.
 Ed 508. **Workshop.** Hours to be arranged.
 Ed 542. **Urbanization, the Pupil, and the School.** 3 hours. Graham.
 Ed 545. **School and Society in the Recent Past.** 3 hours.
 Ed 565. **Curriculum Foundations.** 4 hours. Wood.
 Ed 566. **Curriculum Construction.** 4 hours. Wood.
 Ed 567. **Curriculum Materials.** 4 hours. Wood.
 Ed 598. **Comparative Education.** 3 hours.

Elementary Education

- Ed 451. **Early Childhood Education.** (G) 3 hours. Caudland.
 Ed 534. **Science in the Elementary School.** 3 hours. Kambly.
 Ed 535. **Social Studies in the Elementary School.** 3 hours. Willard.
 Ed 536. **Language Arts in the Elementary School.** 3 hours. Carlson.
 Ed 537. **Reading in the Elementary School.** 3 hours. Utsey.
 Ed 538. **Mathematics in the Elementary School.** 3 hours. Schminke.
 Ed 552. **Elementary-School Problems.** 4 hours.
 Ed 553. **Elementary-School Curriculum.** 4 hours.
 Ed 554. **Elementary-School Supervision and Administration.** 4 hours.

Secondary Education

- Ed 427. **School Activities.** (G) 3 hours. Hearn.
 Ed 484. **The Junior High School.** (G) 3 hours. Hearn.
 Ed 522. **Secondary-School Curriculum.** 3 hours. Hearn.
 Ed 527. **Secondary-School Administration and Supervision.** 3 hours. Hearn.
 Ed 559. **Evaluation of Secondary-School Programs.** 3 hours. Hearn.
 Ed 560. **Secondary-School Problems.** 3 hours. Hearn.
 Ed 571. **Junior High-School Curriculum.** 3 hours. Hearn.
 Ed 593. **Methods in Secondary-School Language Arts.** 3 hours. Kraus.
 Ed 594. **Methods in Secondary-School Mathematics.** 3 hours. Schaaf.
 Ed 595. **Methods in Secondary-School Science.** 3 hours. Ten Brinke.
 Ed 596. **Methods in Secondary-School Social Studies.** 3 hours. Williams.

School Psychological Services

- Ed 409. **Practicum.** (G) Hours to be arranged.
 Ed 424. **Measurements in Education.** (G) 3 hours. Rummel, Lovell, Mittman.

- Ed 428. **Psychology of Reading Instruction.** (G) 3 hours. Hill.
 Ed 429. **Principles of Remedial Education.** (G) 3 hours. Hill.
 Ed 439. **The Gifted Child.** (G) 3 hours. Lovell.
 Ed 462. **Psychology of Exceptional Children.** (G) 3 hours. Mattson.
 Ed 463. **The Maladjusted Child.** (G) 3 hours. Lowe.
 Ed 464. **The Mentally Retarded Child.** (G) 3 hours. Espeseth.
 Ed 465. **Diagnostic Techniques in the Basic Skills.** (G) 3 hours. Hill.
 Ed 468. **Remedial Techniques in Basic Skills.** (G) 3 hours. Hill.
 Ed 469. **Reading in High School and College.** (G) 3 hours. Hill.
 Ed 471. **Administration of Special Education.** (G) 3 hours. Espeseth.
 Ed 485. **Principles and Practices of Guidance Services.** (G) 3 hours. Ellsworth, Christensen.
 Ed 488. **Educational and Vocational Guidance.** (G) 3 hours. Acker, Thomas.
 Ed 489. **Curriculum for the Mentally Retarded.** (G) 3 hours. Espeseth.
 Ed 492. **Functional Aspects of Physical Disability.** (G) 3 hours. Acker, Thomas.
 Ed 509. **Practicum.** Hours to be arranged.
 Ed 512. **Research Procedures in Education.** 3 hours. Mittman.
 Ed 515, 516, 517. **Educational Statistics.** 3 hours each term.
 Ed 525. **Theory and Technique of Educational Measurement.** 3 hours. Lovell, Mittman.
 Ed 526. **Counseling Theories.** 3 hours. Ellsworth.
 Ed 528. **Group Testing in Schools and Colleges.** 3 hours. Christensen.
 Ed 529, 530, 531. **Advanced Educational Psychology.** 2 hours each term. Lovell.
 Ed 549. **Principles and Practices in School Psychology.** 2 hours. Lovell.
 Ed 562. **Issues in Extreme Learning Difficulty.** 3 hours. Hill.
 Ed 563. **Diagnosis in Mental Retardation.** 3 hours. Espeseth.
 Ed 564. **Mental Tests.** 4 hours.
 Ed 570. **Advanced Functional Aspects of Physical Disability.** 3 hours. Acker.
 Ed 589. **Organization and Administration of Guidance Services.** 3 hours. Ellsworth.

Higher Education

- Ed 590. **Higher-Education Survey.** 3 hours. Wood.
 Ed 591. **Teacher-Education Survey.** 3 hours. Kambly.
 Ed 592. **Administration of Colleges and Universities.** 3 hours. Wood.

Educational Administration

- Ed 572. **Public School Administration.** 3 hours.
 Ed 573. **Public School Organization.** 3 hours.
 Ed 574. **School Supervision.** 3 hours. Hines.
 Ed 575. **School Finance.** 3 hours.
 Ed 576. **School Buildings.** 3 hours. Hines.

Librarianship

- Lib 481. **Bibliography and Reference.** (G) 3 hours.
 Lib 483. **Principles of Book Selection.** (G) 3 hours.
 Lib 484. **School Library Administration.** (G) 3 hours.
 Lib 485. **Advanced Bibliography and Reference.** (G) 3 hours.
 Lib 486. **Introduction to Cataloging and Classification.** (G) 3 hours.
 Lib 487. **Cataloging and Classification.** (G) 3 hours.
 Lib 488. **Books and Related Materials for Young People.** (G) 3 hours.
 Lib 490. **Children's Literature.** (G) 3 hours.
 Lib 491. **Storytelling.** (G) 3 hours.
 Lib 493. **Literature of the Humanities.** (G) 3 hours. McCollough.
 Lib 494. **Literature of the Sciences.** (G) 3 hours. Roecker.
 Lib 495. **Literature of the Social Sciences.** (G) 3 hours.
 Lib 496. **The Library in the Modern Community.** (G) 3 hours.
 Lib 503. **Thesis.** Hours to be arranged.
 Lib 505. **Reading and Conference.** Hours to be arranged. Hintz, Ostwald.
 Lib 507. **Seminar.** Hours to be arranged.
 Lib 508. **Workshop.** Hours to be arranged (summer sessions).
 Lib 511. **History of the Book.** 3 hours. Hintz.
 Lib 512. **Government Publications.** 3 hours. Findly.
 Lib 514. **Library Administration.** 3 hours.

English

Professors: KESTER SVENDSEN, (department head), ROLAND BARTEL, FRANK G. BLACK, STANLEY B. GREENFIELD, JAMES B. HALL, ROBERT D. HORN, ALBERT R. KITZHABER, WALDO F. MCNEIR, ERNEST G. MOLL, CARLISLE MOORE, JOHN C. SHEERWOOD, CHRISTOF WEGELIN.

Associate Professors: SYLVAN N. KARCHMER, GEORGE REINECKE, A. KINGSLEY WEATHERHEAD, OLIVER M. WILLARD.

Assistant Professors: LUCILE ALY, ROLAND C. BALL, WILLIAM E. CADBURY, FREDERICK, H. CANDELARIA, THELMA GREENFIELD, ROBERT R. HODGES, JOSEPH A. HYNES, STANLEY R. MAVEETY, H. RAY MCKNIGHT, WILLIAM H. NOLTE, WAYNE A. O'NEILL, NORMAN H. OSWALD, RALPH J. SALISBURY, WILLIAM C. STRANGE.

Instructor: FRANK C. GARDINER.

The Department of English offers graduate work in English literature, American literature, the English language, and comparative literature leading to the M.A. and Ph.D. degrees, and graduate work in imaginative writing leading to the M.A. and M.F.A. degrees. The department participates in interdisciplinary programs for the master's degree.

To become a candidate for an advanced degree the student must pass a three-hour written qualifying examination in which he is asked to demonstrate his critical judgment, taste, and general literacy. This examination is given early in the fall term to all entering graduate students and may be repeated in the spring and summer terms.

Requirements for the master's degree include: Problems and Methods of Literary Study (Eng 540); one of the following 9-hour sequences in linguistic background: Old English (Eng 511, 512, 513), History and Structure of the English Language (Eng 520, 521, 522), Middle English (Eng 517), Chaucer's Troilus and Criseyde (Eng 518), The Pearl Poet (Eng 519); 9 hours in formal courses at the 500 level or in seminars. Candidates must pass a three-hour written examination covering a departmental reading list and an oral examination on the 45 hours of course work offered for the degree. Except for candidates in imaginative writing, this is a no-thesis program; a candidate wishing to write a thesis may petition the Graduate Committee for permission. Candidates who present a thesis must pass an oral examination on the thesis and its field in place of the examination on course work offered for the degree.

For the M.F.A. degree the candidate must complete 72 term hours of graduate work, including 22 hours in English-American literature and 18 hours in Thesis, which must be work of imaginative writing of literary quality. The remaining 32 hours should be taken in related fine arts fields, such as art history, music history, drama, and aesthetics, depending upon the candidate's individual program and interest. (See also page 29.)

Candidates for the Ph.D. degree are required to take Old English (Eng 511, 512, 513), Problems and Methods of Literary Study (Eng 540), and three seminar courses (Eng 507). Transfer credit for equivalent work may be allowed upon approval by the Graduate Committee of the department. When he has passed his qualifying examination, the candidate, in conference with his graduate adviser, plans a program of courses which will satisfy the requirement of one year's work in residence and will prepare him, with private study, for written comprehensive examinations; this program is presented for approval to an advisory committee. With the permission of his advisory committee, a candidate may proceed directly from the baccalaureate to the doctorate.

The written comprehensive examinations, offered commonly in the spring and fall terms, cover eight fields, of which the candidate chooses five: (1) English language from the beginnings to the present, including American English; (2) English literature to 1500; (3) English literature 1500-1660; (4) English literature 1660-1800; (5) English literature 1800-c. 1890; (6) American literature from the beginnings to the Naturalists (c. 1890); (7) contemporary literature, English and American; (8) linguistics or comparative philology. The final oral examination for the degree covers the dissertation and its immediate fields, as defined above. If the dissertation ranges over several fields, the candidate selects the field he wishes to offer at this examination.

Literature

- Eng 407. **Seminar.** (G) Hours to be arranged.
 Eng 411, 412, 413. **English Drama.** (G) 3 hours each term. Horn.
 Eng 414, 415, 416. **History of Literary Criticism.** (G) 3 hours each term. Sherwood.
 Eng 420, 421, 422. **Modern Drama.** (G) 3 hours each term. Ball.
 Eng 423, 424. **Types of Prose Fiction.** (G) 3 hours each term (summer sessions).
 Eng 425. **Early English Literature.** (g) 3 hours. Greenfield, O'Neil, Reinecke.
 Eng 428. **Chaucer.** (g) 3 hours. Gardiner, Greenfield, O'Neil, Reinecke.
 Eng 430, 431, 432. **Literature of the Renaissance.** (G) 3 hours each term. T. Greenfield, Maveety, McNeir.
 Eng 434. **Spenser.** (G) 3 hours. McNeir.
 Eng 436. **Advanced Shakespeare.** (g) 3 hours each term.

- Eng 440, 441, 442. **Seventeenth-Century Literature.** (G) 3 hours each term. Black, Candelaria.
- Eng 444. **Milton's Minor Poems and Prose.** (G) 3 hours. Svendsen.
- Eng 445. **Milton's Major Poems.** (G) 3 hours. Svendsen.
- Eng 450, 451, 452. **Eighteenth-Century Literature.** (G) 3 hours each term. Horn.
- Eng 455. **Pope.** (G) 3 hours. Sherwood.
- Eng 460, 461, 462. **The Romantic Poets.** (G) 3 hours each term. Moll.
- Eng 463, 464, 465. **The Later Nineteenth-Century Poets.** (G) 3 hours each term. Cadbury, Moll.
- Eng 470, 471, 472. **Nineteenth-Century Prose.** (G) 3 hours each term. Moore.
- Eng 477, 478, 479. **Nineteenth-Century American Literature.** (G) 3 hours each term. Wegelin.
- Eng 481, 482, 483. **Major American Writers.** (G) 3 hours each term. Nolte.
- Eng 487. **Yeats and Joyce.** (G) 3 hours. Sherwood.
- Eng 488. **Literature for Teachers.** (g) 3 hours. Bartel, Kitzhaber.
- Eng 491. **Introduction to Modern English.** (g) 3 hours. Willard.
- Eng 501. **Research.** Hours to be arranged.
- Eng 503. **Thesis.** Hours to be arranged.
- Eng 505. **Reading and Conference.** Hours to be arranged.
- Eng 507. **Seminar.** Hours to be arranged.
- Eng 508. **Workshop.** Hours to be arranged (summer sessions).
- Eng 511, 512, 513. **Old English.** 3 hours each term. S. B. Greenfield, O'Neil.
- Eng 514, 515, 516. **Old Icelandic.** 3 hours each term. O'Neil.
- Eng 517. **Middle English.** 3 hours. S. B. Greenfield, O'Neil, Reinecke.
- Eng 518. **Chaucer's Troilus and Criseyde.** 3 hours. S. B. Greenfield, O'Neil.
- Eng 519. **The Pearl Poet.** 3 hours. S. B. Greenfield, O'Neil.
- Eng 520, 521, 522. **History and Structure of the English Language.** 3 hours each term. Willard.
- Eng 530, 531, 532. **Shakespeare.** 3 hours each term. T. Greenfield, McNeir.
- Eng 540. **Problems and Methods of Literary Study.** 3 hours. Cadbury, Svendsen.
- Eng 585. **Modern English Literary Criticism.** 3 hours. Weatherhead.
- Eng 588, 589. **Modern Poetry.** 3 hours each term. Weatherhead.
- Eng 590, 591, 592. **Modern Fiction.** 3 hours each term. Wegelin.

Writing

- Wr 411. **English Composition for Teachers.** (g) 3 or 4 hours. L. Aly, Kitzhaber.
- Wr 494. **Theory of Fiction Writing.** (G) 3 hours. Hall.
- Wr 503. **Thesis.** Hours to be arranged.
- Wr 504. **Writing and Conference.** Hours to be arranged.

