

CATALOG
ISSUE
1961-62

GRADUATE SCHOOL

EUGENE,
OREGON

BULLETIN

UNIVERSITY OF OREGON



OREGON STATE SYSTEM OF HIGHER EDUCATION

UNIVERSITY OF OREGON BULLETIN

NUMBER 99

NOVEMBER 1961

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 January, March, April, May (two numbers), June, July, August, and September. Published by the Oregon State Board of Higher Education, at the University of Oregon, Eugene, Oregon.

**UNIVERSITY
OF OREGON
GRADUATE
SCHOOL**

1961-62 CATALOG

EUGENE, OREGON

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Oregon State System of Higher Education

The Oregon State System of Higher Education, as organized in 1932 by the State Board of Higher Education, following a survey of higher education in Oregon by the U. S. Office of Education, includes all the state-supported institutions of higher education. The several institutions are elements 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 General Extension Division, representing all the institutions, has headquarters in Portland and offices in Ashland, Corvallis, Eugene, La Grande, Monmouth, 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.

Portland State College offers major work in general studies and selected liberal arts and 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.

Terminal courses in technical and semiprofessional areas are offered at Oregon Technical Institute.

An interinstitutional booklet, *Your Education*, which outlines the curricula of the several institutions and contains other information, is available. For a copy, write to Division of Information, Board of Higher Education, P.O. Box 5175, Eugene, Oregon.

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

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

Calendar

Summer Session, 1962

June 18, *Monday*.....Registration
June 19, *Tuesday*.....Classes begin
July 16, *Monday*.....Last day for filing doctoral theses
July 26, *Thursday*.....Last day for filing master's theses
August 8, *Wednesday*.....Last day for master's and doctor's
final oral examinations
August 9-10, *Thursday and Friday*.....Final examinations

Fall Term, 1962-63

August 31, *Friday*.....Last day to apply for fall-term admission
without penalty
September 19-22, *Wednesday to Saturday* noon.....Regular registration
September 24, *Monday*.....Classes begin; late registration begins
October 8, *Monday*.....Last day to register or change program
November 22-25, *Thursday to Sunday*.....Thanksgiving vacation
December 8-15, *Saturday to Saturday*.....Final examinations

Winter Term, 1962-63

January 2, *Wednesday*.....Regular registration
January 3, *Thursday*.....Classes begin; late registration begins
January 14, *Monday*.....Last day to register or change program
March 9-16, *Saturday to Saturday*.....Final examinations

Spring Term, 1962-63

March 25, *Monday*.....Regular registration
March 26, *Tuesday*.....Classes begin; late registration begins
April 8, *Monday*.....Last day to register or change program
May 3, *Friday*.....Last day for filing doctoral theses
May 17, *Friday*.....Last day for filing master's theses
June 1, *Saturday*.....Last day for master's and doctor's
final oral examinations
June 1-8, *Saturday to Saturday*.....Final examinations
June 9, *Sunday*.....Baccalaureate and Commencement Day

Summer Session, 1963

June 17, *Monday*.....Registration
June 18, *Tuesday*.....Classes begin
August 8-9, *Thursday and Friday*.....Final examinations

University of Oregon

Officers of Administration

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VERNON L. BARKHURST, M.A.....Director of Admissions
J. SPENCER CARLSON, M.A.....Director, Counseling Center
CLIFFORD L. CONSTANCE, M.A.....Registrar
CARL W. HINTZ, Ph.D.....Librarian
J. ORVILLE LINDSTROM, B.S.....Business Manager

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CLYDE P. PATTON, Ph.D.....Associate Dean
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Office of Scientific and Scholarly Research

HARRY ALPERT, Ph.D.....Director
LEROY H. KLEMM, Ph.D.....Deputy Director

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 such study in depth as will complement the breadth of preparatory college education and enrich both professional and cultural life.

With its land-grant counterpart in the Oregon State System of Higher Education, the Graduate School of the University of Oregon 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 College advanced study and research in education, geology, physics, chemistry, mathematics, and biology.

With an enrollment of from 900 to 1,000 students in the regular sessions and 2,500 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 1961, 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, US 99. 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 55,000, 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 40 inches, with the heaviest in the winter months, November, December, and January.

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 completely remodeled Villard Hall (speech), the Science Building, an addition to the Library, the incorporation of the old University High School Building into the School of Education plant, the Student Union, Eric Allen Hall (journalism), a new wing for the School of Music, Lawrence Hall, a building for the School of Architecture and Allied Arts, several residence halls, and housing for married students, reconstructed Friendly Hall (English and foreign languages), reconstructed Deady Hall (mathematics), remodeled Condon Hall (psychology, geography, and geology), and new quarters for the Department of Anthropology and the Museum of Natural History.

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 1,300 readers and approximately 700,000 books.

Holdings on the Eugene campus now total 737,500 volumes; 3,900 serials are currently received. In addition to books and periodicals, resources for research include maps, photos, pictures, prints, sound recordings, slides, filmstrips, motion picture films, archives, manuscripts, and pamphlets, which collectively number nearly 500,000 items. 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 300,000 manuscripts and 100,000 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 generally preferred instead 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, in an eight-week session. 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 \$90.00 a term.* Students holding graduate or research assistantships or fellowships which involve teaching or research duties pay a special reduced fee of \$34.00 a term. The nonresident fee does not apply to students enrolled in the Graduate School. For 6 term hours of work or less, students pay the regular part-time fee, ranging from a minimum of \$22.00 to a maximum of \$66.00 for 6 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 \$10.00 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 2,315 students, in facilities for married students, accommodating 425 families; or in rooms in private homes. The University maintains four dining halls for students.

Board is available at \$56.00 a month, payable in advance. Room rent in the dormitories ranges from \$62.00 to \$80.00 a term in multiple units and from \$80.00 to \$120.00 a term in single rooms, payable in two equal installments each 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, of

* Beginning with the 1962 summer session, the full-time graduate fee will be \$100.00 a term, and the part-time fee will range from \$25.00 to \$75.00. The reduced fee for assistants and fellows will remain at \$34.00 a term.

which \$35.00 will be applied on the occupant's first board and room installment and \$15.00 on the occupant's last board and room installment. When dormitory reservations are cancelled, the room deposit will be refunded if cancellation is made by August 15 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 \$38.00 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 annually to graduates of accredited universities and colleges who have superior records in their undergraduate work. All persons holding these positions are expected to register in the Graduate School, and to become candidates for advanced degrees. Applications should be made before March 1. Application blanks are furnished on request by the Graduate School.

Teaching Assistantships. A number of teaching assistantships are available to well-qualified graduate students in nearly all schools and departments. Stipends range from \$1,100 to \$2,000 a year; assistants are charged a special reduced fee of \$34.00 per term. 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.

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.

Teaching and Research Fellowships. Fellows are normally candidates for the doctorate, with at least one year of superior work completed toward that degree. Teaching fellows give instructional assistance in their departments. Research fellows have duties similar to those of research assistants; fellows are, however, expected to assume greater responsibility in connection with the research projects to which they are assigned. Stipends range from \$1,400 to \$2,200 a year. Fees and enrollment limitations are the same as for teaching and research assistants.

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 Woodrow Wilson Foundation, and other national agencies, and for fellowships awarded under the National Defense Education Act. Information concerning these programs may be obtained in the Graduate Office.

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.

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.

Maud Densmore Music Fellowship. This \$1,500 fellowship, awarded annually to a graduate student in music, is supported by Harvey B. Densmore, Class of 1903, as a memorial to his sister, the late Miss Maud Densmore.

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.

Fred Meyer Foundation Research Fellowship. A \$1,200 fellowship is awarded annually by the Fred Meyer Foundation to a graduate student in business administration with an interest in the field of retailing. It is expected that the student will engage in productive research related to some phase of retail marketing.

Arthur P. Pratt 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 Pratt 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, and is named in honor of Arthur P. Pratt of Los Angeles, California.

Price Waterhouse Scholarships. Two \$500 scholarships are awarded annually, from funds provided by the Price Waterhouse Foundation, to graduate students in the School of Business Administration who have a major interest in the field of accounting.

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 \$370,000. 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.

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, economics, education, English, geography, geology, Germanic languages, history, mathematics, medical sciences, physical education, 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, urban planning.

*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, music, nursing, physics, political science, psychology, sociology, speech, urban planning.

Master of Architecture: architecture, urban planning.

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

Master of Business Administration: business administration.

Master of Education: education.

Master of Landscape Architecture: landscape architecture, urban planning.

Master of Music: composition, instrumental music, vocal music, music education.

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 studies without intent to earn a graduate degree. Students of the first class follow programs organized in conformity with the rules stated below. Students of the second class enroll for the courses they desire, with the understanding that the University is under no implied obligation

* See also "Interdisciplinary Master's Programs," pages 20-21.

to accept credit earned toward a graduate degree. Whether a student is adequately prepared to enroll for any graduate course is determined by the instructor in charge and the head of the department concerned.

Admission. The requirements for admission to the Graduate School for post-baccalaureate studies or for work toward a graduate degree are :

Admission for Postbaccalaureate Studies. Graduation from an accredited college or university. Such admission carries no commitment that any credit earned under postbaccalaureate status may later be applied toward a graduate degree.

An applicant for admission for postbaccalaureate studies must submit: (1) two copies of an application on an official University form—one copy to be sent to the Office of Admissions and the second copy to the school or department in which the applicant plans to study; and (2) one copy of an official transcript of his college record, to be sent to the Office of Admissions.

Admission for Work toward a Graduate Degree. Graduation from an accredited college or university with a record showing ability to maintain satisfactory scholastic progress in graduate studies. A cumulative undergraduate grade-point average of 2.50 is the minimum normally acceptable. A student with a lower undergraduate GPA or with a record of graduate work below University standards at another institution may be admitted only if supplementary information, such as a graduate aptitude score, provides evidence of ability; all applications for exceptions to the general rule are reviewed by the Graduate Admissions Committee.

In certain fields, there are additional requirements for admission to study toward a graduate degree. The applicant should check the Catalog statement on graduate work of the department or school in which he plans to study.

An applicant for admission for work toward a graduate degree 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 school or department in which the applicant plans to study.

The Graduate Admissions Committee reviews requests for transfer from post-baccalaureate status to regular graduate standing with the privilege of working toward a graduate degree. Such requests are judged on the basis of the student's undergraduate record, grades in graduate courses, and scores on the Miller's Analogy Test, the Graduate Record Examination, or a similar objective test.

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 a 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.

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. A senior student in the University of Oregon who has satisfied all requirements for a bachelor's degree except 6 term hours of credit or less may, on petition to the Graduate School, be allowed to reserve credit in graduate courses for which he is registered for later application as part of his graduate program. The petition must be filed not later than two weeks after the beginning of the term in which the courses are taken.

Study Program and Load. Graduate students beginning studies toward a degree are expected to work out, in tentative form at least, a complete program leading toward the degree desired. This program should allow sufficient time for completion of the thesis. Work on the thesis should be begun as early as possible.

The maximum study load is 16 term hours for a graduate student devoting all of his time to graduate study, and 12 term hours for a graduate assistant or fellow. Only under unusual circumstances may advisers approve study loads in excess of these limits.

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.

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.

Degree Requirements

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 19-20).

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.Ed.) is 30 term hours of work on the Eugene campus or at the Medical School, Dental School, or School of Nursing in Portland.*

Transferred Credit. Credit earned at other accredited institutions, or in the General Extension Division of the Oregon State System of Higher Education,

* 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.

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 one foreign language, preferably French or German. 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. 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 of 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 who has taken the bachelor's degree with honors in the field of his graduate major is ordinarily exempt from the qualifying examinations.

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, must be distributed by the candidate to the members of his examining committee. 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.

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 at least three 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.

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.

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

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. Lloyd R. Sorenson, associate professor of history, 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 departments 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 one of the following fields: art, biology, business administration, English, French, geography, history, health and physical education, mathematics, music, Spanish.

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 General Extension Division of the Oregon State System of Higher Education cannot exceed 15 term hours.

Master of Business Administration

The Master of Business Administration is a professional degree, granted on the completion of graduate programs designed for students interested in careers in managerial or other professional aspects of business. A qualifying examination is required before the student has earned more than 15 term hours of credit. The student's course work must include work in three areas of concentration; comprehensive written examinations covering these fields are required on the completion of the program. The student is also expected to enroll for graduate core studies designed to insure a broad background in managerial techniques and problems.

At the discretion of his advisory committee the student either submits a thesis or prepares three business reports as a part of his regular class work; a final oral examination, based on the thesis or research reports, is required.

Candidates for the M.B.A. degree may earn a maximum of 36 term hours of graduate credit in courses in the Portland Center of the Oregon State System of Higher Education, provided the courses are taught by instructors approved for graduate instruction by the dean of the School of Business Administration. Candidates who satisfy the residence requirement with work in the Portland Center are required to write a thesis.

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 Architecture

The requirements for the degree of Master of Architecture are listed on page 27.

Master of Landscape Architecture

The requirements for the degree of Master of Landscape Architecture are listed on page 27.

Master of Music

Work leading to the degree of Master of Music is offered in the following fields: composition, theory, instrumental music, vocal music, and music education. To be admitted to candidacy for the M.Mus. degree in the field of composition, the student must demonstrate the requisite skills and abilities for creative work and must submit two original compositions. To be admitted to candidacy in the

field of instrumental or vocal music, the student must demonstrate the requisite skills and abilities for professional performance, and must submit a complete repertory. The student of vocal music must demonstrate a reading knowledge of at least two foreign languages and satisfactory diction in a third. To be admitted to candidacy in the field of theory, the student must demonstrate adequate preparation in theory, counterpoint, advanced harmony, and form and analysis. Students in the field of instrumental music education must demonstrate a working knowledge of all band and orchestra instruments; vocal music-education students must demonstrate functional facility in voice and piano. The "thesis" for the M.Mus. degree may be a research paper, an original composition in the large form, or a public instrumental or vocal performance.

