

UNIVERSITY OF OREGON
GRADUATE SCHOOL

EUGENE, OREGON

UNIVERSITY OF OREGON

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OREGON STATE SYSTEM OF HIGHER EDUCATION

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**UNIVERSITY
OF OREGON
GRADUATE
SCHOOL**

1969-70 CATALOG

EUGENE, OREGON

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UNIVERSITY
OF OREGON
GRADUATE
SCHOOL

1929-30 CATALOG

EUGENE, OREGON

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Oregon State System of Higher Education

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

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

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

Portland State University 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.

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

An interinstitutional booklet, *Your Education*, which outlines the curricula of the several institutions and contains other information, is available. For a copy, write to Division of Publications, P.O. Box 3175, Eugene, Oregon 97403.

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	Term Expires
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JOHN W. SNIDER, Medford	1969
PHILIP A. JOSS, Portland	1970
GEORGE LAYMAN, Newberg	1970
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Office of State Board of Higher Education

Post Office Box 3175
 Eugene, Oregon 97403

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

Calendar

Fall Term, 1969-70

August 29, <i>Friday</i>	Last day to apply for fall-term admission without penalty
September 25-27, <i>Thursday-Saturday</i>	Regular registration
September 29, <i>Monday</i>	Classes begin
October 10, <i>Friday</i>	Last day to register
November 14, <i>Friday</i>	Last day to apply for degree for December graduation convocation
November 7, <i>Friday</i>	Last day for submitting doctoral theses to committee and scheduling final oral examinations in Graduate School Office
November 28, <i>Friday</i>	Last day for submitting "Statement of Completion of Requirements for Master's Degree" to Graduate School Office
December 5, <i>Friday</i>	Last day for doctor's final oral examinations
December 9, <i>Tuesday</i>	Last day for turning in master's theses and doctoral dissertations to Graduate School Office
December 12, <i>Friday</i>	Fall term graduation convocation

Winter Term, 1969-70

January 5, <i>Monday</i>	Regular registration
January 6, <i>Tuesday</i>	Classes begin
January 16, <i>Friday</i>	Last day to register
February 13, <i>Friday</i>	Last day to apply for degree for March graduation convocation
February 6, <i>Friday</i>	Last day for submitting doctoral theses to committee and scheduling final oral examinations in Graduate School Office
February 27, <i>Friday</i>	Last day for submitting "Statement of Completion of Requirements for Master's Degree" to Graduate School Office
March 6, <i>Friday</i>	Last day for doctor's final oral examinations
March 10, <i>Tuesday</i>	Last day for turning in master's theses and doctoral dissertations to Graduate School Office
March 13, <i>Friday</i>	Winter term graduation convocation

Spring Term, 1969-70

March 30, <i>Monday</i>	Regular registration
March 31, <i>Tuesday</i>	Classes begin
April 10, <i>Friday</i>	Last day to register
May 15, <i>Friday</i>	Last day to apply for degree for June Commencement
May 8, <i>Friday</i>	Last day for submitting doctoral theses to committee and scheduling final oral examinations in Graduate School Office
May 29, <i>Friday</i>	Last day for submitting "Statement of Completion of Requirements for Master's Degree" to Graduate School Office
June 5, <i>Friday</i>	Last day for doctor's final oral examinations
June 9, <i>Tuesday</i>	Last day for turning in master's theses and doctoral dissertations to Graduate School Office
June 14, <i>Sunday</i>	Spring term Commencement

Summer Session, 1970

June 22, <i>Monday</i>	Registration
June 23, <i>Tuesday</i>	Classes begin
July 17, <i>Friday</i>	Last day to apply for degree for Summer Session graduation convocation
July 17, <i>Friday</i>	Last day for submitting doctoral theses to committee and scheduling final oral examinations in Graduate School Office
July 31, <i>Friday</i>	Last day for submitting "Statement of Completion of Requirements for Master's Degree" to Graduate School Office
August 7, <i>Friday</i>	Last day for doctor's final oral examinations
August 11, <i>Tuesday</i>	Last day for turning in master's theses and doctoral dissertations to Graduate School Office
August 15, <i>Saturday</i>	Summer Session graduation convocation

University of Oregon Officers of Administration

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* Appointment effective July 1, 1969.

† On leave of absence 1969-70.

General Information

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

With an enrollment of 4,024 students in the regular sessions and 4,898 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 nearly 3,521 degrees conferred by the University of Oregon during the 1967-68 academic year, 42 per cent were graduate degrees.

History of the Graduate School

The Graduate School was organized in 1900. Prior to that time, honorific 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, nine 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. It is at the head of the Willamette Valley, 109 miles south of Portland, on the main line of the Southern Pacific Railroad and on the interstate highway; its easy accessibility is also enhanced by the service of United Air Lines and Air West. The city of Eugene, with a population of over 75,000, lies in a rapidly developing metropolitan area of three times the city's population. The Willamette Valley enjoys a mild climate, with moderate winters and cool summers. The average rainfall of less than 38 inches is concentrated in the winter months.

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

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 Audiovisual Media Center, is particularly well suited to the requirements of graduate study. A new addition to the Library has increased the capacity of the building to 1,300,000 volumes and 2,341 readers.

Holdings on the Eugene campus now total over 1,000,000 volumes; 14,000 serials are currently received. The 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 loans.

The Library is a depository for the documents of the U.S. and Canadian governments. Publications of the League of Nations, the United Nations and its specialized agencies, and the Organization of American States are well represented, as are the official records of many nations and numerous international organizations.

The Special Collections Division, with 900,000 manuscripts, 140,000 photographs, pictures, and prints, and other collections of unusual material, is a major resource for graduate research.

Summer Session

Courses and research opportunities are available to degree candidates in the summer. Supplemented by individualized study arrangements, the summer offerings enable the graduate student to make uninterrupted progress toward his degree. For summer session work to be credited toward a degree, formal admission to graduate status in a school or department is required. (See page 17.)

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. The Test of English as a Foreign Language is required of all students from non-English-speaking countries before admission. 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 Services. An effective knowledge of English is required as a condition of admission to graduate study; but foreign students wishing to improve their English may use the services and facilities offered by the Language Laboratory of the ESL (English as a Second Language) program in the Department of English.

Fees and Deposits

Regular fees and tuition for students in the Graduate School, for both residents of Oregon and nonresidents, currently total \$162.00 a term. Students holding graduate or research assistantships or fellowships which involve teaching or re-

search duties pay a special reduced fee of \$38.00 a term. For 7 term hours of work or less, students pay the regular part-time fee, ranging from a minimum of \$34.00 for 2 term hours to a maximum of \$114.00 for 7 term hours. Payment of full-time or part-time fees entitles a graduate student to all services maintained by the University for the benefit of students.

Graduate students must make a \$25.00 general 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 graduate student who has not been previously enrolled in the University of Oregon pays a \$10.00 application fee; this fee, which is not refundable, must be sent to the Office of Admissions with the student's application for admission. In some departments a student who is applying for a teaching or research assistantship may defer formal application for admission and payment of the application fee until negotiations for the assistantship are completed; in others, he must be formally admitted before his application is considered.

A special fee of \$20.00 is paid by all students who are granted doctor's degrees to cover the cost of the reproduction of their theses on microfilm or microcards.

Living Accommodations

Graduate students may live in the dormitories, which accommodate 3,144 undergraduate and graduate students, in facilities for married students, accommodating 656 families in privately owned apartments, or in rooms in private homes. The University maintains six dining halls for students.

Board and room costs in University dormitories currently are approximately \$388 for the fall term, \$259 for the winter term, and \$215 for the spring term—total of approximately \$862 for the academic year. Board and room charges are payable at the beginning of each term. If a student is unable to make the total payment at the beginning of the term, arrangements may be made for payment in two installments, the first at the beginning of the term and the second on a fixed date later in the term.

Dormitory applications should be made as early as possible before the opening of the school year, on an official form supplied by the Housing Office, Carson Hall, and must be accompanied by a room deposit of \$50.00. If a student cancels a fall term dormitory reservation before August 1, or winter- or spring-term reservation two weeks before the opening of the term, \$40 of the \$50 reservation deposit will be refunded; \$10 will be retained to cover the cost of processing the reservation and the refund. The full deposit, however, will be refunded if the student fails to qualify for admission to the University.

Facilities for married students include a wide variety of accommodations. Tuition rents range from \$42.50 to \$88.00. Applications should be made to the Housing Office, Carson Hall.

Assistantships, Fellowships

Teaching and research assistantships and fellowships are available to well-qualified graduate students. Applications should be made before March 1.

All persons holding these positions must enroll in the Graduate School, and are expected to enter a program leading to an advanced degree.

Teaching Assistantships. Nearly all schools and departments award graduate teaching assistantships. Stipends range from \$1,800 to \$2,800 for the academic year. 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 graduate 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.

Special Fellowship Programs. Graduate students at the University of Oregon are eligible for fellowship awards granted by the National Science Foundation, the National Institutes of Health, the Woodrow Wilson Foundation, and other endowed foundations. The University participates in the National Defense Education Act Program, Experienced Teacher Fellowship Program, Prospective Teacher Fellowship Program, NSF Traineeship Program, and the NSF Summer Traineeship Program for Teaching Assistants. Information concerning these programs may be obtained in the Graduate Office.

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

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

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

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

Kester Svendsen Fellowship in English. A \$3,500 fellowship is awarded annually by the Department of English to an advanced doctoral student in English, in memory of the late Kester Svendsen, who was head of the department from 1959 until his death in 1968.

Kester Svendsen Awards in English. The English Department grants three awards of \$500 each for summer study to doctoral students in English, in memory of the late Kester Svendsen.

Weyerhaeuser Fellowship. The Weyerhaeuser Company Foundation offers a \$2,250 fellowship to outstanding graduate students in business administration majoring in forest industries management. The award is made through the Forest Industries Management Center to encourage advanced professional training in this field.

Loan Funds

The University of Oregon administers student loan funds of approximately \$500,000. 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 application should be made through the Office of Financial Aids, Emerald Hall.

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

Guaranteed Student Loans. Banks and other lenders provide low-cost long-

term loans to students through a system of reserve funds held by state agencies or by private nonprofit agencies like United Student Aid Funds, Inc., for the guarantee of such loans against loss by the lender. The interest rate on these loans is generally seven per cent but borrowers who qualify may apply to have the interest paid by the Federal government until repayment begins.

Further information about financial assistance through loans, and application forms for loans, may be obtained from the Office of Financial Aids, Emerald Hall.

Health Service

The regular Student Health Service of the University is available to graduate students on the same basis as to other students. Through the Student Health Service the University strives to safeguard the health of its students by health education, medical treatment of disease, and limited psychiatric and counseling services.

The student health services in the institutions in the Oregon State System of Higher Education are supported by student registration fees and such charges as are necessary. Every student registered for credit is entitled to all the services of the Student Health Service. The Student Health Service is not open during the intervals between terms except for administrative functions.

The Student Health Service facility is new, designed and equipped to meet the rapidly changing concepts in medical treatment and the rapid growth of the University; it consists of out-patient departments, a 44-bed infirmary, including a modern isolation unit of four private beds, and the necessary laboratory, emergency, and administrative facilities. In general, medical services offered include: (1) general medical attention and treatment, including minor surgery (major surgery and other procedures requiring general anesthesia and specialists' services are referred); (2) 15-day free hospitalization in the Student Health Service facility during one academic year if recommended by a Health Service physician; (3) 24-hour daily emergency service; (4) routine laboratory procedures, including X-ray and clinical laboratory; (5) a pharmacy; (6) limited psychiatric and counseling services on an out-patient basis, supervised by a psychiatrist; (7) physical therapy.

Visits to the Student Health Service are by appointment, except for emergencies. An appointment can be made by telephone or by a visit to the Student Health Service. Appointments are not necessary for the Saturday morning clinic.

Charges are made against the breakage deposit for prescriptions, X-ray, laboratory procedures, and services such as immunizations and physical therapy, but every attempt is made to keep these as low as possible.

All expenses of, or connected with, surgical operations or specialized services must be borne by the student, including the services of a special nurse, when deemed necessary. Under no circumstances will the Health Service pay or be responsible for bills from private physicians or private hospitals.

The privileges of the Health Service are not available to members of the faculty.

Physical Examination and Immunizations. For protection of the public health, the Board of Higher Education requires of all students, as a condition for admission to the University: (1) a physical examination by a licensed M.D. or D.O. chosen by the student, and presentation of a record of this examination on an official form provided by the University; (2) an intradermal tuberculin test within six months of registration; and (3) proof, to the satisfaction of the University physician, of (a) immunization against smallpox within five years and (b) diphtheria-tetanus immunization within ten years unless medically contra-indicated.

If the student is enrolled in the University at the close of a five-year period following the first physical examination, a second examination may be required

a second examination may be required after a shorter interval, at the discretion of the University physician.

Students who decline immunizations because of religious conviction may be admitted, but only on the condition that they or (in the case of minor students) their parents or guardians agree in writing to assume all expenses incident to their care or quarantine, should they acquire smallpox, diphtheria, or tetanus while students at the University. This does not exempt them from the physical examination or the intradermal tuberculin test. However, the student may choose to have a chest X-ray in lieu of the skin test but must submit an annual chest X-ray report to remain in school.

Placement Services

Through a Student Placement Service, the University assists its students in obtaining part-time and vacation employment. Through a Graduate Placement Service, the University endeavors to help 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 qualify and wish to participate.

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

Theater. The University Theater presents dramatic productions ranging from classical drama to current plays and musicals in a well-equipped theater. Graduate students are welcomed as participants in these dramatic activities.

Museums and Collections. The University maintains three museums, the Museum of Art, the Museum of Natural History, and the Miniature Wagon Museum. The Museum of Art houses the Warner Collection of Oriental Art and carries on an active program of special exhibitions and lectures. The Museum of Natural History has divisions of anthropology, botany, geology, paleontology, and zoology. The Miniature Wagon Museum contains authentic miniatures of nineteenth- and early twentieth-century American carriages, coaches, and wagons.

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

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

Degrees and Regulations

The primary aim of undergraduate education is to prepare the student for cultured living and intelligent citizenship, and to acquaint him with techniques leading to a professional career. In graduate study, the dominant aim is the development of the scholar, capable of original thinking and of creative achievement in the advancement and extension of knowledge. Hence, a graduate degree indicates more than the mere completion of a prescribed amount of advanced study; it indicates that the student has shown both promise and performance in some field of independent scholarship.

At the University of Oregon, all study beyond the bachelor's degree, except strictly professional work in law, medicine, and dentistry, is administered through the Graduate School. The formulation of the graduate programs of individual students and the working out and direction of these programs are the responsibilities of the instructional department, subject, however, to the general rules and requirements of the Graduate School.

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

Doctor of Arts: English.

Doctor of Business Administration: business administration.

Doctor of Education: education, health, physical education, and recreation.

Doctor of Musical Arts: music.

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

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

Master of Architecture: architecture.

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

* See also "Interdisciplinary Master's Programs," pages 20-22.

GENERAL REGULATIONS

Master of Business Administration: marketing, insurance, and transportation, finance and business environment, accounting and business statistics, personnel and industrial management.

Master of Education: education.

Master of Landscape Architecture: landscape architecture.

Master of Library Science: librarianship.

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

Master of Urban Planning: urban planning.

General Regulations

Students wishing to earn a graduate degree at the University must be admitted to the Graduate School in accordance with the procedures described below.

Admission for Work Toward a Graduate Degree. To be admitted to the Graduate School for the purpose of seeking an advanced degree, a student must be a graduate of an accredited four-year college or university and must also be accepted by the professional school or major department in which he proposes to study.* The schools and departments of the University determine their own specific requirements for graduate admission, with which the student should familiarize himself before applying. Initial acceptance may be either *conditional* or *full*. If a student who has been conditionally admitted has not been granted full admission after he has completed 36 term hours of graduate course work, the Graduate School will inquire of his school or department as to the reason and recommend that a decision on the student's status be made as soon as possible.

Former University of Oregon students must be formally admitted to the Graduate School in the same way as students from other colleges and universities. A student who wishes to change his major must be formally admitted to the school or department in which he wishes to work for a degree.

An applicant should address inquiries concerning graduate admission to the department or school in which he plans to study, not to the Graduate School or the Office of Admissions.†

Documents Supporting Application. An applicant for admission to the Graduate School 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 department or school in which the applicant plans to study and the other to the Office of Admissions. The individual school or department may require other materials, such as scores on the Graduate Record Examination or Miller Analogies Test, or letters of recommendation. The applicant should ascertain from the school or department what additional material, if any, is expected.

Admission as an Unclassified Student. A student with a baccalaureate or higher degree who wishes to enroll in one or more courses, but not with the object of seeking a graduate degree or entering a formal graduate program, may be ad-

* Students from unaccredited institutions or from those which offer the equivalent of baccalaureate instruction but not the degree itself may be admitted under special procedures if they are accepted by a school or department.

† In exceptional circumstances, a student may not be certain, at the time he applies for admission, of the major department or professional school in which he wishes to work. Such a student may apply for admission directly to the Graduate School, rather than to a department or professional school, and, if accepted, will be advised by the Graduate School for a limited period of time. He should inquire of the Graduate School as to the specific entrance requirements and application procedures for such admission.

mitted to the University (*not* to the Graduate School) as an unclassified student. A student in this category must have permission from the instructor to enroll in any graduate course.

It should be emphasized that unclassified status is not designed to be probationary to acceptance in an advanced degree program; there is a specially designated *conditional* status for this purpose (see above). Rather, the unclassified category is intended to make it possible for individuals to enroll (with permission) in selected courses without the need to conform to degree requirements and without the expectation of a degree.

No credits earned after September 1, 1969, while in unclassified status may be applied toward an advanced degree.

Continuous Enrollment. A graduate student who has been admitted for work toward a graduate degree is required to enroll in the University each term during the regular academic year from the time of first enrollment until the completion of all degree requirements, including the awarding of the degree. In any term in which the student is making use of University services or facilities, he must enroll in a minimum of 3 term hours of course work. Ordinarily this work will be taken in residence, but a student may register by proxy for course work when, for example, he is living elsewhere and writing his thesis or dissertation, sending chapters of it to his adviser for criticism.

A student may register for on-leave status when he is not making use of any University facilities or placing any demands upon the faculty; in this case he pays no fees during the leave period. Leave status is granted for a stated period of time, normally not to exceed one calendar year. An exception is made for students who are able to pursue their master's degree work only in the summer term; these students must apply for leave status for the ensuing school year. They may request extensions of leave up to but not beyond the seven-year limitation on credit earned toward a master's degree. Students need not register for on-leave status for the summer term if they are registered for degree work during the fall, winter, and spring terms.

If a student has completed all degree requirements in the term before that in which the degree is to be awarded, he must register for on-leave status for the term in which he expects to receive his degree.

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

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

Course Registration Requirements. The maximum course load for a graduate student devoting all of his time to graduate study in a regular term or in an eleven-week summer session is 16 term hours; the minimum is 9 term hours. The maximum for a teaching or research assistant is 12 term hours. The maximum course load for an eight-week summer session is 13 term hours. Credit for work taken in excess of these maximums cannot be applied toward a degree.

All graduate students using campus facilities (including taking examinations for an advanced degree) or studying under the supervision of a member of the faculty are required to register for a minimum of 3 term hours of course work.

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

Students working for a master's degree with thesis are required to register for a minimum of 9 term hours in Thesis (503) before completing the program for the degree. Students working for a doctor's degree are required to register for a minimum of 18 term hours in Thesis before completing the program for the degree. With school or department approval, up to 3 of the 9 term hours in Thesis required for the master's degree and up to 6 of the 18 required for the doctorate may be in Research (501) instead.

Grade Requirement. A graduate student is required to earn at least a B grade-point average in all graduate courses taken in his degree program. 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 that the student's degree program is terminated, and he is dropped from the Graduate School. A course in which the student earns a grade of D will not carry graduate credit, but will be included in the computation of the student's GPA. F grades will also be included in the GPA computation.

In all divisions except the School of Law, Research (501) and Thesis (503) are classified as no-grade courses, and are disregarded in the calculation of the student's GPA.