Geography

Professors: EDWARD T. PRICE (department head), SAMUEL N. DICKEN, CLYDE P. PATTON.

Associate Professors: GENE MARTIN, CARL L. JOHANNESSEN.

Assistant Professors: AXEL E. HANSEN, ALVIN W. URQUHART.

Instructor: BILL HANNESON.

Graduate work leading to the M.A. and Ph.D. degrees is offered in physical and cultural geography. An undergraduate major in geography or its equivalent is required for admission to graduate status in the department. A thesis is required for either degree.

Graduate work in geography is based on field studies, laboratory work, and library research. The state of Oregon offers excellent opportunities for field studies in climatology, geomorphology, economic geography, historical geography, regional geography, and other subjects. The department is well supplied with maps, cartographic materials and instruments, and aerial photographs. A well-equipped cartographic laboratory and a darkroom are also available to students engaged in graduate work. Library work is supported by a large collection of geographic publications, including books, atlases, and periodicals from geographic centers throughout the world. Research facilities in most fields and for most parts of the world are excellent both at the master's and doctoral levels.

- Geog 421, 422, 423. **Geographic Field Methods.** (G) 3 hours each term. Dicken, Johannessen, Price.
- Geog 427. **Geography of the Soviet Union.** (G) 3 hours. Martin.
- Geog 432. **Geography of Africa.** (G) 3 hours. Pitts.
- Geog 433. **Political Geography.** (G) 3 hours. Pitts.
- Geog 434. **Economic Geography.** (G) 3 hours. Pitts.
- Geog 435. **Urban Geography.** (G) 3 hours. Pitts.
- Geog 445. **Plant Geography.** (G) 3 hours.
- Geog 451. **Geography of Eastern Asia.** (G) 3 hours. Pitts.
- Geog 452. **Geography of Southern Asia.** (G) 3 hours. Pitts.
- Geog 463. **Geography of Middle America.** (G) 3 hours. Johannessen.
- Geog 464, 465. **Geography of South America.** (G) 3 hours each term. Martin.
- Geog 471. **Geography of Atlantic and Mediterranean Europe.** (G) 3 hours. Price.
- Geog 472. **Geography of Central and Eastern Europe.** (G) 3 hours.
- Geog 501. **Research.** Hours to be arranged.
- Geog 502. **Supervised College Teaching.** Hours to be arranged.
- Geog 503. **Thesis.** Hours to be arranged.
- Geog 505. **Reading and Conference.** Hours to be arranged.
- Geog 507. **Seminar.** Hours to be arranged.
- Coastal Landforms. Techniques in Geography. Domestication of Plants. Resource Use. Climate Records. Glacial Studies. Latin America.*
- Geog 511, 512, 513. **Advanced Physical Geography.** 3 hours each term. Patton, Johannessen.
- Geog 515, 516, 517. **Advanced Cultural Geography.** 3 hours each term. Pitts, Johannessen.

Geology

Professors: LLOYD W. STAPLES (department head), EWART M. BALDWIN, WALTER YOUNGQUIST.

Associate Professors: ERNEST H. LUND, J. ARNOLD SHOTWELL, JAMES C. STOVALL.

Assistant Professors: GILBERT T. BENSON, M. ALLAN KAYS, LAURENCE R. KITTELMAN, JR., VERNON E. MCMATH, BRADFORD B. VAN DIVER.

Graduate work leading to the M.S. and Ph.D. degrees is offered in geology. Emphasis may be on either field studies or research problems conducted in the laboratory. A thesis is required for either degree. Upon entering the Department of Geology, all graduate students are required to take the Graduate Record Examination if they have not previously done so.

Students with adequate undergraduate training in geology can usually complete work for the master's degree in one academic year and one summer in the field.

The requirements for the Ph.D. degree are flexible and may be closely adapted to the needs and interests of the individual candidate. Ordinarily, the student takes from 60 to 70 hours of formal course work, including approximately 20 hours in a minor outside the department.

Teaching assistantships and fellowships are awarded annually. Students may also, from time to time, obtain income and experience by participating in research conducted by faculty members of the department. Present research interests of the faculty include aspects of mineralogy, economic geology, igneous petrology, regional stratigraphy, and invertebrate paleontology.

The state of Oregon has many areas that afford excellent opportunities for mapping. These areas present a variety of stratigraphic, paleontologic, and petrologic problems. Several mining regions provide materials for study and research in the field of economic geology. The department operates a summer camp as a base from which field investigations are made; when the camp is not in use its geological equipment is available to students working on special field problems in other areas.

Adequate laboratory facilities are available. Invertebrate paleontological, mineralogical, and petrological collections, and suites for the study of economic geology are housed in the department. Vertebrate materials from well-known John Day Fossil beds of Oregon, as well as from other areas, are located in the Natural History Museum.

Available equipment includes facilities for rock cutting and the preparation of thin sections, dark-room facilities for special studies with the goniometer and other optical instruments, X-ray equipment, an isodynamic separator, sedimentary analysis equipment, a flame photometer, and a gravity meter.

Research is supported by excellent library materials including important geological journals and extensive sets of reference volumes.

The departments of chemistry, physics, mathematics, and biology offer supporting courses.

Geol 411. **Lithology.** (g) 3 hours. Van Diver.

Geol 414, 415, 416. **Petrology and Petrography.** (G) 4 hours each term. Van Diver.

Geol 421, 422, 423. **Economic Geology.** (G) 3 hours each term. Kays.

Geol 440. **Micropaleontology.** (G) 3 hours. Youngquist.

Geol 451, 452. **Pacific Coast Geology.** (G) 3 hours each term. Baldwin, Youngquist.

Geol 455. **Studies in Physical Geology.** (g) 3 hours (summer sessions).

Geol 456. **Regional Geology of North America.** (g) 3 hours (summer sessions).

Geol 473. **Photogeology.** (G) 3 hours. Benson.

Geol 491. **Structural Geology.** (G) 4 hours. McMath.

Geol 492. **Regional Stratigraphy.** (G) 3 hours. Baldwin.

Geol 493. **Petroleum Geology.** (G) 3 hours. Youngquist.

Geol 501. **Research.** Hours to be arranged.

Geol 503. **Thesis.** Hours to be arranged.

Geol 505. **Reading and Conference.** Hours to be arranged.

Geol 506. **Advanced Field Geology.** Hours to be arranged.

Geol 507. **Seminar.** Hours to be arranged.

Regional Geologic Studies.

Geol 511, 512, 513. **Advanced Microscopy and Instrumentation.** 4 hours each term. Kays, Staples.

Geol 514, 515, 516. **Advanced Petrology and Petrography.** 3 hours each term. Kays.

Geol 520. **Advanced Economic Geology.** 3 hours.

Geol 531, 532, 533. **Advanced Paleontology.** 3 hours each term. Youngquist.

Geol 551. **Advanced Physical Geology.** 3 hours. McMath.

Geol 561, 562, 563. **Geochemistry and Geophysics.** 3 hours each term. Kays.

Geol 591. **Advanced Structural Geology.** 3 hours. McMath.

Health, Physical Education, and Recreation

Professors: ARTHUR A. ESSLINGER (dean), H. HARRISON CLARKE, FRANCES M. DOUGHERTY, FRANKLIN B. HAAR, WILLIAM P. RHODA, LYNN S. RODNEY, PETER O. SIGERSETH, VERNON S. SPRAGUE, PAUL R. WASHKE, JANET G. WOODRUFF.

Associate Professors: WAYNE BRUMBACH, DORWIN GILLESPIE, JESSE PUCKETT, WARREN SMITH, MIRIAM TUCK.

Assistant Professors: PHYLLIS FORD, ROBERT KIME, EDWARD REUTER.

The School of Health, Physical Education, and Recreation offers graduate work leading to the M.A., M.S., Ph.D. and D.Ed. degrees.

A thesis is optional for the master's degree. Students writing a thesis must have a 9-hour concentration in one of the following areas: (1) administration of programs, buildings and grounds; (2) school health education; (3) corrective activities and physical therapy; (4) physiological sciences; (5) child growth and development; or (6) history, principles, and philosophy of health and physical education. Students who do not write a thesis are required to have a 9-hour concentration in three of the above areas.

The program for candidates for the doctor's degree includes: (1) a strong emphasis on research methodology and research; (2) concentration or specialization on one area of health education or physical education (four areas are available: administration, health education, child growth and development, and corrective, physical education, or education; and (4) cognate courses for their contribution to the cultural background and understanding of the candidate. The work must be distributed as follows: research methodology, 12-18 term hours;

research, 15-30 term hours; area of concentration, 20-40 term hours; supporting work, 20-30 term hours; cognate courses, 20-48 term hours.

The School of Health, Physical Education, and Recreation has excellent facilities for research. A research laboratory is equipped with the most modern scientific instruments and equipment. An excellent library is available. The library is supplemented by a comprehensive collection of microcards in health education, physical education, and recreation.

Health Education

- HE 450. **Elementary-School Health Education.** (g) 3 hours.
 HE 463. **Social Health.** (G) 3 hours. Tuck.
 HE 464. **Health Instruction.** (G) 3 hours fall. Gillespie.
 HE 465. **School Health Service.** (G) 3 hours winter. Tuck.
 HE 466. **Evaluation of School Health Education.** (G) 3 hours. Haar.
 HE 501. **Research.** Hours to be arranged.
 HE 503. **Thesis.** Hours to be arranged.
 HE 505. **Reading and Conference.** Hours to be arranged.
 HE 506. **Special Problems.** Hours to be arranged.
 HE 507. **Seminar.** Hours to be arranged.
 HE 508. **Workshop.** Hours to be arranged.
 HE 542. **Basic Issues in Health Education.** 3 hours. Haar.
 HE 543. **Advanced Health Instruction.** 3 hours spring. Haar.
 HE 552. **Administration of School Health Education.** 3 hours winter. Haar.

Physical Education

- PE 421. **Administration of Elementary-School Physical Education.** (g) 3 hours.
 PE 446. **Tests and Measurements in Physical Education.** (G) 3 hours. Reuter.
 PE 501. **Research.** Hours to be arranged.
 PE 503. **Thesis.** Hours to be arranged.
 PE 505. **Reading and Conference.** Hours to be arranged.
 PE 506. **Special Problems.** Hours to be arranged.
 PE 507. **Seminar.** Hours to be arranged.
Anatomical and Physiological Bases of Physical Education. Body Growth and Development through Physical Education. Physiology of Exercise. Physical Conditioning. Corrective Reconditioning. Body Mechanics and Body Movement. Administration of Physical Education. Recreation.
 PE 508. **Workshop.** Hours to be arranged.
 PE 509. **Practicum.** Hours to be arranged.
 PE 515. **History and Theories of Physical Education** 3 hours fall. Washke.
 PE 516. **Intramural Organization and Management.** 3 hours winter. Washke.
 PE 517. **Methods of Research.** 3 hours. Clarke.
 PE 521. **Basic Procedures in Corrective Physical Education.** 3 hours.
 PE 522. **Advanced Corrective Procedures.** 3 hours.
 PE 523. **Physical Education of the Handicapped.** 3 hours.

- PE 530. **Developmental Programs in Physical Education.** 3 hours. Clarke.
 PE 531. **Muscle Testing and Therapeutic Exercise.** 3 hours.
 PE 532. **Heat Therapy and Massage.** 3 hours.
 PE 533. **Techniques of Relaxation.** 3 hours.
 PE 540, 541. **Statistical Methods in Physical Education.** 3 hours each term. Clarke.
 PE 542. **Experimental Design in Physical-Education Research.** 4 hours. Clarke.
 PE 550. **Current Movements in Physical Education.** 3 hours spring. Washke.
 PE 551. **Administration of Physical Education.** 3 hours fall. Esslinger.
 PE 552. **Administration of Athletics.** 3 hours. Sprague.
 PE 553. **Psychology of Motor Skills.** 3 hours winter. Brumbach.
 PE 556. **Administration of Buildings and Facilities.** 3 hours spring. Rhoda.
 PE 557. **Supervision of Physical Education for City Supervisors.** 3 hours. Sprague.
 PE 558. **Curriculum Construction in Physical Education.** 3 hours. Sprague.
 PE 559. **Professional Preparation in Physical Education.** 3 hours spring. Sprague.
 PE 561. **Foundations of Physical Growth.** 3 hours fall.
 PE 562. **Changes in Body Size and Form During Childhood and Adolescence.** 3 hours.
 PE 563. **Growth and Body Tissues and Organs.** 3 hours.
 PE 564. **Morphologic and Physiologic Appraisalment of School Children.** 3 hours. Sigerseth.
 PE 566. **Research Methodology for Child Growth.** 3 hours. Rhoda.
 PE 567. **Motor Development in Infancy and Childhood.** 3 hours. Brumbach.
 PE 572, 573. **Gross Anatomy.** 3 hours each term. Sigerseth.
 PE 574. **Physiological Principles of Advanced Conditioning.** 3 hours. Sigerseth.
 PE 575. **Mechanical Analysis of Motor Skills.** 3 hours. Sigerseth.

Recreation Management

- Rec 408. **Workshop.** (g) Hours to be arranged.
 Rec 490. **Principles of Outdoor Recreation.** (G) 3 hours. Ford.
 Rec 492. **Recreation and Natural Resources.** (G) 3 hours. Ford.
 Rec 497. **Recreation and Park Facilities.** (G) 3 hours fall. Rodney.
 Rec 499. **School and Community Recreation Programs.** (G) 3 hours. Rodney.
 Rec 501. **Research.** Hours to be arranged.
 Rec 503. **Thesis.** Hours to be arranged.
 Rec 505. **Reading and Conference.** Hours to be arranged.
 Rec 506. **Special Problems.** Hours to be arranged.
 Rec 507. **Seminar.** Hours to be arranged.
 Rec 508. **Workshop.** Hours to be arranged.
 Rec 552. **Principles and Problems of Recreation Supervision.** 3 hours. Rodney.
 Rec 553. **Administration of Recreation.** 3 hours winter. Rodney.
 Rec 554. **Problems of Camp Management.** 3 hours. Rodney.

History

Professors: QUIRINUS BREEN (emeritus), EDWIN R. BINGHAM, PAUL S. DULL, VAL R. LORWIN, EARL POMEROY, KENNETH W. PORTER, WILLIAM O. SHANAHAN, LLOYD R. SORENSON.