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 advisor. 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.

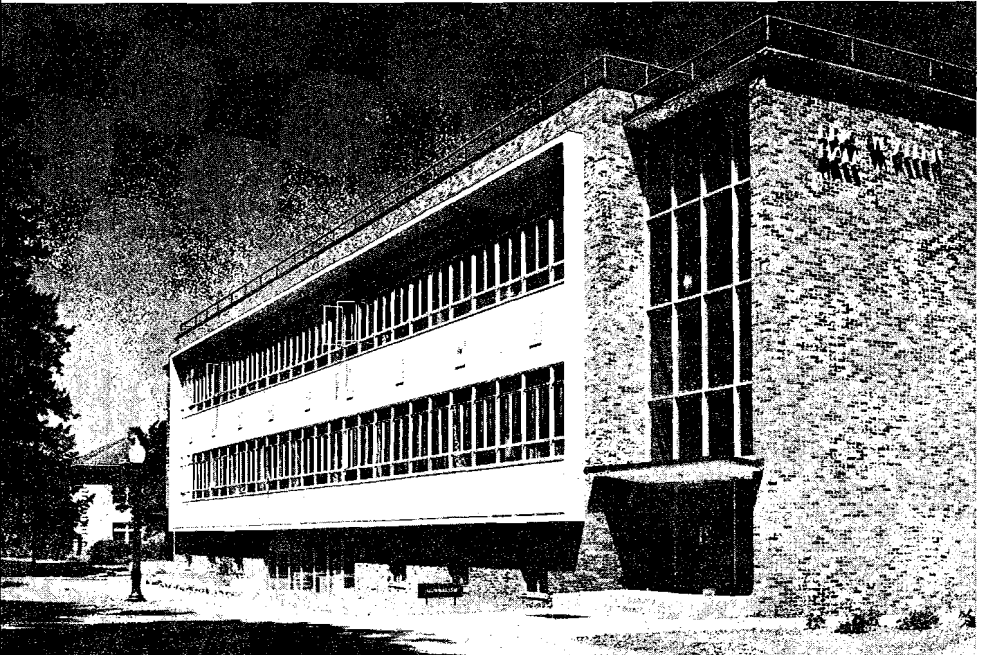
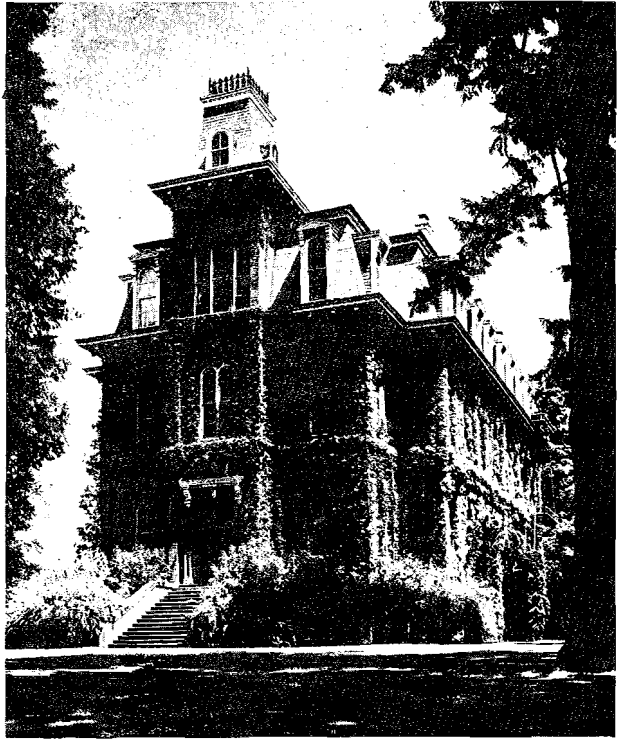
Residence. For the Ph.D. degree, at least three years of full-time work beyond the bachelor's degree are required, of which at least one year (usually the last) must be spent in residence on the Eugene campus of the University of Oregon or at the University of Oregon Medical School in Portland.

Language Requirements. For the Ph.D. degree, a student must demonstrate by formal examinations a reading knowledge of two languages other than his native language. The candidate's advisory committee, with the approval of the graduate dean, will certify the two languages most appropriate to his program. Examinations in these two languages must be passed before the comprehensive examination may be taken.

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.

Right—Deady Hall, the oldest building on campus and the home of the Department of Mathematics

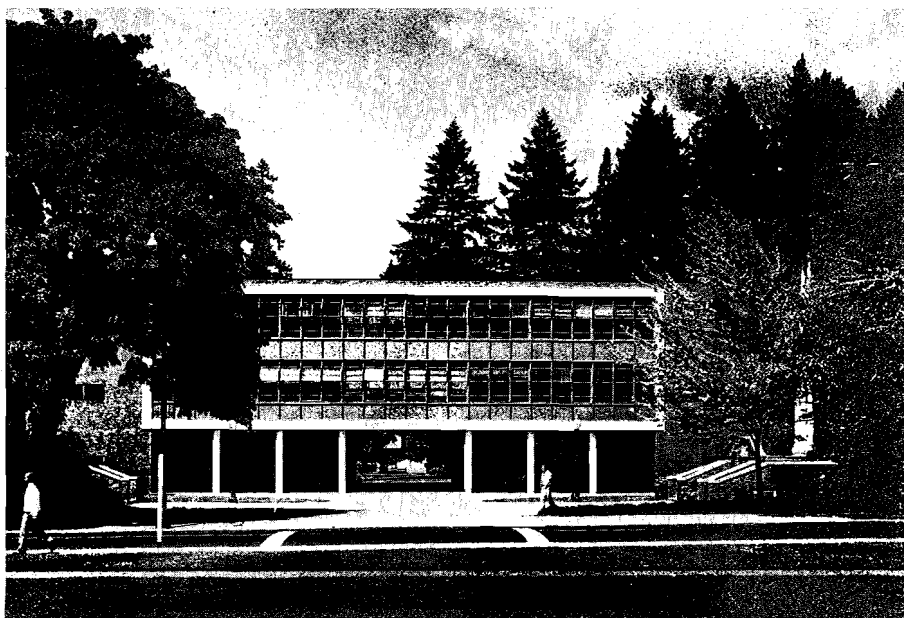
Below — Allen Hall, home of the School of Journalism, named for the school's first dean





Above—Johnson Hall, administration building, where the offices of the Graduate School are located

Below—Commonwealth Hall, home of social science departments and the School of Business Administration



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 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

For admission to candidacy for the degree of Doctor of Business Administration, the student must show, through a qualifying examination, a basic knowledge of economics, accounting, quantitative methods (mathematics and statistics), finance, marketing, business organization and production, and business law. Studies leading to the degree must include work in five fields: (1) business-organization theory and policy, (2) economics, (3) one field chosen from accounting, finance, marketing, insurance, personnel management, production management, or transportation, (4) statistics, (5) a minor field outside the fields of business and economics. Comprehensive written examinations are given in each of these fields. The candidate is also required to present an acceptable dissertation and to pass an oral examination based primarily on his dissertation.

Reading knowledge of foreign languages is not required, but may be substituted for one of the five required fields of study.

The doctoral program normally requires three years of study beyond the bachelor's degree; completion of formal requirements for a master's degree are not required.

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 calls 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: LUTHER S. CRESSMAN (department head), HOMER G. BARNETT,
J. F. M. MIDDLETON.

Associate Professors: VERNON R. DORJAHN, THEODORE STERN.

Assistant Professors: RAYMOND D. GASTIL, DWIGHT T. WALLACE.

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

Anth 411, 412, 413. **World Prehistory.** (g) 2 hours each term. Wallace.

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

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

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. Barnett.

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. Gastil.

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

- Anth 438, 439, 440. **Peoples of Southern and Eastern Asia.** (G) 3 hours each term. Stern.
- Anth 441, 442, 443. **Linguistics.** (G) 3 hours each term. Stern.
- Anth 444. **Religion and Magic of Primitives.** (G) 3 hours fall, Dorjahn.
- 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 501. **Research.** Hours to be arranged.
- Anth 502. **Research Methods in Anthropology.** Hours to be arranged. Stern, Gastil.
- 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.** 3 hours any term.
- Theory and Method in Archaeology:* Wallace, Cressman. *Culture and Personality:* Stern, Gastil. *Field Methods in Ethnology:* Dorjahn. *Innovation:* Barnett. *Comparative Civilizations:* Gastil.
- Anth 511. **Culture, Society, and the Individual.** 3 hours. Barnett.
- Anth 512. **The Beginnings of Civilization.** 3 hours. Cressman.
- Anth 514. **Primitive Social Organization.** 3 hours.
- 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. Dorjahn, Cole.
- Bi 522. **Advanced Genetics.** 2 hours.
- Anth 523, 524, 525. **Archaeology of the New World.** 3 hours each term. Wallace.

Architecture and Allied Arts

- Professors: WALTER GORDON (dean), WALLACE S. BALDINGER, FREDERICK A. CUTHBERT, FREDRICK T. HANNAFORD, WALLACE S. HAYDEN, DAVID MCCOSH, MARION D. ROSS, ANDREW M. VINCENT, JACK WILKINSON.
- Associate Professors: GEORGE F. ANDREWS, THOMAS O. BALLINGER, JOHN BRISCOE, EYLER BOWN (emeritus), STANLEY BRYAN, J. W. BURGNER, ROBERT R. FERENS, BROWNELL FRASIER, GEORGE S. JETTE, MAUDE I. KERNS (emeritus), VICTORIA A. ROSS, WALLACE M. RUFF, R. R. SODERLIND, JAN ZACH.
- Assistant Professors: STEPHEN BOCKHOR, ALVIN BOYARSKY, TING-LI CHO, GERALD N. DI GIUSTO, PHILIP DOLE, ELIZABETH FINKENSTAEDT, DAVID FOSTER, PHILIP GILMORE, LUCILE M. GOLSON, HARLOW HUDSON, ROBERT JAMES, JOHN KENYON, C. MAX NIXON, C. BRYAN RYAN.

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 fields is conducted on an individual basis. Enrollment 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.

The graduate program is currently limited to an enrollment of about forty students. Usually twenty per cent of these are scholarship students, with another twenty per cent selected from applicants from outside the continental United States. 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.

The dean of the School of Architecture and Allied Arts assigns each graduate student to a faculty adviser, who serves during the student's entire program and consults, at the end of the first term, with the graduate committee of the school to determine the student's status for degree candidacy. In addition to taking regular courses during this first term, the student develops his program for a terminal creative project (or thesis). 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 outline 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 planning; 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.

(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 40,000, and is recognized as one of the best in the region. Photographic laboratory, wood shop, gallery workroom, and other supplemental facilities are available.

The building industry supports research projects in architecture. Visiting lecturers and critics in all professional areas are frequent guests of the school and are available for consultation by graduate students. Regular exhibitions on tour from important galleries and other sources, as well as specially arranged exhibits of regional or local interest, are shown in the gallery.

Lawrence Hall, the home of the School of Architecture and Allied Arts, has recently undergone a substantial remodeling and rehabilitation, including the construction of a new wing.

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. **Reading and Conference.** Hours to be arranged.
 AA 505. **Assigned Reading.** Hours to be arranged.
 AA 507. **Seminar.** Hours to be arranged.
 AA 509. **Terminal Creative Project.** Hours to be arranged. Andrews, Boyarsky, Cho, Dole, Ferens, Hayden.
 AA 529. **Ethics and Practice (Architecture).** 2 hours fall or spring. Gordon.
 AA 587. **Architectural Design.** 1 to 12 hours any term. Hayden, Boyarsky, Soderlind.

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 Recreation Areas.** (g) 3 hours each term.
 AA 430, 431, 432. **Plant Composition.** (G) 3 to 6 hours each 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.
 AA 460, 461. **Landscape Construction II.** (G) 3 hours each term.
 AA 499. **City Planning II.** (G) 1 to 6 hours any term. Cho, Hayden.
 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.
 AA 509. **Terminal Creative Project.** Hours to be arranged.
 AA 589. **Landscape Design.** 1 to 12 hours any term. Cuthbert, Jette, Ruff, Bochkor.

Drawing, Painting, and Graphic Arts

- AA 480. **Graphic Arts.** (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 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 6 hours any term. Ross.

AA 456. **Advanced Weaving.** (G) 2 to 6 hours any term. Nixon.

AA 457. **Advanced Jewelry and Metalsmithing.** (G) 2 to 6 hours any term. Nixon.

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

AA 494. **Advanced Sculpture.** (G) 2 to 8 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. Golson.

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 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 532, 533. **Art in the Elementary School.** 3 hours each term. Burgner.

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

Biology

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

Associate Professors: MELVIN J. COHEN, LEROY E. DETLING, PETER FRANK, JAMES KEZER, FRANK P. SIPE (emeritus), SEYMOUR SHAPIRO, J. ARNOLD SHOTWELL, FRANKLIN W. STAHL, GEORGE STREISINGER, STANFORD F. TEPFER.

Assistant Professors: RICHARD W. CASTENHOLZ, S. A. COOK, BAYARD H. MCCONNAUGHEY, ROBERT W. MORRIS, FREDERICK W. MUNTZ, JACOB STRAUS.

Graduate work leading to the degrees of M.A., M.S., and Ph.D. is offered in the fields of botany (plant morphology, anatomy, taxonomy, and physiology), ecology (plant and animal), genetics, marine biology, microbiology, 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; plant or animal physiology; genetics; general chemistry, organic chemistry, and quantitative analysis; general physics; one year of college mathematics and elementary statistics; two years of French or German.