Graduate 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 or as graduate service courses, or, in certain circumstances, as part of an interdisciplinary master's program (see pages 20-22). Graduate students taking courses in the 400s are expected to do work of a higher order and broader scope than the work of undergraduate students in the same courses. Undergraduate enrollment in the 400 courses designated (G) is generally restricted to seniors; undergraduate enrollment in 400 courses designated (g) is generally restricted to juniors and seniors.

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

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

Degree Requirements

Master's Degrees

Credit Requirements. For a master's degree, a student must complete an integrated program of study totaling not less than 45 term hours in courses ap-

proved for graduate credit, at least 24 of these hours being earned in graduate courses. Integration may be achieved either through a departmental major or through a program of interdisciplinary studies (see pages 20-22). For the master's degree with a departmental major, a minimum of two-thirds of the work (30 term hours) must ordinarily be in the major. A student earning a second master's degree in a different field is required to take not less than 30 term hours in his new major.

Residence Requirement. The minimum residence requirement for the master's degree 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 Division of Continuing Education of the Oregon State System of Higher Education, may be counted toward the master's degree under the following conditions: (1) the total of transferred credit may not exceed 15 term hours in a 45-hour master's-degree program; (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).

Distinction Between the M.A. and M.S. Degrees. For the M.A. degree, the student must show a competence in one foreign language; the level of proficiency and the method of determining that level are decided by his school or major department. There is no language requirement for the M.S. and professional degrees unless specified by the school or department.

Course Requirements. For the M.A. or M.S. degree with a departmental major, at least nine term hours in 500-599 courses are required.

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

Examinations. Qualifying and final examinations may be required in any field at the discretion of the department or school. The conduct and content of the examinations are departmental or school responsibilities.

Thesis. In some fields, all candidates for the master's degree are required to present a thesis; in others the thesis is optional or not required.

A student who writes a thesis should apply to his school or department for information on the various steps involved and the minimal standards expected. The student should also call at the Graduate School to learn the University rules regarding thesis style and format, number of copies required, abstracts, etc. Copies of the thesis will not be accepted by the Graduate School unless they meet specified standards of form and style.

Interdisciplinary Master's Programs

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

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

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

DEGREE REQUIREMENTS

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

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

Public Affairs.
Industrial Relations.

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

Public Affairs.
Industrial Relations.
Higher Education.
International Studies.

The established interdisciplinary programs approved by the Graduate Council are listed below. A student interested in one of these programs should direct his inquiry to the chairman, whose name is also listed: International Studies, John Gange; Asian Studies, Alfred Bloom; Juvenile Correction, Kenneth Polk; Public Affairs, Jarold Kieffer; Industrial and Labor Relations, Paul Kleinsorge; Dance, M. Frances Dougherty; Linguistics, Clarence D. Sloat.

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 Lloyd R. Sorenson, 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. The student must have a reasonable background of undergraduate study in education and in the field 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:

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: English, foreign language, geography, history, and mathematics.

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 must include work in at least three of the following fields: anthropology, economics, geography, history, political science, psychology, and sociology. A program in science must include work in at least three of the following fields: 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 remaining courses may include, with some restrictions, both the 400 (G) and 400 (g) series. 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 12 term hours in each of the specific fields 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.

The combined total of work transferred from other accredited institutions

and work done in the Division of Continuing Education of the Oregon State System of Higher Education cannot exceed 15 term hours.

Inquiries about the interdisciplinary programs for teachers in history, English, mathematics, geography, and foreign languages should be directed to the chairmen of these academic departments. Inquiries about programs in other areas should be directed to Lloyd R. Sorenson, Department of History.

Master of Business Administration

The requirements for the degree of Master of Business Administration are listed under COLLEGE OF BUSINESS ADMINISTRATION.

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 College 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 30 term hours of graduate work on the University campus.

Master of Fine Arts

The degree of Master of Fine Arts is granted for attainments and proven creative ability in the arts. It is currently offered by the Department of Fine and Applied Arts, the Department of English, and the Department of Speech. The primary requirement is the satisfactory completion of a creative project of high quality, but all candidates must satisfy minimum requirements of residence and study. Inquiries about additional departmental requirements for the degree should be addressed to the department concerned.

Every candidate for the M.F.A. degree must submit an extended creative work or project of high professional character. If the work is a verbal composition, the candidate must deposit with the Graduate School three clear copies that have been approved by the candidate's adviser and major department.

Master of Architecture

The requirements for the degree of Master of Architecture are listed under SCHOOL OF ARCHITECTURE AND ALLIED ARTS.

Master of Landscape Architecture

The requirements for the degree of Master of Landscape Architecture are listed under SCHOOL OF ARCHITECTURE AND ALLIED ARTS.

Master of Library Science

The requirements for the degree of Master of Library Science are listed under SCHOOL OF LIBRARIANSHIP.

Master of Music

The requirements for the degree of Master of Music are listed under SCHOOL OF MUSIC.

Master of Urban Planning

The requirements for the degree of Master of Urban Planning are listed under SCHOOL OF ARCHITECTURE AND ALLIED ARTS.

Doctor of Philosophy

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.

It is recommended that a student not take all his undergraduate and all his Ph.D. work at the University of Oregon.

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 academic year (three consecutive terms) must be spent in continuous residence on the Eugene campus of the University of Oregon or at the University of Oregon Medical School in Portland.

Language Requirement. Knowledge of a foreign language or of other specialized disciplines such as computer science or statistics may be required by individual schools or departments as part of a Ph.D. program. For information on such requirements, the student should consult the school or department directly.

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 school or department. Advancement to candidacy is contingent on passing these examinations. The student is not eligible to take the examinations until he has satisfied all other requirements except the completion of the dissertation and the final examination.

Advisory Committee. The advisory committee of the candidate for the Ph.D. degree determines the amount of work the student is to do for his degree, in light of his background and objectives. This committee is appointed by the head of the department or dean of the school in which the student is working. Its membership need not be approved by the Graduate School. The committee normally is made up of four members, with the student's adviser serving as chairman. It may or may not have an outside member, depending on the wishes of the department or school, which also may determine the time at which the committee is to be appointed.

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

Three clear copies of the thesis, including the original copy, approved and signed by the adviser, must be distributed by the student, unbound, to the members of his examining committee not less than four weeks before the time set for his final examination; at the conclusion of the examination, these copies, with required revisions, if any, are deposited in the office of the Graduate School. Copies of the thesis will not be accepted by the Graduate School 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 office of the Graduate School four weeks before the examination.

Final Examination Committee. The doctoral candidate's final examination committee must approve his dissertation and conduct his final oral examination. This committee may be composed of the members of the advisory committee (see above), but must include an outside member. It must be proposed to the Dean of the Graduate School not later than four weeks before the date of the final examination; the Dean officially appoints the committee, after approving its membership. This committee must include at least three members from the faculty of the candidate's major department or school, as well as a faculty member from another department or school of the University who represents a discipline different from the candidate's major field. The chairman is normally the candidate's dissertation adviser. More members may be added, subject to the approval of the Dean of the Graduate School, including professional persons not on the University faculty.

Final Examination. The final examination for a doctoral degree (whether Ph.D. degree or professional doctorate) must be taken not later than three calendar years after advancement to candidacy. Failure to complete requirements for the degree within this period will result in invalidation of the student's comprehensive examinations.

The final examination for the Ph.D. degree may be written in part but must include an oral examination of at least two 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.

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

Doctor of Business Administration

The requirements for the degree of Doctor of Business Administration are listed under COLLEGE OF BUSINESS ADMINISTRATION.

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, physical education, and recreation. 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 course related to his program. 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 in the School of Education 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. Students interested in the D.Ed. degree in the School of Health, Physical Education, and Recreation must meet requirements established by that school.

Doctor of Musical Arts

General Requirements. The degree of Doctor of Musical Arts in pedagogy has as its objective the preparation of college teachers of music who are qualified in two or more areas. Students will elect either music education or performance as a primary area, with a supporting area chosen from among the following: performance or music education, theory and musicianship, and history-literature.

Language Requirement. All students seeking the D.M.A. degree must demonstrate a reading knowledge of German. Students electing vocal pedagogy as either a primary or a supporting area within performance must meet the equivalent of the language requirement for the Master of Music degree: two years of one language and one year of each of two other languages, one of these three being German.

Residence. At least three years of full-time work beyond the bachelor's degree are required, of which at least one academic year (three consecutive terms beginning in the fall term) must be spent in continuous residence on the Eugene campus of the University of Oregon.

Comprehensive Examination. The student is required to pass two comprehensive examinations, one each in his primary and supporting areas. These comprehensive written 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) secured the approval of his dissertation proposal by his dissertation advisory committee, (4) received the approval of his adviser to take the examination, and (5) satisfied the language requirement.

Advancement to Candidacy. Advancement to candidacy is based on successful completion of foreign language and comprehensive examinations, approval of the student's dissertation proposal by his dissertation advisory committee, and the recommendation of his adviser that he be advanced to candidacy.

The Dissertation. Students whose primary area is music education must present a dissertation which reveals a mastery of the subject and is written in creditable literary style. Copies of the dissertation must be distributed by the student to the members of his examining committee, in accordance with the procedure outlined for the Ph.D. degree.

Students whose primary area is performance must submit a doctoral document consisting of recorded and written sections. Recordings of three public performances will form one section of the document. The written part together with at least one performance will focus upon a particular aspect of the candidate's performance area. These recorded and written documents constitute the candidate's doctoral dissertation. The three public performances may take a variety of forms and will be subject to approval of the candidate's committee. The first public performance will normally be given prior to the comprehensive examinations. The written document will be submitted to the candidate's committee no later than two weeks prior to the final oral examination.

Final Examination. The final examination is an oral examination at which the candidate is expected to defend his dissertation and to show a satisfactory knowledge of his major area. The examining committee consists of the candidate's advisory committee, including at least one member from a school or department other than the School of Music, subject to the approval of the dean of the Graduate School.

Procedure for Doctor's Degrees

Procedure	Responsible Agency	Chronology
1. <i>Admission</i> —see page 17.	Department or school.	First step.
2. <i>Course work and residence</i> —Student's advisory committee, appointed by school or department, determines the program, which must include three years of work beyond the bachelor's degree, and at least one year on the Eugene campus or at the Medical School in Portland.	Department or school.	After appointment of advisory committee.
3. <i>Foreign languages</i> — Where required.	Advisory committee; school or department.	Before comprehensive examination.
4. <i>Comprehensive examination</i> — covers the major discipline in a comprehensive manner; advances the student to candidacy for the degree.	Department or school.	After substantially all course work has been taken, and after all other requirements for the degree have been satisfied except the completion of the dissertation and the final examination; but at least one year before expected completion of all work for the degree.
5. <i>Thesis</i> —Required for all doctor's degrees.	Department or school.	After comprehensive examination, but not less than four weeks before final examination; thesis abstract must be filed with the Graduate School not later than four weeks before date of final examination.
6. <i>Application for degree.</i>	Registrar.	One month before the date of Commencement.
7. <i>Final examination</i> — Examining committee consists of at least three members from the faculty of the candidate's major department or school, as well as a faculty member from another department or school of the University and representing a discipline different from the candidate's major field.	Department or school.	After completion of thesis, course work, and residence requirements, but within three years of the comprehensive examination (otherwise a new comprehensive examination must be taken).
8. <i>Granting of degree.</i>	General faculty, on certification by Graduate School; Registrar.	After all requirements have been satisfied.
9. <i>Thesis reproduction fee</i> —\$20 fee required.	Business Office.	Before award of certificate of completion.
10. <i>Certificate of completion.</i>	Graduate School; Registrar.	At end of term in which all degree requirements are satisfied.
11. <i>Diploma.</i>	Registrar.	Dated as of Commencement.

Instruction

Anthropology

Professors: V. R. DORJAHN (department head), HOMER G. BARNETT, LUTHER S. CRESSMAN (emeritus), ALFRED G. SMITH, THEODORE STERN.

Associate Professors: DON E. DUMOND, PAUL E. SIMONDS.

Assistant Professors: C. MELVIN AIKENS, KENNETH A. BENNETT, RICHARD P. CHANEY, DAVID L. COLE, LE ROY JOHNSON, MALCOLM MCFEE, ANN G. SIMONDS, MICHAEL J. STANISLAWSKI, ROBERT TONKINSON, PHILIP D. YOUNG.

Instructors: FREDERICK D. McEVOY, RODNEY N. VLASAK.

Graduate work leading to the M.A. and Ph.D. degrees is offered with choice of specialization in archaeology, cultural anthropology, ethnology, linguistics, and physical anthropology. All degrees are in anthropology; this means that the student must demonstrate basic competence in archaeology, 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 fifth term of graduate study.

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

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

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

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

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

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

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

Anth 414. **Race and Culture.** (G) 3 hours. P. Simonds.

Anth 415. **Socialization in Primitive Society.** (G) 3 hours. McFee, Stern.

Anth 416. **History of Anthropology.** (G) 3 hours. Barnett, Stern.

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

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

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

- Anth 434, 435, 436. **Peoples of the Near East.** (G) 3 hours each term.
- Anth 437. **Peoples of Interior Asia.** (G) 3 hours.
- 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. Smith, Stern.
- Anth 444. **Religion and Magic of Primitives.** (G) 3 hours. McFee, Stern.
- Anth 445. **Folklore and Mythology of Primitives.** (G) 3 hours. McFee, Stern.
- Anth 446. **Art Among Primitives.** (G) 3 hours. McFee, Stern.
- Anth 450, 451, 452. **Cultural Dynamics.** (G) 3 hours each term. Barnett.
- Anth 453. **Primitive Value Systems.** (G) 3 hours. Barnett.
- Anth 454. **Applied Anthropology.** (G) 3 hours. Barnett.
- Anth 455. **Anthropology and Native Administration.** (G) 3 hours. Barnett.
- Anth 456, 457, 458. **Language, Culture, and Behavior.** (G) 3 hours each term. Smith.
- Anth 475. **Primate Behavior.** (G) 3 hours. P. Simonds.
- Anth 476. **Primate Anatomy.** (G) 3 hours. P. Simonds.
- Anth 477. **Principles of Taxonomy.** (G) 3 hours. Bennett.
- Anth 479. **Palaeoprimatology.** (G) 3 hours. P. Simonds.
- *Anth 501. **Research.** Hours to be arranged.
- Anth 502. **Research Methods in Anthropology.** Hours to be arranged. Chaney.
- *Anth 503. **Thesis.** Hours to be arranged.
- *Anth 505. **Reading and Conference.** Hours to be arranged.
- Anth 506. **Special Problems.** Hours to be arranged.
- Anth 507. **Seminar.** Hours to be arranged.
- Theory and Method of Archaeology:* Dumond, Johnson. *Field Methods in Ethnology:* Barnett. *Anthropological Theory:* Barnett. *The Negro in the New World:* Dorjahn. *Primate Behavior:* P. Simonds. *Fossil Man:* P. Simonds. *Evolution and Race:* P. Simonds. *Primitive Primates:* P. Simonds. *Modern Mexico:* Dumond. *Archaeology of the Circumpolar Region:* Dumond. *Archaeology of Western North America:* Cole, Cressman, Dumond. *Problems of Modern Africa:* Dorjahn. *West African Ethnology:* Dorjahn. *Reservation Indians:* McFee. *Modern Latin America:* Young.
- Anth 511. **Culture, Society, and the Individual.** 3 hours. Barnett.
- Anth 512. **The Beginnings of Civilization.** 3 hours. Aikens.
- Anth 514. **Primitive Social Organization.** 3 hours. Chaney.
- 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. Bennett, P. Simonds.
- Anth 523, 524, 525. **Archaeology of the New World.** 3 hours each term. Dumond, Stanislawski.
- Anth 530, 531, 532. **Cultural Ecology.** 3 hours each term. Dumond.

Architecture and Allied Arts

Professors: FREDERICK A. CUTHBERT (acting dean), GEORGE F. ANDREWS, WALLACE S. BALDINGER, THOMAS O. BALLINGER, JOHN L. BRISCOE, STANLEY W. BRYAN, HOWARD W. BUFORD, JACK W. BURGNER, ROBERT R. FEREN

* No-grade course.

ARCHITECTURE AND ALLIED ARTS

ROBERT S. HARRIS, WALLACE S. HAYDEN, GEORGE M. HODGE, JR., GEORGE S. JETTE, VINCENT LANIER, DAVID J. MCCOSH, MARION D. ROSS, WALLACE M. RUFF, JAN ZACH.

Associate Professors: PAUL BUCKNER, WILLIAM R. DALE, PHILIP DOLE, DAVID FOSTER, JANE A. GEHRING, ROBERT C. JAMES, LYMAN T. JOHNSON, GORDON L. KENSLE, WILLIAM KLEINSASSER, PATRICIA LAWRENCE, JUNE KING MCFEE, A. DEAN MCKENZIE, EARL E. MOURSUND, CARL NIEDERER, C. MAX NIXON, CHARLES B. RYAN, RICHARD A. SMITH, JAY V. SOEDER, DAVID STANNARD.

Assistant Professors: JUDITH BERG, MALCOLM CAMPBELL, WILLIAM R. DAVENPORT, MARIAN DONNELLY, ROBERT R. DVORAK, THOMAS FAWKES, JERRY FINROW, JOHN F. GILLHAM, PHILIP GILMORE, MYRON A. GURAN, WILLIAM H. HAVENS, ARTHUR W. HAWN, HARLOW E. HUDSON, LA VERNE KRAUSE, RONALD J. LOVINGER, GEORGE MILLER, RICHARD C. PAULIN, DONALD L. PETING, PASQUALE M. PICCIONI, CHARLES A. RAPP, JOHN S. REYNOLDS, DAVID N. RINEHART, JOHN E. STAFFORD, DALE M. TAYLOR, RICHARD L. UNRUH, LAWRENCE L. WALKER, JOHN J. WARNER, MORRIS YAROWSKY.

Lecturer: ESTHER J. LEONG.

Graduate work in the School of Architecture and Allied Arts is offered in each of the nine divisions of the school: architecture, landscape architecture, urban planning, 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, at least two faculty members are assigned to each graduate student at the earliest stage of his program; through this arrangement, a breadth of criticism is assured throughout the student's work on his terminal creative project.

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

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 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 broad and complex problem that can serve as a base for investigation of a specific area of concern; the problem 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 on a specific architectural problem such as user requirements, performance standards, the design process, environmental survey techniques,

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, or the project may be primarily a thesis related to some specific phase of the work of the profession.

(c) *Master of 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. (See also page 22.)

(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 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 or Master of Arts (in Art Education)*. For program of graduate study in art education on the elementary and secondary levels.

(d) *Doctor of Philosophy or Doctor of Education (granted by the School of Education) with a major in Art Education*. For programs of advanced graduate study in art education.

(4) For students desiring advanced work in the history of art.

(a) *Master of Arts*. An undergraduate major in art history or its equivalent is ordinarily prerequisite to graduate work in the department. A written qualifying examination is required before not more than fifteen hours of graduate study are completed. A reading knowledge of French or German, demonstrated in a written examination, is required. The ability to read both French and German is highly desirable. The student must present a program of study for approval by the department, including at least three graduate research seminars. A written thesis is required, for which a maximum of nine term hours of credit is allowed. An oral examination will be given on the thesis.

(b) *Doctor of Philosophy*. In addition to the requirements for the degree listed on pages 23-24 the following should be noted. The qualifying examination for admission to the program may be waived only for students who have taken their M.A. in this department with a superior record. The student must have passed

written examinations in both French and German by the end of the first year; demonstration of competence in other necessary languages may be required. The comprehensive examination includes three areas in art history: (a) two adjacent areas, of which one is that in which the dissertation will be written, and (b) a third, unrelated area. These areas are selected from an established list. The comprehensive examination should be taken before the completion of 45 credit hours beyond the M.A.

A reference library of 10,000 volumes is maintained in the school, along with a collection of 95,000 slides and 13,000 photographs. Photographic laboratory, wood shop, gallery workroom, and other supplemental facilities are available.

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

Architecture

Arch 420, 421, 422. **Building Materials and Construction**. (g) 3 hours each term. Hannaford.

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

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

*Arch 501. **Special Studies**. Hours to be arranged. Rinehart, Harris.

Arch 505. **Reading and Conference**. Hours to be arranged. Kleinsasser.

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

Research Methods. Smith.

Project Analysis and Development. Kleinsasser.

Arch 509. **Graduate Terminal Project**. Hours to be arranged.