Associate Professors: ROBERT W. SMITH (department head), GUSTAVE ALEF, STANLEY A. PIERSON.

Assistant Professors: RAYMOND F. BIRN, PAUL S. HOLBO, SYDNEY V. JAMES, ROBERT G. LANG, JOHN W. PERRIN, ROBERT L. PETERSON, JOHN E. WOODHAM.

Instructor: ROBERT S. DILL.

Lecturers: PAUL R. BAKER, HAROLD BAUMAN, OWEN DUDLEY EDWARDS, WILLIAM B. EVANS, GENNARO FALCONERI.

The Department of History offers graduate work leading to the M.A. and Ph.D. degrees. Faculty and library resources support most adequately concentration in the fields of nineteenth- and twentieth-century American and European history and modern Japanese history.

Basic undergraduate work in European and American history is prerequisite to entering graduate work in history. Preparation in foreign languages is strongly advised. Students with an undergraduate grade-point average below 3.00 in history are not advised to seek a graduate degree in history.

Admission. An undergraduate major in history or its equivalent is required for admission to graduate work in history. Results of the Miller Analogies Test, together with all undergraduate and graduate transcripts, should be sent to the department. Applicants for admission to Ph.D. work must have a reading knowledge of one foreign language, and should have three letters of recommendation sent to the department by persons acquainted with the student's academic qualifications.

Master's Degree. The oral qualifying examination covers the standard fields of European and American history. Students who have not already had training in research must take Historical Method (Hst 520). Every candidate must complete at least 9 term hours of work in courses numbered 507 or above. The candidate must prepare himself for examination in three fields chosen from different divisions of history. A program may be arranged with thesis or, with the consent of the candidate's adviser, without thesis. For the M.A. without thesis the candidate is required to submit three seminar papers and take a written examination covering two of the three fields covered in the final oral examination.

Students working toward the M.A. or M.S. degree in the University's interdisciplinary master's program for teachers may select history as a field of subject concentration. See pages 21-22.

Ph.D. Degree. A candidate for the Ph.D. degree must pass comprehensive examinations in four fields of history or in three fields of history and a minor field outside the department. Every candidate must take either a minor or supporting work in one or more related fields outside the field of history. At least 18 hours of work in graduate research seminars is required.

Hst 411. **History of Greece.** (G) 3 hours fall. Dill.

Hst 412, 413. **History of Rome.** (G) 3 hours each term, winter and spring. Dill.

Hst 418, 419. **Studies in Western Civilization.** (g) 4 hours each term (summer sessions). Smith, Sorenson.

Hst 421, 422, 423. **Middle Ages.** (G) 3 hours each term. Perrin.

Hst 424, 425. **Early Modern Europe.** (G) 3 hours each term. Bauman, Birn.

Hst 430, 431. **Renaissance.** (G) 3 hours each term, fall and winter.

Hst 432. **Reformation.** (G) 3 hours spring.

Hst 434, 435, 436. **Western Institutions and Ideas.** (G) 3 hours each term. Sorenson.

Hst 437, 438. **History of Germany.** (G) 3 hours each term. Shanahan.

Hst 441, 442, 443. **History of France.** (G) 3 hours each term. Lorwin.

Hst 444, 445. **Twentieth-Century Europe.** (G) 3 hours each term. Shanahan.

Hst 447, 448, 449. **History of Russia.** (G) 3 hours each term. Alef.

Hst 454, 455, 456. **Economic History of Modern Europe.** (G) 3 hours each term. Lorwin.

Hst 457. **The Era of American Sectional Conflict.** (G) 3 hours. Edwards.

Hst 458. **The Era of the Civil War.** (G) 3 hours. Edwards.

Hst 459. **The Era of the Reconstruction.** (G) 3 hours. Edwards.

Hst 460, 461, 462. **History of American Thought and Culture.** (G) 3 hours each term. Baker, Bingham.

Hst 463. **History of Canada.** (G) 3 hours. Smith.

Hst 464. **History of Mexico.** (G) 3 hours. Woodham.

Hst 465. **British Empire.** (g) 3 hours. Smith.

Hst 466. **Tudor England.** (G) 3 hours. Lang, Smith.

Hst 468. **Victorian England.** (G) 3 hours. Smith.

Hst 469. **Twentieth-Century England.** (G) 3 hours. Smith.

Hst 470, 471. **Social Factors in American History.** (G) 3 hours each term. Porter.

Hst 473, 474, 475. **American Foreign Relations.** (G) 3 hours each term. Holbo.

Hst 476, 477. **History of the West.** (G) 3 hours each term. Porter, Pomeroy.

Hst 478. **History of the Pacific Northwest.** (G) 3 hours. Bingham, Evans, Porter.

Hst 479. **Forces and Influences in American History.** (G) 3 hours.

Hst 480, 481, 482. **The United States in the Twentieth Century.** (G) 3 hours each term. Pomeroy.

Hst 484, 485, 486. **Early History of the American People.** (G) 3 hours each term. James, Porter.

Hst 487, 488, 489. **American Economic History.** (G) 3 hours each term. Peterson.

Hst 490. **Problems of the Pacific.** (g) 3 hours (summer sessions).

Hst 494, 495, 496. **History of China.** (G) 3 hours each term. Dull, Falconeri.

Hst 407, 498, 499. **History of Japan.** (G) 3 hours each term. Dull, Falconeri.

Hst 501. **Research.** Hours to be arranged.

Hst 502. **Supervised College Teaching.** Hours to be arranged.

Hst 503. **Thesis.** Hours to be arranged.

Hst 505. **Reading and Conference.** Hours to be arranged.

Hst 507. **Seminar.** Hours to be arranged.

European History: Alef, Birn, Dill, Lorwin, Perrin, Pierson, Shanahan, Sorenson. *English History:* Lang, Smith. *American History:* Baker, Bingham, Holbo, James, Peterson, Pomeroy, Porter. *History of the Far East:* Dull, Falconeri. *History of Latin America:* Holbo, Woodham.

Hst 520. **Historical Method.** 3 hours. Pomeroy, Shanahan.

Hst 530, 531, 532. **European History: Problems and Interpretations.** 3 hours each term. Bauman, Birn, Shanahan.

Hst 591. **Japanese Political Evolution since 1912.** 3 hours. Dull.

Interdisciplinary Studies

Students pursuing a program of interdisciplinary studies leading to the M.A. or M.S. degree may supplement courses offered by the several departments and schools with individualized studies, for which they may enroll under the course numbers listed below. For regulations governing graduate interdisciplinary program, see pages 21-22.

ISt 501. **Research.** Hours to be arranged.

ISt 503. **Thesis.** Hours to be arranged.

Journalism

Professors: JOHN L. HULTENG (dean), WARREN C. PRICE, MAX WALES.

Associate Professors: BERNARD L. FREEMESSER, ROBERT C. HALL (emeritus), ROY P. NELSON, GALEN RARICK, CARL C. WEBB.

Assistant Professors: JACK D. EWAN, KARL J. NESTVOLD.

Graduate work in the School of Journalism leads to the M.A. or M.S. degree. By special arrangement, the student may offer a journalism minor toward the Ph.D. degree in certain fields. Areas of study cover all major aspects of the press and the broadcast media except strictly technological aspects. Emphasis is placed upon the social significance and responsibilities of journalistic fields, rather than upon techniques. Basic skills and methods, however, are not ignored.

Two plans of study are available. Candidates elect the plan appropriate to their interests and needs after consultation with the dean.

Plan A is designed for the graduate student with a relatively extensive background of education or professional experience in journalism. A minimum of 24 term hours in graduate courses in journalism, including a thesis, is required.

Plan B is designed primarily for the graduate student with little or no background in journalism. The candidate may take a maximum of 40 term hours in the major field. A thesis is optional. (If the student elects not to write a thesis, he must submit three term papers under the supervision of his adviser.)

In either case, completion of 45 term hours in graduate courses with a B average is required for the master's degree in journalism. Under Plan A the work may be completed within an academic year. Candidates under Plan B are ordinarily required to take certain basic courses in journalism that do not carry graduate credit; they should therefore be prepared to spend an additional one or two terms in residence.

The graduate curriculum in journalism is thus sufficiently flexible to meet the needs of:

(1) The student who has an undergraduate major in the liberal arts, and who wishes a fifth-year concentration on journalism.

(2) The student who has had substantial professional experience and who wishes advanced study as preparation for specialized work or as a supplement to previous academic training.

(3) The student who has an undergraduate major in journalism and who, after several years' experience in the field, wishes a fifth year of advanced study. (The school does not recommend that students with undergraduate majors in journalism begin graduate work without first having had professional experience.)

(4) The student who contemplates a career in teaching or communications research.

Graduate students in journalism are expected to have a broad undergraduate background. Previous training and experience are weighed in planning the study program of each degree candidate.

The school is housed in Eric W. Allen Hall. Facilities include study accommodations for graduate students, a reading-reference room with important newspapers and magazines, and laboratories. The *Oregon Daily Emerald* and the University Press are also housed in Allen Hall.

J 407. **Seminar.** (G) Hours to be arranged.

J 421. **Newspaper Management.** (G) 3 hours. Webb.

J 424. **The Community Newspaper.** (G) 3 hours.

J 432. **Radio-Television News II.** (G) 3 hours. Nestvold.

J 440. **Advertising Production.** (G) 3 hours. Webb.

J 441, 442, 443. **The Media of Advertising.** (G) 2 hours each term. Wales.

J 444. **Advertising Problems.** (G) 3 hours. Wales.

J 445. **Advertising Agencies and Departments.** (G) 3 hours. Wales.

J 446, 447. **Advertising Copy and Layout.** (G) 3 hours each term. Nelson, Wales.

J 450. **The Press and Society.** (g) 3 hours. Nelson.

J 455. **Supervision of School Publications.** (G) 2-3 hours. Nelson.

J 459. **Publicity and Public Relations.** (G) 3 hours. Nelson.

J 462. **Reporting II.** (G) 4 hours. Rarick.

J 464. **Interpretive Writing.** (G) 3 hours. Hulteng.

J 468, 469. **Magazine Article Writing.** (G) 2 hours each term. Nelson.

J 470. **Magazine Editing.** (G) 3 hours. Nelson.

J 483. **Public Relations Problems.** (G) 3 hours. Wales.

J 485. **Law of the Press.** (G) 3 hours. Price.

J 487. **History of Journalism.** (G) 3 hours. Price.

J 489. **Comparative Foreign Journalism.** (G) 3 hours. Price.

J 494. **Journalism and Public Opinion.** (G) 3 hours. Rarick.

J 495, 496. **Journalism and Contemporary Affairs.** (G) 2 hours each term. Hulteng.

J 501. **Research.** Hours to be arranged.

J 503. **Thesis.** Hours to be arranged.

J 505. **Reading and Conference.** Hours to be arranged.

J 507. **Seminar.** Hours to be arranged.

Public Opinion Measurement. Advertising Problems. Literature of Journalism. The Foreign Press. History of Journalism. Propaganda. The Photo Essay.

J 512. **Communication Theories and Research Methods.** 3 hours. Rarick.

Mathematics

Professors: ANDREW F. MOURSUND, (department head), PAUL CIVIN, CHARLES W. CURTIS, KENNETH S. GHENT, IVAN M. NIVEN, BERTRAM YOOD.

Associate Professors: FRANK W. ANDERSON, FRED C. ANDREWS, DAVID K. HARRISON, EUGENE A. MAIER, KENNETH A. ROSS, KARL R. STROMBERG, DONALD R. TRUAX, LEWIS E. WARD, JR.

Assistant Professors: FRANK S. CATER, RICHARD M. GILLETTE, THEODORE K. MATTHES, WILLIAM H. SILLS, GEORGE W. STRUBLE, JAMES M. VAN BUSKIRK, CHARLES R. WRIGHT.

The University offers graduate work in mathematics leading to the M.A., M.S., and Ph.D. degrees.

Programs for the M.A. and M.S. degrees may be arranged with or without thesis. In most cases the department recommends the degree without thesis; when a thesis is not presented, an expository essay is required. Final written and oral comprehensive examinations covering all of the student's graduate work are a part of the requirement for all master's degrees.

Work for the Ph.D. Degree is offered in algebra, analysis, number theory, topology, and mathematical statistics. The required comprehensive examination generally covers a broad area from the fields of abstract algebra, analysis, statistics, and topology. The candidates' advisory committee may, however, approve certain modifications of the program. Courses offered in other departments which involve applications of mathematics may be substituted for work in mathematical statistics. A large portion of the work beyond the basic courses is done in seminars which reflect the current interests of the faculty.

New graduate students are required to take qualifying-placement examinations appropriate to their level of achievement in mathematics soon after they arrive on the campus.

The University Library has an excellent collection in the field of mathematics. The department has an electronic computer and a well-equipped statistical laboratory.

Mth 412, 413, 414. **Introduction to Abstract Algebra.** (G) 3 hours each term. Anderson, Curtis, Harrison, Wright.

Mth 418. **Differential Equations.** (g) 3 hours. Niven, Wright, Yood.

Mth 419. **Functions of Several Variables.** (g) 3 hours. Curtis, Niven, Wright.

Mth 420. **Vector Analysis.** (g) 3 hours. Curtis, Niven, Wright.

Mth 421. **Functions of a Complex Variable.** (g) 3 hours. Moursund, Stromberg.

Mth 422. **Fourier Series.** (g) 3 hours. Stromberg, Yood.

Mth 425, 426, 427. **Elements of Statistical Methods.** (g) 3 hours each term. Matthes, Truax.

Mth 428, 429, 430. **Numerical Analysis.** (G) 3 hours each term. Struble.

Mth 431, 432, 433. **Advanced Calculus.** (G) 3 hours each term. Civin, Moursund, Ross.

Mth 441, 442, 443. **Introduction to Statistical Theory.** (g) 3 hours each term. Matthes, Truax.

Mth 444. **Computing.** (g) 3 hours. Andrews, Struble.

Mth 447, 448, 449. **Mathematical Statistics.** (G) 3 hours each term. Andrews, Matthes, Truax.

Mth 457, 458, 459. **Foundations of Mathematics.** (g) 3-4 hours each term (summer sessions). Ghent, Maier, Moursund.

Mth 468, 469. **Probability and Statistics.** (g) 3-4 hours each term (summer sessions). Maier.