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 412, 413. **Microbiology.** (g) 3 hours each term, winter and spring. McConnaughey.
- Bi 414, 415. **Genetics of Bacteria and Viruses.** (G) 3 hours each term. Stahl, Novick.
- Bi 422. **Plant Microtechnique.** (G) 2 hours. Tepfer.
- Bi 423. **Histology.** (G) 4 hours. Kezer.
- Bi 431, 432, 433. **General Ecology.** (g) 3 hours each term (extension).
- Bi 434. **Aquatic Biology.** (G) 3 hours. Castenholz, Frank.
- Bi 441. **Introduction to Mammalian Physiology.** (g) 4 hours. Soderwall.
- Bi 442. **Introduction to Genetics.** (g) 3 hours. Clancy.
- Bi 443. **Genetics Laboratory.** (G) 2 hours. Clancy.
- Bi 444. **Human Genetics.** (G) 3 hours. Novitski.
- Bi 446. **Evolution.** (G) 3 hours. Frank.
- Bi 448, 449. **Cytology.** (G) 4 hours each term. Risley, Kezer.
- Bi 450. **Marine Invertebrate Types.** (g) 3 hours (marine institute).
- Bi 454. **Algae.** (G) 4 hours. Castenholz.
- Bi 455. **Fungi.** (G) 4 hours. Castenholz.
- Bi 456. **Natural History of Marine Organisms.** (G) 9 hours (marine institute).

- Bi 457. **Planktonology.** (G) 6 hours (marine institute).
 Bi 459. **Marine Ecology.** (G) 6 hours (marine institute).
 Bi 461, 462. **Invertebrate Zoology.** (G) 4 hours each term, fall and winter.
 Bi 463. **Parasitology.** (G) 4 hours. McConnaughey.
 Bi 464, 465, 466. **Principles of Ecology.** (G) 4 hours each term. Frank, Cook.
 Bi 467, 468, 469. **Historical Biogeography.** (G) 3 hours each term. Shotwell.
 Bi 470. **Field Botany.** (G) 3 hours (summer sessions).
 Bi 475. **Plant Anatomy.** (G) 4 hours fall. Tepfer.
 Bi 482. **Invertebrate Embryology.** (G) 4 hours. Risley.
 Bi 485. **Endocrinology.** (G) 4 hours. Soderwall.
 Bi 486. **Field Ornithology.** (G) 3 hours (summer sessions).
 Bi 491, 492, 493. **General and Comparative Physiology.** (G) 3 hours each term. Scheer, Cohen, Munz.
 Bi 494. **Field and Laboratory Methods in Biology.** (g) 3 hours (summer sessions).
 Bi 495. **Neurophysiological Basis of Behavior.** (G) 3 hours. Cohen.
 Bi 501. **Research.** Hours to be arranged.
 Bi 502. **Research Methods in Biology.** 2 hours. Scheer.
 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.

- Bi 520, 521, 522. **Advanced Genetics.** 2 hours each term. Novitski.
 Bi 525. **Experimental Embryology.** 4 hours. Risley.
 Bi 526. **Developmental Genetics.** 4 hours. Clancy.
 Bi 531. **Vertebrate Endocrinology.** 3 hours. Soderwall.
 Bi 532. **Physiology of Reproduction.** 3 hours. Risley, Soderwall.
 Bi 533. **Comparative Endocrinology.** 3 hours. Scheer.
 Bi 534. **Endocrinology Laboratory.** 1-3 hours.
 Bi 535. **Neurophysiological Basis of Behavior.** 3 hours. Cohen.
 Bi 536. **Neurophysiology Laboratory.** 3 hours. Cohen.
 Bi 537. **Physiology of Membrane Processes.** 3 hours. Scheer.
 Bi 547, 548, 549. **Advanced Systematic Botany.** 3 hours each term. Detling.
 Bi 551. **Biology of Fishes.** 4 hours. Morris.
 Bi 597, 598, 599. **Advanced Biology.** 4 hours each term.

Business Administration

Professors: RICHARD W. LINDHOLM (dean), WESLEY C. BALLAINE, O. K. BURRELL, N. H. COMISH (emeritus), C. E. JOHNSON, S. J. KAGAN, C. E. KELLY

(emeritus), A. L. LOMAX (emeritus), VICTOR P. MORRIS (emeritus), EDWARD W. REED, A. B. STILLMAN (emeritus), S. C. VANCE.

Associate Professors: EDWIN F. BEAL, M. R. GREENE, T. G. JOHNSON, J. B. MINER, W. D. RICHINS, W. J. ROBERT, F. J. SEUBERT, JESSIE MAY SMITH, J. W. SOHA, MAX WALES, S. D. WALTON, C. F. ZIEBARTH.

Assistant Professors: D. A. BAERNCOFF, C. E. BROWNING, D. S. HARWOOD, JR., CATHERINE M. JONES, M. F. MOSS, A. L. PEETERSON, R. J. SAMPSON, N. E. TAYLOR, D. A. WATSON.

For admission to graduate work in business administration leading to the master's degree or the doctor's degree (M.B.A., M.A., M.S., or D.B.A.), a student must hold a bachelor's degree from an accredited college or university.

A minimum of 45 term hours of graduate work is required for the master's degree, of which 12 to 15 hours may be in an approved allied field (e.g., economics, mathematics, psychology, sociology) selected as a minor. The student must select his courses from three areas of concentration in business administration or from two such areas and a minor; comprehensive written examinations covering these areas are required on the completion of the program. The student is expected to enroll for graduate core studies designed to insure a broad background in managerial techniques and problems. At the discretion of his examining committee, the student submits a thesis or prepares three business-research reports as a part of his regular course work; a final oral examination, based on the thesis or research reports, is required.

For admission to candidacy for the D.B.A. degree, the student must show, through a qualifying examination, a basic knowledge of economics, accounting, quantitative methods (mathematics and statistics), finance, marketing, business organization and production, and business law. The program leading to the degree must include work in five fields: (1) business-organization theory and policy, (2) economics, (3) one field chosen from accounting, finance, marketing, insurance, personnel management, production management, or transportation, (4) statistics, (5) a minor field outside of the fields of business and economics. Comprehensive written examinations are given in each of these fields. The candidate is also required to present an acceptable dissertation and to pass an oral examination based primarily on his dissertation.

A reading knowledge of a foreign language is not required, but may be substituted for the fifth, or outside, field of study.

The doctoral program normally requires three years of study beyond the bachelor's degree; completion of formal requirements for a master's degree 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. Soha.

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

Ac 440, 441. **Accounting Verification.** (G) Soha.

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

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

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

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

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

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

Accounting Trends: Soha. *Business Control:* Baerncopf, Soha.

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

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

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

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

Business Statistics

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

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

Business Education

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

BEd 421. **Principles of Business Education.** (G) 3 hours. Jones.

BEd 422, 423. **Problems of Business Education.** (G) 3 hours each term. Jones.

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

Finance and Business Economics

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

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

FBE 434. **Business Enterprise and Social Responsibility.** (G) 5 hours. Richins.

FBE 459. **Problems in Business Finance.** (G) 5 hours. Watson.

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

FBE 463, 464. **Investments.** (G) 3 hours each term. Burrell.

FBE 466. **Business Fluctuation and Expansion.** (G) 5 hours. Lindholm.

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

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

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

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

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

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

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

Economic Potentials of Oregon: Morris. *Taxation and Business Management:* Lindholm. *Problems in Business Forecasting:* Lindholm. *Foreign Commercial Law:* Robert. *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 522. **Problems in Business Finance.** 5 hours. Watson.

FBE 530. **Managerial Economics.** 3 hours. Ballaine.

FBE 565. **Security Analysis.** 3 hours. Burrell.

FBE 566. **Investment Policy.** 3 hours. Burrell.

FBE 575. **The Money Market.** 3 hours. Reed.

Management, Production, and Marketing

MPM 412. **Personnel Management.** (g) 3 hours. Beal.

- MPM 413. **Wage and Salary Administration.** (G) 3 hours. Beal.
 MPM 414. **Problems in Personnel Management.** (G) 3 hours. Beal.
 MPM 430. **Problems in Production Management.** (G) 3 hours. Vance.
 MPM 434. **Governmental Regulation of Distribution.** (G) 4 hours. Richins.
 MPM 435. **Marketing Management.** (G) 4 hours. Taylor, Greene.
 MPM 436. **Retail Store Management.** (G) Thomas.
 MPM 442. **Buying Behavior.** (G) 3 hours. Johnson.
 MPM 444. **Advanced Problems in Marketing Management.** (G) 3 hours. Richins, Taylor.
 MPM 447. **Highway Transportation.** (G) 3 hours (extension).
 MPM 448. **Air Transportation.** (G) 3 hours (extension).
 MPM 451. **Transportation Regulatory Laws and Procedures.** (G) 3 hours. Sampson, Ziebarth.
 MPM 452. **Special Problems in Transportation and Traffic Management.** (G) 3 hours. Sampson, Ziebarth.
 MPM 453. **Business Policies.** (G) 5 hours. Greene, Seubert, Johnson.
 MPM 455. **Property and Liability Insurance.** (G) 5 hours. Greene.
 MPM 456. **Life and Health Insurance.** (G) 3 hours. Greene.
 MPM 458. **Social Insurance.** (G) 3 hours. Greene.
 MPM 467. **Public Utility Management.** (G) 3 hours. Sampson.
 MPM 480. **Business History.** (G) 5 hours. Walton.
 MPM 501. **Research.** Hours to be arranged.
 MPM 503. **Thesis.** Hours to be arranged.
 MPM 505. **Reading and Conference.** Hours to be arranged.
 MPM 507. **Seminar.** Hours to be arranged.
- Risk Management:* Greene. *Transportation Management:* Sampson. *Managerial Psychology:* Miner. *Human Resources Utilization:* Miner. *Personnel Administration:* Beal. *Business History:* Walton.
- MPM 508. **Workshop.** Hours to be arranged (summer sessions and extension).
 MPM 520. **Marketing Problems and Policies.** 3 hours. Johnson.
 MPM 521. **Pricing Policies.** 3 hours. Taylor.
 MPM 530. **Production Programming.** 3 hours. Vance.
 MPM 531. **Theory of Business Organization.** 3 hours. Miner.
 MPM 532. **Problems in Business Policies.** 3 hours. Vance.
 MPM 556. **Pensions and Group Insurance.** 3 hours. Greene.

Chemistry

Professors: FRANCIS J. REITHEL (department head), VIRGIL C. BOEKELHEIDE, TERRELL L. HILL, ADOLF H. KUNZ (emeritus), RICHARD M. NOYES.

Associate Professors: LeROY H. KLEMM, JOHN A. SCHELLMAN, DONALD F. SWINEHART.

Assistant Professors: JOHN B. BUSH, JR., LLOYD J. DOLBY, THOMAS C. FARRAR, RICHARD A. KELLER, MARTIN L. SAGE, RAYMOND G. WOLFE.

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. It is customary for the Ph.D. candidate to earn about 75 term hours in formal courses (including approximately 18 hours or two one-year sequences in allied fields outside of chemistry) beyond the bachelor's degree and 60 term hours in graduate research and thesis.

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 May. They serve both as a basis for student advising and as a qualifying examination for admission to candidacy for a graduate degree. The master's final examination may serve as the Ph.D. qualifying examination.

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 under the supervision of four skilled instrument makers 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 fellowships are available. Although subject to variation, stipends of assistants and fellows, who usually have summer employment, range up to \$3,000 for the calendar year. During 1961-62 research projects in the Department of Chemistry were sponsored by the U. S. Air Force Office of Scientific Research, the American Cancer Society, the American Chemical Society, the Atomic Energy Commission, the National Institutes of Health, the National Science Foundation, the Research Corporation, 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, microwave spectroscopy, electron spin resonance.

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. **Advanced Inorganic Chemistry.** (G) 3 hours each term fall and winter. Noyes.

Ch 414. **Advanced Inorganic Laboratory.** (G) 1 or 2 hours. Noyes.

Ch 416. **Kinetics in Solution.** (G) 3 hours. Noyes.

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 435. **Organic Qualitative Analysis.** (G) 3 hours. Klemm.

Ch 439. **Survey of Organic Chemistry.** (g) 4 or 5 hours (summer sessions).

- Ch 441, 442, 443. **Physical Chemistry.** (g) 3 hours each term. Swinehart.
- Ch 444, 445. **Physical-Chemical Measurements.** (g) 1 hour winter, 2 hours spring. Farrar.
- Ch 461, 462, 463. **Biochemistry.** (G) 3 hours each term. Wolfe.
- Ch 464, 465, 466. **Biochemistry Laboratory.** (G) 1 hour each term. Wolfe.
- 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. Sage.
- Ch 531, 532, 533. **Advanced Organic Chemistry.** 3 hours each term. Boekelheide.
- Ch 534, 535, 536. **Special Topics in Organic Chemistry.** 2 or 3 hours each term. Bush, Dolby, Klemm.
- Ch 537, 538, 539. **Advanced Organic Laboratory.** 2 hours each term.
- Ch 541, 542, 543. **Chemical Kinetics.** 3 hours each term. Swinehart.
- Ch 544, 545, 546. **Quantum Chemistry.** 2 or 3 hours each term. Keller.
- Ch 551, 552. **Chemical Thermodynamics.** 3 hours each term, fall and winter. Hill.
- Ch 553, 554. **Statistical Thermodynamics.** 3 hours each term, fall and winter. Schellman.
- Ch 556, 557. **Photochemistry and Molecular Spectra.** 2 hours.
- Ch 561, 562, 563. **Enzymes and Intermediary Metabolism.** 2 or 3 hours each term. Wolfe.
- Ch 564, 565, 566. **Proteins.** 2 or 3 hours each term. Wolfe.

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, oral pathology, pedodontics, pharmacology, and physiology. For requirements and courses, see the Dental School Catalog.

Economics

Professors: C. WARD MACY (department head), CALVIN CRUMBAKER (emeritus), JAMES H. GILBERT (emeritus), PAUL L. KLEINSORGE, RAYMOND F. MIKESELL, PAUL B. SIMPSON.