Arch 529. **Ethics and Practice (Architecture)**. 2 hours fall or spring. Hayden.

Arch 541. **Architecture as Amenity**. 2-4 hours. Hayden.

Arch 542. **Architecture as Form**. 2-4 hours. Harris.

Arch 587. **Architectural Design**. 1 to 12 hours any term. Andrews.

Arch 599. **Architecture Workshop**. 2-4 hours any term. Hayden.

Interior Architecture

*Arch 501. **Special Studies**. Hours to be arranged. Johnson.

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

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

Arch 530. **Ethics and Office Practice (Interior)**. 2 hours.

Arch 588. **Interior Design**. 1 to 12 hours any term. Hawn.

Landscape Architecture

LA 411, 412, 413. **Parks, School Grounds, and Recreation Areas**. (g) 3 hours each term. Jette.

*LA 430, 431, 432. **Plant Composition**. (G) 3 to 6 hours each term.

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

LA 459. **Landscape Field Practice**. (G) 3 hours.

LA 460, 461. **Landscape Construction II**. (G) 3 hours each term. Quiner.

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

* No-grade course.

- LA 505. **Reading and Conference.** Hours to be arranged.
 LA 507. **Seminar.** Hours to be arranged.
 LA 509. **Graduate Terminal Project.** Hours to be arranged.
 LA 511. **Urban Open Spaces.** 1 to 6 hours.
 LA 512. **Landscape Planning Analysis.** 4 hours.
 LA 513. **The Urban Region.** 1 to 8 hours.
 LA 589. **Landscape Design.** 1 to 12 hours any term.

Urban Planning

- UP 499. **City Planning II.** (G) 1 to 6 hours any term. Dale.
 *UP 501. **Special Studies.** Hours to be arranged.
 UP 505. **Reading and Conference.** Hours to be arranged.
 UP 507. **Seminar.** Hours to be arranged.
Planning Administration.
 UP 508. **Seminar in Planning and Housing.** 2 to 3 hours any term. Dale.
 UP 509. **Graduate Terminal Project.** Hours to be arranged. Dale.

Fine and Applied Arts

Drawing, Painting, and Graphic Arts

- Art 480. **Lithography.** (g) 2 to 4 hours any term. McCosh.
 Art 483. **Intaglio Printing Methods.** (G) 2 to 4 hours any term. Krause.
 Art 490. **Advanced Painting.** (g) 2 to 4 hours any term. Fawkes, McCosh.
 Art 491. **Advanced Drawing.** (g) 1 to 4 hours any term. Ryan, Soeder.
 Art 492. **Composition and Visual Theory.** (G) 2 to 4 hours any term. Niederer.
 Art 493. **Visual Continuity.** (G) 1 to 3 hours any term. Foster.
 Art 495. **Cinemagraphics.** (G) 2 to 4 hours any term. Foster.
 Art 498. **Terminal Creative Project.** (G) Hours to be arranged.
 *Art 501. **Special Studies.** Hours to be arranged.
 Art 505. **Reading and Conference.** Hours to be arranged.
 Art 507. **Seminar.** Hours to be arranged.
 Art 509. **Terminal Creative Project.** Hours to be arranged.
 Art 580. **Graduate Studies in Print Making.** Hours to be arranged. Krause, McCosh, Miller.
 Art 590. **Graduate Studies in Painting.** Hours to be arranged. Fawkes, McCosh, Niederer, Ryan, Soeder.
 Art 591. **Graduate Studies in Drawing.** Hours to be arranged. Ryan, Soeder.
 Art 592. **Graduate Studies in Visual Theory and Design.** Hours to be arranged. Niederer.

Sculpture and Applied Design

- Art 455. **Advanced Ceramics.** (G) 2 to 4 hours any term. James.
 Art 456. **Advanced Weaving.** (G) 2 to 4 hours any term. Nixon.
 Art 457. **Advanced Jewelry and Metalsmithing.** (G) 2 to 4 hours any term. Nixon.
 Art 458. **Textile Printing.** (G) 2 to 4 hours. Gehring.

* No-grade course.

- Art 489. **Advanced Metal Casting.** (G) 3 hours.
 Art 494. **Advanced Sculpture.** (G) 2 to 4 hours any term. Buckner, Zach.
 Art 496. **Ceramic Sculpture.** (G) 2 hours any term.
 Art 498. **Terminal Creative Project.** (G) Hours to be arranged.
 *Art 501. **Special Studies.** Hours to be arranged.
 Art 505. **Reading and Conference.** Hours to be arranged.
 Art 507. **Seminar.** Hours to be arranged.
 Art 509. **Terminal Creative Project.** Hours to be arranged.
 Art 594. **Graduate Studies in Sculpture.** Hours to be arranged.

Art History

- ArH 411, 412, 413. **Ancient Art.** (G) 3 hours each term. Lawrence.
 ArH 421, 422, 423. **Mediaeval Art.** (G) 3 hours each term. McKenzie.
 ArH 431, 432, 433. **Renaissance Art.** (G) 3 hours each term. Berg.
 ArH 437, 438, 439. **History of Architecture II.** (G) 3 hours each term. Ross.
 ArH 440, 441, 442. **American Architecture.** (G) 3 hours. Donnelly, Ross.
 ArH 446, 447, 448. **Japanese Art.** (G) 3 hours each term. Baldinger.
 ArH 450, 451, 452. **Art in Latin America.** (G) 3 hours each term. Ross.
 ArH 461, 462, 463. **Chinese Art.** (G) 3 hours each term. Leong.
 ArH 464. **Russian Art.** (G) 3 hours. McKenzie.
 ArH 476, 477, 478. **Modern Art.** (G) 3 hours each term. Baldinger.
 *ArH 501. **Special Studies.** Hours to be arranged.
 *ArH 503. **Thesis.** Hours to be arranged.
 ArH 505. **Reading and Conference.** Hours to be arranged.
 ArH 507. **Seminar.** Hours to be arranged.
Ancient Art. Mediaeval Art. Renaissance and Baroque Art. American Art. Chinese Art. Indian Art. Slavic Art. Islamic Architecture. Prints and Drawings. History of Film and Photography.
 ArH 511, 512, 513. **The Art Museum.** 3 hours each term. Baldinger, Paulin.
 ArH 514. **Art History Bibliography.** 1 hour. Lawrence.

Art Education

- ArE 409. **Practicum.** (g) Hours to be arranged. Ballinger.
 ArE 411. **Methods and Research Materials: Art in Elementary Schools.** (G) 3 hours fall. Burgner.
 ArE 414. **Current Problems in Art Education.** (G) 3 hours spring.
 ArE 415. **The Role of Art Criticism in Art Education.** (G) 3 hours. Paulin.
 *ArE 501. **Special Studies.** Hours to be arranged.
 ArE 505. **Reading and Conference.** Hours to be arranged.
 ArE 507. **Seminar.** Hours to be arranged.
Foundations of Art Education: McFee. Art in Society: McFee. Curriculum Development in Art: McFee. Newer Media in Art Education: Lanier. Research Methodology in Art Education: Kensler. Art Criticism in Art Education: Paulin.
 ArE 532. **Supervision of Children's Art Laboratory.** 3 hours any term. Burgner.
 ArE 535. **Art and Architecture for the School Administrator.** 3 hours.

* No-grade course.

Asian Studies

The University offers an interdisciplinary program in Asian studies, leading to the Master of Arts degree. Students may elect one of three options: (1) a program of studies without thesis; (2) a program with thesis; or (3) a program combining work in Asian studies with work in a departmental field of specialization, leading to two master's degrees. The program is administered by an advisory committee.

Students electing option (1) must complete 54 term hours of graduate study, including 45 hours in Asian studies, and must submit two substantial research papers, developed in Asian studies seminars. Students electing option (2) must complete 48 term hours of graduate study, including 45 hours in Asian studies, of which 9 hours is earned for thesis. Students electing option (1) or (2) must take Asian studies courses in not less than three different disciplines and must earn 6 term hours of credit in Asian studies seminars, including an Asian studies interdisciplinary seminar offered once annually. Not more than 18 hours of credit in Japanese or Chinese languages may be counted toward the degree.

Students electing option (3) must complete 30 term hours in interdisciplinary Asian studies, including at least 3 hours in an Asian studies interdisciplinary seminar, and 45 term hours in a departmental field of specialization. A thesis, applying the methodology of the student's departmental field to an Asian studies subject, is required. A student completing this program is granted two M.A. degrees, in Asian studies and in his departmental field.

A candidate is required to demonstrate competence in an Asian language, relevant to his program, equivalent to the attainment expected after two years of college study.

For admission, a student is expected to have completed an undergraduate major in interdisciplinary Asian studies or in one of the departmental disciplines represented in the Asian studies program; he may, however, qualify for admission through the completion of 18 term hours of work in each of two disciplines pertinent to the Asian studies program. A student who has not completed Far East in Modern Times (Hst 391, 392, 393) or equivalent as an undergraduate must audit this sequence during his first year of graduate study.

The graduate program in Asian studies is supported by the following courses:

Anthropology—Peoples of Southern and Eastern Asia (Anth 438, 439, 440).

Art Education—Seminar: Art of the Himalayas (ArE 507).

Art History—Japanese Art (ArH 446, 447, 448).

Arts and Letters—Seminar: Modern Japanese Literature (AL 407); Seminar: Modern Chinese Literature (AL 407).

Geography—Eastern and Southern Asia (Geog 451).

History—History of China (Hst 494, 495, 496); History of Japan (Hst 497, 498, 499); Japanese Political Evolution Since 1912 (Hst 591); Seminar: Japanese Historiography (Hst 507); Seminar: China (Hst 507); Seminar: Japan (Hst 507); Colloquium: History of the Far East (Hst 508); Colloquium: Chinese Revolution (Hst 508); Colloquium: Japanese History (Hst 508).

Political Science—Government and Politics of the Far East: China (PS 460, 461); Seminar: Comparative Communist Systems (PS 507).

Religious Studies—Seminar: Buddhist Philosophy in India (R 407); Oriental Philosophies of Religion (R 430, 431, 432); Seminar: Religions in Japan (R 407).

Center for Japanese Studies. Graduate study and research in Japanese culture and civilization is sponsored through the University Center for Japanese Studies. The program of the center includes the direction of the work of graduate

students who choose Japan as an area of concentration for the M.A. degree in Asian studies. Through the center, advanced students are provided an opportunity to pursue part of their studies in Japan.

Biology

Professors: SANFORD S. TEPPER (co-chairman), GEORGE STREISINGER (co-chairman), CLARENCE W. CLANCY, MELVIN J. COHEN, PETER W. FRANK, PHILIP GRANT, GRAHAM HOYLE, JAMES KEZER, ROBERT W. MORRIS, AARON NOVICK, EDWARD NOVITSKI, PAUL L. RISLEY, BRADLEY T. SCHEER, J. ARNOLD SHOTWELL, WILLIAM R. SISTROM, ARNOLD L. SODERWALL, FRANKLIN W. STAHL, DONALD E. WIMBER.

Associate Professors: ANDREW S. BAJER, HOWARD T. BONNETT, ROBERT W. CASTENHOLZ, STANTON A. COOK, JANE GRAY, BAYARD H. MCCONNAUGHEY, FREDERICK W. MUNZ.

Assistant Professors: GEORGE C. CARROLL, JOHN C. FENTRESS, DONALD R. HAGUE, CHARLES B. KIMMEL, JOHN R. MENNINGER, WALTER R. MOBERLY, PAUL P. RUDY.

Instructors: RUDY DAM, HARRISON M. HOWARD, ARNOLD J. KARPOFF, GORDON J. MURPHY.

The department offers graduate work leading to the Doctor of Philosophy degree, and to the degrees of Master of Arts and Master of Science for students primarily interested in teaching careers in high school and junior college. The master's degrees are terminal in nature and usually are not taken before the Ph.D. degree.

Candidates for advanced degrees are expected to have met undergraduate major requirements or their equivalents before or as soon as possible after beginning graduate study. These requirements include year-long courses in Cell Biology (Bi 301, 302, 303) and Biology of Organisms (Bi 304, 305, 306), as well as one term of General Ecology (Bi 372) and two terms of electives. Also required are general chemistry, organic chemistry, general physics, and one year of college-level mathematics. Graduate study is offered in most of the basic areas of biology, both plant and animal, including cytology, development, ecology, genetics, marine biology, microbiology, morphology, neurobiology, physiology (comparative, general, mammalian, and plant), and systematics. Interdisciplinary programs are offered in developmental biology, neurobiology, and molecular biology, involving the three departments of biology, chemistry, and psychology, as well as the Institute of Molecular Biology.

Excellent facilities and equipment are available for research and study in the areas listed above ranging from ultracentrifuges, equipment for chromatography and amino-acid analysis, to an electron-microscope laboratory with three instruments, an herbarium in the Museum of Natural History, greenhouses, growth chambers, constant-temperature rooms, and photographic darkrooms. In a rich collecting area on the coast, the University operates the Oregon Institute of Marine Biology, providing instructional and research facilities throughout the year. The Institute of Molecular Biology (see page 102) is a center for research and research instruction in areas of biology where understanding can be found in terms of the properties of macromolecules. Staff members hold joint appointments in a department (biology, chemistry, or physics).

*Bi 408. **Laboratory Projects.** (G) Hours to be arranged.

Bi 414, 415, 416. **General and Comparative Physiology.** (G) 4 hours each term.

* No-grade course.

- Bi 417. **Introduction to Mammalian Physiology.** (g) 4 hours (summer session).
- Bi 418, 419, 420. **Comparative Physiology Laboratory.** (G) 2 hours.
- Bi 423. **Genetics.** (G) 5 hours. Clancy.
- Bi 424. **Human Genetics.** (G) 3 hours. Novitski.
- Bi 426. **Evolution.** (G) 3 hours.
- Bi 429. **Cytology.** (G) 4 hours. Wimber.
- Bi 432. **Mycology.** (G) 5 hours. Carroll.
- Bi 433. **Algae.** (G) 5 hours. Castenholz.
- Bi 435. **Methods of Pollen Analysis.** (G) 3 hours, spring term, alternate years. Gray.
- Bi 436. **Cenozoic Paleobotany.** (G) 3 hours, spring term, alternate years. Gray.
- Bi 438. **Systematic Botany.** (G) 5 hours.
- Bi 439. **Field Botany.** (G) 4 hours (summer session).
- Bi 440, 441, 442. **Biology of Vascular Plants.** (G) 5 hours each term.
- Bi 455. **Histology.** (G) 4 hours. Kezer.
- Bi 459. **Field Ornithology.** (G) 3 hours (summer session).
- Bi 461, 462. **Invertebrate Zoology.** (G) 4 hours each term.
- Bi 463. **Parasitology.** (G) 4 hours. McConnaughey.
- Bi 467. **Marine Invertebrate Types.** (g) 3 hours (marine institute).
- Bi 468. **Invertebrate Embryology.** (G) 4 hours (marine institute).
- Bi 471, 472, 473. **Principles of Ecology.** (G) 4 hours each term. Cook, Frank.
- Bi 475. **Limnology.** (G) 4 hours. Castenholz, Frank.
- Bi 476. **Biology of Marine Organisms.** (G) 8 hours (marine institute).
- Bi 477. **Planktonology.** (G) 4 hours (marine institute).
- Bi 478. **Marine Ecology.** (G) 4 hours (marine institute).
- Bi 481, 482. **Microbiology.** (G) 3 hours winter, 5 hours spring. Sistrom.
- Bi 484, 485. **Developmental Biology.** (G) 3 hours each term. Grant, Kimmel.
- Bi 491, 492, 493. **Historical Biogeography.** (G) 3 hours each term. Shotwell.
- Bi 494. **Laboratory and Field Methods in Biology.** (G) 4 hours, fall. Murphy.
- Bi 495. **History of Biological Ideas.** (G) 3 hours.
- *Bi 501. **Research.** Hours to be arranged.
- *Bi 502. **Supervised College Teaching.** Hours to be arranged.
- *Bi 503. **Thesis.** Hours to be arranged.
- *Bi 505. **Reading and Conference.** Hours to be arranged.
- *Bi 507. **Seminar.** Hours to be arranged.
- Animal Physiology. Botany. Cytology. Developmental Biology. Ecology. Genetics. Molecular Biology. Radiation Biology.*
- Bi 510. **Endocrinology Laboratory.** 1-3 hours.
- Bi 511. **Vertebrate Endocrinology.** 3 hours. Soderwall.
- Bi 512. **Physiology of Reproduction.** 3 hours. Soderwall, Risley.
- Bi 513. **Comparative Endocrinology.** 3 hours. Scheer.
- Bi 516, 517. **Neurophysiological Basis of Behavior.** 3 hours each term. Cohen, Fentress, Hoyle.
- Bi 519. **Neurophysiology Laboratory.** 3 hours. Cohen, Hoyle.

* No-grade course.

- Bi 520, 521, 522. **Advanced Genetics.** 2 hours each term. Novitski.
- Bi 523, 524, 525. **Principles of Microscopic Technique.** 2-4 hours each term.
- Bi 526. **Developmental Genetics.** 3 hours. Clancy.
- Bi 537, 538, 539. **Advanced Systematic Botany.** 3 hours each term. Not offered 1969-70.
- Bi 541. **Advanced Plant Physiology.** 3 hours.
- Bi 545. **Physiology and Ecology of Algae.** 3 hours. Castenholz.
- Bi 551. **Biology of Fishes.** 4 hours. Morris.
- Bi 597, 598, 599. **Advanced Biology.** 3 hours each term. Murphy, Tepper.

Chemistry

Professors: VIRGIL C. BOEKELHEIDE (department head), JOHN E. BALDWIN, SIDNEY A. BERNHARD, EDWARD HERBERT, LEROY H. KLEMM, ROBERT M. MAZO, RICHARD M. NOYES, WARNER L. PETICOLAS, FRANCIS J. REITHEL, JOHN SCHELLMAN, WILLIAM T. SIMPSON, DONALD F. SWINEHART, PETER H. VON HIPPEL, RAYMOND G. WOLFE.

Associate Professors: LLOYD J. DOLBY, GORDON G. GOLES, O. HAYES GRIFFITH, THOMAS W. KOENIG.

Assistant Professors: JOHN R. FROINES, J. F. KEANA, C. E. KLOPFENSTEIN, ALLAN R. LARRABEE, MICHAEL PHILPOTT.

Graduate work leading to the M.A., M.S., and Ph.D. degrees is offered in organic, physical, biochemistry, and geochemistry. 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.

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 a modern science complex, which has ample facilities for research and study, including a machine shop with four skilled instrument makers and a glass blower, and an adjoining "student" shop (directly accessible to graduate students). Graduate students also benefit from the presence of chemistry postdoctoral research fellows on the staff.

Teaching and research assistantships and postdoctoral fellowships are available. The department also awards National Defense Education Act fellowships, National Institutes of Health traineeships, and National Science Foundation traineeships. Additional information on these awards may be obtained at the time the student applies for admission. Although subject to variation, stipends of assistants and fellows, who usually have summer employment, range up to \$3,400 for the calendar year. During 1968-69, research projects in the Department of Chemistry were sponsored by the Army Research Office, the American Chemical Society, the Atomic Energy Commission, the National Institutes of Health, the National Science Foundation, the Office of Naval Research, the Research Corporation, the DuPont Corporation, the Texaco Fellowship, Dreyfus Foundation, and the Sloan Foundation.

For convenience, current research interests of the faculty are grouped as biochemistry, organic chemistry, and physical chemistry programs:

Biochemistry. Modern research into the chemistry of the living cell involves studies of macromolecules, their organization, and their functional regulation. Current areas of interest include the structure and function of DNA, DNA-protein complexes and transfer RNA, protein structure and function and the assembly of subunits, enzyme catalytic mechanisms, lipid-protein interactions, and the physiological significance and biosynthesis of alkaloids.

The interaction of these programs with the departments of Biology and Physics is greatly strengthened by ties with the Institute of Molecular Biology. For example, a protein X-ray crystallographic facility, to be located in the Institute of Molecular Biology, under the direction of a member of the physics faculty, will be available to interested students in chemistry.

In 1967 the Department of Chemistry joined with the departments of Biology and Psychology and the Institute of Molecular Biology in launching a major interdisciplinary program in the areas of macromolecular chemistry, developmental biology, and neurobiology. Entering graduate students in chemistry are in an excellent position to take advantage of this molecularly oriented avenue to biological problems.