Mth 478, 479. **Algebra.** (g) 3-4 hours each term (summer sessions). Ghent, Maier.

Mth 487, 488, 489. **Geometry.** (g) 3-4 hours each term (summer sessions). Ghent, Maier.

Mth 498, 499. **Analysis.** (g) 3-4 hours each term (summer sessions). Ghent, Moursund.

Mth 501. **Research.** Hours to be arranged.

Mth 503. **Thesis.** Hours to be arranged.

Mth 505. **Reading and Conference.** Hours to be arranged.

Mth 507. **Seminar.** Hours to be arranged.

Banach Algebras: Yood. *Commutative Algebra:* Anderson, Harrison. *Complex Variable Theory:* Shapiro. *Fourier Analysis: Groups and Representations:* Curtis, Wright. *Harmonic Analysis:* Civin, Stromberg. *Homological Algebra:* Anderson, Curtis, Harrison. *Noncommutative Rings:* Anderson, Curtis, Harrison. *Number Theory:* Niven. *Statistics and Stochastic Processes:* Andrews, Matthes, Truax. *Topics in Functional Analysis:* Civin, Ross, Stromberg, Yood. *Topology:* Gillette, Van Buskirk, Ward.

Mth 541, 542, 543. **Abstract Algebra.** 3 hours each term. Anderson, Curtis, Harrison, Wright.

Mth 544, 545, 546. **Structure of Rings and Algebras.** 3 hours each term. Anderson, Curtis, Harrison, Wright.

Mth 547, 548, 549. **Algebraic Number Theory.** 3 hours each term. Niven.

Mth 551, 552, 553. **Theory of Functions of a Real Variable.** 3 hours each term. Ross, Stromberg, Yood.

Mth 554, 555, 556. **Theory of Functions of a Complex Variable.** 3 hours each term. Civin, Stromberg.

Mth 557, 558, 559. **Topics in Classical Analysis.** 3 hours each term. Civin, Sills.

Mth 561, 562, 563. **Modern Theories in Analysis.** 3 hours each term. Civin, Ross, Sills, Stromberg, Yood.

Mth 571, 572, 573. **Topology.** 3 hours each term. Gillette, Van Buskirk, Ward.

Mth 579, 580. **Algebra.** 3-4 hours each term (summer sessions). Ghent, Maier.

Mth 581, 582, 583. **Theory of Estimation and Testing Hypotheses.** 3 hours each term. Andrews, Matthes, Truax.

Mth 584, 585, 586. **Theory of Probability.** 3 hours each term. Andrews, Matthes, Truax.

Mth 587, 588. **Stochastic Processes.** 3 hours each term. Andrews, Truax.

Mth 589. **Geometry.** 3-4 hours (summer sessions). Maier.

Mth 591, 592, 593. **Advanced Mathematical Statistics.** 3 hours each term. Andrews, Matthes, Truax.

Mth 594. **Theory of Games.** 3 hours. Matthes, Truax.

Mth 595, 596. **Statistical Decision Theory.** 3 hours each term. Truax.

Mth 598, 599. **Analysis.** 3-4 hours each term (summer sessions). Moursund.

Medical Sciences

The University of Oregon Medical School in Portland offers graduate instruction leading to the M.A., M.S., and Ph.D. degrees in the medical sciences (anatomy, bacteriology, biochemistry, pathology, pharmacology, and physiology). Graduate degrees earned at the Medical School are conferred by the University of Oregon, upon recommendation by the faculty of the Medical School. In addition to opportunities for graduate study and research in the preclinical departments, arrangements may be made for special study of clinical problems by experimental methods, through the cooperation of the preclinical and clinical departments. In some cases, students doing work of this kind may qualify for graduate degrees. For graduate requirements and courses, see the Medical School Catalog.

Modern and Classical Languages

Professors: DAVID M. DOUGHERTY (division head), CHANDLER B. BEALL, FREDRICK M. COMBELLACK, THOMAS R. HART, JR., CARL L. JOHNSON, WOLFGANG A. LEPPMANN.

Associate Professors: EMMANUEL S. HATZANTONIS, HENRY KRATZ, CARLOS LOZANO, THOMAS E. MARSHALL, ROGER A. NICHOLLS, JULIAN PALLEY, RENÉ L. PICARD, PERRY J. POWERS.

Assistant Professors: RICHARD H. DESROCHES, PETER B. GONTRUM, WALTER L. HAHN, EDNA LANDROS (emeritus), C. BENNETT PASCAL, ROBIN E. STEUSSEY, VLADIMIR TOLSON.

The Division of Modern and Classical Languages offers programs of study leading to the M.A. degree in Classical languages, French, German, Spanish, and Romance languages, and to the degree of Doctor of Philosophy in Romance languages, German, and comparative literature.

The program for the master's degree, usually completed in from three to six terms, the time depending largely upon the candidate's undergraduate preparation, includes courses in the languages and literatures of Greece, Rome, France, Germany, Italy, Spain, or Spanish-America, and frequently in two of these fields. The program may also include courses in Russian literature and language, in French and Spanish philology, and in French civilization. The program may be planned to terminate formal education so as to prepare for further advanced study. A master's thesis may be written in such fields as literary history or literary criticism, philology, or comparative literature. Candidates for the master's degree may substitute 9 term hours of course work for the thesis.

The program for the doctorate in Romance languages, includes courses and seminars in the fields of French and Spanish, supplemented by work in Italian and Latin. The program for the doctorate in German includes advanced work in German language and literature, and studies in Germanic philology offered in cooperation with the Department of English. The program for the doctorate in comparative literature includes advanced work in English literature as well as foreign literatures, and is administered by an interdepartmental committee. Intended primarily to prepare research scholars and college teachers, these programs may emphasize regular courses in broad or in restricted fields. They may also center in the investigation of a single problem, the results of which are embodied in the dissertation, or may be broadly cultural, with less emphasis upon the results of personal research. Literary studies are pursued according to various methods—historical, comparative, aesthetic—depending on the preference of the student. The dissertation must demonstrate the candidate's capacity for original investigation and effectiveness of presentation.

The resources of the University Library are fully adequate for the department's graduate programs; in some fields they are outstanding. The holdings in learned journals are extensive; the quarterly journal, *Comparative Literature*, is edited in the department.

Graduate students who intend to teach may gain valuable experience in connection with the undergraduate program of the department. Those who hold assistantships serve as readers and supervisors in the language laboratory, and, if qualified, as regular teachers of elementary classes under the direction of senior members of the department.

Classics

Greek

- CL 407. **Greek Seminar.** (G) Hours to be arranged.
- CL 411. **Thucydides.** (G) 3 hours. Combella.
- CL 412. **Aeschylus.** (G) 3 hours. Combella.
- CL 413. **Theocritus.** (G) 3 hours. Combella.
- CL 414. **Plato's Republic.** (G) 3 hours. Combella.
- CL 415. **Aristotle's Ethics.** (G) 3 hours. Combella.
- CL 416. **Greek Lyric Poetry.** (G) 3 hours. Combella.
- CL 503. **Thesis.** Hours to be arranged.
- CL 505. **Reading and Conference.** Hours to be arranged.
- CL 507. **Greek Seminar.** Hours to be arranged.
- CL 517, 518, 519. **Studies in Greek Literature.** Hours to be arranged. Combella.

Latin

- CL 408. **Latin Seminar.** (G) Hours to be arranged.
- CL 461. **Propertius and Tibullus.** (G) 3 hours. Combella.
- CL 462. **Juvenal.** (G) 3 hours. Pascal.
- CL 463. **Tacitus' Annals.** (G) 3 hours. Pascal.
- CL 503. **Thesis.** Hours to be arranged.
- CL 505. **Reading and Conference.** Hours to be arranged.
- CL 508. **Latin Seminar.** Hours to be arranged.
- CL 511, 512, 513. **Readings in Mediaeval Latin.** Hours to be arranged.
- CL 514, 515, 516. **Studies in Latin Literature.** Hours to be arranged. Combella, Pascal.

German and Russian

German

- GL 407. **Seminar.** (g) Hours to be arranged. Leppmann.
- GL 411, 412, 413. **The Age of Goethe.** (G) 3 hours each term.
- GL 414, 415, 416. **German Literature of the Nineteenth Century.** (G) 3 hours each term. Hahn.
- GL 421, 422, 423. **German Literature of the Twentieth Century.** (G) 3 hours each term. Leppmann.

- GL 424, 425, 426. **Advanced German Composition and Conversation.** (G) 2 hours each term. Kratz.
- GL 427, 428, 429. **German Romanticism.** (G) 3 hours each term. Hahn.
- GL 430, 431, 432. **The German Lyric.** (G) 3 hours each term. Gontrum.
- GL 503. **Thesis.** Hours to be arranged
- GL 505. **Reading and Conference.** 1 to 3 hours any term.
- GL 507. **Seminar.** Hours to be arranged.
Humanism and the Reformation. The German Baroque. History of the German Language.
- GL 514, 515, 516. **Middle High German.** 3 hours each term. Kratz.
- GL 517. **Modern German Drama.** 3 hours. Gontrum.
- GL 520. **Contemporary German Lyric.** 3 hours. Gontrum
- GL 523. **Modern German Novel.** Leppmann.

Russian

- SL 407. **Seminar.** (g) Hours to be arranged.
- SL 411, 412, 413. **The Russian Novel.** (g) 3 hours each term. Steussy.
- AL 421, 422, 423. **Modern Russian Short Story, Poetry, Drama.** (g) 3 hours each term. Steussy.
- SL 461, 462, 463. **Advanced Russian Composition and Conversation.** (g) 2 hours each term. Tolson.

Romance Languages

French

- RL 407. **Seminar.** (G) Hours to be arranged.
- RL 411, 412, 413. **Seventeenth-Century French Literature.** (G) 3 hours each term. Picard.
- RL 417, 418, 419. **Nineteenth-Century French Literature.** (G) 3 hours each term. Johnson.
- RL 423, 424, 425. **Twentieth-Century French Literature.** (G) 3 hours each term. Marshall.
- RL 429, 430, 431. **French Culture and Civilization.** (G) 3 hours each term. Picard.
- RL 467, 468, 469. **Advanced French Composition.** (G) 2 or 3 hours each term. Dougherty.
- RL 503. **Thesis.** Hours to be arranged.
- RL 505. **Reading and Conference.** Hours to be arranged.
- RL 507. **French Seminar.** Hours to be arranged.
- RL 514, 515, 516. **Eighteenth-Century French Literature.** 3 hours each term. Beall, Desroches.
- RL 517, 518, 519. **Sixteenth-Century French Literature.** 3 hours each term. Beall.
- RL 538, 539, 540. **Old French Readings.** 2 hours each term. Dougherty.
- RL 544. **François Villon.** 3 hours. Dougherty.
- RL 545. **Ronsard.** 3 hours. Beall.
- RL 546. **Molière.** 3 hours.

MUSIC

- RL 547. **Voltaire.** 3 hours. Beall.
- RL 548. **Baudelaire.** 3 hours. Johnson.
- RL 549. **Paul Valéry.** 3 hours. Marshall.

Italian

- AL 477, 478, 479. **Dante and His Times.** (g) 3 hours each term. Beall.
- RL 480, 481, 482. **Italian Renaissance Literature.** (G) 3 hours each term. Hatzantonis.

Portuguese

- RL 471, 472, 473. **Portuguese and Brazilian Literature.** (G) 3 hours each term.

Spanish

- RL 407. **Seminar.** (G) Hours to be arranged.
- RL 438, 439, 440. **Nineteenth-Century Spanish Literature.** (G) 3 hours each term. Palley.
- RL 441, 442, 443. **Modern Spanish Literature.** (G) 3 hours each term. Palley.
- RL 444, 445, 446. **Spanish-American Literature.** (G) 3 hours each term.
- RL 451, 452, 453. **Spanish Literature of the Golden Age.** (G) 3 hours each term. Powers.
- RL 461, 462, 463. **Advanced Spanish Composition and Conversation.** (G) 2 or 3 hours each term. Lozano.
- RL 503. **Thesis.** Hours to be arranged.
- RL 505. **Reading and Conference.** Hours to be arranged.
- RL 508. **Spanish Seminar.** Hours to be arranged.
- RL 541, 542, 543. **Old Spanish Readings.** 2 hours each term. Hart.
- RL 554, 555, 556. **Drama of the Golden Age.** 3 hours each term. Powers.
- RL 557, 558, 559. **The "Modernista" Movement.** 3 hours each term. Lozano.
- RL 561, 562, 563. **Spanish-American Novel.** 3 hours each term. Lozano.

Romance Philology

- RL 520, 521, 522. **Old French.** 3 hours each term. Dougherty.
- RL 523, 524, 525. **Vulgar Latin and Old Provençal.** 2 hours each term.
- RL 535, 536, 537. **Old Spanish.** 3 hours each term. Hart.

Music

Professors: ROBERT M. TROTTER (dean), EDMUND CYKLER, GEORGE HOPKINS, HOMER KELLER, ROBERT E. NYE, ROBERT S. VAGNER.

Associate Professors: EXINE BAILEY, FRANCIS W. BITTNER, GEORGE BOUGHTON, JOHN M. GUSTAFSON, JOHN HAMILTON, J. ROBERT HLADKY, IRA D. LEE, MAX RISINGER, ROYCE SALTZMAN, WILLIAM WOODS.

Assistant Professors: PETER BERGQUIST, ROBERT CUNNINGHAM, LAWRENCE MAVES, NEIL E. WILSON.

Instructors: GABRIEL CHODOS, WILLIAM ROST, RICHARD TROMBLEY.

The School of Music offers degree programs leading to the M.Mus. degree (composition, music education, and performance and music literature) and M.A. degree (music history, music theory, and music education). Options in music education are available in choral-general and in instrumental music. Performance and music literature specializations are available in piano, organ, harpsichord, voice, or any orchestral instrument; and a special group option is available in woodwind or brass instruments. Programs leading to an interdisciplinary M.S. degree may also be arranged for public school teachers who find it necessary to combine two teaching assignments, one of which is music. The School of Music also cooperates with the School of Education in arranging programs leading to the D.Ed. or the Ph.D. degree for students who wish to do a major part of their work in the field of music education.

For admission to the master's program, the student must satisfy the general requirements for admission to the Graduate School. Formal admission to candidacy is granted only after a qualifying examination in the theory, history, and performance of music, to be taken during the first term or summer session in residence. Further examinations are required in each area of concentration. Further information concerning these examinations and concerning levels of performance competency required may be obtained from the dean of the School of Music.