Associate Professors: ROBERT L. ALLEN, ROBERT CAMPBELL, RICHARD M. DAVIS, H. T. KOPLIN, BARRY N. SIEGEL, MARSHALL D. WATTLES.

Assistant Professor: JAMES N. TATTERSALL.

The Department of Economics offers graduate work leading to the M.A., M.S., and Ph.D. degrees. The program for each degree permits a wide choice of fields within the area usually covered by economics. Cognate work in other depart-

ments and schools of the University may be used in partial fulfillment of the requirements for all advanced degrees.

Economic theory, as a foundation for graduate study in economics and related fields, is emphasized in all graduate programs. Additional fields in which concentrated work may be done are: history of economic thought, monetary and banking theory, international economics, public finance and fiscal policy, labor economics, government regulation of business, mathematical and statistical economics, economic development, and economic history. The thesis, required for the master's degree, and the dissertation, required for the doctor's degree, may be written in any one of the above-listed fields.

A candidate for the Ph.D. degree with a major in economics must select four fields of study, one of which may be in an allied area. Economic theory is included in the programs of all candidates; the additional fields may be chosen by the student. A working knowledge of statistics and accounting is required. In addition, all candidates must demonstrate competence in the history of economic thought either by satisfactory completion of approved course work or by examination.

All students who wish to become candidates for graduate degrees in economics are required to take the Graduate Record Examination in Economics and the Graduate Record General Aptitude Examination or its equivalent. These qualifying examinations should normally be taken before the student has earned 15 term hours of graduate credit. In addition, both written and oral preliminary examinations covering the student's fields of concentration are required for admission to candidacy for the doctorate.

Library facilities for research in economics are excellent. The economics collection in the University Library is growing rapidly, and is varied enough to enable students to pursue research in all major areas.

Faculty members in economics are engaged in a variety of research activities, some of which are financed by outside agencies and foundations. Several graduate students, appointed each year as departmental assistants and research fellows, gain valuable experience by working closely with the faculty. The department selects one or two advanced graduate students annually to serve as teaching fellows.

The number of graduate students in economics is small enough to allow careful supervision of and individual attention to work of each student by members of the faculty. Employment opportunities in teaching, business, and government service are open to qualified recipients of master's and doctor's degrees in economics.

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

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

Ec 414. **Economics of Natural Resources and Conservation.** (G) 3 hours fall. Tattersall.

Ec 415. **Location Theory and Regional Economic Change.** (G) 3 hours winter. Campbell, Tattersall.

Ec 416. **Economy of the Pacific Northwest.** (G) 3 hours spring. Simpson, Tattersall.

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

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

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

Ec 437, 438, 439. **Economic Problems of Government Regulation.** (G) 2 hours each term. Koplín.

- Ec 440, 441, 442. **International Economics.** (G) 3 hours each term. Allen, Wattles.
- Ec 447, 448, 449. **Collective Bargaining.** (G) 2 hours each term. Kleinsorge.
- Ec 450, 451, 452. **Comparative Economic Systems.** (g) 2 hours each term. Allen, Davis.
- Ec 454, 455, 456. **Economic History of Modern Europe.** (G) 3 hours each term.
- Ec 458, 459. **Advanced Economic Theory.** (G) 3 hours each term, fall and winter. Koplín.
- Ec 460. **Theories of Economic Instability.** (G) 3 hours spring. Davis, Koplín.
- 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. **National Income Analysis.** (G) 3 hours fall. Simpson.
- Ec 484. **Correlation Analysis of Economic Data.** (G) 3 hours winter. Simpson.
- Ec 485. **Research and Survey Methods in Economics.** (G) 3 hours spring. Simpson.
- Ec 487, 488, 489. **American Economic History.** (G) 3 hours each term. Tattersall.
- 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.

Economic History: Tattersall. *Government Regulation:* Koplín. *History of Economic Thought:* Campbell. *Industrial Relations:* Kleinsorge. *International Economics:* Mikesell, Wattles. *Money and Credit:* Siegel, Simpson. *Statistical Economics:* Simpson.

- Ec 521, 522, 523. **National-Income Analysis and Forecasting.** 2 hours each term. Simpson.
- 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. Macy.
- 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.

Education

Professors: P. B. JACOBSON (dean), QUIRINUS BREEN, C. D. BYRNE (emeritus), ALBUREY CASTELL, H. H. CLARKE, KEITH GOLDHAMMER, ARTHUR C. HEARN, CLARENCE HINES, CARL W. HINTZ, C. L. HUFFAKER (emeritus), J. R. JEWELL, (emeritus), PAUL E. KAMBLY, ROBERT E. NYE, MILES C. ROMNEY, J. FRANCIS RUMMEL, ADOLF A. SANDIN, P. B. SIMPSON, F. L. STETSON (emeritus), DONALD E. TOPE, HUGH B. WOOD.

Associate Professors: THOMAS O. BALLINGER, DOROTHY M. CANDLAND, JACK A.

CULBERTSON, EUGENE W. DILS, ELIZABETH FINDLY, GRACE GRAHAM, WALTER R. HILL, RAYMOND N. LOWE, JAMES R. LENT, RUTH A. WILLARD.

Asistant Professors: MARTIN H. ACKER, MELVIN B. BERRYHILL, GLEN CHRONISTER, SILVY KRAUS, JOHN LALLAS, LLOYD LOVELL, ROBERT C. MATTSON, ROY P. NELSON, VERNICE NYE, VENICE V. OSWALD, WAYNE OTTO, IONE PIERRON, CLARENCE W. SCHMINKE.

Instructors: EVELYN WATSON, KATHRYN WHYTE.

Graduate work in the School of Education is offered for the preparation of teachers, supervisors, guidance workers, 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, special education, health and physical education, business education, higher education, curriculum and instruction, guidance and counseling, educational psychology and measurement, 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 masters degree may be elected, but they should 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.

Primary Area. A minimum of 30 hours of course work is required in one of the following areas: general school administration; curriculum and instruction;

elementary education; secondary education; educational psychology and measurement; special education; health and physical education; music education; educational guidance and counseling.

Supporting Area. A minimum of 30 hours of course work is required in the following areas: any of the primary areas except the area of specialization; higher education; business education; art education.

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 results 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 424. **Measurement in Education.** (G) 3 hours. Lovell, Rummel.
 Ed 435. **Audio-Visual Aids.** (G) 4 hours.
 Ed 440. **History of Education.** (G) 3 hours. Breen.
 Ed 441. **History of American Education.** (G) 3 hours. Castell.
 Ed 446. **Modern Philosophies of Education.** (G) 3 hours. Castell.
 Ed 447. **Radio Education.** (G) 3 hours (extension and summer sessions).
 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 482. **Intercultural Education.** (G) 3 hours (extension and summer sessions).
 Ed 491. **Social Education.** (G) 3 hours. Graham.
 Ed 499. **Utilization of Regional Resources.** (G) 3 hours (extension and summer sessions).
 Ed 501. **Research.** Hours to be arranged.

Child Development: Lowe, Lovell. *College Teaching:* Jacobson. *Counseling:* Lallas, Lowe, Thompson. *Curriculum, Instruction:* Sandin, Wood; *Educational Psychology:* Lovell. *Elementary Education:* Sandin, Willard, Starr. *History of Education:* Breen. *Measurements:* Lovell, Rummel. *Philosophy of Education:* Castell. *Pupil Evaluation:* Lovell, Rummel. *Corrective and Remedial Education:* Hill. *School Administration:* Goldhammer, Jacobson, Romney, Tope. *School Psychology:* Lovell. *Science Education:* Kambly. *Secondary Education:* Jacobson, Hearn. *Special Education:* Mattson. *Teacher Education:* Kambly.

- 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 512. **Research Procedures in Education.** 3 hours. Rummel.
- Ed 515, 516, 517. **Educational Statistics.** 3 hours each term. Clarke, Simpson, Rummel, Truax.
- Ed 545. **School and Society in the Recent Past.** 3 hours. Castell.
- Ed 565. **Curriculum Foundations.** 4 hours. Wood.
- Ed 566. **Curriculum Construction.** 4 hours. Wood.
- Ed 567. **Curriculum Materials.** 4 hours. Wood.
- Ed 587. **Adult Education.** 3 hours.

Elementary Education

- Ed 451. **Preprimary Education.** (G) 3 hours. Candland.
- Ed 455. **Primary-Education Workshop.** (G) 5 hours (extension).
- Ed 457. **Intermediate and Upper-Grade Education Workshop.** (G) 2 to 5 hours (extension).
- Psy 460. **Developmental Psychology I: Infancy and Childhood.** (g) 3 hours.
- 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. Willard.
- Ed 537. **Reading in the Elementary School.** 3 hours. Willard.
- Ed 538. **Mathematics in the Elementary School.** 3 hours. Schmincke.
- Ed 552. **Elementary-School Problems.** 4 hours. Sandin.
- Ed 553. **Elementary-School Curriculum.** 4 hours. Sandin.
- Ed 554. **Elementary-School Supervision and Administration.** 4 hours. Sandin.

Secondary Education

- Ed 453. **Secondary-Education Workshop.** (G) 5 hours (extension).
- Psy 461. **Developmental Psychology II: Adolescence and Maturity.** (g) 3 hours.
- Ed 484. **The Junior High School.** (G) 3 hours. Hearn.
- Ed 522. **Secondary-School Curriculum.** 3 hours. Hearn.
- Ed 523. **School Activities.** 3 hours. Hearn.
- Ed 527. **Secondary-School Administration and Supervision.** 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. **School Psychological Practicum.** (G) Hours to be arranged.
- Ed 439. **The Gifted Child.** (G) 3 hours. Lovell, Mattson.
- 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. Lent.
- Ed 465. **Diagnostic and Corrective Techniques in the Basic Skills.** (G) 3 hours. Hill, Chronister.
- Ed 468. **Diagnostic and Remedial Techniques in Reading.** (G) 3 hours. Hill.
- Ed 469. **Reading in High School and College.** (G) 3 hours. Hill, Kraus.
- Ed 471. **Administration of Special Education.** (G) 3 hours. Mattson.
- Ed 480. **Psychology of Reading Instruction.** (G) 3 hours. Hill.
- Ed 485. **Principles and Practices of Guidance Services.** (G) 3 hours. Lallas.
- Ed 488. **Educational and Vocational Guidance.** (G) 3 hours. Lowe, Lallas.
- Ed 509. **School Psychology Practicum.** Hours to be arranged. Staff.
- Ed 525. **Theory and Technique of Educational Measurement.** 3 hours. Lovell, Rummel.
- Ed 526. **High-School Counseling.** 3 hours. Lallas.
- Ed 528. **Group Testing in Schools and Colleges.** 3 hours. Lowe, Lallas.
- Ed 529, 530, 531. **Advanced Educational Psychology.** 2 hours each term. Lowe, Lovell.
- Ed 564. **Mental Tests.** 4 hours. Lallas, Lovell, Watson.
- Ed 589. **Organization and Administration of Guidance Services.** 3 hours. Lallas.

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. Jacobson, Wood.

Educational Administration

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

Librarianship

- Lib 481. **Bibliography and Reference.** (G) 3 hours. Pierron.
- Lib 484. **School Library Administration.** (g) 3 hours. Ostwald.

- Lib 485. **Advanced Bibliography and Reference.** (G) 3 hours. Pierron.
- Lib 486. **Introduction to Cataloging and Classification.** (G) 3 hours. Pierron.
- Lib 487. **Cataloging and Classification.** (G) 3 hours. Pierron.
- Lib 488. **Books and Related Materials for Young People.** (g) 3 hours. Oswald.
- Lib 489. **Principles of Book Selection.** (G) 3 hours. Pierron.
- Lib 490. **Children's Literature.** (g) 3 hours. Oswald.
- Lib 491. **Storytelling.** (G) 3 hours. Oswald.
- 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. Morrison.
- Lib 496. **The Library in the Modern Community.** (G) 3 hours. Pierron.
- Lib 503. **Thesis.** Hours to be arranged.
- Lib 505. **Reading and Conference.** Hours to be arranged. Hintz, Oswald, Pierron.
- Lib 507. **Seminar.** Hours to be arranged.
- Lib 508. **Library Workshop.** Hours to be arranged (summer sessions).
- Lib 511. **History of the Book.** 3 hours. Hintz.
- Lib 512. **Government Publications.** 3 hours. Findly.

English

Professors: KESTER SVENDSEN (department head), FRANK G. BLACK, ARTHUR E. BRODEUR, RUDOLF H. ERNST (emeritus), ROBERT D. HORN, JOHN C. McCLOSKEY, WALDO F. McNEIR, ERNEST G. MOLL, CARLISLE MOORE, JOHN C. SHERWOOD, W. F. GOODWIN THATCHER (emeritus).

Associate Professors: ROLAND BARTEL, ALICE H. ERNST (emeritus), STANLEY B. GREENFIELD, JAMES B. HALL, SYLVAN N. KARCHMER, CHRISTOF A. WEGELIN, OLIVER M. WILLARD.

Assistant Professors: ROLAND C. BALL, FREDERICK H. CANDELARIA, JOSEPH A. HYNES, STANLEY R. MAVEETY, WILLIAM H. NOLTE, WAYNE A. O'NEIL, NORMAN H. OSWALD, A. KINGSLEY WEATHERHEAD.

The Department of English offers graduate work in English literature, American literature, and the English language 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.

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. Requirements for the master's degree include: Problems and Methods of Literary Study (Eng 540); one of the following nine-hour sequences in linguistic background—Anglo-Saxon (Eng 420, 421, 422), History and Structure of the English Language (Eng 492, 493, Eng 407), seminars in Middle English, *Troilus and Criseyde*, and the *Pearl* poet; 9 hours in formal courses at the 500 level; a thesis. A candidate must pass a three-

hour final written examination on a list of twenty-five works in English and American literature and a two-hour oral examination on his thesis and its field.