Organic Chemistry. Research problems in organic chemistry under active investigation cover a broad spectrum of interests ranging from structural elucidation and physiological activity, problems in synthesis, mechanistic studies, applications of both established and new physical methods, and the use of theory in calculations and predictions of the properties of organic molecules. Specific problems in the area of natural products and physiologically-active compounds include studies of the total synthesis of gibberellic acid, tetrodotoxin, echitamine, mava-curine and certain other indole alkaloids, lignans, and potential new antimalarials.

Mechanistic studies embrace the use of kinetics, isotopic labeling, secondary isotope effects, configurational changes, and photochemical, electrochemical and thermal behavior as probes for examining cycloaddition reactions, various free radical reactions, rules governing conservation or orbital symmetry, nitroxide chemistry, the role of solvent, diffusion control of fast reactions in solution, and heterogeneous catalysis. Synthesis of unusual molecules having substituents within the cavity of the pi-electron cloud are being made to provide data for a better theoretical understanding of aromaticity. Computer methods are being applied both to facilitate routine spectral measurements as well as to extend the range and enhance the power of these established methods.

Physical Chemistry. Research interests include molecular spectroscopy, theoretical chemistry, chemical dynamics, biophysics, and physical geochemistry. Current interest extends from reactions of diatomic molecules to the conformations of complex biological macromolecules. Specific theoretical work includes the study of molecular electronic state spectra, equilibrium and nonequilibrium statistical thermodynamics, bond-excitons, charge transfer and conducting states of large hydrocarbon molecules, statistical theories of transport processes, theory of very fast chemical reactions, second quantization treatment of molecular exciton Hamiltonians, spin Hamiltonians, theory of vibronic mixing in two and three photon processes, and the theory of optical rotatory dispersion. Interdisciplinary cooperation with the departments of physics and mathematics is encouraged and actively supported through ties with the Institute of Theoretical Sciences. In addition, a chemical physics program is available for interested graduate students.

Current experimental studies include vacuum ultraviolet spectroscopy, the reaction mechanisms of diatomic molecules, gas phase kinetics and mass spectroscopy of small molecules, Raman and two- and three-photon spectroscopic processes involving the scattering and absorption of laser light, flash photolysis, neutron activation analysis of lunar and terrestrial volcanic samples, experimental studies of factors which determine the three-dimensional structure of proteins and nucleic acids, electron spin resonance of spin labeled macromolecules, fluorescence spectroscopy and energy transfer in aromatic molecules and nuclear magnetic resonance of membrane models.

A booklet giving complete details of the graduate program and degree requirements is available on request to the department.

Ch 409. **Special Laboratory Problems.** (G) Hours to be arranged.

Ch 411, 412. **Physical-Inorganic Chemistry.** (G) 3 hours each term, fall and winter.

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

Ch 419. **Advanced General Chemistry.** (g) 4 or 5 hours (summer session).

Ch 429. **Survey of Analytical Chemistry.** (g) 4 or 5 hours (summer session).

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

Ch 441, 442, 443. **Physical Chemistry.** (g) 4 hours each term.

Ch 446, 447, 448. **Physical Chemistry Laboratory.** (g) 3 hours each term.

Ch 461, 462, 463. **Biochemistry.** (G) 3 hours each term.

Ch 464. **Biochemistry Laboratory.** (G) 4 hours winter.

*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.

Organic Chemistry. Physical Chemistry. Biochemistry. Molecular Biology.

Ch 508. **Special Topics in Theoretical Chemistry.** 2 or 3 hours.

Ch 531, 532, 533. **Advanced Organic Chemistry.** 3 hours each term.

Ch 534, 535, 536. **Special Topics in Organic Chemistry.** 2 or 3 hours each term.

Ch 541, 542, 543. **Chemical Kinetics.** 3 hours each term.

Ch 544, 545, 546. **Quantum Chemistry.** 2 or 3 hours each term.

Ch 551, 552. **Chemical Thermodynamics.** 3 hours each term, fall and winter.

Ch 553, 554. **Statistical Thermodynamics.** 3 hours each term, fall and winter.

Ch 561, 562, 563. **Enzymes and Intermediary Metabolism.** 2 or 3 hours each term.

Ch 564, 565, 566. **Physical Biochemistry.** 2 or 3 hours each term.

Classics

Professor: F. M. COMBELLACK (department head).

Associate Professor: C. B. PASCAL.

Assistant Professor: STEPHEN C. SHUCARD.

Graduate programs are offered in the field of classical studies leading to the degree of Master of Arts in (1) Greek, (2) Latin, and (3) Classics. The first two indicate that the student has concentrated his graduate work in either Greek or Latin. The degree in (3) Classics indicates that he has taken graduate work in both Greek and Latin. All three programs require 45 term hours of graduate work. Students taking the degree in (1) Greek or (2) Latin will ordinarily be expected to take some work in the other language unless they have already done so. Students who have not already had a year course in ancient history will be expected to include ancient history in their graduate program and may include work in classical art and archaeology. Students have the option of writing a thesis or of making a special study of a Greek or Latin author.

Greek

CL 407. **Greek Seminar.** (G) Hours to be arranged.

CL 411. **Thucydides.** (G) 3 hours. Combellack.

CL 412. **Aeschylus.** (G) 3 hours. Combellack, Pascal.

* No-grade course.

- CL 413. **Theocritus.** (G) 3 hours. Combellack, Pascal.
 CL 414. **Plato's Republic.** (G) 3 hours. Combellack, Pascal.
 CL 415. **Aristotle's Ethics.** (G) 3 hours. Combellack.
 CL 416. **Greek Lyric Poetry.** (G) 3 hours. Combellack, Shucard.
 *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. Combellack, Shucard.

Latin

- CL 408. **Latin Seminar.** (G) Hours to be arranged.
 CL 447, 448, 449. **Latin Prose Composition.** (G) 1 hour each term.
 CL 461. **Propertius and Tibullus.** (G) 3 hours. Combellack.
 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. Combellack, Pascal.

College Teaching

The University offers instruction and supervised experience in college teaching for graduate students who plan careers in higher education, including a seminar in higher education, conducted through the Institute for College Teaching (see page 107), and programs of supervised teaching in special fields conducted by the several instructional divisions.

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

Comparative Literature

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

For admission to the program, a candidate should normally have an undergraduate major in one literature plus competence in two foreign languages. Candidates for both the master's and doctor's degrees are expected to take Introduction to Comparative Literature (AL 514, 515, 516) or equivalent.

M. A. Degree. The candidate must demonstrate competence in two languages, in addition to English, by examination or by completing literature courses in the language. At least one of the languages must be chosen from the following list: French, German, Greek, Italian, Latin, Russian, Spanish. The student's graduate

* No-grade course.

course program must include a minimum of 9 term hours in comparative literature courses or seminars. Most or all of the remaining course work is selected from two fields of literature.

For the M.A. degree, the writing of a thesis is optional. Both thesis and non-thesis candidates take written examinations covering reading lists of works from world literature and from their chosen literatures, normally followed by an oral examination over the reading lists and course work. The oral examination for thesis students also covers the thesis.

Ph.D. Degree. Before taking the comprehensive examination, candidates must demonstrate competence in three languages. One must be either Latin or Greek. At least one other must be chosen from the list prescribed for M.A. candidates. In addition to AL 514, 515, 516, the program includes comparative literature courses in a period or genre and a course in literary criticism. For his total study program, each candidate chooses (1) a literature of specialization, from English, German, Greek, Italian, Latin, Romance, and Russian literatures; (2) a second literature; and (3) a period of Western literature for comparative study (five periods of nonclassical literature are recognized; mediaeval, Renaissance, Enlightenment, romantic, modern). Comprehensive written examinations cover the literatures and the period chosen for comparative study.

The following courses provide literary study from a comparative viewpoint:

- AL 477, 478, 479. **Dante and His Times.** (g) 3 hours each term. Beall.
 AL 507. **Seminar.** Hours to be arranged.
Mediaeval Literature: Hart. *Preromanticism and the Romantic Movement in Continental, English, and American Literature:* Ball. *Comparative Studies in Modern Literature:* Ball.
 AL 514, 515, 516. **Introduction to Comparative Literature.** 3 hours each term. Hart.
 AL 586, 587. **Comparative Literary Criticism.** 3 hours each term. Beall.

Dental Sciences

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

Economics

Professors: ROBERT CAMPBELL, RICHARD M. DAVIS, CORWIN D. EDWARDS, PAUL L. KLEINSORGE, H. T. KOPLIN, RAYMOND F. MIKESSELL, BARRY N. SIEGEL, PAUL B. SIMPSON, MARSHALL D. WATTLES.

Associate Professors: MYRON A. GROVE (department head), GERALD O. BIERWAG, HENRY N. GOLDSTEIN, ROBERT E. SMITH, JAMES N. TATTERSALL.

Assistant Professors: CHULSOON KHANG, PETER A. LUNDT, W. E. WHITELAW.

The Department of Economics offers graduate work leading to the M.A., M.S., and Ph.D. degree. Applicants for admission must submit the following to the department: (1) scores in the Graduate Record General Aptitude Examination and the Advanced Test in Economics; (2) three letters of recommendation;

(3) complete transcripts of previous work. Applicants whose native language is not English must also submit their score in the Test of English as a Foreign Language.

All candidates for graduate degrees must have a basic knowledge of statistics. This requirement may be satisfied with Elements of Statistical Methods (Mth 425, 426, 427); or with courses agreed to by the department.

Master's Degree. Economic Theory (Ec 375, 376, 377), or Advanced Economic Theory (Ec 558, 559, 560) is required preparation for work toward a master's degree in economics.

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

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

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

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

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

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

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

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

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

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

Ec 429, 430, 431. **Public Finance.** (G) 3 hours each term. Grove, Whitelaw.

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

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

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

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

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

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

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

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

Ec 460, 461, 462. **Industrial Organization and Public Policy.** (G) 3 hours each term. Edwards, Smith.

Ec 463. **Economics of Regulated Industries.** (G) 3 hours winter. Smith.

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

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

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

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

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

Ec 490, 491, 492. **Development of Industrial Economics.** (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.

Industrial Organization and Control: Edwards, Smith. *Economic History:* Tattersall. *History of Economic Thought:* Campbell, Davis. *Labor Economics:* Kleinsorge, Smith. *International Economics:* Mikesell, Goldstein. *Money and Credit:* Siegel. *Mathematical Economics:* Simpson, Khang. *Econometrics:* Bierweg, Khang. *Public Finance:* Grove, Whitelaw.

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

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

Ec 558, 559, 560. **Advanced Economic Theory.** 3 hours each term. Bierweg, Davis, Khang, Koplin.

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

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

Education

Professors: PAUL B. JACOBSON (dean), MAX G. ABBOTT, HAROLD ABEL, MARTIN H. ACKER, CURTIS E. AVERY, FORREST L. BRISSEY, RICHARD O. CARLSON,

* No-grade course.

WERRETT W. CHARTERS, JOHN E. DEJUNG, EUGENE DILS, KENNETH A. ERICKSON, GRACE GRAHAM, N. RAY HAWK, ARTHUR C. HEARN, PAUL E. KAMBLY, JOHN LALLAS, VINCENT LANIER, JOHN LOUGHARY, RAYMOND N. LOWE, ROBERT H. MATTSON, ARTHUR MITTMAN, ROBERT N. NYE, GERALD PATTERSON, ARTHUR PEARL, ADOLPH A. SANDIN, RICHARD A. SCHMUCK, GUY SHELLENBARGER, VERNON S. SPRAGUE, JOHN E. SUTTLE, DONALD E. TOPE, WENDELL L. VAN LOAN, HUGH B. WOOD.

Associate Professors: KEITH ACHESON, BARBARA BATEMAN, CHESTER BOWERS, DOROTHY N. CANDLAND, BARTON E. CLEMENTS, HENRY F. DIZNEY, TERRY EIDELL, VERNON K. ESESETH, E. COSTON FREDERICK, JOHN HANSEN, GORDON KENZLER, GERALD KRANZLER, WAYNE LANCE, LLOYD L. LOVELL, MELTON C. MARTINSON, ESTHER MATTHEWS, JUNE MCFEE, FRANCIS NICKERSON, VERNICE T. NYE, HENRY OSIBOV, HERBERT PREHM, JESSIE PUCKETT, RICHARD RANKIN, MILDRED M. ROBECK, RONALD J. ROUSSEVE, OSCAR F. SCHAAF, CLARENCE SCHMINKE, FRANCES G. SCOTT, GEORGE SHEPERD, ROBERT SYLWESTER, ANDREW THOMPSON, SAUL TOOBERT, CARL WALLEN, RONALD WALLER, RUTH WILLARD, MILDRED WILLIAMS, HARRY F. WOLCOTT.

Assistant Professors: FRANCIS A. BENSON, ROBERT BOWLIN, HAZEL BRESLIN, PHILIP BROWNING, JAMES CROSSON, GORDON DUDLEY, VERNE DUNCAN, SUSAN GILMORE, ERIC HOUGHTON, JAMES HOTCHKISS, JAMES JOHNSTON, J. ARTHUR KEITH, NORBERT MAERTENS, GREGORY MALBY, JAMES M. MCLEOD, LEW B. MYERS, PATRICIA POND, GAYLORD RYBOLT, HELEN SIMMONS, DIRK P. TEN BRINKE, HILL WALKER.

Senior Instructors: JAMES BOOTH, HAZEL HOLBOKE, SUSAN MILLER, EVA O'NEIL, NONDA STONE, RUTH WAUGH.

Instructors: CYRUS BLAIR, JACQUELINE BROCKWAY, GARY BURTON, LARRY ENGELSON, GARY FERRINGTON, ROBERT FUNK, EDNA KEHL, GLENN MADSEN, PAUL TUCKER.

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

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

Master's Degree. All graduate students in education are expected to be knowledgeable about the total structure of the field of education. Thus, the graduate program in any area should include some work in social foundations, psychological foundations, philosophical and historical foundations, and measurement and research.

A major in school administration is not offered in a master's-degree program. Persons looking forward to administrative positions in public education should plan either the two-year graduate program in educational administration or work toward the doctorate in educational administration. Those aspiring to positions of educational leadership should think in terms of at least two years of graduate work beyond the baccalaureate degree.

Persons who would like to include enough work in administration to qualify either as elementary or secondary principals should plan a major in either elementary education or secondary education in their master's-degree program.

Each student has complete freedom to elect the area of education in which he desires to specialize. However, within each selected area the student is expected

to take a basic core of specified courses. The remaining courses for the completion of graduate work for a master's degree may be elected, but they must be selected with the aid of an adviser in order to provide for a rationally unified program of study. The requirement of a research project, field study, or thesis is optional, at the discretion of the adviser, depending on the student's area of specialization.

Work leading to the master's degree is offered in several areas of education. Students should write to the Graduate Personnel Office of the College 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 College of Education are recommended to the student to supplement his academic program in education.

Candidates for the doctor's degree are required to be in residence on campus for at least three consecutive terms, to be registered for at least 9 hours of credit each term of residence, to devote their major attention and mental energy to their studies, and to take full advantage of the total resources of the University in the pursuit of their programs.

The satisfaction of the residence requirement begins with the term in which an approved program has been developed and filed in the Graduate Personnel Office of the College of Education.

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

At the present time programs of specialization are offered in the following six departments. Specific requirements are available from department heads.

- (1) Counseling, John Loughary, head.
- (2) Curriculum and Instruction, C. W. Schminke, head. Areas of concentration: Curriculum and Supervision; Elementary Education; Secondary Education; Early Childhood Education; Disadvantaged Youth.
- (3) Educational Administration, Donald E. Tope, head. Areas of concentration: General Administration; Elementary Administration; Secondary Administration; College Student Personnel Administration.
- (4) Educational Foundations, C. A. Bowers, head.
- (5) Educational Psychology, Arthur Mittman, head. Areas of concentration: School Psychology; Human Development; Measurement and Research.
- (6) Special Education, Robert H. Mattson, head. Areas of concentration: Mentally Retarded; Extreme Learning Problems; Social-Emotional Problems; Physically Handicapped; Administration of Special Education Programs.

Cooperative programs are also available in the following departments:

- (1) Art Education, Vincent Lanier, head.
- (2) Music Education, Robert E. Nye, head.

Supporting Area. An approved supporting core of course work comprising a

minimum of 30 term hours must be included in the doctoral program. This supporting core of work may be drawn from one of the areas listed above and including Higher Education and Measurement and Research, or from without the College of Education in areas such as art education, music education, speech education, or other professional school areas. It can also be an appropriate liberal arts area if formal arrangements have been made with the department. The program developed in the supporting area must be approved by a faculty member in the area.

Foundation Areas. Doctoral students are required to include in their program at least one basic course in each of the following areas:

(a) Psychological theories and processes in education. Courses from which selection usually is made are: Developmental Psychology (Psy 460); Advanced Educational Psychology (Ed 529, 530, 531); Psychology of Exceptional Children (Ed 462); Group and Individual Differences (Psy 441).

(b) Social foundations. Courses from which selection is usually made are: Social Education (Ed 491); Urbanization, the Pupil, and the School (Ed 542); Seminar: Scope and Method of the Social Sciences (Soc 507); Race and Culture (Anth 414).

(c) Philosophical and historical foundations. Courses from which selection is usually made are: Modern Philosophies of Education (Ed 445); History of Education (Ed 440); History of American Education (Ed 441); History of American Thought and Culture (Hst 460, 461, 462).

Research Areas. In the Ph.D. program, a student is required to complete a minimum of 9 term hours of course work in research techniques and enroll for three terms in Seminar: Thesis (Ed 507) (1 term hour each term). In the Ed.D. program, a student is required to complete 3 term hours of research techniques and enroll in the Thesis seminar for at least one term hour. Courses from which students elect usually include the following: Educational Statistics (Ed 515, 516 or PE 540, 541 or Math 425, 426, 427), Research Procedures (Ed 512), and Historical Method (Hst 520).

Counseling

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

Issues in Counseling: Dudley, staff. *Appraisal in Counseling I:* Kranzler. *Appraisal in Counseling II:* Rybolt. *Occupational Information:* Matthews. *Group Counseling:* Clements, Toobert, Waller. *Moral Issues in Counseling:* Gilmore. *Family Counseling.* *Research in School Counseling:* Kranzler. *Research in Rehabilitation Counseling:* Rybolt. *Research in Counseling:* Loughary. *Rehabilitation of the Mentally Retarded:* Rybolt. *Interdisciplinary Consultation.*

*Ed 409. **Practicum.** (G) Hours to be arranged.

Introduction to Counseling: Clements, Brockway, staff. *Elementary-School Counseling:* Kranzler. *Secondary-School Counseling:* Matthews, Clements, Dudley, Roussève, Brockway. *Rehabilitation Counseling:* Rybolt, Waller. *Community College Counseling.* *College Counseling:* Gilmore, Toobert, Dudley. *Group Counseling:* Clements, Waller, Toobert. *Family Counseling.*

Ed 485. **Principles and Practices of Guidance Services.** (G) 3 hours. Roussève.

Ed 488. **Educational and Vocational Guidance.** (G) 3 hours. Matthews.

Ed 492. **Functional Aspects of Physical Disability.** (G) 3 hours. Waller.

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

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

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

* No-grade course.

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

Seminar in Counseling Psychology: Gilmore. *Counseling Procedures I:* Waller. *Counseling Procedures II:* Toobert. *Counseling Procedures III:* Waller. *Appraisal in Counseling I:* Kranzler. *Appraisal in Counseling II:* Rybolt. *Moral Issues in Counseling:* Gilmore. *Counseling Supervision:* Clements. *Community College Counseling.* *Research in Counseling:* Loughary. *Research in Vocational Development:* Matthews. *Developmental Counseling and the Human Career:* Matthews. *Imagination and Learning:* Dudley. *Philosophy of Science and Behavior:* Dudley. *Advanced Counseling Theory:* Dudley. *Evaluation of Work Potential:* Waller. *Management and Supervision in Public Agencies:* Waller. *Counseling Techniques for Exceptional Children:* Rybolt.

*Ed 508. **Workshop.** Hours to be arranged.

Ed 509. **Practicum.** Hours to be arranged.