Core Program. All candidates for a master's degree in music must complete a core program, in addition to requirements in their areas of specialization. The core program is as follows: (1) participation in a large ensemble (Mus 395, Mus 396, Mus 397), three terms; (2) private instruction in performance, at a level to be determined by audition, three terms; (3) attendance at ten musical events each term in residence or five events each summer session in residence; (4) Introduction to Graduate Study (Mus 511, 512); (5) Seminar (Mus 507 or MuE 507).

Information concerning requirements in the several areas of specialization and concerning admission procedures may be obtained from the dean of the School of Music.

The resources of the University Library and the instrumental and physical equipment of the School of Music provide excellent facilities for a wide variety of musical research. The Collegium Musicum is a vital adjunct to historical studies.

All graduate work in the School of Music is accredited by the National Association of Schools of Music, of which the school has been a member since 1930.

Music

- Mus 407. **Seminar.** (G) Hours to be arranged.
 Mus 433, 434. **Counterpoint II.** (G) 2 hours each term.
 Mus 436, 437. **Advanced Orchestration.** (G) 2 hours each term. Keller.
 Mus 438. **Band Arranging.** (G) 3 hours. Vagner.
 Mus 439. **Choral Arranging.** (G) 3 hours.
 Mus 440, 441, 442. **Composition II.** (G) 2 hours each term. Keller.
 Mus 450. **Listening with Understanding.** (g) 3 hours, fall or winter.
 Mus 451. **The Music of Bach and Handel.** (g) 3 hours, winter. Trotter.
 Mus 452. **The Classic Symphony and Sonata.** (g) 3 hours, spring. Trotter.
 Mus 453. **Introduction to Opera.** (g) 3 hours, spring. Trotter.
 Mus 454. **Introduction to Twentieth-Century Music.** (g) 3 hours winter. Trotter.
 Mus 455, 456, 457. **Orchestral Literature.** (G) 2 hours each term.
 Mus 458. **Organ Literature.** (G) 3 hours. Hamilton.
 Mus 459. **Wind-Instrument Literature.** (G) 3 hours. Vagner.

- Mus 460. **Song Literature.** (G) 3 hours. Wilson.
 Mus 461, 462, 463. **Chamber-Music Literature.** (G) 2 hours each term. Hladky.
 Mus 464, 465, 466. **Piano Literature.** (G) 2 hours each term. Woods.
 Mus 467, 468, 469. **Church Music Literature.** (G) 2 hours each term. Saltzman.
 Mus 485, 486. **Advanced Conducting.** (G) 2 hours each term. Risinger, Vagner.
 Mus 493. **Collegium Musicum.** (G) 1 hour each term. Cykler, Trombley.
 Mus 501. **Research.** Hours to be arranged.
 Mus 503. **Thesis.** Hours to be arranged.
 Mus 505. **Reading and Conference.** Hours to be arranged.
 Mus 507. **Seminar.** Hours to be arranged.
Composition. Music History. Music Theory.
 Mus 511, 512. **Introduction to Graduate Study.** 3 hours each term. Cykler, Trombley.
 Mus 533, 534. **Twentieth-Century Counterpoint.** 2 hours each term.
 Mus 540, 541, 542. **Composition for Electronic Media.** 3 hours each term. Keller, Hunter.
 Mus 590. **Performance Studies (Private Instruction).** 2-4 hours any term.

Music Education

- MuE 407. **Seminar.** (G) Hours to be arranged.
 MuE 426. **The General Music Program.** (G) 3 hours. Gustafson.
 MuE 444. **Choral Material for Schools.** (G) 2 hours. Risinger.
 MuE 445. **String Materials for Schools.** (G) 2 hours. Hladky.
 MuE 446. **Wind-Instrument Materials for Schools.** (G) 2 hours. Cunningham, Lee, Vagner.
 MuE 501. **Research.** Hours to be arranged.
 MuE 503. **Thesis.** Hours to be arranged.
 MuE 507. **Seminar.** Hours to be arranged.
 MuE 532. **Basic Concepts in the Teaching of Music.** 3 hours. Gustafson, Nye.
 MuE 533. **Music in the Elementary School.** 3 hours. Gustafson, Nye.
 MuE 534. **Music in the Junior High School.** 3 hours. Gustafson, Nye.
 MuE 535. **Music in the Senior High School.** 3 hours. Gustafson, Nye.
 MuE 536. **Administration of School Music.** 3 hours. Gustafson, Nye.
 MuE 537. **Comparative Music Pedagogy.** 3 hours. Cykler.

Nursing

The University of Oregon School of Nursing, on the campus of the Medical School in Portland, offers a graduate program leading to the M.S. degree, to prepare qualified professional nurses for teaching positions in nursing. For further information, see the School of Nursing Catalog.

Philosophy

Professor: BERTRAM JESSUP.

Associate Professor: FRANK EBERSOLE (department head).

Assistant Professors: HENRY ALEXANDER, JOHN COOK, THEODORE DRANGE, DON LEVI, ARNULF ZWEIG.

Instructor: ROBERT PAUL.

The Department of Philosophy offers graduate work leading to the M.A. and Ph.D. degrees.

The department's graduate offerings are intended to meet the needs of three classes of students: (1) those preparing to work for the Ph.D. in philosophy with a view to teaching and research; (2) those interested in securing a master's degree but not intending to proceed to further graduate work in philosophy; (3) those interested in philosophy as part of a program with a major in some other department.

Phl 407. **Seminar.** (G) Hours to be arranged.

Wittgenstein: Cook. *Philosophy of Religion*: Cook. *History of Logic*: Levi. *Berkeley*: Levi. *Descartes*: Paul.

Phl 411, 412. **Philosophy of Science.** (g) 3 hours each term. Drange.

Phl 413, 414. **Philosophy of Mind.** (g) 3 hours each term. Ebersole.

Phl 415. **Plato.** (G) 3 hours.

Phl 416. **Aristotle.** (G) 3 hours.

Phl 417. **Hume.** (G) 3 hours. Ebersole.

Phl 418. **Kant.** (G) 3 hours. Zweig.

Phl 421, 422. **Russell and His Contemporaries.** (G) 3 hours each term.

Phl 431, 432. **Philosophy in Literature.** (G) 3 hours each term. Jessup.

Phl 435. **Existentialism.** (G) 3 hours. Jessup.

Phl 441, 442, 443. **Aesthetics.** (G) 3 hours each term. Jessup.

Phl 452. **Philosophy of Language.** (G) 3 hours. Ebersole.

Phl 453, 454. **Analytic Philosophy.** (G) 3 hours each term. Paul.

Phl 461, 462. **Symbolic Logic.** (G) 3 hours each term. Levi.

Phl 465. **Logical Theory.** (G) 3 hours. Levi.

Phl 503. **Thesis.** Hours to be arranged.

Phl 505. **Reading and Conference.** Hours to be arranged.

Phl 507. **Seminar.** Hours to be arranged.

Kant: Zweig. *German Philosophy*: Zweig. *American Philosophy*: Jessup. *Metaphysics*: Alexander. *Analytic Aesthetics*: Jessup. *Problems of Space and Time*: Ebersole.

Phl 511, 512, 513. **Problems of Knowledge.** 3 hours each term. Ebersole.

Phl 514, 515, 516. **Ethical Theory.** 3 hours each term. Cody.

Physics

Professors: JOHN L. POWELL (department head), SHANG-YI CH'EN, BERND CRASEMANN, EDWIN G. EBBIGHAUSEN, RAYMOND T. ELICKSON, G. H. WANNIER.

Associate Professors: M. D. GIRARDEAU, J. W. McCLURE.

Assistant Professors: R. J. HIGGINS, HARLAN LEFEVRE, DAVID K. McDANIELS, DONALD O. WELLS.

The Department of Physics offers a program of graduate work leading to the M.A., M.S., and Ph.D. degrees. Current research in the department is concerned with experimental and theoretical aspects of nuclear and atomic physics, optical spectroscopy, and solid state physics. Current experimental and theoretical studies of solid state physics include electron spin resonance, optical properties, and fundamentals of band theory and its relation to electronic properties of solids.

Nuclear physics research is centered on the 4-MeV Van de Graaff accelerator laboratory. Special emphasis is placed upon nuclear structure research, including beta and gamma ray spectroscopy, and nuclear theory. Studies are also underway in the resonant absorption of gamma rays by nuclei bound in crystals, experimental determinations of the lifetimes of excited states of atoms and molecules, and the effect of nuclear decay on atomic electrons. The perturbation of atomic energy levels under conditions of high temperature and pressure is being investigated through optical spectroscopy. In astronomy, research on the motions of double- and triple-star systems is in progress, and seminar work is offered; no advance degrees are offered in astronomy.

The department is located in the modern Science Building, which includes well-equipped research laboratories and such auxiliary facilities as machine shops staffed by professional instrument technicians, available for graduate student use, and a glass blowing shop, liquid air plant, etc.

A qualifying examination for entering graduate students is given at the beginning of each fall term. This examination is restricted to questions in the fields of mechanics and electricity. Students who show a lack of preparation in either of these fields are required to take appropriate undergraduate courses.

Course requirements for a master's degree with a major in physics normally include, in addition to the substantial equivalent of the undergraduate requirements listed above: two year sequences in physics, at least one of which must be a 500 sequence; and one of the following sequences in mathematics—Advanced Calculus (Mth 431, 432, 433), seminar in applied mathematics (Mth 507), Theory of Functions of a Real Variable (Mth 551, 552, 553), Theory of Functions of a Complex Variable (Mth 554, 555, 556), Topics in Classical Analysis (Mth 557, 558, 559).

A well-prepared student may complete requirements for the master's degree in one year of full-time work. The master's degree is offered with or without presentation of a thesis.

The Ph.D. qualifying examination, given in the spring, covers undergraduate physics and the content of core graduate courses in mechanics, electromagnetic theory, and quantum mechanics. This examination is followed by comprehensive examination, which leads to admission to candidacy for the Ph.D. degree. After completion of his thesis, the candidate takes an oral Ph.D. final examination. A detailed description of examinations and requirements is available from the department.

Teaching and research assistantships are available. Research assistantships are offered in connection with projects sponsored by the Graduate School and by such agencies as the National Science Foundation, the Office of Naval Research, the Air Force Office of Scientific Research, and the Tektronix Foundation. Several National Defense Education Act fellowships are awarded. Students from foreign countries wishing to apply for assistantships are required to submit results of the Graduate Record Examination. Further information on graduate work in physics at the University is available from the department.

Ph 407. **Seminar.** (G) Hours to be arranged.

Astrophysics.

- Ph 411, 412, 413. **Modern Physics.** (G) 3 hours each term. Crasemann.
- Ph 417, 418. **Atomic and Nuclear Physics.** (g) 3 hours each term.
- Ph 427, 428, 429. **Electronics and Electrical Measurements.** (g) 2 hours each term. Kemp.
- Ph 431, 432, 433. **Electricity and Magnetism.** (g) 3 hours each term. McDaniels.
- Ph 441, 442, 443. **Advanced Optics.** (G) 3 hours each term. Ch'en.
- Ph 444. **Spectrochemical Analysis.** (G) 3 hours. Ch'en.
- Ph 451, 452, 453. **Thermodynamics and Kinetic Theory.** (G) 3 hours each term. Wannier.
- Ph 471, 472, 473. **Introduction to Theoretical Physics.** (G) 3 hours each term. Wells.
- Ph 501. **Research.** Hours to be arranged.
- Ph 503. **Thesis.** Hours to be arranged.
- Ph 505. **Reading and Conference.** Hours to be arranged.
- Ph 507. **Seminar.** Hours to be arranged.
Foundation of Physics. Theoretical Physics. Nuclear Physics. Solid State Physics.
- Ph 517, 518, 519. **Quantum Mechanics.** 3 hours each term. McClure.
- Ph 524, 525, 526. **Nuclear Physics.** 3 hours each term. McDaniels.
- Ph 534, 535, 536. **Advanced Physical Measurements.** 1 or 2 hours each term.
- Ph 538, 539, 540. **Theoretical Mechanics.** 3 hours each term. Higgins.
- Ph 541, 542, 543. **Theoretical Nuclear Physics.** 3 hours each term.
- Ph 544, 545, 546. **Electromagnetic Theory.** 3 hours each term. Girardeau.
- Ph 551, 552, 553. **Atomic Spectra.** 3 hours each term. Ch'en.
- Ph 554, 555, 556. **Experimental Spectroscopy.** 1 hour each term. Ch'en.
- Ph 578, 579, 580. **Solid State Physics.** 3 hours each term. Wannier.

Political Science

Professors: ROBERT L. AGGER, JAMES C. DAVIES (department head), ARTHUR S. FLEMMING, JOHN F. GANGE, CHARLES P. SCHLEICHER, LESTER G. SELIGMAN.

Associate Professors: DANIEL GOLDRICH, JAROLD A. KIEFFER, LUCIAN C. MARQUIS, WILLIAM C. MITCHELL, L. HARMON ZIEGLER.

Assistant Professors: JOSEPH R. FISZMAN, MARSHALL GOLDSTEIN, ARTHUR M. HANHARDT, JR., JAMES R. KLONOSKI, JOYCE M. MITCHELL.

Instructors: ROBERT I. MENDELSON, LEROY GRAYMER.

The Department of Political Science offers a graduate program of studies leading to the M.A., M.S., and Ph.D. degrees. The program is designed to prepare a student for teaching, research, and governmental or other public service, as well as to enable him to understand and participate in public affairs. Regular members of the department, special lecturers, and occasional visiting faculty members offer advanced courses and seminars in most fields of political science. Joint faculty-student studies, interdepartmental research projects, and individual research are currently being conducted in such diverse areas as public administration in the United States and underdeveloped countries, political leadership, Congressional

voting, local community power structures, communications in international relations, and art and politics.

Members of the faculty and their students are associated with a variety of research and study enterprises in the Institute of International Studies and Overseas Administration, the Institute for Community Studies, the Center for the Advanced Study of Educational Administration, the Bureau of Municipal Research and Service, the Politics Studies Program, and the Public Affairs Program. Each of these programs provides a center of interdisciplinary and interdepartmental study, focused on aspects of political science. Individual faculty research projects, financed by foundations, the government, the University, and other agencies, provide further opportunities for the student to work closely with faculty members, and to share directly in the tasks of planning, designing, and conducting systematic studies of various kinds.