For the M.F.A. degree the candidate may offer one of the options of the linguistic requirement for the M.A. degree in English or 9 hours at the advanced level in the literature of the candidate's modern language. The thesis must be a work of imaginative writing of literary quality. Otherwise the requirements for the M.F.A. degree are the same as those for the M.A.

All candidates for the Ph.D. degree are required to take Anglo-Saxon (Eng 420, 421, 422) and Problems and Methods of Literary Study (Eng 540). 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 term, cover seven fields, of which the candidate may omit two: (1) English language from the beginnings to the present; (2) English literature to 1500; (3) English literature 1500-1660; (4) English literature 1660-1800; (5) English literature 1800-1900; (6) American literature from the beginnings to the naturalists (c. 1890); (7) contemporary literature, English and American. The final oral examination for the degree covers the dissertation and its immediate field, as defined above. If the dissertation ranges over several fields, the candidate may select the field he wishes to offer at this examination.

Literature

- Eng 407. **Seminar in Special Authors.** (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 417, 418, 419. **Modern Drama.** (G) 3 hours each term. Ball.
- Eng 420, 421, 422. **Anglo-Saxon.** (G) 3 hours each term. Greenfield.
- Eng 423, 424. **Types of Prose Fiction.** (G) 3 hours each term (summer sessions).
- Eng 425. **Late Mediaeval Literature.** (G) 3 hours. Greenfield, O'Neil.
- Eng 428. **Chaucer.** (G) 3 hours. Greenfield, O'Neil.
- Eng 430, 431, 432. **Literature of the Renaissance.** (G) 3 hours each term. Svendsen, Maveety.
- Eng 434. **Spenser.** (G) 3 hours. McNeir.
- Eng 436. **Advanced Shakespeare.** (G) 3 hours. Svendsen.
- Eng 440, 441, 442. **Seventeenth-Century Literature.** (G) 3 hours each term. Black.
- Eng 444. **Milton.** (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. Moll.

- Eng 470, 471, 472. **Nineteenth-Century Prose.** (G) 3 hours each term. Moore.
- Eng 475, 476, 477. **Literary Foundations of American Life.** (G) 3 hours each term.
- Eng 478, 479, 480. **The Modern Spirit in American Literature.** (G) 3 hours each term. Wegelin.
- Eng 481, 482, 483. **Major American Writers: The Romantic Idealists.** (G) 3 hours each term.
- Eng 484, 485, 486. **Major American Writers: The Realists.** (G) 3 hours each term. Hynes.
- Eng 487. **Yeats and Joyce.** (G) 3 hours. Sherwood.
- Eng 488. **Literature for Teachers.** (g) 3 hours. Bartel.
- Eng 491. **Introduction to Modern English.** (g) 3 hours. Willard.
- Eng 492, 493. **The Modern English Language.** (G) 3 hours each term. 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 540. **Problems and Methods of Literary Study.** 3 hours fall. Svendsen.

Writing

- Wr 411. **English Composition for Teachers.** (g) 3 or 4 hours.
- Wr 503. **Thesis.** Hours to be arranged.

Foreign Languages

Professors: DAVID M. DOUGHERTY (department head), CHANDLER B. BEALL, FREDERICK M. COMBELLACK, CARL L. JOHNSON, EDMUND P. KREMER (emeritus), ANIBAL VARGAS-BARÓN, LEAVITT O. WRIGHT (emeritus).

Associate Professors: ROBERT W. HARTLE, WOLFGANG A. LEPPMANN, PERRY J. POWERS.

Assistant Professors: DOMINIQUE BAUDOIN, NED J. DAVIDSON, PETER B. GONT-RUM, WALTER L. HAHN, NANCY P. HELMBOLD, HENRY KRATZ, EDNA LANDROS (emeritus), T. E. MARSHALL, WILMA J. NEWBERRY, C. BENNETT PASCAL, IVAN A. SCHULMAN, ROBIN E. STEUSSEY, VLADIMIR TOLSTOUCHOV.

The Department of Foreign 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 and German.

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, Spain, or Spanish-America, and frequently in two of these fields. The program may also include courses in Russian literature and language, and courses in French and Spanish philology, and in French civilization. The program may be planned to terminate formal education or to prepare for further advanced study.

The master's thesis may be written in such fields as literary history or literary criticism, philology, or comparative literature.

The program for the doctorate in Romance languages, includes courses in 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. 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; one 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 guidance of senior members of the department.

Classical Languages

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.

Germanic Languages

- GL 407. **Seminar.** (g) Hours to be arranged.
- GL 411, 412, 413. **The Age of Goethe.** (G) 3 hours each term. Leppmann.
- 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 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 551, 512, 513. **The German Lyric.** 3 hours each term.
- GL 514, 515, 516. **Middle High German.** 3 hours each term. Kratz.

Romance Languages

French

- RL 411, 412, 413. **Seventeenth-Century French Literature.** (G) 3 hours each term. Hartle.
- 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. Baudouin.
- RL 429, 430, 431. **French Culture and Civilization.** (G) 3 hours each term. Johnson, Baudouin.
- RL 467, 468, 469. **Advanced French Composition.** (G) 2 or 3 hours each term. Baudouin.
- RL 503. **Thesis.** Hours to be arranged.
- RL 505. **Reading and Conference.** Hours to be arranged.
- RL 507. **Seminar.** Hours to be arranged.
- RL 514, 515, 516. **Eighteenth-Century French Literature.** 3 hours each term. Beall.
- 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. Dougherty, Hartle.
- RL 547. **Voltaire.** 3 hours. Beall.
- RL 548. **Baudelaire.** 3 hours. Johnson.
- RL 549. **Paul Valéry.** 3 hours. Marshall.

Italian

- AL 407. **Seminar.** (g) Hours to be arranged.
- RL 474, 475, 476. **Fourth-Year Italian.** (g) 2 hours each term. Beall.
- AL 477, 478, 479. **Dante and His Times.** (g) 3 hours each term. Beall.

Spanish

- RL 438, 439, 440. **Nineteenth-Century Spanish Literature.** (G) 3 hours each term. Vargas-Barón.
- RL 441, 442, 443. **Modern Spanish Literature.** (G) 3 hours each term. Vargas-Barón.
- RL 444, 445, 446. **Spanish-American Literature.** (G) 3 hours each term. Davison.
- 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. Vargas-Barón.
- RL 503. **Thesis.** Hours to be arranged.
- RL 505. **Reading and Conference.** Hours to be arranged.
- RL 508. **Spanish Seminar.** 3 hours spring. Powers.
Cervantes. Lope de Vega.
- RL 541, 542, 543. **Old Spanish Readings.** 2 hours each term.
- 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. Davison.
- RL 561, 562, 563. **Spanish-American Novel.** 3 hours each term.

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. González-Muela.

Slavic Languages

- SL 407. **Seminar.** (g) Hours to be arranged.
- AL 411, 412, 413. **The Russian Novel.** (g) 3 hours each term. Steussy.
- AL 421, 422, 423. **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. Tolstouchov.

Geography

Professor : SAMUEL N. DICKEN (department head).

Associate Professor : CLYDE P. PATTON.

Assistant Professors : CARL L. JOHANNESSEN, FRITZ L. KRAMER, GENE E. MARTIN, FORREST R. PITTS.

Graduate work leading to the M.A., M.S., 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.

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 420. **Political Geography.** (G) 3 hours. Johannessen.

Geog 421, 422, 423. **Geographic Field Methods.** (G) 3 hours each term. Martin, Johannessen.

Geog 426. **Geography of Europe.** (G) 3 hours. Kramer.

Geog 427. **Geography of the Soviet Union.** (G) 3 hours. Martin.

Geog 432. **Geography of Africa.** (G) 3 hours. Pitts.

Geog 435. **Urban Geography.** (G) 3 hours. Pitts.

Geog 451, 452, 453. **Geography of Asia.** (G) 3 hours each term. Pitts, Martin.

Geog 461, 462. **Geography of Latin America.** (G) 3 hours each term. Martin, Johannessen.

Geog 501. **Research.** 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.

History of Geographic Thought. Historical Geography. Geography of Europe. Geography of Asia. Geography of Latin America.

Geog 511, 512, 513. **Advanced Physical Geography.** 3 hours each term. Patton, Dicken.

Geog 515, 516, 517. **Advanced Cultural Geography.** 3 hours each term. Johannessen, Martin.

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: M. ALLAN KAYS, WILLIAM B. PURDOM, ELMAR WALTER.

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, or 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 the well-known John Day fossil beds of Oregon, as well as from other areas, are located in the Natural History Museum.

Facilities are available for rock cutting and the preparation of thin sections; there are dark-room facilities for special studies with the goniometer and other optical instruments.

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

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

- Geol 411. **Lithology and Petrogenesis.** (g) 3 hours. Lund.
 Geol 414, 415, 416. **Petrology and Petrography.** (G) 4 hours each term. Lund.
 Geol 421, 422, 423. **Economic Geology.** (G) 3 hours each term. Baldwin, Purdom.
 Geol 440. **Micropaleontology.** (G) 3 hours. Youngquist.
 Geol 451, 452. **Pacific Coast Geology.** (G) 3 hours each term. Baldwin, Youngquist.
 Geol 455. **Problems in Physical Geology.** (g) 3 hours (summer sessions).
 Geol 456. **Problems in Regional Geology.** (g) 3 hours (summer sessions).
 Geol 491. **Structural Geology.** (G) 3 hours. McMath.
 Geol 492. **Advanced 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.

Founders of Geology. Regional Geologic Studies. Classical Geologic Treatises. Classical Problems in Geology. Structural Geology.

- Geol 511, 512, 513. **Advanced Microscopy.** 4 hours each term. Staples.
 Geol 514, 515, 516. **Advanced Petrology and Petrography.** 3 hours each term. Lund.
 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.

Health, Physical Education, and Recreation

Professors: ARTHUR A. ESSLINGER (dean), FLORENCE D. ALDEN (emeritus), H. HARRISON CLARKE, FRANCIS M. DOUGHERTY, FRANKLIN B. HAAR, E. R. KNOLLIN (emeritus), MARGARET S. POLEY, LYNN S. RODNEY, PETER O. SIG-

ERSETH, VERNON S. SPRAGUE, HARRIET W. THOMPSON (emeritus), PAUL R. WASHKE, JANET G. WOODRUFF.

Associate Professors: JESSIE PUCKETT, WILLIAM P. RHODA.

Assistant Professors: WILLIAM BISHOP, WAYNE BRUMBACH, PHYLLIS FORD, DORWIN GILLESPIE, 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); (3) supporting work in related areas of health education, 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 411, 412, 413. **Health-Education Workshop.** (g) 9 hours total credit (extension and summer sessions).

HE 450. **Elementary-School Health Education.** (g) 3 hours.

HE 463. **Social Health.** (G) 3 hours. Haar.

HE 464. **Health Instruction.** (G) 3 hours fall. Haar.

HE 465. **School Health Service.** (G) 3 hours winter. Haar.

HE 466. **Organization and 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 411, 412, 413. **Physical-Education Workshop.** (g) 9 hours total credit (extension and summer sessions).
- PE 420. **Methods in Elementary-School Physical Education.** (g) 3 hours. Munson.
- PE 421. **Administration of Elementary-School Physical Education.** (g) 3 hours.
- PE 446. **Tests and Measurements in Physical Education.** (g) 3 hours. Clarke.
- 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, Correctives, Reconditioning. Body Mechanics and Body Movement. Administration of Physical Education. Recreation.*
- PE 508. **Workshop.** 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. Poley.
- PE 522. **Advanced Corrective Procedures.** 3 hours. Poley.
- PE 523. **Physical Education of the Handicapped.** 3 hours. Poley.
- PE 524, 525, 526. **Correctives Laboratory.** 1 hours each term. Poley.
- PE 530. **Developmental Programs in Physical Education.** 3 hours. Clarke.
- PE 531. **Muscle Testing and Therapeutic Exercise.** 3 hours. Poley.
- PE 532. **Heat Therapy and Massage.** 3 hours. Poley.
- PE 533. **Techniques of Relaxation.** 3 hours. Poley.
- 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.** 4 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.
- PE 559. **Professional Preparation in Physical Education.** 3 hours spring. Sprague.
- PE 561. **Foundations of Physical Growth.** 3 hours fall. Poley.
- PE 562. **Changes in Body Size and Form During Childhood and Adolescence.** 3 hours. Poley.
- PE 563. **Growth and Body Tissues and Organs.** 3 hours. Poley.

- 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. Poley.
- 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 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: WILLIAM O. SHANAHAN (department head), QUIRINUS BREEN, PAUL S. DULL, JAMES F. GILLIAM, VAL R. LORWIN, EARL POMEROY, KENNETH W. PORTER, WENDELL H. STEPHENSON.

Associate Professors: EDWIN R. BINGHAM, ROBERT W. SMITH, LLOYD R. SORENSON.

Assistant Professors: GUSTAVE ALEF, PAUL S. HOLBO, ARNOLD M. PAUL, STANLEY A. PIERSON.

Instructors: RAYMOND E. BIRN, RICHARD P. BONINE, CHARLES H. CARTER, FREDERICK A. DE LUNA.

The department of History offers graduate work in American, European, and Far Eastern history leading to the M.A. and Ph.D. degrees. A representative selection of graduate offerings is available in the summer sessions. Detailed statements of departmental requirements and descriptions of graduate awards are available at the departmental office.