Elementary-School Counseling: Kranzler. *Secondary-School Counseling:* Matthews, Clements, Dudley, Roussève, Brockway. *Rehabilitation Counseling:* Rybolt, Waller. *Community College Counseling.* *College Counseling:* Gilmore, Toobert, Dudley. *Group Counseling:* Clements, Toobert, Waller. *Family Counseling.*

Ed 526. **Counseling Theories.** 3 hours. Gilmore.

Ed 570. **Advanced Functional Aspects of Physical Disability.** 3 hours. Not offered in 1969-70.

Ed 589. **Organization and Administration of Guidance Services.** 3 hours. Roussève.

Curriculum and Instruction

Elementary Education

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

Ed 409. **Practicum.** (G) Hours to be arranged.

Ed 451. **Early Childhood Education.** (G) 3 hours.

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

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

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

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

Reading. Evaluation of Elementary School Programs. *Elementary School Mathematics.* *Elementary School Social Studies.* *Primary Education.* *Analysis of Teaching.* *Language Arts.*

*Ed 508. **Workshop.** Hours to be arranged.

Ed 509. **Practicum.** Hours to be arranged.

Ed 534. **Science in the Elementary School.** 3 hours. Sylwester.

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. Waller.

Ed 538. **Mathematics in the Elementary School.** 3 hours. Schminke, Maertens.

Ed 599. **Administrative and Curricular Practices in Elementary Schools.** 3 hours.

Secondary Education

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

Ed 420. **The Student Council in the Secondary School.** (G) 3 hours.

* No-grade course.

- Ed 427. **School Activities.** (G) 3 hours. Shellenbarger.
 Ed 484. **The Junior High School.** (G) 3 hours. Hansen.
 *Ed 501. **Research.** Hours to be arranged.
 *Ed 503. **Thesis.** Hours to be arranged.
 Ed 505. **Reading and Conference.** Hours to be arranged.
 Ed 507. **Seminar.** Hours to be arranged.
 *Ed 508. **Workshop.** Hours to be arranged.
 Ed 585. **Instructional Practices in Secondary Schools.** 3 hours.
 Ed 593. **Methods in Secondary-School Language Arts.** 3 hours.
 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.

Reading and Language Arts Center

- Ed 407. **Seminar.** (G) Hours to be arranged.
Social-Emotional Problems: Hotchkiss. Careers in a Changing World: Pearl. Alienation of Youth from Education: Pearl. Life Styles of the Poor: Pearl.
 Ed 409. **Practicum.** (G) Hours to be arranged.
Diagnostic-Remedial Clinic: O'Neil. Diagnostic-Remedial Clinic: Bateman. Social-Emotional Problems: Hotchkiss. Disadvantaged Youth: Pearl.
 Ed 428. **Psychology of Reading Instruction.** (G) 3 hours. Bateman.
 Ed 429. **Principles of Remedial Education.** (G) 3 hours. Bateman.
 Ed 465. **Diagnostic Techniques in the Basic Skills.** (G) 3 hours. O'Neil.
 Ed 468. **Remedial Techniques in the Basic Skills.** (G) 3 hours. O'Neil.
 Ed 469. **Reading in High School and College.** (G) 3 hours. Frederick.
 *Ed 501. **Research.** Hours to be arranged.
 *Ed 503. **Thesis.** Hours to be arranged.
 Ed 505. **Reading and Conference.** Hours to be arranged.
 Ed 507. **Seminar.** Hours to be arranged.
Advanced Problems in Theory of Learning Disorders. Advanced Problems in Research in Learning Disorders. Advanced Problems in Diagnosis-Remediation of Learning Disorders. Extreme Learning Difficulties. Advanced Reading in High School: Frederick.
 *Ed 508. **Workshop.** Hours to be arranged.
 Ed 509. **Practicum.** Hours to be arranged.
Diagnosis and Treatment of Extreme Learning Problems: O'Neil. Disadvantaged Youth: Pearl. Social and Behavior Disorders: Bateman, Hotchkiss

Curriculum and Supervision

- Ed 435. **Audiovisual Aids.** (G) 4 hours.
 *Ed 501. **Research.** Hours to be arranged.
 *Ed 503. **Thesis.** Hours to be arranged.
 Ed 505. **Reading and Conference.** Hours to be arranged.
 Ed 507. **Seminar.** Hours to be arranged.
 *Ed 508. **Workshop.** Hours to be arranged.
 Ed 522. **Secondary-School Curriculum.** 3 hours. Hearn.
 Ed 527. **Secondary-School Administration and Supervision.** 3 hours. Hearn.

* No-grade course.

- 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.
 Ed 559. **Evaluation of Secondary-School Programs.** 3 hours. Hearn.
 Ed 560. **Secondary-School Problems.** 3 hours. Hearn.
 Ed 565. **Curriculum Foundations.** 4 hours. Wood.
 Ed 566. **Curriculum Construction.** 4 hours. Wood.
 Ed 567. **Curriculum Materials.** 4 hours. Wood.
 Ed 571. **Junior-High-School Curriculum.** 3 hours. Hearn.
 Ed 574. **School Supervision.** 3 hours.

Educational Administration

- *Ed 501. **Research.** Hours to be arranged.
 *Ed 503. **Thesis.** Hours to be arranged.
 Ed 505. **Reading and Conference.** Hours to be arranged.
 Ed 507. **Seminar.** Hours to be arranged.
Administrative Problems: Jacobson, Tope, Carlson. Advanced School Law: Osibov. Anthropology in Educational Administration: Wolcott. Change in Organizations: Carlson. Nature and Problems of Administrative Behavior: Jacobson, staff. Nongraded Elementary School: Sandin. Problems of Government Finance. Problems of Staff Organization. Research in Educational Organization: Brissey. Research in Elementary Education: Sandin. Scope and Method of the Social Sciences: Tope, staff. School Business Administration: Hines. School Social Organization: Charters. School Surveys: Maltby.
 *Ed 508. **Workshop.** Hours to be arranged.
 Ed 527. **Secondary-School Administration and Supervision.** 3 hours. Hearn.
 Ed 552. **Elementary-School Problems.** 4 hours. Sandin.
 Ed 554. **Elementary-School Supervision and Administration.** 4 hours. Sandin.
 Ed 559. **Evaluation of Secondary-School Programs.** 3 hours. Hearn.
 Ed 560. **Secondary-School Problems.** 3 hours. Hearn.
 Ed 572. **Public School Administration.** 3 hours. Tope.
 Ed 573. **Public School Organization.** 3 hours. Maltby.
 Ed 575. **School Finance.** 3 hours. Osibov.
 Ed 576. **School Buildings.** 3 hours.
 Ed 580. **School Personnel Administration.** 3 hours. Tope.

Higher Education

- *Ed 501. **Research.** Hours to be arranged.
 *Ed 502. **Supervised College Teaching.** Tope.
 *Ed 503. **Thesis.** Hours to be arranged.
 Ed 505. **Reading and Conference.** Hours to be arranged.
 Ed 507. **Seminar.** Hours to be arranged.
Administration of the Community College: Van Loan. Adult Education: Dahl. College Student Personnel: Hawk. Education in Developing Countries: Wood. Programs in the Community College: Van Loan.
 *Ed 508. **Workshop.** Hours to be arranged.

* No-grade course.

- Ed 509. **Practicum.** Hours to be arranged.
 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. Lallas.
 Ed 597. **Methods of College Teaching.** 3 hours. Wood.

Educational Foundations

- Ed 407. **Seminar.** (G) Hours to be arranged.
 Ed 440. **History of Education.** (G) 3 hours.
 Ed 441. **History of American Education.** (G) 3 hours.
 Ed 445. **Modern Philosophies of Education.** (G) 3 hours.
 Ed 491. **Social Education.** (G) 3 hours.
 *Ed 501. **Research.** Hours to be arranged.
 *Ed 503. **Thesis.** Hours to be arranged.
 Ed 505. **Reading and Conference.** Hours to be arranged.
 Ed 507. **Seminar.** Hours to be arranged.
Cultural Perspectives in Education: Wolcott. Anthropology in Educational Administration: Wolcott. Ideology and Education: Bowers, Maltby. Educational and Social Ideas of John Dewey: Bowers.
 *Ed 508. **Workshop.** Hours to be arranged.
 Ed 542. **Urbanization, the Pupil, and the School.** 3 hours. Graham.
 Ed 545. **School and Society in the Recent Past.** 3 hours. Bowers.
 Ed 598. **Comparative Education.** 3 hours. Wood.

Educational Psychology

- Ed 407. **Seminar.** (G) Hours to be arranged.
Developmental Psychology—Child: Abel. Developmental Psychology—Adolescent: Abel. Developmental Psychology—Adult: Scott. Introduction to design and Analysis of Experiments. Projective Techniques: Toobert.
 Ed 409. **Practicum.** (G) Hours to be arranged.
Individual Interests Test.
 Ed 424. **Measurement in Education.** (G) 3 hours. Dizney.
 *Ed 501. **Research.** Hours to be arranged.
 *Ed 503. **Thesis.** Hours to be arranged.
 Ed 505. **Reading and Conference.** Hours to be arranged.
 Ed 507. **Seminar.** Hours to be arranged.
Abnormal Psychology. Learning: Johnston. Motivation: Johnston. Perception: Johnston, Rankin. Design and Analysis of Experiments: Mittman. Correlation Methods: Mittman. Topics in Statistics: Mittman. Advanced Topics in Measurement: Dizney, Mittman, Rankin. Theories of Interpersonal Relations: Schmuck. Planned Change in Schools: Schmuck. Philosophy of Science: Lovell. Group and Individual Differences: Rankin.
 Ed 512. **Introduction to Research Procedures in Education.** 3 hours. Dizney, Mittman.
 Ed 515, 516. **Educational Statistics.** 3 hours each term.
 Ed 517. **Advanced Educational Statistics.** 3 hours. Mittman.
 Ed 525. **Theory and Technique of Educational Measurement.** 3 hours. Mittman.

* No-grade course.

- Ed 528. **Group Testing in Schools and Colleges.** 3 hours. Rybolt.
 Ed 529. **Advanced Educational Psychology I.** 2 hours. Dizney.
 Ed 530. **Advanced Educational Psychology II.** 2 hours. Dizney.
 Ed 531. **Advanced Educational Psychology III.** 2 hours.
 Ed 549. **Principles and Practices in School Psychology.** 3 hours. Lovell.
 Ed 564. **Mental Tests.** 4 hours. Rankin.

Special Education

- Ed 407. **Seminar.** (G) Hours to be arranged.
Teaching—Mental Retardation: Espeseth, Madsen. Teaching—Gifted: Dizney. Teaching—Physical Disability: Sheperd. Education of Exceptional Children: Stone. Research—Exceptional Children: de Jung. Physical Disability: Sheperd. Behavior Modification: Crosson. Curriculum Trainable Mentally Retarded: Lance. Extra-Curriculum Mentally Retarded: Madsen. Social-Emotional Problems: Hotchkiss.
 Ed 409. **Practicum.** (G) Hours to be arranged.
Exceptional Children—Mental Retardation: Madsen, Waechter. Exceptional Children—Physical Disability: Sheperd. Administration of Programs for Exceptional Children: Martinson. Supervision of Special Educational Personnel: Martinson. Prescriptive Teaching: Haughton. Social-Emotional Problems: Hotchkiss. Diagnostic-Remedial Clinic: O'Neil.
 Ed 439. **The Gifted Child.** (G) 3 hours. Lovell.
 Ed 462. **Psychology of Exceptional Children.** (G) 3 hours. Stone.
 Ed 463. **The Maladjusted Child.** (G) 3 hours.
 Ed 464. **The Mentally Retarded Child.** (G) 3 hours. Espeseth.
 Ed 465. **Diagnostic Techniques in the Basic Skills.** (G) 3 hours. O'Neil.
 Ed 468. **Remedial Techniques in the Basic Skills.** (G) 3 hours. O'Neil.
 Ed 471. **Administration of Special Education.** (G) 3 hours. Martinson.
 Ed 489. **Curriculum for the Mentally Retarded.** (G) 3 hours. Espeseth, Sheperd.
 Ed 505. **Reading and Conference.** Hours to be arranged.
 Ed 507. **Seminar.** Hours to be arranged.
Teaching—Mental Retardation: Espeseth, Madsen, Sheperd. Teaching—Physical Disability: Sheperd. Counseling—Education of Exceptional Children: Rybolt. Research—Exceptional Children: de Jung. Neurological Impairment: Myers. Physical Disability: Sheperd. Behavior Analysis I and II: Crosson. Clinical and Rehabilitation Practicum: Cerebral Palsy: Myers. Neurological Basis of Behavior: Myers. Psychological Aspects of Mental Retardation: Prehm. Social-Vocational Aspects of Mentally Retarded: Rybolt. Piaget: Educational Implications: Benson. Administration of Pupil Personnel Services: Martinson. Bio-medical Aspects of Mental Retardation: Prehm. Psychological Aspects of Mental Retardation: Prehm. Sociological Aspects of Mental Retardation: Prehm. Utilization of Community Resources. Advanced Curriculum for Mental Retardation: Sheperd.
 *Ed 508. **Workshop.** Hours to be arranged.
Role-play Techniques.
 Ed 509. **Practicum.** Hours to be arranged.
Exceptional Children—Problems of Education: Stone. Exceptional Children—Mental Retardation: Espeseth. Exceptional Children—Physical Disability: Sheperd. Administration of Programs for Exceptional Children: Martinson. Supervision of Special Educational Personnel: Martinson. Field Research for Administrators: Martinson. Learning Behavior Research: Crosson.
 Ed 562. **Issues in Extreme Learning.** 3 hours. Bateman.
 Ed 563. **Diagnosis in Mental Retardation.** 3 hours.

* No-grade course.

English

Professors: ROLAND BARTEL (acting department head), STANLEY B. GREENFIELD, WILLIAM J. HANDY, ROBERT D. HORN, S. N. KARCHMER, ALBERT R. KITZ-HABER, WALDO F. MCNEIR, CARLISLE MOORE, JOHN C. SHERWOOD, DONALD S. TAYLOR, ANDREW K. WEATHERHEAD, CHRISTOF A. WEGELIN.

Associate Professors: ROBERT C. ALBRECHT, ROLAND C. BALL, WILLIAM E. CADBURY, THELMA GREENFIELD, JOHN A. HAISLIP, JOSEPH A. HYNES, GLEN A. LOVE, STODDARD MALARKEY, STANLEY B. MAVEETY, RALPH J. SALISBURY, WILLIAM C. STRANGE, OLIVER M. WILLARD.

Assistant Professors: RICHARD F. ALLEN, LUCILE ALY, MERRIT CROSS, RICHARD W. REID, GORDON W. ROCKETT, BURTON E. SABOL, CLARENCE SLOAT, RICHARD C. STEVENSON, PETER L. THORPE, J. B. TOELKEN.

The Department of English offers graduate work leading to the M.A. degree in English, the M.A. and the M.F.A. degrees in imaginative writing, the interdisciplinary M.A. degree in English and education, and the Ph.D. and D.A. degrees in English. Information about admissions procedures and a more detailed explanation of the various programs can be obtained by writing the Director of Graduate Studies in English.

For the M.A. degree a program of study totaling 45 term hours is required, including 10 hours in Old English, Middle English, or linguistics. The candidate must pass three examinations selected from the following fields: (1) Old English literature, (2) Middle English literature, (3) Renaissance dramatic literature, (4) Renaissance nondramatic literature, (5) English literature 1660-1780, (6) English literature 1780-1830, (7) English literature 1830-1914, (8) American literature to 1914, (9) contemporary British and American literature, (10) special studies (not involving a period approach). The student may satisfy the examination requirement in two of the three fields by completing three graduate courses in each field with a GPA of 3.25. The M.A. candidate must also demonstrate a reading knowledge of a foreign language by examination or course work. A 55-hour program without examination is also offered for students not planning to pursue graduate study beyond the Master's degree. The M.A. degree in writing substitutes a thesis in imaginative writing for 5 hours of course work.

The candidate for the M.F.A. degree completes 72 hours of graduate work, including 18 hours in English and American literature, 18 hours in writing, and 18 hours in writing an imaginative thesis. The remaining 18 hours is taken in related fine-arts fields such as art history, music history, drama, and aesthetics, depending on the candidate's individual program. The candidate must also pass a two-hour written examination on a reading list of works of fiction, drama, or poetry.

The doctoral program requires at least three years of full-time study beyond the bachelor's degree, at least one year of which must be spent in residence on the Eugene campus. The candidate is required to take a bibliography course and two courses in Old English, Middle English, or linguistics; he must also demonstrate, by examination or course work, a reading knowledge of two foreign languages or a very high competence in one. Doctoral candidates must have supervised experience as classroom teachers in the department.

The doctoral candidate takes examinations at two levels: the field examinations, usually during the first two years of full-time graduate study, and the doctoral examination, usually during the third year of full-time study. In the field examinations, the candidate must pass six of the ten field examinations listed under the M.A. program above; the student may satisfy the examination requirement in three of the six fields by completion of three graduate courses in each field with a GPA of 3.25. Examinations passed for the M.A. count toward the six. Transfer students may be credited with a maximum of three examinations, but at least three examinations must be passed at the University of Oregon.

After completing the field examinations, the doctoral candidate submits a statement of the nature and scope of his major field, which need not be one of the traditional periods or fields but must be of comparable scope. He then meets with his doctoral committee to consider his preparation and to agree on the coverage of his doctoral examination, which may be written, oral, or a combination of these, and which ordinarily covers the literature of the field, secondary scholarship, and a relevant supporting field.

The Ph.D. is granted upon completion of all previously stated doctoral requirements and of a dissertation; this dissertation may be a work of literary or linguistic scholarship on a single subject or a collection of three substantial essays exhibiting internal coherence but not necessarily treating a single precisely defined subject. When the dissertation is approved by the student's doctoral committee, the candidate is given a final oral examination on his dissertation and related subjects.

The program leading to the Doctor of Arts (D.A.) degree in English includes all requirements for the Ph.D. degree except the writing of a dissertation.

Literature

- Eng 407. **Seminar.** (G) Hours to be arranged.
- Eng 411, 412, 413. **English Drama.** (G) 3 hours each term. Horn.
- Eng 414, 415, 416. **History of Literary Criticism.** (G) 3 hours each term. Sherwood.
- Eng 417. **Introduction to Folklore and Mythology.** (G) 3 hours.
- Eng 418. **Folklore and Mythology of the British Isles.** (G) 3 hours.
- Eng 419. **American Folklore.** (G) 3 hours.
- Eng 420, 421, 422. **Modern Drama.** (G) 3 hours each term. Ball.
- Eng 423, 424. **Types of Prose Fiction.** (G) 3 hours each term (summer sessions).
- Eng 425. **Early English Literature.** (g) 3 hours. S. Greenfield, Toelken.
- Eng 428. **Chaucer.** (g) 3 hours. Allen, S. Greenfield, Malarkey, Toelken.
- Eng 430, 431, 432. **Literature of the Renaissance.** (G) 3 hours each term. T. Greenfield, Maveety, McNeir.
- Eng 434. **Spenser.** (G) 3 hours. McNeir.
- Eng 436. **Advanced Shakespeare.** (g) 3 hours.
- Eng 440, 441, 442. **Seventeenth-Century Literature.** (G) 3 hours each term. Reid, G. Rockett.
- Eng 444. **Milton's Minor Poems and Prose.** (G) 3 hours.
- Eng 445. **Milton's Major Poems.** (G) 3 hours. Maveety.
- Eng 450, 451, 452. **Eighteenth-Century Literature.** (G) 3 hours each term. Horn, Taylor, Thorpe.
- Eng 455. **Pope.** (G) 3 hours. Sherwood.
- Eng 460, 461, 462. **The Romantic Poets.** (G) 3 hours each term. Bartel, Strange.
- Eng 463, 464, 465. **The Later Nineteenth-Century Poets.** (G) 3 hours each term. Cadbury.
- Eng 470, 471, 472. **Nineteenth-Century Prose.** (G) 3 hours each term. Moore.
- Eng 477, 478, 479. **Nineteenth-Century American Literature.** (G) 3 hours each term. Cross.
- Eng 481, 482, 483. **Major American Writers.** (G) 3 hours each term. Albrecht, Handy.