Graduate students come to the advanced study of political science with a variety of academic backgrounds. Each student is encouraged to advance as rapidly as possible toward his goals by developing a program suited to those goals. The department offers a wide variety of courses and seminars, but it also requires all graduate students to complete a core program of studies designed to increase their competence in theoretical and research skills. These core areas are: political theory and methodology; comparative politics, national systems; comparative politics, cross-national studies; and international relations. Examinations for both the master's and doctor's degrees test the student's preparation in these core areas and in the area of concentration he has selected for his principal studies.

Master's Degree. Ordinarily, full-time advanced study for one year beyond the bachelor's degree enables a student to prepare himself for the final comprehensive written examination for the master's degree. As a rule, four-fifths of the student's work is in political science and the remainder in related fields. The writing of a thesis is optional.

Doctor's Degree. Two years of full-time study beyond the bachelor's degree is generally required in preparation for the preliminary comprehensive examination for the Ph.D. degree. During these years the student is expected to take regular courses and seminars and reading courses to prepare himself for the examination. After successful completion of the language requirement and the preliminary examination, the student is expected to write a thesis.

Admission. Admission to graduate study is based upon an evaluation of the Miller Analogies Test, plus supporting documents including an individual statement of purpose, transcripts of grades, and letters of recommendation. Applicants are encouraged to make their applications direct to the department during the winter and spring terms before admission in the fall term.

Financial Assistance. A variety of teaching and research assistantships and fellowships are available for qualified students. Application forms may be secured from the Office of Admissions; applications should be submitted to the department as early as possible during the school year.

PS 412, 413. **Administrative Organization and Behavior.** (G) 3 hours each term, winter and spring. Mendelsohn.

PS 414, 415, 416. **Political Parties and Public Opinion.** (G) 3 or 4 hours each term. Seligman.

PS 420, 421. **International Organization.** (G) 3 hours each term, fall and winter. Graymer.

PS 422. **International Law.** (G) 3 hours spring.

PS 424. **Government and Politics of Great Britain.** (G) 3 hours. Marquis.

PS 425. **Government and Politics of France.** (G) 3 hours. Hanhardt.

- PS 426. **Government and Politics of Germany.** (G) 3 hours. Hanhardt.
- PS 427, 428. **Government and Politics of the Soviet Union.** (G) 3 hours each term. Fiszman.
- PS 430. **Political Theory: General Issues.** (G) 3 hours fall. Goldstein.
- PS 431. **Political Theory: Values and Utopias.** (G) 3 hours winter. Fiszman.
- PS 432. **Political Theory: Causes of Political and Social Change.** (G) 3 hours spring.
- PS 433, 434, 435. **Political Theory: The American Tradition.** (G) 3 hours each term, fall and winter.
- PS 440, 441, 442. **Foreign Politics of the Major Powers.** (G) 3 hours each term. Schleicher.
- PS 453. **The Struggle for Asia: Democracy vs. Communism.** (g) 4 hours (summer sessions).
- PS 454. **Competing Ideologies in the World Today.** (G) 3 hours (extension).
- PS 455. **Area Tensions in the World Today.** (G) 3 hours (extension).
- PS 456, 457. **Theory of Democracy.** (G) 3 hours each term, fall and winter. W. Mitchell.
- PS 484, 485, 486. **The Supreme Court in American Government.** (G) 3 hours each term. Klonoski.
- PS 487, 488, 489. **The Policy Process.** (G) 3 hours each term. Wengert.
- PS 490, 491. **Community Politics.** (G) 3 hours each term, winter and spring. Agger, Goldrich.
- PS 494, 495, 496. **Federal Education, Federal Welfare, and National Security Policy.** (G) 3 hours each term. Flemming, J. Mitchell.
- PS 501. **Research.** Hours to be arranged.
- PS 503. **Thesis.** Hours to be arranged.
- PS 505. **Reading and Conference.** Hours to be arranged.
- PS 507. **Seminar.** Hours to be arranged.
- Allocation of Justice:* Klonoski, Mendelsohn. *Armament Policies:* Schleicher. *Comparative Community Politics:* Agger, Goldrich. *Comparative Communist Systems:* Fiszman. *Comparative Political Elites:* Seligman. *Comparative Political Institutions:* Fiszman. *Comparative Politics and the Novel:* Marquis. *Comparative Public Administration:* Mendelsohn. *Comparative Western European Politics:* Marquis. *Constitutional Law and the Judicial Process:* Klonoski. *International Politics:* Schleicher. *International Relations Theory:* Schleicher. *Latin American Politics:* Goldrich. *Leadership and Responsibility in U.S. Government:* Kieffer. *Organization Theory:* Mendelsohn. *Policy Implementation Abroad:* Gange. *Political Behavior:* Davies. *Political Development in the Newer Nations:* Davies, Goldrich. *Political Revolution:* Davies. *The Political System:* W. Mitchell. *Public Administration and Policy Development:* Mendelsohn, Wengert. *Regulatory Administration:* Klonoski. *Scope and Methods of Political Science:* Zeigler. *Theories of American Politics:* W. Mitchell. *United States Foreign Policy:* Schleicher. *The Negro in American Politics:* Agger, Klonoski.

Psychology

Professors: RICHARD A. LITTMAN (department head), FRED ATTNEAVE, FREDERICK R. FOSMIRE, RAY HYMAN, ROBERT W. LEEFER, NORMAN D. SUNDBERG, PHILIP J. RUNKEL, LEONA E. TYLER.

Associate Professors: J. SPENCER CARLSON, HAROLD R. CROSLAND (emeritus),

HAROLD R. DICKMAN, ROBERT F. FAGOT, GENE R. LAFORGE, ROBERT W. LEARY, GERALD R. PATTERSON, PHIL H. SCHOGGEN.

Assistant Professors: BARRY F. ANDERSON, LOUIS BREGER, WILLIAM A. BRICKER, LESLIE A. DAVISON, LEWIS R. GOLDBERG, DANIEL P. KIMBLE, VELLO SERMAT, DAVID F. WRENCH.

Instructor: ROBERT J. KING

The Department of Psychology offers work leading to the M.A., M.S., and Ph.D. degrees. Candidates are accepted in the fields of general-experimental psychology (especially learning, perception, and comparative-physiological psychology), clinical psychology, counseling, personality, social, and developmental psychology.

Graduate work in psychology has been well established at the University since the early 1920s. The present policy of the department aims at a maximum enrollment of about seventy-five students. This limitation permits both individual supervision of graduate work and the close relationships between faculty and students that have been so important in the past work of the department.

Work in general-experimental psychology continues to be the major orientation of the department. The areas of general psychology which are emphasized by the department include: learning, perception, physiological and comparative psychology, personality theory, developmental and social psychology. Research programs now being conducted include the following: judgmental processes with complex data; perception of lawfulness in sequential stimulation; physiology and pharmacology of memory; memory and the limbic system; factors affecting creative thinking; parent-child interactions affecting instrumental learning; long-range development of children's interests; personality patterns of creative people; social psychological environments of physically handicapped children; factors affecting outcomes in child therapy; methods of training graduate students in psychotherapy; discrimination learning and social dominance in monkeys; species comparisons with monkeys; residual effects of early experiments with rats; mathematical models of psychophysical judgments; and means of predicting student performance.

About half of the present graduate-student group have a primary interest in clinical and counseling psychology. The department recognizes that a large proportion of its graduate students will wish to prepare for clinical and counseling work because of the expanding demand for workers in these areas. Within the clinical area, the department has developed a strong program of training for students interested in clinical work with children. To facilitate such training, the department operates a clinic in which selected cases from the community and campus receive diagnostic and therapeutic treatment. Graduate clinical students may also take work in the clinic maintained by the Department of Speech for children with difficulties of speech and hearing, and in the Reading Clinic maintained by the School of Education. Facilities for practicum experience with adults are provided by the University Counseling Center. Arrangements for internships have been developed at the Oregon State Hospital in Salem, at the Community Child Guidance Clinic in Portland, in the State Psychiatric Services for Children at the University of Oregon Medical School in Portland, and in several regional hospitals of the Veterans Administration.

The University also offers a two-year program of graduate study, leading to the master's degree, to prepare students for positions as counselors for handicapped persons in vocational-rehabilitation programs. The program is conducted jointly by the Department of Psychology and the School of Education. The work includes courses in psychology, supplemented by study of medical, legal, and other aspects of rehabilitation and by supervised experience in rehabilitation agencies. Traineeships are available.

All applicants desiring to do graduate work in psychology should supply scores on either the Graduate Record Examination or the Miller Analogies Test (preferably the former), as well as transcripts of previous undergraduate and graduate work.

- Psy 407. **Seminar.** (G) Hours to be arranged.
- Psy 417, 418. **Laboratory in Advanced Psychological Statistics.** (G) 1 hour each term.
- Psy 421, 422. **Principles and Methods of Psychological Assessment.** (g) 3 hours each term. Goldberg, Davison.
- Psy 436. **Character and Personality.** (g) 3 hours. Davison, Leeper, Sermat.
- Psy 439. **Somatopsychology.** (G) 3 hours. Schoggen.
- Psy 441, 442. **Group and Individual Differences.** (G) 3 hours each term. Tyler.
- Psy 447. **Introduction to Industrial Psychology.** (g) 3 hours.
- Psy 448. **Industrial Psychology.** (G) 3 hours.
- Psy 449. **Occupational Choice and Psychology of Careers.** (G) 3 hours. Fosmire, Tyler.
- Psy 450. **Abnormal Psychology.** (g) 3 hours fall or spring. Breger, Fosmire, Patterson.
- Psy 451. **Physiological Psychology.** (G) 2 or 3 hours. Kimble.
- Psy 460. **Developmental Psychology I: Infancy and Childhood.** (g) 3 hours. Bricker, Patterson, Schoggen.
- Psy 461. **Developmental Psychology II: Adolescence and Maturity.** (g) 3 hours. Bricker.
- Psy 465. **Motivation.** (G) 2 hours. Leeper, Littman.
- Psy 470. **Animal Psychology.** (g) 2 hours. Leary.
- Psy 471. **Laboratory in Animal Psychology.** (g) 1 or 2 hours. Leary.
- Psy 490. **Psychology of Learning.** (g) 3 hours. Anderson, Littman.
- Psy 491. **Laboratory in Learning.** (g) 2 hours. Anderson, Littman.
- Psy 492. **Psychology of Perception.** (g) 3 hours. Attneave.
- Psy 493. **Laboratory in Perception.** (g) 2 hours. Attneave.
- Psy 501. **Research.** Hours to be arranged.
- Psy 502. **Research Symposium.** Hours to be arranged.
- Psy 503. **Thesis.** Hours to be arranged.
- Psy 505. **Reading and Conference.** Hours to be arranged.
- Psy 507. **Seminar.** Hours to be arranged.
- Core Comparative:* Leary. *Core Developmental:* Patterson, Bricker, Schoggen. *Core History and Systems:* Leeper, Littman. *Core Individual Differences:* Tyler. *Core Learning:* Leeper, Littman. *Core Perception:* Attneave. *Core Personality:* Breger. *Core Physiological:* Kimble, Leary. *Core Psychopathology:* Fosmire. *Core Quantitative Methods:* Fagot, Hyman. *Core Research:* Anderson, Attneave, Breger, Davison, Fagot, Kimble, Leary, McGaugh, Patterson. *Core Social:* Wrench. *Early Experience:* Littman. *Piaget:* Hyman, Bricker. *Game Theory as Applied to Interpersonal Relations:* Sermat. *Psychotherapy I: Behavior Theory:* Patterson. *Psychotherapy II: Interpersonal Theory:* Fosmire. *Psychological Ecology:* Schoggen. *Advanced Counseling:* Tyler. *Clinical and Counseling Practice:* Breger, Sermat. *Communication and Persuasion:* Wrench. *Mathematical Psychology:* Fagot.
- Psy 508. **Clinical Work with Children.** 3 hours any term. Breger, staff.
- Psy 509. **Practicum Experience.** Hours to be arranged. Breger, staff.

- Psy 521, 522, 523. **History and Systems of Psychology.** 2 hours each term. Littman.
- Psy 524, 525. **Individual Intelligence Testing.** 4, 3 hours.
- Psy 527. **Counseling Procedures.** 3 hours. Sundberg, Tyler.
- Psy 530, 531. **Foundations of Clinical and Counseling Practice.** 3 hours each term. Davison, Sundberg.
- Psy 532, 533. **Advanced Personality Assessment.** 3 hours each term. Goldberg, Sermat.
- Psy 535. **Advanced Social Psychology.** 3 hours. Hyman, Wrench.
- Psy 537, 538, 539. **Personality Theory and Research.** 4 hours fall; 2 hours each term, winter and spring. Breger, Patterson, Sermat.
- Psy 543, 544. **Measurement: Theory and Application.** 3 hours each term. Fagot.
- Psy 545. **Theory and Construction of Tests.** 3 hours. Fagot.
- Psy 546. **Factor Analysis.** 3 hours. Fagot.
- Psy 551, 552, 553. **Advanced Experimental Psychology.** 3 hours each term.
- Psy 560. **Advanced Physiological Psychology.** 2 hours. Kimble.
- Psy 566. **Advanced Psychology of Perception.** 3 hours. Attneave.
- Psy 567. **Advanced Laboratory in Perception.** 3 hours. Attneave.
- Psy 570. **Advanced Animal Psychology.** 2 hours. Leary.
- Psy 572, 573, 574. **Advanced Psychology of Learning and Thinking.** 3 hours each term. Leary, Anderson, Leeper, Littman.
- Psy 575. **Advanced Laboratory in Learning.** 3 hours. Anderson, Leary, Leeper, Littman.

Religion

Professor: P. B. MEANS (emeritus).

Associate Professor: DOUGLAS STRATON (department head).

Assistant Professor: ALFRED BLOOM.

The University of Oregon does not offer major graduate work in religion. However, the Department of Religion offers several courses that carry graduate credit and that may partially satisfy the minor requirement for a graduate degree.

- R 405. **Reading and Conference.** (g) Hours to be arranged.
- R 407. **Seminar.** (g) Hours to be arranged.
- R 419, 420. **Philosophy of Religion.** (g) 3 hours each term, fall and winter.
- R 421. **Contemporary Social Problems and Religion.** (g) 3 hours spring.
- R 422. **Psychology of Religion.** (g) 3 hours spring.
- R 423, 424, 425. **Contemporary Concepts of God.** (g) 3 hours each term.