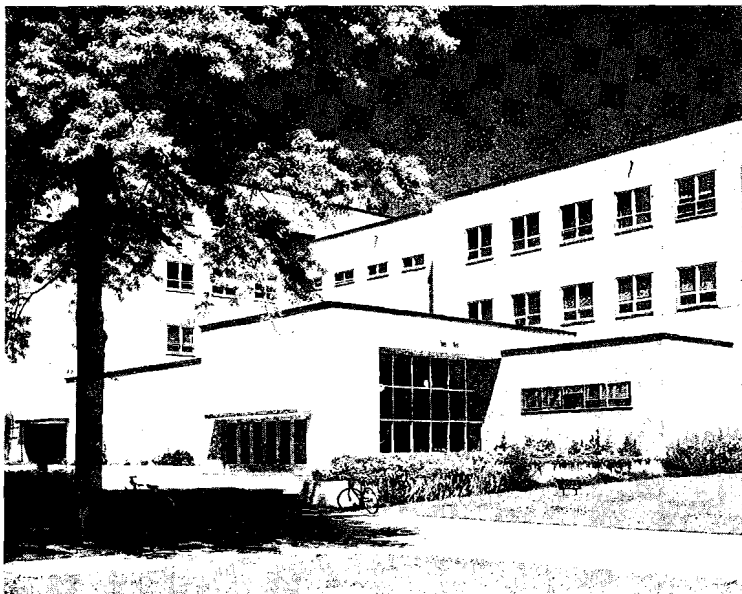
Faculty and Library resources support dissertations most adequately in the fields of nineteenth- and twentieth-century American and European history, mediaeval and Renaissance Europe, and modern Japanese history.

Basic undergraduate work in European and American history is prerequisite to candidacy for a graduate degree in history. Graduate students who have not already had training in research must take a course in historical method (Hst 520). Further specific recommendations may be made by the committee that administers the qualifying examination given at the beginning of the first term of graduate study. The qualifying examination for the M.A. degree covers the general areas of European and American history.

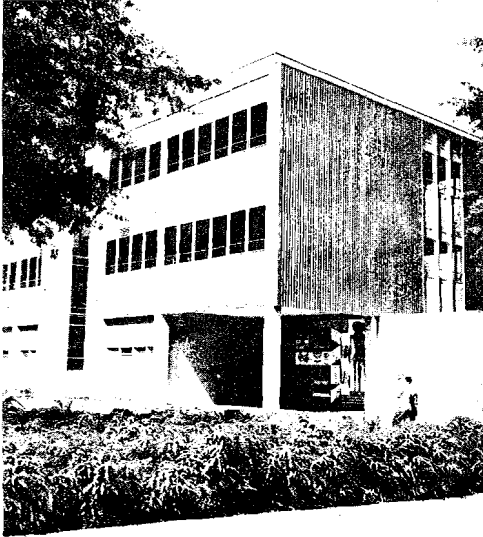
For the M.A. degree a candidate must prepare himself for oral examinations in three fields chosen from different divisions of history. A program may be



The University of Oregon Library



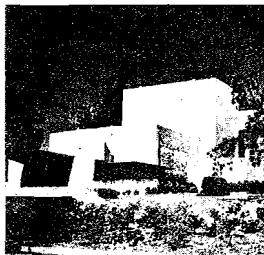
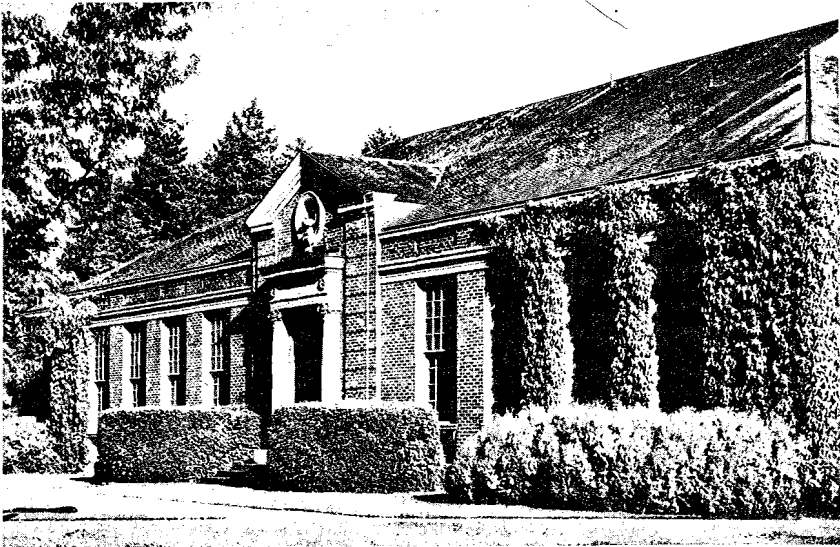
The Science Building



Top—Lawrence Hall,
home of the School of
Architecture and Allied
Arts

Center — Education
Building, center of grad-
uate work for public
school teachers and
administrators

Bottom — University
Theater, laboratory for
graduate work in drama
and play production.



arranged with thesis or, with the consent of the candidate's adviser, a program 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.

A candidate for the Ph.D. degree must pass written comprehensive preliminary examinations in four fields of history or in three fields of history and a minor held outside the department. Every candidate must take either a minor or supporting work on one or more related fields outside the field of history. The final oral examination covers the thesis and the major and minor or supporting fields.

Students working toward the M.A. or M.S. degree in the University's interdisciplinary master's program may select history as a field of subject concentration. See pages 20-21.

- Hst 411. **History of Greece.** (G) 3 hours fall. Gilliam.
- Hst 412, 413. **History of Rome.** (G) 3 hours each term, winter and spring. Gilliam.
- 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. Breen.
- Hst 424, 425. **Early Modern Europe.** (G) 3 hours each term. Birn, Carter.
- Hst 430, 431. **Renaissance.** (G) 3 hours each term, fall and winter. Breen.
- Hst 432. **Reformation.** (G) 3 hours, spring. Breen.
- Hst 434, 435, 436. **Western Institutions and Ideas.** (G) 3 hours each term. Sorenson.
- Hst 441, 442, 443. **History of France.** (G) 3 hours each term. de Luna, Lorwin.
- Hst 445. **Europe since 1939.** (G) 3 hours. Shanahan.
- Hst 446. **Modern Germany.** (G) 3 hours. Shanahan.
- Hst 447, 448, 449. **History of Russia.** (G) 3 hours each term. Alef, Bonine.
- Hst 454, 456, 457. **Economic History of Modern Europe.** (G) 3 hours each term. Lorwin.
- Hst 457. **The Era of American Sectional Conflict.** (G) 3 hours. Govan, Stephenson.
- Hst 458. **The Era of the Civil War.** (G) 3 hours. Stephenson.
- Hst 459. **The Era of the Reconstruction.** (G) 3 hours. Paul, Stephenson.
- Hst 460, 461, 462. **History of American Thought and Culture.** (G) 3 hours each term. Bingham.
- Hst 463. **History of Canada.** (G) 3 hours. Smith.
- Hst 465. **British Empire.** (g) 3 hours. Smith.
- Hst 466. **Tudor England.** (G) 3 hours. Carter, 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, 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. Porter.

- Hst 487, 488, 489. **American Economic History.** (G) 3 hours each term. Selby.
 Hst 490. **Problems of the Pacific.** (g) 4 hours (summer sessions).
 Hst 494, 495, 496. **History of China.** (G) 3 hours each term. Dull.
 Hst 497, 498, 499. **History of Japan.** (G) 3 hours each term. Dull.
 Hst 501. **Research.** 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.
Greek and Roman History: Gilliam. *European History:* Alef, Breen, Lorwin, Pierson, Shanahan, Sorenson. *English History:* Smith. *American History:* Bingham, Holbo, Pomeroy, Porter, Stephenson. *History of the Far East:* Dull.
 Hst 520. **Historical Method.** 3 hours. Shanahan, Stephenson.
 Hst 530, 531, 532. **European History: Problems and Interpretations.** 3 hours each term. Breen, Birn, Lorwin.

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 programs, see pages 20-21.

- ISt 501. **Research.** Hours to be arranged.
 ISt 503. **Thesis.** Hours to be arranged.

Journalism

Professors: CHARLES T. DUNCAN (dean), JOHN L. HULTENG, WARREN C. PRICE, W. F. G. THACHER (emeritus), GEORGE S. TURNBULL (emeritus).
Associate Professors: ROBERT C. HALL (emeritus), MAX WALES, CARL C. WEBB.
Assistant Professors: BERNARD L. FREEMESSER, ROY P. NELSON.
Instructor: 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 designated for the graduate student with a relatively extensive background of education or professional experience in journalism. A minimum of 18 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 av-

erage 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 421. **Community Newspaper: Editorial Problems.** (G) 3 hours. Duncan.
 J 422. **Community Newspaper: Business Problems.** (G) 3 hours. Webb.
 J 423. **Community Newspaper: Production Problems.** (G) 3 hours. Webb.
 J 432. **Radio-Television News II.** (G) 3 hours.
 J 440. **Advertising Production.** (G) 3 hours. Webb.
 J 441. **Radio-Television Advertising.** (G) 3 hours. Wales.
 J 443. **Newspaper Advertising.** (G) 3 hours. Wales.
 J 444. **Advertising Problems.** (G) 3 hours. Wales.
 J 446, 447. **Advertising Copy and Layout.** (G) 3 hours each term. Nelson, Wales.
 J 455. **Supervision of School Publications.** (g) 3 hours. Nelson.
 J 457. **The Press and Related Media.** (g) 2 hours. Nelson.
 J 459. **Publicity and Public Relations.** (g) 3 hours. Nelson.
 J 462. **Reporting of Public Affairs I.** (G) 3 hours. Hulteng.
 J 463. **Reporting of Public Affairs II.** (G) 3 hours. Price.
 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 481. **Newsroom Policies.** (G) 2 hours. Price.
 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. Duncan.

- J 495, 496. **Journalism and Contemporary Affairs.** (G) 3 hours each term.
Duncan, 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. Interpretive Writing. Communications Research Methods. Advertising Problems. Literature of Journalism. The Foreign Press. History of Journalism. Propaganda. Current Problems in Journalism.

Mathematics

Professors: ANDREW F. MOURSUND (department head), PAUL CIVIN, KENNETH S. GHENT, IVAN M. NIVEN, VICTOR L. SHAPIRO, BERTRAM YOOD.

Associate Professors: FRANK W. ANDERSON, FRED C. ANDREWS, EUGENE A. MAIER, LEWIS E. WARD, JR.

Assistant Professors: FRANK S. CATER, AVIEZRI S. FRAENKEL, ROBERT E. ODEH, KARL R. STROMBERG, GEORGE W. STRUBLE, DONALD R. TRUAX, 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 research 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 well-equipped statistical laboratory.

- Mth 412, 413, 414. **Introduction to Abstract Algebra.** (G) 3 hours each term.
F. Anderson, Ghent, Maier.
- Mth 416, 417. **Projective Geometry.** (G) 3 hours each term. Ghent.
- Mth 421, 422, 423. **Introduction to Applied Mathematics.** (g) 3 hours each term.
Wright.
- Mth 425, 426, 427. **Elements of Statistical Methods.** (g) 3 hours each term.
Truax, Odeh.
- Mth 428, 429, 430. **Numerical Analysis.** (G) 3 hours each term. Struble.
- Mth 431, 432, 433. **Advanced Calculus.** (G) 3 hours each term. Moursund, Yood.
- Mth 441, 442, 443. **Introduction to Statistical Theory.** (g) 3 hours each term.
Andrews, Odeh.

- Mth 447, 448, 449. **Mathematical Statistics.** (G) 3 hours each term. Andrews, Truax.
- Mth 468, 469. **Probability and Statistics.** (g) 3 hours each term (summer sessions).
- Mth 478, 479. **Algebra.** (g) 3 hours each term (summer sessions).
- Mth 488, 489. **Geometry.** (g) 3 hours each term (summer sessions).
- Mth 498, 499. **Foundations of Mathematics.** (g) 3 hours each term (summer sessions).
- 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.
Algebra: Anderson, Wright. *Applied Mathematics:* Shapiro. *Number Theory:* Niven. *Banach Algebras:* Yood. *Harmonic Analysis:* Civin, Stromberg, Shapiro. *Statistic and Stochastic Processes:* Andrews, Truax. *Topological Algebras:* Civin, Yood. *Topology:* Ward.
- Mth 541, 542, 543. **Abstract Algebra.** 3 hours each term. Niven, Anderson, Wright.
- Mth 544, 545, 546. **Structure of Rings and Algebras.** 3 hours each term. Yood, Anderson.
- Mth 547, 548, 549. **Algebraic Number Theory.** 3 hours each term. Niven, Fraenkel.
- Mth 551, 552, 553. **Theory of Functions.** 3 hours each term. Cater, Stromberg, Yood, Fraenkel.
- Mth 554. **Measure Theory.** 3 hours. Anderson, Truax.
- Mth 555, 556. **Theory of Probability.** 3 hours each term. Andrews, Truax.
- Mth 557, 558, 559. **Topics in Classical Analysis.** 3 hours each term. Shapiro, Yood.
- Mth 561, 562, 563. **Modern Theories in Analysis.** 3 hours each term. Civin, Yood.
- Mth 571, 572, 573. **Topology.** 3 hours each term. Civin, Ward.
- Mth 569. **Probability and Statistics.** 3 hours (summer sessions).
- Mth 579. **Algebra.** 3 hours (summer sessions).
- Mth 581, 582, 583. **Theory of Estimation and Testing Hypotheses.** 3 hours each term. Andrews.
- Mth 587, 588. **Stochastic Processes.** 3 hours each term. Andrews.
- Mth 589. **Geometry.** 3 hours (summer sessions).
- Mth 591, 592, 593. **Advanced Mathematical Statistics.** 3 hours each term. Andrews.
- Mth 594. **Theory of Games.** 3 hours. Truax.
- Mth 595, 596. **Statistical Decision Theory.** 3 hours each term. Truax.
- Mth 599. **Foundations of Mathematics.** 3 hours (summer sessions).

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.

Music

Professors: THEODORE KRATT (dean), EDMUND CYKLER, GEORGE HOPKINS, ROBERT E. NYE, JANE THACHER (emeritus), ROBERT S. VAGNER.

Associate Professors: EVERETT S. ANDERSON, EXINE BAILEY, F. W. BITTNER, GEORGE BOUGHTON, S. L. GREEN, J. ROBERT HLADKY, HOMER KELLER, IRA D. LEE, MAX RISINGER.