- Eng 487. **Yeats and Joyce.** (G) 3 hours. Sherwood.
 Eng 488. **Literary Analysis for Teachers.** (g) 3 hours. Bartel.
 Eng 491. **History of the English Language.** (g) 3 hours. Sloat, Willard.
 Eng 492. **Modern English Grammar.** (g) 3 hours. Sloat, Willard.
 Eng 493. **Advanced English Grammar.** (g) 3 hours. Sloat.
 *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.
 Seminars are offered in approximately ten subjects each quarter.
 Eng 508. **Workshop.** Hours to be arranged (summer sessions).
 Eng 511, 512, 513. **Old English.** 5 hours each term. S. Greenfield.
 Eng 514, 515, 516. **Old Icelandic.** 5 hours each term. Allen.
 Eng 517. **Middle English.** 5 hours.
 Eng 518. **Chaucer's Troilus and Criseyde.** 5 hours. S. Greenfield, Malarkey.
 Eng 519. **The Pearl Poet.** 5 hours. S. Greenfield, Malarkey.
 Eng 520, 521, 522. **History and Structure of the English Language.** 5 hours each term. Sloat, Willard.
 Eng 530, 531, 532. **Shakespeare.** 5 hours each term. T. Greenfield, McNeir.
 Eng 540. **Bibliography.** 3 hours fall. Cadbury.
 Eng 585. **Modern English Literary Criticism.** 5 hours.
 Eng 588, 589. **Modern Poetry.** 5 hours each term. Weatherhead.
 Eng 590, 591, 592. **Modern Fiction.** 5 hours each term. Wegelin.

Writing

- Wr 411. **English Composition for Teachers.** (g) 3 hours. Aly, Kitzhaber.
 Wr 420, 421, 422. **Novel Writing.** (G) 3 hours each term.
 Wr 494. **Theory of Fiction Writing.** (G) 3 hours. Karchmer, Sabol.
 *Wr 503. **Thesis.** Hours to be arranged.
 Wr 504. **Writing and Conference.** Hours to be arranged.
 Sp 514. **Eighteenth-Century Rhetorical Theory.** 3 hours.
 Wr 530, 531, 532. **Graduate Creative Writing.** 3 hours each term. Haislip, Karchmer, Salisbury.
 Sp 551, 552, 553. **Theory of Dramatic Production.** 3 hours each term. Robinson.
 Sp 564, 565. **History of the Theatre.** 5 hours each term.

Geography

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

Associate Professors: CARL L. JOHANNESSEN, GENE MARTIN, EVERETT SMITH, ALVIN W. URQUHART.

Assistant Professor: WILLIAM G. LOY.

* No-grade course.

- Graduate work leading to both the M.A. and Ph.D. degrees is offered. Although the department requires knowledge of the fundamentals of geography, it welcomes students whose undergraduate work has been in other disciplines and who can apply their previous training to geographic problems. Work leading to the M.A. degree is aimed at familiarity with the main physical and cultural lineaments of the earth. In addition to basic preparation in physical and cultural geography, geographic field methods, aerial photograph interpretation, and cartography, the M.A. degree candidate will participate in at least three seminars, have a reading knowledge of one foreign language, and write a thesis. The Ph.D. program requires a thorough knowledge of the geography of a major region of the world and a competent understanding of one of the systematic fields of geography. A minor field or fields is developed from departments that share interests with geography (e.g., anthropology, biology, economics, geology, history, mathematics, political science, sociology, urban planning). A reading knowledge of two foreign languages is required. A doctoral dissertation showing ability to do individual research culminates the Ph.D. program. Field studies, seminars, and the preparation of theses form the heart of advanced geographic training. The University Library's collection of periodicals, maps, and books is adequate for most geographic research. The collections dealing with certain specific fields or areas are excellent, i.e., Latin America, Africa. The department maintains a large collection of maps used in teaching and field studies. Summer field research and training opportunities in the United States and abroad are available to many students through financial support from the Department of Geography and the University's Institute of International Studies and Overseas Administration and other sources.

- Geog 421, 422, 423. **Geographic Field Methods.** (G) 2 hours each term.
 Geog 433. **Political Geography.** (G) 3 hours.
 Geog 434. **Economic Geography.** (G) 3 hours.
 Geog 435, 436. **Urban Geography.** (G) 3 hours each term. Smith.
 Geog 451. **Eastern and Southeast Asia.** (G) 3 hours.
 Geog 452. **Southwestern Asia.** (G) 3 hours.
 Geog 453. **Africa.** (G) 3 hours. Urquhart.
 Geog 461, 462. **Geography of South America.** (G) 3 hours each term. Johannessen, Martin.
 Geog 463. **Geography of Middle America.** (G) 3 hours.
 Geog 471, 472. **Geography of Europe.** (G) 3 hours each term. Loy.
 Geog 473. **Geography of the Soviet Union.** (G) 3 hours.
 Geog 481, 482, 483. **Physical Geography.** (G) 5 hours each term.
 Geog 484. **Interpretation of Aerial Photographs.** (G) 3 hours. Loy.
 Geog 485, 486. **Cartography.** (G) 3 hours each term. Loy, Patton.
 Geog 487. **World Regional Climatology.** (G) 3 hours. Patton.
 Geog 491, 492, 493. **Cultural Geography.** (G) 3 hours each term.
 *Geog 501. **Research.** Hours to be arranged.
 *Geog 502. **Supervised College Teaching.** Hours to be arranged.
 *Geog 503. **Thesis.** Hours to be arranged.
 Geog 505. **Reading and Conference.** Hours to be arranged.

* No-grade course.

- Geog 507. **Seminar.** Hours to be arranged.
Geomorphology: Loy, Urquhart. *Climatology:* Patton. *Biogeography:* Johannessen. *Urban Geography:* Smith. *Rural Settlement:* Martin, Price. *Historical Geography:* Dicken. *Middle America:* Johannessen, Martin. *Andean America:* Martin. *Africa:* Urquhart. *Europe:* Patton, Price, Loy.
- Geog 555. **History of Geographic Thought.** 3 hours.

Geology

Professors: A. R. MCBIRNEY (department head), EWART M. BALDWIN, LLOYD W. STAPLES.

Associate Professors: H. RICHARD BLANK, JR., SAM BOGGS, JR., GORDON G. GOLES, M. ALLAN KAYS, ERNEST H. LUND, DANIEL F. WEILL.

Assistant Professor: WILLIAM N. ORR.

Graduate work leading to the M.A., 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 all degrees. 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 master's-degree work in two academic years 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 courses in geology and related fields according to his individual interests and the recommendation of the faculty member under whom he is working.

Teaching assistantships and fellowships are awarded annually. Students may also 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, petrology, regional stratigraphy, invertebrate paleontology, micropaleontology, geophysics, and geochemistry.

The state of Oregon has many areas that afford excellent opportunities for mapping. These areas present a variety of stratigraphic, paleontologic, and petrologic problems. Several mining regions provide materials for study and research in the field of economic geology. The department operates summer camps as bases from which field investigations are made. Geological equipment is available to students working on special problems in the field.

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 John Day fossil beds of Oregon, as well as from other areas, are located in the Natural History Museum. Materials for study in volcanology and the related fields of volcanic geology, experimental petrology, geophysics, and geochemistry are available through the Center for Volcanology.

Available equipment includes facilities for rock cutting and the preparation of thin sections, dark-room facilities for special studies with the goniometer and other optical instruments, a high temperature laboratory, X-ray equipment, mineral separation facilities, sedimentary analysis equipment, a flame photometer, atomic absorption and spectrophotometric equipment, a fluxgate magnetometer, a gravity meter, and an electron microprobe.

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

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

- Geol 408. **Workshop.** (g) Hours to be arranged.

- Geol 411. **Lithology.** (g) 3 hours. Lund.
- Geol 414, 415, 416. **Petrology and Petrography.** (G) 4 hours each term. Kays, Lund.
- Geol 417. **Sedimentary Petrology.** (G) 4 hours. Boggs.
- Geol 421, 422, 423. **Economic Geology.** (G) 3 hours each term. Staples.
- Geol 440. **Micropaleontology.** (G) 3 hours. Orr.
- Geol 451. **Pacific Coast Geology.** (G) 3 hours. Baldwin.
- Geol 455. **Studies in Physical Geology.** (g) 3 hours (summer session).
- Geol 456. **Regional Geology of North America.** (g) 3 hours (summer session).
- Geol 461, 462, 463. **Mineral Paragenesis.** (G) 3 hours each term.
- Geol 473. **Photogeology.** (G) 3 hours.
- Geol 491. **Structural Geology.** (G) 4 hours.
- Geol 493. **Petroleum Geology.** (G) 3 hours. Boggs.
- *Geol 501. **Research.** Hours to be arranged.
- *Geol 503. **Thesis.** Hours to be arranged.
- Geol 505. **Reading and Conference.** Hours to be arranged.
- Geol 506. **Advanced Field Geology.** Hours to be arranged.
- Geol 507. **Seminar.** Hours to be arranged.
Regional Geologic Studies. Volcanology.
- Geol 511, 512, 513. **Advanced Microscopy and Instrumentation.** 4 hours each term. Kays, McBirney.
- Geol 514, 515, 516. **Advanced Petrology and Petrography.** 3 hours each term. Kays, McBirney.
- Geol 520. **Advanced Economic Geology.** 3 hours.
- Geol 523. **Advanced Regional Stratigraphy.** 3 hours. Baldwin.
- Geol 524, 525. **Advanced Sedimentary Petrology.** 3 hours each term. Boggs.
- Geol 531, 532, 533. **Advanced Paleontology.** 3 hours each term. Orr.
- Geol 561, 562, 563. **Geochemistry.** 3 hours each term. Goles.
- Geol 571, 572, 573. **Geophysics.** 3 hours each term. Blank.
- Geol 591, 592, 593. **Advanced Structural Geology.** 3 hours each term.

German and Russian

Professors: ROGER NICHOLLS, WOLFGANG LEPPMANN.

Associate Professors: JOHN FRED BEEBE, EDWARD DILLER, PETER GONTRUM, WALTER HAHN, JEAN WOODS.

Assistant Professors: ALBERT LEONG, JAMES MCWILLIAMS, HELMUT PLANT, JAMES L. RICE.

The Department of German and Russian offers programs of study leading to the degree of Master of Arts in German and in Russian, and to the degree of Doctor of Philosophy in German.

The program for the M.A. degree in German is usually centered on literary studies, but some work in philology is required. The degree may be considered either as the termination of formal education or as preparation for further advanced study.

In addition to the regular Master of Arts degree, the Department offers a

* No-grade course.

program in German for a Master of Arts degree in teaching. It provides the secondary-school teacher with an opportunity to study literature at the graduate level, to achieve competence in the written and spoken language, and to study and practice methods of presenting his material. The program fulfills the Oregon requirements for the Standard Secondary Teaching Certificate.

The program for the M.A. degree in Russian is designed to provide training in Russian language, literature, and linguistics for students planning to teach these subjects, whether or not they intend to go on to the doctorate elsewhere. A master's thesis is required, or may be waived if the student demonstrates competence in a second Slavic language and its literature.

The program for the Ph.D. in German includes advanced work in German language and literature, and studies in Germanic philology offered in collaboration with the Department of English.

German

- GL 407. **Seminar.** (g) Hours to be arranged.
- GL 411, 412, 413. **The Age of Goethe.** (G) 3 hours each term.
- GL 414, 415, 416. **The Nineteenth-Century German Novelle.** (G) 3 hours each term. Hahn.
- GL 424, 425, 426. **Advanced German Composition and Conversation.** (G) 3 hours each term.
- *GL 503. **Thesis.** Hours to be arranged.
- GL 505. **Reading and Conference.** Hours to be arranged.
- GL 507. **Seminar.** Hours to be arranged.
- GL 511, 512, 513. **The German Lyric.** 5 hours each term. Gontrum.
- GL 514, 515, 516. **Middle High German.** 5 hours each term. Plant.
- GL 517, 518, 519. **German Romanticism.** 5 hours each term. Hahn.
- GL 524, 525, 526. **German Literature 1500-1750.** 5 hours each term.
- GL 527, 528, 529. **Goethe.** 5 hours each term. Leppmann.
- GL 530, 531. **Old High German.** 5 hours each term. Plant.
- GL 532. **Introduction to Gothic.** 5 hours.
- GL 533, 534, 535. **History of the German Language.** 5 hours each term. Plant.
- GL 536. **Lessing.** 5 hours.
- GL 537. **Sturm und Drang.** 5 hours.
- GL 538. **Schiller.** 5 hours.
- GL 539. **Introduction to Old Saxon.** 5 hours. Plant.
- GL 540, 541, 542. **German Drama of the Nineteenth Century.** 5 hours each term. Nicholls.
- GL 543, 544, 545. **Contemporary German Lyric.** 5 hours each term. Gontrum.
- GL 546, 547, 548. **Modern German Novel.** 5 hours each term. Diller, Nicholls.
- GL 550, 551, 552. **Modern German Drama.** 5 hours each term. Gontrum.
- GL 555, 556, 557. **German Novel of the Nineteenth Century.** 5 hours each term. Hahn.

Russian

- SL 407. **Seminar.** (G) Hours to be arranged.

* No-grade course.

- SL 411, 412, 413. **Advanced Readings in Russian Literature.** (G) 3 hours each term. Leong, Rice.
- AL 420. **Modern Russian Novel.** (G) 3 hours. Rice.
- AL 421. **Modern Russian Short Story.** (G) 3 hours. Rice.
- AL 422. **Modern Russian Poetry.** (G) 3 hours. Leong.
- AL 423. **Modern Russian Drama.** (G) 3 hours. Leong, Rice.
- AL 424. **Dostoevsky.** (G) 3 hours. Leong, Rice.
- AL 425. **Tolstoy.** (G) 3 hours. Leong.
- AL 426. **Gogol.** (G) 3 hours. Rice.
- AL 427. **Turgenev.** (G) 3 hours. Rice.
- AL 428. **Chekhov.** (G) 3 hours. Rice.
- AL 429. **Soviet Russian Literature.** (G) 3 hours. Leong.
- SL 440, 441, 442. **Structure of Russian.** (G) 3 hours each term.
- SL 461, 462, 463. **Advanced Russian Composition and Conversation.** (G) 2 hours each term. Beebe.
- *SL 503. **Thesis.** Hours to be arranged.
- SL 505. **Reading and Conference.** Hours to be arranged.
- SL 507. **Seminar.** Hours to be arranged.
Eighteenth-Century Russian Literature. Old Russian Literature. Pushkin. Russian Folklore. Russian Literary Criticism.
- SL 540. **Old Church Slavonic.** 3 hours. Beebe.
- SL 541, 542. **History of Russian.** 3 hours each term. Beebe.

Health, Physical Education, and Recreation

Professors: ARTHUR A. ESSLINGER (dean), H. HARRISON CLARKE, FRANCIS M. DOUGHERTY, EUGENE EVONUK, FRANKLIN B. HAAR, BETTY McCUE, WILLIAM P. RHODA, LYNN S. RODNEY, PETER O. SIGERSETH, VERNON S. SPRAGUE, PAUL R. WASHKE.

Associate Professors: WAYNE BRUMBACH, K. WRIGHT DUNKLEY, RICHARD GESER, JESSIE PUCKETT, CHARLES REICH, WARREN SMITH, EDNA WOOTEN.

Assistant Professors: JOHN BORCHARDT, CLIFFORD E. BRUBAKER, CORLEE MUNSON, ROBERT KIME, ROBERT RAUS, EDWARD REUTER, RICHARD SCHLAADT, DONALD P. VAN ROSSEN.

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 in one area of health education or physical education (four areas are available;

* No-grade course.

administration, health education, child growth and development, and corrective physical education) or education; and (3) 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. Two research laboratories are equipped with the most modern scientific instruments and equipment. An excellent library, supplemented by a comprehensive collection of microcards in health education, physical education, and recreation, is available.

Dance

- D 409. **Practicum.** (G) Hours to be arranged.
 D 452. **Dance History to 1000 A.D.** (G) 3 hours.
 D 453. **Dance History 1000-1900 A.D.** (G) 3 hours.
 D 454. **Dance History since 1900.** (G) 3 hours.
 D 501. **Research.** Hours to be arranged.
 D 503. **Thesis.** Hours to be arranged.
 D 505. **Reading and Conference.** Hours to be arranged.
 D 506. **Special Problems.** Hours to be arranged.
 D 507. **Seminar.** Hours to be arranged.
 D 508. **Workshop.** Hours to be arranged.
 D 509. **Practicum.** Hours to be arranged.
 D 593. **Aesthetic Bases for Dance in Art and Education.** 3 hours.

Health Education

- HE 408. **Workshop.** (g) Hours to be arranged.
 HE 450. **Elementary-School Health Education.** (g) 3 hours any term. Schlaadt, Smith.
 HE 463. **Social Health.** (G) 3 hours spring. Kime.
 HE 464. **Health Instruction.** (G) 3 hours fall. Schlaadt.
 HE 465. **School Health Service.** (G) 3 hours winter. Smith.
 HE 466. **Evaluation of School Health Education.** (G) 3 hours. Kime.
 HE 468. **Psychophysical Testing Equipment in Driver Education.** (G) 3 hours.
 *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 fall. Haar.
 HE 543. **Advanced Health Instruction.** 3 hours winter. Smith.

* No-grade course.

- HE 552. **Administration of School Health Education.** 3 hours spring. Haar.
 HE 560. **Administration of Supervision of Safety Programs.** 3 hours. Schlaadt.
 HE 561. **Psychology of Accident Prevention.** 3 hours. Kime.
 HE 562. **Administration and Supervision of Driver Education Programs.** 3 hours. Schlaadt.
 HE 563. **Problems in Traffic Safety.** 3 hours. Haar.

Physical Education

- PE 408. **Workshop.** (g) Hours to be arranged.
 PE 421, 422, 423. **Foundations of Elementary-School Physical Education.** (g) 3 hours each term.
 PE 424. **Administration of Elementary-School Physical Education.** (g) 3 hours. Munson.
 PE 446. **Tests and Measurements in Physical Education.** (G) 3 hours. Reuter.
 *PE 501. **Research.** Hours to be arranged.
 *PE 503. **Thesis.** Hours to be arranged.
 PE 505. **Reading and Conference.** Hours to be arranged.
 PE 506. **Special Problems.** Hours to be arranged.
 PE 507. **Seminar.** Hours to be arranged.
Anatomical, Physiological, and Kinesiological Bases of Physical Education. Body Growth and Development through Physical Education. Administration of Physical Education Service Programs. Philosophy of Physical Education. Advanced Study in Motor Learning. Current Literature in Physical Education.
 PE 508. **Workshop.** Hours to be arranged.
 PE 509. **Practicum.** Hours to be arranged.
 PE 515. **History and Theories of Physical Education.** 3 hours fall. McCue.
 PE 518. **Current Movements in Physical Education.** 3 hours.
 PE 520. **Developmental Program in Physical Education.** 3 hours. Clarke.
 PE 521. **Basic Procedures in Corrective Physical Education.** 3 hours. Wooten.
 PE 522. **Advanced Corrective Procedures.** 3 hours. Wooten.
 PE 523. **Physical Education of the Handicapped.** 3 hours. Wooten.
 PE 527. **Techniques of Relaxation.** 3 hours. Wooten.
 PE 531. **Muscle Testing and Therapeutic Exercise.** 3 hours. Wooten.
 PE 533. **Motor Skill Learning.** 3 hours. Brumbach.
 PE 540. **Statistical Methods in Physical Education.** 3 hours fall. Clarke.
 PE 541. **Statistical Methods in Physical Education.** 3 hours winter. Clarke.
 PE 544. **Methods of Research.** 3 hours. Geser.
 PE 545. **Experimental Design in Physical-Education Research.** 4 hours. Clarke.
 PE 550, 551, 552. **Administration of Physical Education.** 3 hours each term. Esslinger.
 PE 554. **Administration of Athletics.** 3 hours. Sprague.
 PE 555. **Intramural Organization and Management.** 3 hours. Borchardt.
 PE 556. **Administration of Buildings and Facilities.** 3 hours. Rhoda.

* No-grade course.