Sociology

Professors: WALTER T. MARTIN (department head), HARRY ALPERT, JOEL V. BERREMAN, ROBERT DUBIN, JOHN M. FOSKETT, JAY M. JACKSON, ROLAND J. PELLEGRIN, WILLIAM S. ROBINSON.

Associate Professors: HERBERT BISNO, ROBERT A. ELLIS, THEODORE B. JOHANNIS, JR., BENTON JOHNSON.

Assistant Professors: TED T. JITODAI, KENNETH POLK, ROY H. ROGERS, KIM RODNER, GEORGE ROTHBART.

Visiting Lecturer: MAURICE JACKSON.

Instructors: JOAN ACKER, JOHN R. HOWARD.

The graduate program of the Department of Sociology, leading to the M.A., M.S., and Ph.D. degrees, is an intensive program designed to train professional sociologists for teaching, research, and administrative posts in sociology and related fields. Most candidates for the Ph.D. degree first obtain a master's degree, but qualified students who have completed one year of work in residence are occasionally permitted to develop programs leading directly to the Ph.D.

Although the department accepts students who are interested only in the master's degree, its program is primarily intended for doctoral candidates. All students of good academic ability are encouraged to follow a course of study leading to the Ph.D. degree.

The department offers two programs leading to the master's degree. The preparatory master's program, leading to the M.A. degree, is designed as a stepping stone to the Ph.D. degree. The second program leads to a terminal master's degree for students preparing to enter professional positions other than college or university teaching or research; no thesis is required in this program.

The department offers graduate study in five broad areas of concentration: theory, methodology, social psychology, social structure and processes and social institutions. In each of these general areas a core curriculum is provided and all graduate students seeking advanced degrees are required to complete the core courses. Doctoral candidates must demonstrate a high level of competence in a specialized field within one of these broad areas. This competence is achieved through an intensive program of study culminating in the doctoral dissertation. The doctoral dissertation must embody the results of research and show evidence of originality and ability in independent investigation.

A broad range of research is in progress in the department, offering a variety of opportunities for graduate students for study on which master's theses and doctoral dissertations may be based. Graduate awards of various kinds are available for well-qualified students. Considerable emphasis is placed on close working relationships between students and faculty.

Students are not advised to seek an advanced degree in sociology unless they have achieved a B average or better in their undergraduate work in the field. Students whose undergraduate major has been in another field should have at least a B average in all social science courses taken.

The department does not offer graduate study in social work.

Students interested in the graduate program in sociology should write directly to the head of the Department of Sociology for a brochure describing the program in detail, and for the necessary application materials to be submitted for evaluation. All application materials should be submitted at least two months before the student plans to begin graduate work, or by March 1 for those applying for graduate awards.

Soc 407. **Seminar.** (G) Hours to be arranged.

Quantitative Methods: Rothbart. *Juvenile Delinquency:* Bisno. *Sociology of Illness and Health:* Bisno. *Economic Sociology:* Rodner. *Sociology of Leisure:* Johannis.

Soc 411, 412, 413. **Sociological Research Methods.** (G) 3 hours each term. Robinson, Ellis.

Soc 415. **Theory and Methods in Population and Ecology.** (G) 3 hours. Jitodai, Martin.

Soc 422, 423, 424. **Sociology of Social Work.** (g) 3 hours each term. Acker.

Soc 425, 426. **Principles and Concepts of Social Work.** (g) 3 hours each term. Acker.

Soc 430. **Theory of Small Groups.** (G) 3 hours. Johannis.

Soc 431. **Group Dynamics.** (g) 3 hours. J. Jackson.

Soc 436. **Collective Behavior.** (g) 3 hours. Berreman.

Soc 438. **Social Psychology of the Family.** (G) 3 hours. Johannis.

Soc 440, 441. **Criminology and Delinquency.** (g) 3 hours each term. Rothbart.

Soc 442. **Urbanization and the City.** (G) 3 hours. Martin.

Soc 443. **Social Control.** (G) 3 hours. Berreman.

Soc 444. **Social Stratification.** (G) 3 hours. Ellis, Johnson.

Soc 445. **Sociology of Race Relations.** (g) 3 hours. Berreman.

Soc 446. **Sociology of Work.** (G) 3 hours. Dubin.

Soc 447. **Industrial Sociology.** (G) 3 hours. Dubin.

Soc 448. **Sociology of Occupations.** (G) 3 hours. Pellegrin.

Soc 449. **Social Change.** (G) 3 hours. Bisno.

Soc 460. **Social Institutions.** (G) 3 hours. Rodgers.

Soc 461. **Sociology of Religion.** (G) 3 hours. Johnson.

Soc 462. **Sociology of the Family.** (G) 3 hours. Johannis, Rodgers.

Soc 465. **Political Sociology.** (G) 3 hours. Bisno, Rodner.

Soc 470. **Development of Sociology.** (g) 3 hours. Rodner.

Soc 501. **Research.** Hours to be arranged.

Soc 502. **Supervised College Teaching.** Hours to be arranged.

Soc 503. **Thesis.** Hours to be arranged.

Soc 505. **Reading and Conference.** Hours to be arranged.

Soc 507. **Seminar.** Hours to be arranged.

Comparative Family Systems: Johannis. *Contemporary Family Research:* Johannis, Rodgers. *Population and Social Structure:* Martin. *Sociology of Professions:* Bisno. *Sociology of Religion:* Johnson. *Sociology of Deviant Behavior:* Rothbart. *Social Stratification:* Ellis, Johnson. *Primary Human Interaction:* Dubin. *Community Analysis:* Foskett, Pellegrin. *Theory of Action:* Johnson. *Urbanization:* Martin. *Quantitative Sociology:* Robinson. *Correctional Research:* Rothbart. *Sociology of Adolescence:* Polk.

Soc 518. **Experimental Sociology.** 3 hours. Dubin.

Soc 530. **Analytical Problems in Social Psychology.** 3 hours. J. Jackson.

Soc 532. **Propaganda and Social Control.** 3 hours. Berreman.

Soc 537. **Social Movements.** 3 hours. Berreman, Rothbart.

Soc 540. **Social Structure and Processes.** 3 hours. Pellegrin.

Soc 541. **Theory of Organization.** 3 hours. Dubin.

Soc 542. **Power and Influence in Community and Society.** 3 hours. Pellegrin.

Soc 560. **Analytical Problems in Social Institutions.** 3 hours. Foskett.

Soc 561. **Values and Social Structure.** 3 hours. Johnson.

Soc 570. **Analytical Problems in Sociological Theory.** 3 hours. Dubin.

Soc 571. **History of Social Thought.** 3 hours. Foskett.

Soc 572. **Development of American Sociology.** 3 hours. Foskett.

Soc 573. **Contemporary Sociology.** 3 hours. Rodner.

Soc 575. **Theory Building in Sociology.** 3 hours. Dubin.

Speech

Professors: D. GLENN STARLIN (department head), BOWER ALY, ROBERT D. CLARK, HORACE W. ROBINSON, KENNETH S. WOOD.

Associate Professors: HERMAN COHEN, FABER DE CHAINE, E. A. KRETSINGER, CHARLEY A. LEISTNER, KIRT E. MONTGOMERY, SCOTT NOBLES, JOHN R. SHEPHERD.

Assistant Professors: NED J. CHRISTENSEN, JEAN V. CUTLER, ANTHONY L. KADLEC.

The Department of Speech offers work leading to the M.A., M.S., and Ph.D. degrees. The fields of study are: rhetoric and public address, radio and television broadcasting, speech and hearing therapy, and theater.

Students concentrate their studies in one of these four fields, but also elect courses in the other subject fields of the department. Candidates for graduate degrees are required to write a thesis. Research projects for the thesis include: play production in drama; experimental studies in speech correction, radio and television, and public address; studies in the history of theater and of oratory, and in rhetorical and dramatic theory.

The activities and special services of the department provide laboratories in which students may gain experience in direction as well as in limited participation. The University Theater, one of the best-equipped in the West, has three producing areas: the main theater, the laboratory theater, and the arena theater. The University has its own television studios and FM radio station (KWAX), as well as local studios to provide programs for the state-owned radio and television stations (KOAC and KOAC-TV) and for commercial radio and television stations. The Speech Correction and Hearing Clinic gives students opportunity to work with actual cases of speech-handicapped children and adults. The forensics program includes not only traditional debate and speech contests but also participation in the activities of the University Symposium, a group which takes the discussion of critical public issues to Oregon communities. Graduate students are given special responsibility in the direction of these activities, and find in them problems for their research projects.

The instruction and activities of the department are housed in Villard Hall and in the adjacent University Theater.

Rhetoric and Public Address

- Sp 421. **Classical Oratory.** (G) 3 hours. Aly, Nobles.
- Sp 422. **British Oratory.** (G) 3 hours. Aly, Cohen, Montgomery.
- Sp 423. **American Oratory.** (G) 3 hours. Aly, Leistner.
- Sp 424. **Speech Forms and Techniques in Group Control.** (g) 3 hours (extension and summer sessions).
- Sp 501. **Research.** Hours to be arranged.
- Sp 503. **Thesis.** Hours to be arranged.
- Sp 505. **Reading and Conference.** Hours to be arranged.
- Sp 507. **Seminar.** Hours to be arranged.
Introduction to Graduate Study. Argumentation and Debate.
- Sp 511. **Eighteenth Century Rhetorical Theory.** 3 hours. Cohen.

Sp 512. **American Public Address.** 3 hours. Aly.

Sp 513. **Recent Rhetorical Criticism.** 3 hours. Nobles.

Radio and Television Broadcasting

- J 432. **Radio-Television News II.** (G) 3 hours.
- Sp 444. **Radio-Television Direction.** (G) 3 hours. Shepherd.
- Sp 445. **Radio-Television Production.** (G) 3 hours. Shepherd.
- Sp 446. **Radio-Television Programming.** (G) 3 hours. Shepherd, Starlin.
- Sp 448. **Radio and Television and the Public.** (G) 3 hours spring. Shepherd. Starlin.
- Sp 469. **Lighting for Television.** (G) 2 hours.
- Sp 501. **Research.** Hours to be arranged.
- Sp 503. **Thesis.** Hours to be arranged.
- Sp 505. **Reading and Conference.** Hours to be arranged.
- Sp 507. **Seminar.** Hours to be arranged.
Introduction to Graduate Study. Problems of Education by Television.
- Sp 541. **Theory and Criticism of Broadcasting.** 3 hours. Kretsinger, Starlin.
- Sp 544. **Radio-Television Program Evaluation.** 3 hours. Kretsinger, Shepherd.

Speech and Hearing Therapy

- Sp 472. **Experimental Phonetics.** (G) 3 hours. Wood.
- Sp 481, 482, 483. **Speech Pathology.** (G) 3 hours each term. Wood.
- Sp 484, 485, 486. **Clinical Speech Therapy.** (G) 2 hours each term. Christensen, Ryan, Wood.
- Sp 487, 488, 489. **Audiology.** (G) 3 hours each term. Christensen.
- Sp 490. **Lip Reading for the Deaf and Hard-of-Hearing.** (G) 3 hours (extension).
- Sp 491. **Advanced Language Development for the Deaf.** (G) 3 hours (extension).
- Sp 492. **Voice and Speech for the Deaf.** (G) 3 hours (extension).
- Sp 501. **Research.** Hours to be arranged.
- Sp 503. **Thesis.** Hours to be arranged.
- Sp 505. **Reading and Conference.** Hours to be arranged.
- Sp 507. **Seminar.** Hours to be arranged.
Introduction to Graduate Study. Psychology of Speech.

Theater

- Sp 460. **Advanced Play Direction.** (G) 3 hours. Cutler, Robinson.
- Sp 461. **Introduction to Scene Design.** (G) 3 hours. Kadlec.
- Sp 462. **Styles in Scene Design.** (G) 3 hours. Kadlec.
- Sp 463. **Advanced Problems in Scene Design.** (G) 3 hours. Kadlec.

Sp 464, 465, 466. **History of the Theater.** (G) 3 hours each term. Cutler, De Chaine.

Sp 467, 468. **Lighting for the Stage.** (G) 2 hours each term. Kadlec.

Sp 501. **Research.** Hours to be arranged.

Sp 503. **Thesis.** Hours to be arranged.

Sp 505. **Reading and Conference.** Hours to be arranged.

Sp 507. **Seminar.** Hours to be arranged.

Introduction to Graduate Study. Interpretation. Technical Problems of the Theater.

Sp 551, 552, 553. **Theory of Dramatic Production.** 3 hours each term. Cutler, Robinson.

Research

The University's program for the encouragement and support of research by members of its faculty is administered through the Office of Scientific and Scholarly Research of the Graduate School, with advice and assistance from the faculty Research Committee. The Office of Scientific and Scholarly Research also serves as a coordinating agency in connection with University relations with foundations and government bodies which provide grants for research projects and supervises the programs of the University research divisions listed below. Research programs are also conducted through the Bureau of Municipal Research and Service and the Bureau of Educational Research.

Institute of Molecular Biology

AARON NOVICK, Ph.D., Director of Institute of Molecular Biology; Professor of Biology.

SIDNEY A. BERNHARD, Ph.D., Associate Professor of Chemistry.

WILLIAM T. SIMPSON, Ph.D., Professor of Chemistry.

FRANKLIN W. STAHL, Ph.D., Professor of Biology.

GEORGE STREISINGER, Ph.D., Associate Professor of Biology.

EDWARD HERBERT, Ph.D., Associate Professor of Chemistry.

FRANCIS J. REITHEL, Ph.D., Professor of Chemistry.

EDWARD NOVITSKI, Ph.D., Professor of Biology.

JOHN A. SCHELLMAN, Ph.D., Associate Professor of Chemistry.

WILLIAM R. SISTROM, Ph.D., Associate Professor of Biology.

RAYMOND G. WOLFE, Ph.D., Associate Professor of Chemistry.

The Institute of Molecular Biology is a center for research and research instruction in areas of biology where understanding is found in terms of the properties of micromolecules, particularly nucleic acids and proteins. Staff members hold joint appointments in a department (biology, chemistry, or physics).