Assistant Professors: ROBERT CUNNINGHAM, MILTON DIETERICH, J. M. GHSTAFSON, JOHN HAMILTON, NEIL E. WILSON, W. C. WOODS.

The School of Music offers graduate work in the following fields: theory and composition, music history and literature, instrumental and vocal performance, and music education. Its major graduate programs lead to the M.A., M.S., and M. Mus. degrees. Programs may also be arranged, leading to the M.S. in General Studies, for public school teachers who find it necessary to combine two teaching assignments, one of which may be in music. The School of Music also cooperates with the School of Education in arranging programs leading to the D.Ed. degree for those students who wish to do a major part of their work in the field of music education.

The University Library and the instrumental and physical facilities of the School of Music make possible a wide variety of musical research. Instruction on the graduate level is offered in all the fields of applied music, including work in ensembles which vary from small select chamber groups to larger groups, including chorus, orchestra, and symphonic band. Graduate students are offered opportunities not only to participate in but also to direct such performing groups.

All graduate work in the School of Music is recognized and fully 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 408. **Seminar in Music History.** (G) 3 hours each term. Cykler, staff.

Mus 414, 415, 416. **Composition I.** (G) 2 hours each term. Keller.

Mus 420, 421, 422. **Counterpoint II.** (G) 2 hours each term. Keller.

Mus 428, 429, 430. **Introduction to Musicology.** (G) 3 hours each term. Cykler.

Mus 434, 435, 436. **Applied Theory.** (G) 3 hours each term (summer sessions).

Mus 441, 442, 443. **Advanced Conducting.** (G) 2 or 3 hours each term. Kratt, Risinger.

Mus 447. **Wind-Instrument Literature.** (G) 3 hours. Vagner.

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 Literature. Music Theory. Music History.

Mus 511, 512, 513. **Applied Counterpoint.** 2 or 3 hours each term. Keller.

- Mus 514, 515, 516. **Composition II.** 2 hours each term. Keller.
- Mus 520, 521, 522. **Interpretation of Symphonic Literature.** 2 or 3 hours each term. Kratt.
- Mus 523, 524, 525. **Interpretation of Choral Literature.** 2 or 3 hours each term. Kratt.
- Mus 526, 527, 528. **Composition III.** 2 hours each term. Keller.
- Mus 590. **Applied Music.** 1 to 4 hours any term. Anderson, Bailey, Bittner, Boughton, Green, Hamilton, Hladky, Hopkins, Lee, Vagner, Wilson.

Music Education

- MuE 407. **Seminar.** (G) Hours to be arranged.
- MuE 426. **Supervision of the General Music Program.** (G) 3 hours. Nye, Risinger.
- MuE 444. **Choral Literature for Public Schools.** (G) 2 hours. Risinger.
- MuE 445. **String Literature for Public Schools.** (G) 2 hours. Boughton.
- MuE 446. **Wind-Instrument Literature for Public Schools.** (G) 2 hours. Vagner, Lee.
- MuE 501. **Research.** Hours to be arranged.
- MuE 503. **Thesis.** Hours to be arranged.
- MuE 505. **Reading and Conference.** Hours to be arranged.
- MuE 507. **Seminar.** Hours to be arranged.
- MuE 532. **Problems in Music Education.** 3 hours. Nye.
- MuE 533. **Music in the Elementary School.** 3 hours. Nye.
- MuE 534. **Music in the Junior High School.** 3 hours. Nye.
- MuE 535. **Music in the Senior High School.** 3 hours. Nye.

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

Professors: ALBREY CASTELL (department head), BERTRAM JESSUP.

Associate Professors: VERGIL DYKSTRA, FRANK ERBERSOLE, THOMAS FLYNN.

Assistant Professor: ARNULF ZWEIG.

Instructors: BRENNAN LIDDELL, RUTH A. MATHERS.

The Department of Philosophy offers graduate work leading to the M.A. and Ph.D. degrees. All candidates for the master's degree in philosophy are required to write a thesis.

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

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

Phl 433. **Existentialism.** (G) 3 hours. Jessup.

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

Phl 452, 453. **Analytical Philosophy.** 3 hours each term. Ebersole.

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

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

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

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

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

Theory of Knowledge: Ebersole. *Value Theory:* Jessup. *Recent Idealism:* Castell. *Mediaeval Philosophy:* Flynn. *Authors:* Zweig. *Current Journals:* Liddell.

Physics

Professors: JOHN L. POWELL (department head), CHANG-YI CH'EN, EDWIN G. EBBIGHAUSEN, RAYMOND T. ELLICKSON, G. H. WANNIER.

Associate Professors: BERND CRASEMAN, FRANCIS E. DART, H. J. HROSTOWSKI, J. W. McCLURE.

Assistant Professors: JAMES C. KEMP, HARLAN LEFEVRE, DONALD O. WELLS, KENNETH L. ZANKEL.

The Department of Physics offers a program of graduate work leading to the M.A., M.S., and Ph.D. degrees, with a variety of opportunities for research. The fields of current research interest are the following: In nuclear physics, beta and gamma ray spectroscopy, particularly polarization and angular correlation studies, nuclear instrumentation, and nuclear theory; in solid state physics, primarily in the behavior of electrons in crystals; in atomic physics, the optics of gases and metallic vapors under pressure. Although no graduate work is offered in the field of astronomy, a program of research is under way on the motion of certain double and triple star systems.

Research assistantships are available on projects supported by the Graduate School and such agencies as the National Science Foundation, the Office of Naval Research, the Air Force Office of Scientific Research, and Tektronix, Inc.

The department is housed in the Science Building at the northeast corner of the campus. The location provides a natural association with the other natural sciences; this association is strengthened through the programs of two research institutes, the Institute of Theoretical Science and the Institute of Molecular Biology. The science departments also share a well-equipped shop with professional personnel, as well as a student shop open to qualified graduate students.

A qualifying examination for first-year graduate students is given at the beginning of the fall term. The examination is restricted to questions in the fields of mechanics and electricity. Students who show a lack of adequate preparation in either of these two fields are required to take an appropriate undergraduate course, for which no graduate credit is given.

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

Ph 411, 412, 413. **Modern Physics.** (G) 3 hours each term. Kemp.

- Ph 431, 432, 433. **Electricity and Magnetism.** (g) 4 hours each term. Zankel.
- Ph 441, 442, 443. **Advanced Optics.** (G) 4 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. Hrostowski.
- 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.
Experimental Solid State Physics. Nuclear Physics. Advanced Quantum Mechanics.
- Ph 517, 518, 519. **Quantum Mechanics.** 3 hours each term. Powell.
- Ph 524, 525, 526. **Nuclear Physics.** 3 hours each term. Wells.
- Ph 528, 529, 530. **Nuclear Physics Laboratory.** 1 hour each term.
- Ph 534, 535, 536. **Advanced Physical Measurements.** 1 or 2 hours each term.
- Ph 538, 539, 540. **Theoretical Mechanics.** 3 hours each term.
- Ph 541, 542, 543. **Theoretical Nuclear Physics.** 3 hours each term. Powell.
- Ph 544, 545, 546. **Theory of Electricity and Magnetism.** 3 hours each term. Zankel.
- Ph 551, 552, 553. **Atomic and Molecular 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.

Political Science

Professors: EGBERT S. WENGERT (department head), ARTHUR S. FLEMMING, JOHN F. GANGE, CHARLES P. SCHLEICHER.

Associate Professors: ROBERT E. AGGER, LESTER G. SELIGMAN.

Assistant Professors: JAMES R. KLONOSKI, LUCIAN C. MARQUIS, WILLIAM C. MITCHELL, ALEX WEILENMANN.

Instructors: JOSEPH R. FISZMAN, MARSHALL GOLDSTEIN, ROBERT I. MENDEL-SOHN.

Graduate education in political science aims to develop broad theoretical competence and skill in independent study and research in the more specialized aspects of political institutions and behavior, public law, policy, and administration. Towards this end, regular members of the department, special lecturers, and occasional visiting faculty members offer advanced courses and seminars in six broad fields of political science: American politics, comparative government and politics, public law and jurisprudence, public administration and policy development, international relations, and political theory. Joint faculty-student research, interdepartmental research projects, and tutorial conferences for the discussion of guided readings also contribute to advanced study in political science.

Current opportunities for advanced study may be illustrated by the principal research interests of members of the faculty. Among these are: the development of theoretical approaches to guide empirical studies in political science; American constitutional law as an expression of political theory; empirical studies of political behavior concerned with local-community, state, and national political parties,

political leadership, and policy formation; public opinion and mass communication; comparative studies of political behavior, policy formation, and political institutions; policy studies in foreign relations; organization and decision theory; studies of the structure and function of selected local, national, and international political institutions.

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 Bureau of Municipal Research and Service, and the Public Affairs Program. Each of these provides a center of interdisciplinary and interdepartmental study, focused on aspects of political science.

Individual faculty research projects, supported by grants from the Graduate Council of the University and from foundations and other agencies, provide additional opportunities for students to work closely with faculty scholars. These projects enable graduate students 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 at the University from a variety of academic backgrounds. Each student is encouraged to advance as rapidly as possible toward his academic goal. Accordingly, he draws upon courses, seminars, and individual instruction in the department and in other departments in the light of his needs.

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 examination for the master's degree. As a rule, at least two-thirds of his study is in political science, and one-third in related fields.

His master's thesis enables the student to apply to his area of concentrated study insights and perspectives from several fields, whether in political science or in related areas, and to exhibit his capacity for independent research. The thesis generally demands about one-fifth of the student's time while working for the master's degree.

Doctor's Degree. Three years of full-time study beyond the bachelor's degree is the minimum required to prepare for the final examination for the doctor's degree. During the first two years of study, the student ordinarily draws on courses, seminars, and readings to prepare himself for comprehensive preliminary examinations. In the third year of advanced study, the student usually completes his dissertation. The dissertation is expected to make a significant and original contribution to knowledge, and serves as a measure of the depth of the student's preparation in his special field of interest.

PS 411, 412, 413. **Public Administration and Policy Development.** (G) 3 hours each term. 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. Weilenmann.

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

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

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

PS 426. **Government and Politics of Germany.** (G) 3 hours. Marquis.

PS 427, 428. **Government and Politics of the Soviet Union.** (G) 3 hours each term. Fiszman.

PS 430, 431, 432. **Political Theory: The Western Tradition.** (G) 3 hours each term. Fiszman.

PS 440, 441, 442. **Foreign Politics of the Major Powers.** (G) 3 hours each term. Schleicher.

- PS 433, 434, 435. **Political Theory: The American Tradition.** (G) 3 hours each term, fall and winter.
- 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 482. **The Legislature in American Government.** (G) 3 hours fall.
- PS 484, 485, 486. **The Supreme Court in American Government.** (G) 3 hours each term. Klonoski.
- PS 487, 488, 489. **Policies and Programs of American Governments.** (G) 3 hours each term. Flemming, Wengert.
- 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.

Psychology

Professors: ROBERT LEEPER (department head), FRED ATTNEAVE, RICHARD A. LITTMAN, A. R. MOORE (emeritus), LEONA E. TYLER.

Associate Professors: J. SPENCER CARLSON, H. R. CROSLAND (emeritus), FREDERICK R. FOSMIRE, ROY HYMAN, ROBERT W. LEARY, NORMAN D. SUNDBERG.

Assistant Professors: MARTIN H. ACKER, LOUIS BREGER, ROBERT F. FAGOT, LEWIS R. GOLDBERG, GERALD R. PATTERSON, PHIL H. SCHOGGEN, HARRY A. SHOEMAKER, JAMES H. STRAUGHAN, CHARLES F. WARNATH, DAVID F. WRENCH.

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 and perception), clinical psychology, counseling, personality, and social 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 the close 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.

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 is attempting to develop a strong program of training for students interested in clinical work with children. To facilitate such training, a small clinic has been established within the department. 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, and in the State Psychiatric Services for Children at the University of Oregon Medical School in Portland.

Work in general-experimental psychology continues to be a major interest of the department, both as a field deserving attention in its own right and as an indispensable part of the training of clinical and counseling students. The areas of

general psychology which are emphasized by the department include: learning, perception, physiological psychology, personality theory, and personality development. Research programs now being conducted include the following: judgmental processes with complex data; perception of lawfulness in sequential stimulation; 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.

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 Miller Analogies Test or the Graduate Record Examination (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. Fagot.
- Psy 421, 422. **Principles and Methods of Psychological Assessment.** (g) 3 hours each term. Sundberg.
- Psy 436. **Character and Personality.** (g) 3 hours. Leeper, Patterson.
- 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. Warnath.
- Psy 448. **Industrial Psychology.** (G) 3 hours. Warnath.
- Psy 449. **Occupational Choice and Psychology of Careers.** (G) 3 hours. Warnath.
- Psy 450. **Abnormal Psychology.** (g) 3 hours fall or spring. Fosmire, Straughan.
- Psy 451. **Physiological Psychology.** (G) 2 or 3 hours. Leary.
- Psy 460. **Developmental Psychology I: Infancy and Childhood.** (g) 3 hours. Schoggen, Breger.
- Psy 461. **Developmental Psychology II: Adolescence and Maturity.** (g) 3 hours. Schoggen, Straughan.
- Psy 465. **Motivation.** (G) 2 hours. 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. Littman.
- Psy 491. **Laboratory in Learning.** (g) 2 hours. Shoemaker.
- 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: Littman. *Introduction to Rehabilitation:* Schoggen. *Core Learning:* Shoemaker. *Core Perception:* Attneave. *Core Physiological:* Leary. *Advanced Medical Aspects of Rehabilitation:* Acker. *Teaching Psychology:* Shoemaker. *Core Personality:* Leeper, Breger. *Core Developmental:* Patterson, Schoggen. *Core Social:* Wrench. *Psychotherapy:* Fosmire. *Core Psychopathology:* Fosmire. *Core Experimental Design:* Fagot. *Core Individual Differences:* Sundberg. *Core History & Systems of Psychology:* Leeper, Littman. *Occupational Information:* Carlson. *Advanced Counseling:* Tyler. *Medical Aspects of Rehabilitation:* Acker. *Core Research:* Attneave, Fosmire, Hyman, Leary, Patterson, Sundberg.