- PE 557. **Supervision of Physical Education for City Supervisors.** 3 hours. Sprague.
- PE 558. **Curriculum Construction in Physical Education.** 3 hours. Sprague.
- PE 559. **Professional Preparation in Physical Education.** 3 hours. Sprague.
- PE 561. **Foundations of Physical Growth.** 3 hours. Wooten.
- PE 562. **Changes in Body Size and Form During Childhood and Adolescence.** 3 hours. Wooten.
- PE 563. **Growth of Body Tissues and Organs.** 3 hours. Wooten.
- PE 564. **Morphologic and Physiologic Appraisalment of School Children.** 3 hours.
- PE 566. **Research Methodology for Child Growth.** 3 hours.
- PE 567. **Motor Development in Infancy and Childhood.** 3 hours.
- 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.
- PE 576, 577, 578. **Advanced Physiology of Exercise.** 3 hours each term. Evonuk.

Recreation and Park Management

- RM 408. **Workshop.** (g) Hours to be arranged.
- RM 490. **Principles of Outdoor Education.** (G) 3 hours winter. Ford.
- RM 492. **Recreation and Natural Resources.** (G) 3 hours spring. Ford.
- RM 497. **Recreation and Park Facilities.** (G) 3 hours fall. Reich.
- RM 499. **School and Community Recreation Programs.** (G) 3 hours. Neal.
- *RM 501. **Research.** Hours to be arranged.
- *RM 503. **Thesis.** Hours to be arranged. Ford.
- RM 505. **Reading and Conference.** Hours to be arranged.
- RM 506. **Special Problems.** Hours to be arranged.
- RM 507. **Seminar.** Hours to be arranged.
Basic Issues in Parks and Recreation. Public Park Administration. Problems of Recreation Finance. Administrative Problems of Recreation. Philosophical Foundations of Recreation: Ford. Youth and Leadership: Nickerson. Studies and Surveys: Reich. Methods of Social Research: Reich. Social Statistics: Reich. Metropolitan Park Planning: Reich.
- RM 508. **Workshop.** Hours to be arranged.
- RM 552. **Problems of Recreation Supervision.** 3 hours. Rodney.
- RM 553. **Administration of Recreation.** 3 hours winter. Rodney.
- RM 554. **Problems of Camp Management.** 3 hours. Rodney, Ford.

History

Professors: GUSTAVE ALEF, EDWIN R. BINGHAM, QUIRINUS BREEN (emeritus), PAUL S. DULL, THOMAS P. GOVAN, VAL R. LORWIN, EARL POMEROY, KENNETH W. PORTER, ROBERT W. SMITH, LLOYD R. SORENSON, WENDELL H. STEPHENSON.

* No-grade course.

Associate Professors: STANLEY A. PIERSON (department head), RAYMOND F. BIRN, GENNARO FALCONERI, WILLIAM S. HANNA, PAUL S. HOLBO.

Assistant Professors: ROBERT M. BERDAHL, THOMAS A. BRADY, ROGER P. CHICKERING, ALAN KIMBALL, ROBERT LANG, YU-SHENG LIN, J. PENDLETON MADDEX, JOHN W. PERRIN, ARTHUR J. QUINN, JOHN E. WOODHAM.

The Department of History offers graduate work leading to the M.A. and Ph.D. degrees. Basic undergraduate work in European and American history is prerequisite to entering graduate work in history. Preparation in foreign languages is essential. Students with an undergraduate grade-point average below 3.00 in history are not advised to seek a graduate degree in history. The department will also periodically review the progress and performance of its graduate students and drop students from the program who do not meet the basic standards.

Admission. An undergraduate major in history or its equivalent, including basic work in European and American history. Preparation in at least one foreign language is required for admission to graduate work in history. Results of either the Miller Analogies Test or the Graduate Record Examination, together with all undergraduate and graduate transcripts, should be sent to the department. Applicants for admission to the doctoral program should have three letters of recommendation sent to the department by persons acquainted with the student's academic qualifications. All applicants for admission must indicate on their applications the field or fields of history in which they expect to work.

Master's Degree. Each candidate must complete 9 term hours of work in courses, ordinarily research seminars, numbered 507-532. The candidate must prepare himself for examination in three fields chosen from different divisions of history. A program may be arranged with or without thesis. For the M.A. without thesis the candidate is required to submit two seminar papers, revised and improved to meet degree standards, and to take a written examination covering two of the three fields covered in the final oral examination.

Students working toward the M.A. or M.S. degree in the University's interdisciplinary master's program for teachers may select history as a field of subject concentration. See pages 20-22.

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

- Hst 411. **History of Greece.** (G) 3 hours fall.
- Hst 412, 413. **History of Rome.** (G) 3 hours each term, winter and spring.
- Hst 414, 415, 416. **History of Science.** (G) 3 hours each term. Quinn.
- Hst 418, 519. **Studies in Western Civilization.** (g) 3 hours each term (summer session).
- Hst 420. **Historical Method.** (G) 3 hours fall.
- Hst 421, 422, 423. **Middle Ages.** (G) 3 hours each term. Perrin.
- Hst 424, 425. **Early Modern Europe.** (G) 3 hours each term. Birn.
- Hst 430, 431. **Renaissance.** (G) 3 hours each term, fall and winter. Brady.
- Hst 432. **Reformation.** (G) 3 hours spring. Brady.
- Hst 434, 435. **Western Institutions and Ideas.** (G) 4 hours each term. Sorenson.
- Hst 436, 437. **History of Germany.** (G) 3 hours each term. Berdahl.
- Hst 438. **Germany in the Twentieth Century.** (G) 3 hours. Chickering.

- Hst 439, 440. **Cultural and Intellectual History of Modern Europe.** (G) 3 hours each term. Pierson.
- Hst 441, 442, 443. **History of France.** (G) 3 hours each term. Birn, Lorwin.
- Hst 444, 445. **Twentieth-Century Europe.** (G) 3 hours each term. Chickering.
- Hst 447, 448, 449. **History of Russia.** (G) 3 hours each term. Alef, Kimball.
- Hst 450. **History of Spain.** (G) 3 hours. Woodham.
- Hst 452, 453. **The Russian Revolution.** (G) 3 hours each term. Kimball.
- Hst 454, 455, 456. **Economic History of Modern Europe.** (G) 3 hours each term. Lorwin.
- Hst 457, 458, 459. **The Era of American Sectional Conflict.** (G) 3 hours each term. Maddex.
- Hst 460, 461, 462. **History of American Thought and Culture.** (G) 3 hours each term. Bingham.
- Hst 463. **History of Canada.** (G) 3 hours.
- Hst 464. **History of Mexico.** (G) 3 hours. Woodham.
- Hst 465. **British Empire.** (g) 3 hours. Smith.
- Hst 466. **Tudor England.** (G) 3 hours. Lang, Smith.
- Hst 468. **Victorian England.** (G) 3 hours. Smith.
- Hst 469. **Twentieth-Century England.** (G) 3 hours. Smith.
- Hst 470, 471. **Social Factors in American History.** (G) 3 hours each term. Porter.
- Hst 472. **History of Brazil.** (G) 3 hours.
- 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. **The United States in the Twentieth Century.** (G) 4 hours each term. Pomeroy.
- Hst 484, 485, 486. **Early History of the American People.** (G) 3 hours each term. Hanna.
- Hst 487, 488, 489. **American Economic History.** (G) 3 hours each term. Decker.
- Hst 490. **Problems of the Pacific.** (g) 3 hours (summer session).
- Hst 491, 492, 493. **The Early National Period in United States History.** (G) 3 hours each term. Govan.
- Hst 494, 495, 496. **History of China.** (G) 3 hours each term. Dull, Lin.
- Hst 497, 498, 499. **History of Japan.** (G) 3 hours each term. Dull, Falconeri.
- *Hst 501. **Research.** Hours to be arranged.
- *Hst 502. **Supervised College Teaching.** Hours to be arranged.
- *Hst 503. **Thesis.** Hours to be arranged.
- Hst 505. **Reading and Conference.** Hours to be arranged.
- Hst 507. **Seminar.** Hours to be arranged.
- European History:* Alef, Berdahl, Birn, Brady, Chickering, Kimball, Lorwin, Perrin, Pierson, Quinn, Sorenson. *European Social and Economic History:* Lorwin. *English History:* Lang, Smith. *American History:* Bingham, Decker, Govan, Hanna, Holbo, Maddex, Pomeroy, Porter. *History of the Far East:* Dull, Falconeri, Lin. *Latin American History:* Woodham. *Historical Theory:* Sorenson.

* No-grade course.

- Hst 508. **Colloquium.** Hours to be arranged.
- Middle Ages:* Perrin. *English Historians:* Smith. *Seventeenth-Century England:* Lang. *Interpretations of American History:* Hanna, Porter. *Southern History:* Maddex. *American Diplomacy:* Holbo. *History of Science:* Quinn. *Interpretations of Latin American History:* Woodham. *Japanese History:* Dull, Falconeri. *Early National:* Govan. *Renaissance and Reformation:* Brady. *Age of Enlightenment:* Birn. *Russian:* Alef, Kimball. *German:* Berdahl, Chickering.
- Hst 530, 531, 532. **European History: Problems and Interpretations.** 3 hours each term. Birn, Lorwin, Pierson.
- Hst 591. **Japanese Political Evolution since 1912.** 3 hours. Dull, Falconeri.

Industrial and Labor Relations

The University offers an interdisciplinary program of graduate study in industrial and labor relations, leading to the Master of Arts or Master of Science degree. The program is administered by the Institute of Industrial and Labor Relations (see page 106), and requires 45 term hours of work with thesis in courses approved by the Institute, or 54 hours of work without thesis.

The student's program must include work in at least three disciplines, with at least 18 term hours in one of the three disciplines, and must include a minimum of 15 term hours in 500-level courses. The prerequisites for the program are a bachelor's degree and 27 hours of prior work in the subject areas represented in the graduate program. Before advancement to candidacy for a degree, a student must submit a satisfactory score on the Miller Analogies Test or a comparable objective test.

The following University courses are especially relevant to the graduate program in industrial and labor relations:

Economics—Regional Economics (Ec 414, 415, 416); Contemporary Economic Problems (Ec 417); Labor Economics (Ec 444); Organized Labor (Ec 445); Labor Legislation (Ec 446); Collective Bargaining (Ec 447, 448, 449); Comparative Economic Systems (Ec 450, 451, 452); Industrial Organization and Public Policy (Ec 460, 461, 462); American Economic History (Ec 487, 488, 489); Development of Industrial Economics (Ec 490, 491, 492); Seminar: Labor Economics (Ec 507).

Education—Seminar: Work Evaluation (Ed 407); Seminar in Occupational Information (Ed 407); Educational and Vocational Guidance (Ed 488); Seminar in Vocational Development Theory (Ed 507).

History—American Economic History (Hst 487, 488, 489).

Interdisciplinary Studies—Research (ISt 501); Thesis (ISt 503); Reading in Industrial Relations (ISt 505); Seminar: Industrial Relations (ISt 507).

Journalism—Seminar: Industrial Communications and Editing (J 407); Public Relations Methods (J 407); The Press and Society (J 450); Principles of Public Relations (J 459); Public Relations Problems (J 483); Journalism and Public Opinion (J 494); Seminar: Public Opinion and Propaganda (J 507).

Law—Law, Its Processes and Functions (L 430); Labor Law (L 476).

Political Science—Administrative Organization and Behavior (PS 412, 413); Public Opinion and Political Participation (PS 452, 453, 454); Democratic Institutions (PS 456); Democratic Processes (PS 457); Development of Democracy (PS 458); Political Behavior (PS 470); The Supreme Court in American Government (PS 484, 485); Seminar: Constitutional Law and the Judicial Process (PS 507); Seminar: Comparative Labor Movements (PS 507); Seminar: Policy Analysis (PS 507); Seminar: Political Organization (PS 507); Seminar: Political Participation (PS 507).

Production and Industrial Management—Personnel Management (PIM 412); Wage and Salary Administration (PIM 413); Problems in Personnel Management (PIM 414); Seminar: Collective Bargaining (PIM 507); Seminar: Administration of Labor Market Policies (PIM 507); Industrial Administration (PIM 511); Personnel Administration (PIM 534); Personnel Psychology (PIM 535); Organizational Conflict and Change (PIM 536).

Sociology—Seminar: Economic Sociology (Soc 407); Seminar: Sociology of Professions (Soc 407); Seminar: Problems of Change in Underdeveloped Areas (Soc 407); Theory of Small Groups (Soc 430); Group Dynamics (Soc 431); Sociology of Work (Soc 446); Industrial Sociology (Soc 447); Sociology of Occupations (Soc 448); Seminar: Economic Sociology (Soc 507); Theory of Organization (Soc 541).

The Institute of Industrial and Labor Relations provides advice and assistance to doctoral candidates who are interested in work in industrial relations as a minor field or as a supplement to their major program.

Interdisciplinary Studies

Students pursuing a program of interdisciplinary studies leading to the M.A. or M.S. degree may supplement courses offered by the several departments and schools with individualized studies, for which they may enroll under the course numbers listed below. For regulations governing graduate interdisciplinary program, see pages 20-22.

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

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

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

Public Affairs. Industrial Relations.

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

Public Affairs. Industrial Relations. Higher Education. International Studies.

Journalism

Professors: JOHN W. CRAWFORD (dean), CHARLES T. DUNCAN, JOHN L. HULTENG, ROY P. NELSON, MAX WALES.

Associate Professors: JACK D. EWAN, BERNARD L. FREEMESSER, JAMES B. LEMERT, DEAN F. REA, CARL C. WEBB, WILLIS L. WINTER.

Assistant Professors: ROY K. HALVERSON, KENNETH T. METZLER, 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.

Admission. Candidates for admission to graduate study in the School of Journalism must be graduates of a four-year accredited college or university and must have a grade point average of at least 3.00 (B) in their undergraduate study. A student may be conditionally admitted for graduate study if he can offer

* No-grade course.

evidence that a graduate course of study will be pursued successfully. He may fulfill this requirement either (1) by passing an examination to be determined by the School or (2) by his having earned a grade-point average exceeding 3.00 during the last two years of his undergraduate studies. Men or women who have substantial experience in any of the fields of journalism may offer such experience, with the approval of the faculty, in lieu of (1) or (2) for conditional admittance. The student who is not admitted under (1) or (2) above may request a review of his application by the faculty.

Advising. An adviser will be appointed by the dean for all graduate students in the school upon recommendation of the faculty committee on graduate study. A student who is writing a master's thesis will also be assigned to a thesis adviser, a faculty member who will work with him on the research and writing phases of the thesis program. A thesis subject must be approved by the dean and the thesis adviser before work is undertaken on the thesis. Students who are writing theses should register for thesis credit hours during the terms in which they are doing the actual research and writing. The thesis carries a total of nine term hours of credit.

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

(1) Plan A (thesis required) is designed for students with an extensive background in journalism. The candidate may satisfy the major requirements with 30 term hours of work in journalism, 9 of which may be thesis. The minimum number of graduate hours is 45.

(2) Plan B (thesis optional) is designed for students with little or no journalistic background. The candidate may take a maximum of 40 term hours in journalism. If he elects not to write a thesis, he must write or prepare a terminal project under faculty guidance. Students enrolled under this plan, in addition to completing the 45 hours of graduate credit required for the master's degree, may be required to enroll in two basic professional courses which do not carry graduate credit.

Courses taken outside of the field of journalism must constitute an integrated program of work in a single area or in closely related areas.

Course programs for graduate students are usually planned individually, on the basis of consultation with the student's adviser. It is expected, however, that any student intending to complete requirements for an advanced degree will include the following courses in his program (or present evidence that he has previously completed such courses or their equivalent): Law of the Press (J 485), History of Journalism (J 487), Seminar: Public Opinion and Propaganda (J 507), Communication Theories (J 513).

In addition, all master's-degree programs must include the following: (1) Three journalism courses or seminars numbered at the 500 level; (2) at least one graduate-level course in journalistic writing from the following group: Reporting II (J 462), Magazine Article Writing I (J 468), Editorial Writing (J 564).

Examinations. All graduate students seeking conditional admission should make arrangements to take the Graduate Record Examination at a location convenient to them. Upon receipt of the results of this examination and of a transcript setting forth all the academic work the applicant has taken, the committee on graduate study will notify the applicant whether he has been admitted to the school.

All graduate students' programs are examined by the faculty of the school at two points during their progress toward the master's degree:

(1) After completion of at least the equivalent of a full term of graduate credit work in the school, the faculty will review each student's progress and determine whether the student should be formally advanced to candidacy.

(2) When the student has completed all other requirements for the degree, he will be scheduled for the final oral examination. The final examination for degree candidates who are writing theses will be in the form of a defense of the thesis before an examining committee of faculty members. The final examination for students who are not writing theses will also be conducted orally before a faculty committee, and it will be based in part on the project the student has submitted in lieu of a thesis.

Foreign Students. Foreign students beginning graduate work at the School of Journalism should plan to spend some time (at least a full quarter, in most cases) taking basic courses that do *not* carry graduate credit, before embarking on graduate-level courses. A firm mastery of English, including the American mass-communications idiom, is necessary to success in professional courses at the graduate level. Foreign students who lack such a mastery will find themselves severely handicapped, and may find it wise to pursue a program of course work leading to a second bachelor's degree rather than attempt to complete master's-degree requirements. Those foreign students who do decide to seek a master's degree should plan to spend five or more terms in residence. Foreign students who decide to complete requirements for a second bachelor's degree rather than a master's degree should expect to spend three or four terms in residence.

Facilities. The school is housed in Eric W. Allen Hall. Facilities include a reading-reference room with important newspapers and magazines, a division of communication research, and laboratories. The *Oregon Daily Emerald* and the University Press are also housed in Allen Hall.

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

Editorial Cartooning. Industrial Communications and Editing. Documentary Film in Television. Picture Editing. Radio-TV Station Management. Radio-TV Problems. History of Photography. Philosophy of Photography.

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

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

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

J 441. **Media of Advertising: Print.** (G) 3 hours. Ewan, Wales.

J 442. **Media of Advertising: Broadcast.** 3 hours. Nestvold.

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

Sp 444. **Radio-Television Direction.** (G) 3 hours.

Sp 445. **Radio-Television Production.** (G) 3 hours.

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

Sp 446. **Radio-Television Programming.** (G) 3 hours.

J 446. **Advertising Copy Writing.** (G) 3 hours. Ewan, Wales.

J 447. **Advertising Layout.** (G) 3 hours. Ewan, Nelson.

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

J 455. **Methods of Teaching Journalism.** (G) 2-3 hours. Rea.

J 459. **Principles of Public Relations.** (G) 3 hours. Ewan, Nelson.

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

J 465. **Public Relations Methods.** (G) 3 hours.

J 468. **Magazine Article Writing I.** (G) 3 hours. Metzler, Nelson.

J 469. **Magazine Article Writing II.** (G) 2 hours. Nelson.

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

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

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

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

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

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

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

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

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

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

Public Opinion Measurement. Advertising Research. Literature of Journalism. History of Journalism. Law of the Press. Propaganda. The Photo Essay. Visual Communication. Research. Writing the Nonfiction Book.

J 512. **Communication Research Methods.** 3 hours. Lemert.

J 513. **Theories of Mass Communication.** 3 hours. Lemert.

J 564. **Editorial Writing.** 3 hours. Hulteng.

J 589. **Comparative Foreign Journalism.** 3 hours.

Librarianship

Professors: LEROY C. MERRITT (dean), ELIZABETH FINDLY, CARL W. HINTZ, ROBERT R. MCCOLLOUGH, PERRY D. MORRISON.

Associate Professors: HOLWAY JONES, IONE PIERRON.

Associate Professors: JOHN P. COMAROMI, CAROLINE FELLER, ROBERT E. KEMPER, PATRICIA B. POND.

The School of Librarianship offers a program of graduate studies leading to the degree of Master of Library Science. The program is designed to provide: (1) graduate instruction in the basic principles and practices of library service and administration; (2) opportunities for in-service training for graduate librarians; (3) leadership in the development of new and improved concepts and practices in librarianship; (4) service to library development in Oregon through research, consultation, and work with professional organizations.