Current research projects in the Institute are concerned with such topics as genetic recombination and mutation in bacteria and bacterial viruses, the genetic control of protein synthesis, the regulation of the rate of protein formation, molecular structural aspects of biological specificity, biocatalysis, and biological coding.

The Institute sponsors seminars, special lectures, visiting professorships, and instruction in research, but does not conduct a formal teaching program. Members of the Institute staff offer courses in their fields of competence through the departments with which they are affiliated.

Research instruction is offered at both the graduate and postdoctoral levels. With the approval of the department concerned, graduate students in biology, chemistry, or physics may do research in the Institute as a part of their programs leading to graduate degrees. Research advisers may be members either of the Institute staff or of the departmental faculties interested in molecular biology.

Institute of Theoretical Science

ROBERT M. MAZO, Ph.D., Director of Institute of Theoretical Science; Associate Professor of Chemistry.

MARSHALL FIXMAN, Ph.D., Professor of Chemistry.

MARVIN D. GIRARDEAU, JR., Ph.D., Associate Professor of Physics.
 MARTIN L. SAGE, Ph.D., Assistant Professor of Chemistry.
 WILLIAM T. SIMPSON, Ph.D., Professor of Chemistry.

TERRELL L. HILL, Ph.D., Professor of Chemistry.
 JOEL W. MCCLURE, Ph.D., Associate Professor of Physics.
 JOHN L. POWELL, Ph.D., Professor of Physics.
 GREGORY H. WANNIER, Ph.D., Professor of Physics.

The Institute of Theoretical Science provides a center for research leading to the understanding of natural processes in terms of logically constructed conceptual systems, and to the synthesis of the specialized research of physicists, biologists, and other natural scientists.

Theoretical science may be defined to include: (1) the discovery and description of the fundamental laws which govern the behavior of the elementary constituents of natural systems; (2) the theoretical description of complex systems, arising through the mutual interaction of a large number of simple systems of which we have a basic theoretical understanding; and (3) the utilization of the conceptual and analytic tools of the theoretical scientists in applied research.

Graduate students with adequate preparation in one of the science departments may elect thesis research in the Institute. The Institute also sponsors postdoctoral fellowships and visiting professorships.

Statistical Laboratory and Computing Center

FRED C. ANDREWS, Ph.D., Director of Statistical Laboratory and Computing Center; Associate Professor of Mathematics.

DONALD R. TRUAX, Ph.D., Associate Professor of Mathematics; Research Associate.

TED K. MATTHES, Ph.D., Assistant Professor of Mathematics; Research Associate.

GEORGE W. STRUBLE, Ph.D., Assistant Professor of Mathematics; Research Associate.

The Statistical Laboratory and Computing Center conducts research in the development of new statistical and numerical procedures and provides a consulting service for graduate students and members of the faculty in the fields of statistical and numerical analysis. The Computing Center maintains an IBM 1620 electronic computer, which is available to the faculty and students of the University for research and instruction. The staff offers seminars in programming for the 1620 computer. Users of the computer provide necessary programs and are responsible for the actual running of these programs.

Institute of International Studies and Overseas Administration

JOHN F. GANGE, M.A., Director of Institute of International Studies and Overseas Administration; Professor of Political Science.

LEROY E. GRAYMER, M.A., Assistant to the Director; Instructor in Political Science.

ANNE M. MARNIX, M.S., Assistant to the Director; Instructor in Business Education.

WILLIAM P. MCGREEVEY, Research Associate; Assistant Professor of Economics.

LOUIS BREGER, Ph.D., Assistant Professor of Psychology.

JAMES C. DAVIES, Ph.D., Professor of Political Science.

SAMUEL N. DICKEN, Ph.D., Professor of Geography.

GENNARO FALCONERI, M.A., Visiting Lecturer in History.

CARL L. JOHANNESSEN, Ph.D., Assistant Professor of Geography.

GENE E. MARTIN, Ph.D., Associate Professor of Geography.

RAYMOND F. MIKESELL, Ph.D., W.E. Miner Professor of Economics.

ANGELA J. PALANDRI, Ph.D., Assistant Professor of Oriental Languages.

DWIGHT T. WALLACE, Ph.D., Assistant Professor of Anthropology.

The Institute of International Studies and Overseas Administration is responsible for the development and coordination of University activities in the field of international affairs. Its primary functions are: (1) to develop programs of research, teaching, and administration, in cooperation with private and governmental agencies, and to arrange for the conduct of these programs by University personnel, both on the campus and overseas; (2) to assist the Committee on International Studies and Overseas Administration in the administration of graduate study in international affairs and to provide research training for graduate students; and (3) to serve as the University's center for other faculty and student activities concerned with international affairs.

The Institute supervises a graduate study program leading to the Master of Arts in international studies (a two-year degree program) and a program leading to the M.A. in overseas administration (a second M.A. conferred in conjunction with an M.A. degree in a departmental discipline), and cooperates with major departments in the supervising of Ph.D. programs for students who elect an emphasis on international affairs within their chosen disciplines.

The Institute sponsors and encourages faculty research in international affairs and assists in providing opportunities for joint faculty and student research projects on campus and overseas. Research assistantships are available in the Institute; research and research training bases have been established in Chile, Colombia, and the Philippines.

The Institute also conducts graduate seminars to provide for students and members of the faculty opportunities to share ideas and experiences with visiting lecturers, special consultants, and among themselves. In addition to its campus programs, the Institute arranges for advanced students opportunities for overseas study and for administrative experience on foreign projects.

The Institute conducts the University's annual Summer World Affairs Program and the program of the Oregon High School International Relations League.

Institute for Community Studies

ROLAND J. PELLEGRIN, Ph.D., Director of Institute for Community Studies and the Center for the Advanced Study of Educational Administration; Professor of Sociology.

KEITH GOLDHAMMER, Ph.D., Associate Director, Center for the Advanced Study of Educational Administration; Professor of Education.

PHILIP J. RUNKEL, Ph.D., Associate Director, Center for the Advanced Study of Educational Administration; Professor of Psychology.

The Institute for Community Studies conducts and encourages research in the behavioral and social sciences, education, and related areas. Most projects carried on under the auspices of the Institute have a community orientation,

focusing on the structure and functioning of the community as a social and political system. Emphasis is on the policy-formulation processes in the economy, government, education, and other institutional areas of the community.

The Institute provides facilities for individual research by members of the faculty and for cooperative projects, together with opportunities for continuing communication, criticism, and reports of progress by participating scholars. It also provides research training for graduate students in connection with Institute projects, with emphasis on the development of specific research designs as a basis for graduate dissertations.

The Center for the Advanced Study of Educational Administration, a division of the Institute, was established in 1964 with funds granted by the Research and Development Program of the United States Office of Education. The program of the Center is concerned with the internal organization and functioning of public educational institutions and educational systems and with the relationships of these institutions and systems to the larger environments in which they are located. As a division of the Institute, the Center draws upon the services of staff members and graduate students in the various behavioral science disciplines and in the field of educational administration.

Bureau of Business and Economic Research

WESLEY C. BALLAINE, Ph.D., Director, Bureau of Business and Economic Research; Professor of Business Economics.

PAUL L. KLEINSORGE, Ph.D., Associate Director; Director of Institute of Industrial and Labor Relations; Professor of Economics.

DONALD A. WATSON, Ph.D., Associate Director; Associate Professor of Finance.

GERTRUD G. EDWARDS, Ph.D., Research Associate.

ROBERT L. CURRY, M.A., Research Assistant.

The Bureau of Business and Economic Research conducts and encourages research in business, economics, and related fields. Studies undertaken by the Bureau or for which it provides assistance in research design and facilities are financed through University funds and through grants from foundations, government agencies, and the business community.

The Bureau publishes the monthly *Oregon Business Review*, the annual *Oregon Economic Statistics*, and monographs reporting the results of business and economic research.

The Bureau works in close cooperation with the Institute of Industrial and Labor Relations.

Institute of Industrial and Labor Relations

PAUL L. KLEINSORGE, Ph.D., Director of Institute of Industrial and Labor Relations; Associate Director of Bureau of Business and Economic Research; Professor of Economics.

EDWIN C. BEAL, Ph.D., Associate Professor of Management.

ROBERT DUBIN, Ph.D., Research Professor of Sociology.

The Institute of Industrial and Labor Relations conducts a program of research, public service, and graduate study in the field of industrial relations. The Institute's research program includes studies in manpower resources, labor mobil-

ity, wage structures, personnel problems, management and labor organizations, communications in labor relations, labor legislation, and collective bargaining. The approach is interdisciplinary, involving the cooperative efforts of scholars in the several social sciences and related professional schools. In its research program, the Institute is closely associated with the Bureau of Business and Economic Research. Research assistantships are available for graduate students.

The Institute also sponsors programs in labor education and management, including regular campus courses, evening classes through the Division of Continuing Education, special seminars, and conferences, and provides an information service on problems of industrial relations.

Center for Social Service Training and Research

MARTIN H. ACKER, Ph.D., Co-Director of the Center for Social Service Training and Research; Associate Professor of Education.

KENNETH POLK, Ph.D., Co-Director of the Center for Social Service Training and Research; Assistant Professor of Sociology.

The Center for Social Service Training and Research administers programs of graduate instruction and research conducted by the University in the fields of juvenile correction, rehabilitation counseling, and related areas.

Rehabilitation Counseling. The program in rehabilitation counseling includes a two-year program of graduate work leading to a master's degree. The program, offered through the cooperation of the Department of Psychology and the School of Education, is designed to provide the student with a well-rounded background for professional employment as a counselor in a state or private agency concerned with the problems of physically or mentally handicapped persons. Courses in psychology, education, and sociology are supplemented by study of medical, legal, and other aspects of rehabilitation and by supervised experience in rehabilitation agencies. Financial assistance to full-time students in this program is available through traineeships provided by the U.S. Department of Health, Education, and Welfare.

Juvenile Correction. In the field of juvenile correction, the University offers through the Center for Social Service Training and Research, a two-year interdisciplinary program of graduate study, leading to the master's degree, to prepare students for professional careers in the prevention and correction of juvenile delinquency in a variety of institutions and agencies. The Center also sponsors, in cooperation with the Oregon Juvenile Judges Association, an annual summer school on juvenile delinquency for the personnel of juvenile correctional programs. The research program includes studies of the etiology, prevention, and correction of juvenile behavioral problems.

Institute for College Teaching

WILLIAM C. JONES, Ph.D., Director of the Institute for College Teaching; Dean of Administration; Professor of Higher Education.

The programs of the Institute for College Teaching include: (1) the conduct of research on various problems relating to college teaching, the improve-

ment of the quality of college teaching, the preparation of college teachers, and related professional problems of direct concern to college teachers; (2) the organization, supervision, and coordination of systematic programs of carefully supervised teaching experiences for students preparing for college teaching careers; (3) the preparation and presentation of courses and seminars dealing with the nature, structure, history, philosophy, and organization of institutions of higher learning.

Procedure for Master's Degrees

Procedure	Responsible Agency	Chronology
1. <i>Admission</i> —see page 17.	Department or school.	First step.
2. <i>Qualifying examination</i> —Admits student to candidacy for master's degree.	Department or school.	Should be held before 15 term hours of graduate work have been completed.
3. <i>Course work and residence</i> —At least 45 term hours in courses approved for graduate credit; 30 term hours must be taken while in residence status.*	Department or school.	Approval of planned program should be secured during the first term of work on the degree; normally all but final 15 term hours must be taken after the qualifying examination.
4. <i>Foreign languages</i> —where required.	Department or school; Div. of Modern & Classical Lang.	Prior to final examination.
5. <i>Thesis</i> —Where required.	Department or school.	Between qualifying examination and final examination; thesis abstract must be filed with Graduate School not later than two weeks before date of final examination.
6. <i>Application for degree.</i>	Registrar.	One month before the date of Commencement.
7. <i>Final examination</i> —Examining committee nominated by department or school for approval by the dean of the Graduate School.	Department or school.	After completion of thesis, course work, and residence requirement.
8. <i>Granting of degree.</i>	General faculty, on certification by Graduate School; Registrar.	After all requirements have been satisfied.
9. <i>Certificate of completion</i> —Issued upon application to the Registrar.	Graduate School; Registrar.	At end of term in which all degree requirements are completed.
10. <i>Diploma.</i>	Graduate School; Registrar.	Dated as of Commencement.

* The M.Ed. and M.B.A. have slightly different requirements.

Procedure for Doctor's Degrees

Procedure	Responsible Agency	Chronology
1. <i>Admission</i> —see page 17.	Department or School.	First step.
2. <i>Qualifying examination</i> —Admits student to a doctoral program, but not to candidacy.*	Department or school.	Relatively early in the program.
3. <i>Course work and residence</i> —Student's advisory committee, appointed by school or department with the approval of the dean of the Graduate School, determines the program, which must include three years of work beyond the bachelor's degree, and at least one year on the Eugene campus or at the Medical School in Portland.	Department or school.	After appointment of advisory committee.
4. <i>Foreign languages</i> — Where required.	Advisory committee; Div. of Modern & Classical Lang.; Graduate School.	Before comprehensive examination.
5. <i>Comprehensive examination</i> — covers the major discipline in a comprehensive manner; advances the student to candidacy for the degree.	Department or school.	After substantially all course work has been taken, and after language requirement has been met, but at least one year before expected completion of all work for the degree.
6. <i>Thesis</i> —Required for all doctor's degrees.	Department or school.	After comprehensive examination, but not less than four weeks before final examination; thesis abstract must be filed with the Graduate School not later than four weeks before date of final examination
7. <i>Application for degree.</i>	Registrar.	One month before the date of Commencement.
8. <i>Final examination</i> — Examining committee consists of the advisory committee, at least one member outside the major field, and <i>ex-officio</i> , the dean of the Graduate School.	Department or school.	After completion of thesis, course work, and residence requirements, but within three years of the comprehensive examination (otherwise a new comprehensive examination must be taken).
9. <i>Granting of degree.</i>	General faculty, on certification by Graduate School; Registrar.	After all requirements have been satisfied.
10. <i>Thesis reproduction fee</i> —\$20 fee required.	Business Office.	Before award of certificate of completion.
11. <i>Certificate of completion.</i>	Graduate School; Registrar.	At end of term in which all degree requirements are satisfied.
12. <i>Diploma.</i>	Graduate School; Registrar.	Dated as of Commencement.

* In the School of Education, formal application must be made for admission to the doctoral program in addition to, and following, the successful completion of the qualifying examination.

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