Psy 508. **Clinical Work with Children.** 3 hours any term. Straughan.

Psy 509. **Practicum Experience.** Hours to be arranged. Tyler, Warnath.

Psy 521, 522, 523. **History and Systems of Psychology.** 2 hours each term. Shoemaker.

Psy 524, 525. **Individual Intelligence Testing.** 3 hours each term. Breger.

Psy 527. **Counseling Procedures.** 3 hours. Warnath.

Psy 530, 531. **Foundations of Clinical and Counseling Practice.** 3 hours each term. Straughan, Patterson.

Psy 532, 533. **Advanced Personality Assessment.** 3 hours each term. Goldberg, Breger.

Psy 535. **Advanced Social Psychology.** 3 hours. Hyman.

Psy 537, 538, 539. **Personality Theory and Research.** 4 hours fall ; 2 hours each term, winter and spring.

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. Leary.

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. Shoemaker, Hyman.

Psy 575. **Advanced Laboratory in Learning.** 3 hours. Straughan.

Religion

Professor: DOUGLAS STRATTON (department head).

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 master's degree.

R 419, 420. **Philosophy of Religion.** (g) 3 hours each term, fall and winter.

R 421. **Religion and Society.** (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, ROLAND J. PELLEGRIN.

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

Assistant Professors: BENTON JOHNSON, KENNETH POLK.

Instructors: JAMES L. PRICE, TED T. JITODAI.

The graduate program of the Department of Sociology leads to the M.A., M.S., and Ph.D. degrees. It is an intensive program designed to train professional sociologists for teaching, research, and administrative posts in sociology and related fields. Although most candidates for the Ph.D. degree first obtain a master's degree, qualified graduate students may develop programs leading directly to the Ph.D.

All students applying for admission for graduate work in sociology must submit to the department letters of recommendation from three persons qualified to evaluate their academic achievement, transcripts of all work done at the college level, and scores on the Miller Analogies Test. These materials must be submitted at least one month before the student plans to begin graduate work, or by March 1 for those applying for assistantships.

Students are not advised to seek an advanced degree in sociology unless they have achieved a grade-point average of 3.00 or better in their undergraduate work in the field; students whose undergraduate major has been in another field should have a grade-point average of 3.00 in all social science courses taken.

Candidates for advanced degrees will be expected to achieve a general knowledge of the entire field of sociology and special competence in selected areas of concentration. The areas of concentration are: (1) general theory, (2) methodology, (3) social psychology, (4) formal organization, (5) marriage and the family, (6) social stratification, (7) population and ecology, (8) deviant behavior, (9) industrial sociology, (10) belief and value systems, (11) community organization and analysis, (12) organization of societies.

All candidates for advanced degrees must include in their programs the areas of general theory and methodology. Candidates for the master's degree must select three additional areas and candidates for the doctor's degree four additional areas, including organization of societies. With the approval of his advisory committee, a candidate may select an area of concentration not included in the list given above.

As an exception to these requirements, a graduate student who wishes to acquire a broad knowledge in sociology and related social sciences for the purpose of teaching general social science may, with the approval of his advisory committee, arrange a more general program of study. Such candidates must demonstrate a breadth of knowledge in sociology and in one or more related disciplines.

All graduate students in sociology must have preparation in statistics and research methods equivalent to Mth 425, 426, 427 and Soc 447, 448, 449, with the exception that a student working toward a terminal master's degree, with the approval of his adviser, may satisfy the requirement with Soc 447 and Mth 425. Graduate students who lack this preparation must complete the required courses in addition to course work normally required for a graduate degree.

Candidates for the master's degree, especially the M.S., are advised to develop a strong area of concentration in a related discipline. All master's candidates are required to present an acceptable thesis.

Candidates for the doctor's degree must demonstrate clearly their basic and serious commitment to a professional career in the social sciences, with particular emphasis on sociology. The department encourages interdisciplinary studies, and

provides opportunity for the development of original programs of study designed to broaden the student's professional preparation.

The qualifying examination for the doctor's degree covers the basic fields of sociology; the work required for the master's degree will usually prepare the candidate for this examination. The preliminary examination covers the selected areas of concentration and a cognate or minor field outside the department. It is an intensive test of the candidate's mature grasp of the field and his capacity for constructive and imaginative scholarly growth; it is a written examination, given over a period of several days, and requires not less than twelve hours for completion.

The doctoral candidate's dissertation must embody the results of research and show evidence of originality and ability in independent investigation. It is recommended that work on the dissertation be begun early in the doctoral program, so that the candidate's research experience will be an integral part of his total program of study.

Candidates for advanced degrees who choose sociology as a minor must demonstrate competence in the general field of sociology and a depth of knowledge in one of the areas of concentration.

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 or doctoral dissertations may be based. The department is an active participant in the Institute for Community Studies, the Institute of International Studies and Overseas Administration, and the Center for Social Service Research and Training. The Sociological Research and Training Laboratory provides space and facilities, including IBM equipment, for graduate students engaged in research.

Considerable emphasis is placed in the graduate program upon personal contacts between students and faculty. Qualified graduate students have opportunities to learn teaching through teaching assignments, research through research assistantships, and general faculty functions through departmental assistantships. Also, a number of national defense fellowships have been allocated to the department under the National Defense Education Act.

The Pacific Sociological Review, official journal of the Pacific Sociological Association, the *American Sociological Review*, official journal of the American Sociological Association, and the *Family Life Coordinator* are edited in the department.

Recognizing the growing need for soundly trained college teachers, the department encourages candidates whose special interests lie in teaching to orient their educational program toward college teaching.

A departmental brochure describing the graduate program in more detail and indicating the courses available in each of the eleven areas of orientation is available upon request.

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

Family-Life Education: Johannis. *Sociology of Religion:* Johnson. *Juvenile Delinquency:* Bisno. *Interviewing:* Johnson. *Sociology of Leisure:* Johannis. *Methodology:* Ellis. *Political Sociology:* Bisno. *Quantitative Methods in Sociology:* Ellis. *Criminological Research:* Polk. *Public Opinion and Propaganda:* Berreman. *Sociology of Illness:* Bisno. *Sociology of Education:* Ellis. *Theory of Action:* Johnson. *Bureaucracy:* Price. *Sociological Analysis:* Pellegrin. *Community Analysis:* Pellegrin.

Soc 414. **Social Institutions.** (G) 3 hours. Foskett.

Soc 415. **Social Organization.** (G) 3 hours. Price.

Soc 416, 417. **Criminology and Delinquency.** (G) 3 hours each term. Polk.

Soc 421. **Social Change.** (G) 3 hours. Bisno.

Soc 425, 426, 427. **Theory of Social Groups.** (G) 3 hours each term. Dubin.

- Soc 431, 432. **Community Structure and Organization.** (G) 3 hours each term. Martin.
- Soc 434. **Social Stratification.** (G) 3 hours. Ellis, Johnson.
- Soc 435. **Theory and Methods of Population Analysis.** (G) 3 hours. Jitodai, Martin.
- Soc 436. **Social Control.** (G) 3 hours. Berreman.
- Soc 437. **Sociology of Race Relations.** (G) 3 hours. Berreman.
- Soc 438. **Collective Behavior.** (G) 3 hours. Berreman.
- Soc 440, 441. **Group Dynamics.** (G) 3 hours each term. Johannis.
- Soc 442. **Community Welfare Organization.** (g) 3 hours. Bisno.
- Soc 444, 445, 446. **Sociology of Social Work.** (g) 3 hours each term. Bisno.
- Soc 447, 448, 449. **Methods of Social Research.** (G) 3 hours each term. Ellis.
- Soc 450. **History of Social Thought.** (G) 3 hours. Foskett.
- Soc 451. **Development of American Sociology.** (G) 3 hours. Foskett.
- Soc 452. **Contemporary Sociology.** (G) 3 hours. Price.
- Soc 455. **Sociology of Work.** (G) 3 hours. Dubin.
- Soc 456. **Industrial Sociology.** (G) 3 hours. Dubin.
- Soc 460. **Sociology of Religion.** (G) 3 hours. Johnson.
- Soc 465, 466. **The Family in American Culture.** (G) 3 hours each term. Johannis.
- Soc 501. **Research.** 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.
- Sociology of Science:* Alpert. *Population Analysis:* Martin. *Comparative Family Systems:* Johannis. *Theory Building:* Dubin. *Urbanization:* Martin. *The Professions:* Bisno. *Primary Human Interaction:* Dubin. *Contemporary Family Research:* Johannis. *Problems of Social Psychology:* Ellis, Berreman. *Systematic Sociology:* Price. *Social Stratification:* Ellis, Johnson. *Theory of Organization:* Dubin. *Personality and Culture:* Ellis. *Teaching of Sociology:* Johannis. *Sociology of Values:* Johnson. *Sociology of Occupations:* Pellegrin. *Community Power Structure:* Pellegrin.
- Soc 537. **Social Movements.** 3 hours. Berreman.
- Soc 556. **Experimental Sociology.** 3 hours.

Speech

Professors: D. GLENN STARLIN (department head), BOWER ALY, ROBERT D. CLARK, HORACE W. ROBINSON, KENNETH S. WOOD.

Associate Professors: HERMAN COHEN, WALFRED A. DAHLBERG, E. A. KRETSINGER, KIRT E. MONTGOMERY, SCOTT NOBLES, JOHN R. SHEPHERD.

Assistant Professors: WILLIAM R. MCGRAW, CLEMEN PECK, HOWARD L. RAMEY.

Instructors: PRESTON H. TUTTLE, LAWRENCE H. WISMER.

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, Dahlberg.
 Sp 422. **British Oratory.** (G) 3 hours. Aly, Cohen, Montgomery.
 Sp 423. **American Oratory.** (G) 3 hours. Aly, Nobles.
 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. Clark.

Radio and Television Broadcasting

- J 432. **Radio-Television News II.** (G) 3 hours.
 J 441. **Radio-Television Advertising.** (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.
 Sp 448. **Radio and Television and the Public.** (G) 3 hours spring. Shepherd, Starlin.
 Sp 469. **Lighting for Television.** (G) 2 hours. Ramey.
 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.

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. Wood.

Sp 487, 488, 489. **Audiology.** (G) 3 hours each term.

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 461. **Introduction to Scene Design.** (G) 3 hours. Peck.

Sp 462. **Styles in Scene Design.** (G) 3 hours. Peck.

Sp 463. **Advanced Problems in Scene Design.** (G) 3 hours. Peck.

Sp 464, 465, 466. **History of the Theater.** (G) 3 hours each term. Wismer, Tuttle.

Sp 467, 468. **Lighting for the Stage.** (G) 2 hours each term. Peck, Ramey.

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. Robinson, Wismer, Tuttle.

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 following University research divisions:

Institute of Molecular Biology. The Institute of Molecular Biology conducts research and provides research instruction in areas of biology where phenomena can be understood in terms of the structure of molecules, such as nucleic acids and proteins. Since research in molecular biology may involve several scientific disciplines, members of the staff of the Institute hold joint appointments in chemistry, biology, 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, and some other aspects of the mechanisms of protein synthesis.

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 graduate courses in their several 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, and physics may do research in the Institute as a part of their programs leading to graduate degrees. Research advisers may be either members of the Institute staff or members of the departmental faculties interested in molecular biology. The Institute provides facilities and a limited number of fellowships for student research.

Statistical Laboratory and Computing Center. The Statistical Laboratory and Computing Center conducts research for the development of new statistical and numerical procedures and provides a consulting service for graduate students in the fields of statistical and numerical analysis. The Center maintains an IBM 1620 electronic computer, which is available for research and instruction by the faculty and students of the University. Seminars are conducted by the staff of the Center in programming methods for the IBM 1620.

Institute of Theoretical Science. 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, chemists, biologists, and other natural sciences.

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 scientist in applied research.

Institute for Community Studies. The Institute for Community Studies conducts and encourages basic research designed to explore the structure of American communities as social and political systems and to relate selected forms of behavior to such systems. Emphasis is placed on the policy formulation processes in such areas as education, voluntary associations, local government, health, business associations, etc.

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 Institute conducts seminars for the discussion of matters of common interest to members of its staff and graduate students, including the background of research and research methods in community analysis, problems in design of cooperative research projects, and reports on research in progress.

Institute of International Studies and Overseas Administration. 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 sponsors and supervises research related to graduate theses and dissertations; in the development of research conducted by members of its staff, it seeks to organize these studies to utilize collaborative assistance by graduate students and to provide substantial training in research methods and techniques. It also conducts graduate seminars to provide for students and members of the faculty an opportunity to share ideas and experiences with visiting lecturers, special consultants, and among themselves. In addition to its campus programs, the Institute arranges opportunities, for advanced students, for overseas study and administrative experience on foreign projects for periods of six months to a year.

The Institute conducts the University's annual Summer World Affairs Program, designed especially for teachers and community leaders, and the program of the Oregon High School International Relations League, and assists in the student-sponsored World Affairs Week and the Model United Nations program. It also assists in such community activities as the Citizen Consultation Program of the National Commission for UNESCO and the Great Decisions Program of the Foreign Policy Association.

Center for Social Service Training and Research. The Center for Social Service Training and Research administers the programs of graduate instruction and research conducted by the University in the fields of juvenile correction, rehabilitation counseling, and other areas of social service.

The instructional functions of the Center include a two-year program in rehabilitation counseling, leading to the master's degree, to prepare students for positions as counselors for handicapped persons; and a program in juvenile correction leading to the degree of M.A. in interdisciplinary studies. Practical experience through internships is provided in both programs.

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