Admission. Requirements for admission to the professional graduate program of the school include: (1) graduation from an institution of higher education whose requirements for the bachelor's degree are substantially equivalent to the requirements of the University of Oregon; (2) a grade-point average of 3.00 for the last two years of the student's academic preparation; (3) a satisfactory score on the Graduate Record Examination Aptitude Test; (4) two years of college-level study of one modern foreign language, or one year of college-level study of each of two modern foreign languages; (5) for foreign students, proof of proficiency in the English language as measured by the University of Michigan English Language Institute Test or the Princeton University Test of English as a Foreign Language, in lieu of the GRE Aptitude Test.

For application procedures for admission to graduate standing in the University, see page 17. Students applying for admission to the School of Librarianship must also: (1) have three letters of recommendation (one preferably from a librarian) sent to the dean of the School of Librarianship; (2) arrange for an interview with the dean or member of the faculty of the school or with a representative of the school designated by the dean. All application procedures must be

* No-grade course.

completed early in the term preceding the term in which the student wishes to enter the school.

Degree Requirements. The requirements for the M.L.S. degree are as follows: (1) 45 term hours of graduate work, including not less than 39 hours in librarianship and at least two graduate courses in another school or department totaling not less than 4 term hours; (2) completion of a 24-hour core curriculum, including Lib 411, Lib 421, Lib 431, Lib 442, Lib 512, Lib 522, Lib 571, Lib 572; (3) a 3.00 GPA covering all upper-division and graduate courses taken after admission to the school.

A maximum of 15 term hours of graduate work completed at another accredited institution or through the Division of Continuing Education of the Oregon State System of Higher Education may be accepted for transferred credit. Candidates who hold advanced degrees in another field may be considered to have satisfied the requirements for work outside the school, and may take additional courses in librarianship.

- Lib 411. **Cataloging and Classification.** (G) 3 hours. Comaromi, Kemper.
 Lib 421. **Bibliography and Reference.** (G) 3 hours. Findly, Morrison.
 Lib 431. **The Library in Society.** (G) 3 hours. Pierron.
 Lib 432. **The School Library as an Instructional Materials Center.** (G) 3 hours. Pond.
 Lib 442. **Selection and Acquisition of Materials.** (G) 3 hours. Merritt, Pierron.
 Lib 445. **The Library and Audio-Visual Materials.** (G) 3 hours. Kemper.
 Lib 451. **Children's Literature.** (G) 3 hours. Feller, Pond.
 Lib 455. **Books and Related Materials for Young Adults.** (G) 3 hours. Pond.
 Lib 505. **Reading and Conference.** Hours to be arranged.
 Lib 507. **Seminar.** Hours to be arranged.
 Lib 508. **Workshop.** Hours to be arranged (summer session).
 Lib 509. **Practicum.** 3 hours.
 Lib 512. **Advanced Cataloging and Classification.** 3 hours. Comaromi.
 Lib 522. **Advanced Bibliography and Reference.** 3 hours. Morrison.
 Lib 523. **Government Publications.** 3 hours. Findly.
 Lib 533. **The Public Library.** 3 hours. Pierron.
 Lib 534. **The Academic Library.** 3 hours. Morrison.
 Lib 538. **Library Administration.** 3 hours. Kemper, Pierron.
 Lib 541. **History of the Book.** 3 hours. Hintz.
 Lib 543. **Instructional Materials Centers: Resources and Services.** 3 hours. Pond.
 Lib 556. **Library Programs for Children and Young Adults.** 3 hours. Feller.
 Lib 558. **Storytelling.** 3 hours. Feller.
 Lib 561. **Literature of the Humanities.** 3 hours. McCollough.
 Lib 562. **Literature of the Sciences.** 3 hours. Morrison.
 Lib 563. **Literature of the Social Sciences.** 3 hours. Jones.
 Lib 571. **Research in Librarianship.** 3 hours. Kemper.
 Lib 572. **Library Automation.** 3 hours. Kemper.
 Lib 573. **The Library and the Publishing Process.** 3 hours. Morrison.

Management and Business

Professors: RICHARD W. LINDHOLM (dean), EDWIN F. BEAL, MARK R. GREENE, DALE S. HARWOOD, CHARLES E. JOHNSON, ARTHUR E. MACE, STUART U. RICH, WILLIAM J. ROBERT, ROY J. SAMPSON, DONALD S. TULL, STANLEY C. VANCE, DONALD A. WATSON.

Associate Professors: ROMAN R. ANDRUS, DAVID A. BAERNCOFF, W. SCOTT BAUMAN, WARREN B. BROWN, EATON H. CONANT, JEROME J. DASSO, CATHERINE M. JONES, CHRIS J. LUNESKI, KENNETH D. RAMSING, W. DWAIN RICHINS, LESLIE L. D. SHAFFER, FREDERICK J. SEUBERT, NORMAN R. SMITH, JOHN W. SOHA, HAROLD K. STROM, JOHN R. WISH.

Assistant Professors: TERRY J. ANDERSON, THOMAS W. CALMUS, PAUL FRISHKOFF, FRANKLIN L. MCCARTHY, WILLIAM H. PARKS, ARNO L. PETERSON, JAMES E. REINMUTH, LARRY E. RICHARDS, PAUL SWADENER.

The Graduate School of Management and Business provides: (1) basic professional business education for entering graduate students who have had little or no undergraduate work in business administration; (2) advanced work in general management and in business specialties for students who have completed an undergraduate major in business administration; and (3) preparation for careers in college teaching and research.

Instruction is offered in the fields listed below. In all fields, instruction in the College of Business Administration is supported by courses in cognate fields offered by other divisions of the University. The graduate program is accredited by the American Association of Collegiate Schools of Business.

Accounting—public, industrial, and government.

Business Education—teacher preparation for secondary schools and colleges.

Finance—banking, investments, financial management.

Forest Industries Management—management of forest products industries (lumber, plywood, pulp and paper, construction and housing).

International Business—finance, trade, management, foreign commercial law.

Management Analysis and Policy—systems analysis, top-level policymaking, functional integration, overall analysis and control.

Managerial Economics—managerial economics, business planning, forecasting, business taxation.

Marketing—marketing theory, consumer and industrial marketing, marketing research and forecasting, management of product, pricing, promotion, distribution.

Organization Theory—organization structure, communication, technology change, group behavior, administrative processes, policy, the organization and the environment.

Personnel—selection, training, wage and salary administration, labor relations.

Production—operations research, production programming, industrial management, industrial structure and policy.

Public Utilities—control and management of private and publicly owned utilities.

Quantitative Methods—quantitative analysis for business decisions.

Real Estate—urban land use, site location.

Risk and Insurance—risk management, personal and property insurance, pensions and group insurance, social insurance.

Transportation and Business Logistics—carrier and industrial traffic management, international and public policy aspects of transport and distribution systems.

Information concerning financial aid available to graduate students is available on request at the Graduate School of Management and Business.

Research and Consultation. Faculty research interests include: impact of computerization, marketing forest products, labor benefit programs, gerontology, the commercial code, bank reserves, accounting theory, forecasting techniques, role of the board of directors, consumer behavior, regional growth patterns, cybernetics, investment patterns, commodity flow trends, transportation pricing, and the impact of taxation on foreign trade. Faculty members are consultants to firms in a great many industries, to civic planning groups, and to Federal, state, and local government agencies.

Master's Program. The Graduate School of Management and Business offers programs leading to the Master of Business Administration, Master of Science, and Master of Arts degrees. The programs require four to six terms to complete, depending on the prior background of the student. For students entering with little or no undergraduate work in business, a total of 82 term hours of work is required, including a 30-hour preliminary core program, all or part of which may be waived for students who have had equivalent work as undergraduates.

Admission. For admission to the master's program, the student must satisfy the general requirements for admission to the Graduate School, and must submit an acceptable score on the Admission Test for Graduate Study in Business, a letter of purpose and three letters of recommendation.

Graduate work taken in summer sessions before a student is formally admitted to a graduate program in business must have the prior approval of the dean to be counted as credit toward an advanced degree.

The Graduate School of Business Administration does not recognize unclassified student status as constituting entry to its graduate degree programs, nor as the basis for admission to graduate-level courses.

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

	Term Hours
Accounting in Administration (Ac 511, 512)	6
Statistics for Business Decisions (BS 511)	3
Financial Environment (FBE 514)	3
Financial Management (FBE 516)	3
Legal Environment of Business (FBE 517)	3
Industrial Administration (PIM 511)	3
Administration of the Marketing Function (MIT 511)	3
Principles of Economics (Ec 201, 202)	6
Mathematics (Mth 106 or Mth 109)	4
Introduction to Numerical Computation (CS 233) or Scientific and Statistical Computation (CS 428)	3
	37

Master of Business Administration. The program leading to the M.B.A. degree emphasizes the development of breadth of understanding of business problems and of general management skills; the program is especially adapted to the needs of students who have earned their bachelor's degree in the social sciences, humanities, sciences, or engineering.

The requirements are: (1) completion of the preliminary core program or equivalent; (2) a minimum of 27 term hours of graduate courses in the College of Business Administration, including not more than 18 hours in a field of specialization; (3) up to 18 term hours of graduate credit in business courses or related areas outside the school. A thesis is not required; if the student elects to submit a thesis, thesis credit (9 hours) is counted as part of the 18-hour maximum in his field of specialization.

All candidates for the M.B.A. degree are required to take a written comprehensive examination, covering the field of specialization. A final oral examination may be administered at the department's discretion.

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

The requirements are: (1) completion of the first-year core program or equivalent; (2) a minimum of 45 term hours, including completion of a major in a specialized area of business, normally 15 term hours; (3) a thesis, 9 terms hours, in the area of specialization; (4) completion of a minor in the school or in a cognate field for a minimum of 12 term hours; (5) for the M.A. degree, competence in a foreign language.

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

Minor in Business Administration. A master's candidate with a major in another field or in an interdisciplinary studies program may elect a minor in business administration. The minor generally consists of the preliminary core. Minor programs must be reviewed by the school before course work is taken. All students taking business administration as a minor field must meet College of Business Administration admission standards outlined above.

Forest Industries Management. The College of Business Administration, through the Forest Industries Management Center, offers graduate work leading to the Master of Business Administration degree with a major in forest industries management. This program is designed to train students for management careers in the forest products industries—lumber, plywood, pulp, and paper—as well as for government careers in this field.

The program is interdisciplinary in nature. It includes course work in all departments within the College of Business Administration as well as courses in other divisions of the University. The program is administered by an interdepartmental committee.

The option in forest industries management is normally open only to students with undergraduate degrees in forestry. It emphasizes general management issues of forest products companies, as well as problems in the particular functional areas of marketing, transportation, production, accounting and statistics, and finance. Attention is also given to the development of skills in the application of quantitative techniques to the solution of forest management and business management problems.

Business Education. The College of Business Administration offers graduate work leading to the Master of Science degree with a special field: business education. The program provides the opportunity for a student to take work in business education, some in business administration, and some in education or in an elective field. A thesis based on an area of interest to the student in business education may also be a part of the program.

The student's specific program will depend to a great extent upon his background and needs. Careful advising will prepare the individual for the program best suited to his teaching goals. Unlike other programs in the College of Business

Administration, a substantial portion of the requirements for the Business Education major may be satisfied by work completed during summer sessions.

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

Admission. For admission to the doctoral program, the student must (1) satisfy the admission requirements of the Graduate School; (2) have the background of graduate work required for a master's degree in business administration; and (3) show exceptional academic promise.

Degree Requirements. The requirements for the D.B.A. degree are as follows: (1) completion of work above the level expected for a master's degree in business administration including work in each of the following areas: business organization theory and policy; a major functional area of business; statistics and quantitative control; Advanced Economic Theory (Ec 558, 559, 560); a field of study other than business; (2) submission of a thesis presenting an original and major contribution to an understanding of the thesis subject, for a minimum of 18 term hours of credit (the student must enroll for 3 term hours of thesis in each term the thesis is uncompleted after he has passed his comprehensive examinations, up to a maximum of 27 term hours); (3) examinations, including (a) a qualifying examination, normally taken during the student's second term of doctoral studies, (b) written comprehensive examinations taken not less than one academic year before the student expects to complete work for the degree, and (c) a final oral defense of the thesis.

Reading knowledge of foreign languages is not required.

Research. Doctoral candidates are expected to become actively engaged in the research program of the school. Opportunities for research experience are provided in connection with projects of individual faculty members, and in the Bureau of Business and Economic Research, Center for International Business Studies, the Forest Industries Management Center, and the Transport and Logistics Research Center.

Accounting and Quantitative Methods

Accounting

- Ac 411. **Federal Income Tax.** (G) 3 hours.
 Ac 412. **Federal Income Tax Procedures.** (G) 3 hours.
 Ac 420, 421. **Management Information Systems.** (G) 3 hours each term.
 Ac 430. **Fund Accounting.** (G) 3 hours.
 Ac 440, 441. **Accounting Verification.** (G) 3 hours each term.
 Ac 450, 451. **Special Topics in Accounting.** (G) 3 hours each term.
 Ac 480, 481. **Advanced Accounting Problems.** (G) Hours to be arranged.
 *Ac 501. **Research.** Hours to be arranged.
 *Ac 503. **Thesis.** Hours to be arranged.
 Ac 507. **Seminar.** Hours to be arranged.
Development of Accounting Thought. Managerial Cost and Budget Analysis.
 Ac 508. **Workshop.** Hours to be arranged (summer session and extension).
 Ac 511, 512. **Accounting in Administration.** (p) 3 hours each term.

* No-grade course.

- Ac 540. **Administrative Control.** 3 hours.
 Ac 542. **Accounting Verification.** 3 hours.
 Ac 552. **Accounting Theory.** 3 hours.
 Ac 562. **Cost Analysis and Interpretation.** 3 hours.

Quantitative Methods

- BS 432. **Quantitative Analysis for Business Decisions.** (G) 3 hours.
 BS 433. **Applied Analysis of Variance.** (G) 3 hours.
 BS 434. **Applied Regression Analysis.** (g) 3 hours.
 BS 435. **Industrial Dynamics.** (G) 3 hours.
 BS 507. **Seminar.** Hours to be arranged.
Dynamic Time-Dependent Processes. Sampling Theory and Techniques. Dynamic Systems. Multivariate Methods.
 BS 511. **Statistics for Business Decisions.** (p) 3 hours.

Business Education

- BEd 407. **Seminar.** (g) Hours to be arranged.
 BEd 422. **Business Education and the Community.** (g) 3 hours.
 BEd 508. **Workshop.** Hours to be arranged (summer session and extension).

Finance and Business Environment

- FBE 460. **Commercial Bank Management.** (g) 3 hours.
 FBE 474. **International Finance Management.** (G) 3 hours.
 *FBE 501. **Research.** Hours to be arranged.
 *FBE 503. **Thesis.** Hours to be arranged.
 FBE 507. **Seminar.** Hours to be arranged.
Business Tax Policy. Legal and Accounting Aspects of Investments.
 FBE 508. **Workshop.** Hours to be arranged (summer session and extension).
 FBE 514. **Financial Environment.** (p) 3 hours.
 FBE 516. **Financial Management.** (p) 3 hours.
 FBE 517. **Legal Environment of Business.** (p) 3 hours.
 FBE 519. **Business Ethics.** 3 hours.
 FBE 520. **Methods in Business Research.** 3 hours.
 FBE 525. **Managerial Economics.** 3 hours.
 FBE 530. **Problems in Business Planning and Forecasting.** 3 hours.
 FBE 540. **Problems in Finance.** 3 hours.
 FBE 545. **Theory of Finance.** 3 hours.
 FBE 550. **Foreign Commercial Law.** 3 hours.
 FBE 565. **Investment Analysis.** 3 hours.
 FBE 566. **Investment Administration.** 3 hours.
 FBE 570. **Commercial Banking.** 3 hours.

* No-grade course.

- FBE 571. **International Finance and Investment.** 3 hours.
 FBE 575. **The Money Market.** 3 hours.
 FBE 580. **Management of Financial Institutions.** 3 hours.

Marketing, Insurance, and Transportation

- MIT 418. **Commercial and Industrial Site Location.** (G) 3 hours.
 MIT 430. **Advanced Real Estate and Urban Land Use.** (G) 3 hours.
 MIT 431. **Residential Property Development.** (G) 3 hours.
 MIT 451. **Transportation Regulatory Laws and Procedures.** (G) 3 hours.
 MIT 452. **Special Problems in Transportation Management.** (G) 3 hours.
 MIT 455. **Business Insurance and Risk Management.** (G) 3 hours.
 MIT 456. **Life and Health Insurance.** (G) 3 hours.
 MIT 457. **Special Topics in Risk and Insurance.** (G) 3 hours.
 MIT 458. **Social Insurance.** (G) 3 hours.
 MIT 467. **Public Utility Management.** (G) 3 hours.
 MIT 475. **International Marketing Management.** (G) 3 hours.
 MIT 476. **Case Problems in International Business.** (G) 3 hours.
 *MIT 501. **Research.** Hours to be arranged.
 *MIT 503. **Thesis.** Hours to be arranged.
 MIT 507. **Seminar.** Hours to be arranged.

Marketing Theory. Transportation Problems. Physical Distribution Management. Marketing Research. Product Innovation. Urban Land Utilization. Real Estate Investment Analysis.

- MIT 508. **Workshop.** Hours to be arranged (summer session and extension).
 MIT 511. **Administration of the Marketing Function.** (p) 3 hours.
 MIT 520. **Marketing Problems and Policies.** 3 hours.
 MIT 521. **Pricing Policies.** 3 hours.
 MIT 530. **Problems in Industrial Marketing.** 3 hours.
 MIT 540. **Problems in Forest Industries Management.** 3 hours.
 MIT 549. **Transportation Theory and Practice.** 3 hours.
 MIT 555. **Risk and Insurance Theory.** 3 hours.
 MIT 556. **Pensions and Group Insurance.** 3 hours.
 MIT 557. **Analysis of Business Risk.** 3 hours.
 MIT 561. **Analysis of Consumer Behavior.** 3 hours.
 MIT 562. **Marketing Communications.** 3 hours.
 MIT 563. **Marketing Concepts and Theory.** 3 hours.
 MIT 572. **International Marketing Policies.** 3 hours.
 MIT 573. **International Business Operations.** 3 hours.

Personnel and Industrial Management

- PIM 412. **Personnel Management.** (g) 3 hours.

* No-grade course.

- PIM 413. **Wage and Salary Administration.** (G) 3 hours.
 PIM 414. **Problems in Personnel Management.** (g) 3 hours.
 PIM 429. **Production Planning and Control.** (G) 3 hours.
 PIM 480. **Business History.** (G) 3 hours.
 *PIM 501. **Research.** Hours to be arranged.
 *PIM 503. **Thesis.** Hours to be arranged.
 PIM 507. **Seminar.** Hours to be arranged.
Research Design. Computer in Business. Comparative Management Systems. Collective Bargaining. Administrative Communication. Administration of Labor Market Policies. Operations Research Applications. Quality Control. Methods and Time Analysis. Administrative Science. Organization Theory. Research and Development Management.
 PIM 511. **Industrial Administration.** (p) 3 hours.
 PIM 528. **Concepts in Industrial Management.** 3 hours.
 PIM 530. **Production Programming.** 3 hours.
 PIM 531. **Theory of Business Organization.** 3 hours.
 PIM 532. **Problems in Business Policies.** 3 hours.
 PIM 533. **Theory of the Industrial Work Group.** 3 hours.
 PIM 534. **Personnel Administration.** 3 hours.
 PIM 535. **Personnel Psychology.** 3 hours.
 PIM 536. **Organizational Conflict and Change.** 3 hours.

Mathematics

Professors: ANDREW F. MOURSUND (department head), FRANK W. ANDERSON, FRED C. ANDREWS, RICHARD B. BARRAR, PAUL CIVIN, CHARLES W. CURTIS, KENNETH S. GHENT, MICHIO KUGA, DAVID K. HARRISON, EUGENE A. MAIER, IVAN M. NIVEN, KENNETH A. ROSS, ROBERT F. TATE, DONALD R. TRUAX, LEWIS E. WARD, JR., BERTRAM YOOD.

Associate Professors: BRUCE A. BARNES, ROBERT S. FREEMAN, HENRY L. LOEB, THEODORE K. MATTHES, DAVID G. MOURSUND, GEORGE W. STRUBLE, JAMES M. VAN BUSKIRK, CHARLES R. B. WRIGHT.

Assistant Professors: CLARK T. BENSON, WENDELL T. BEYER, ROBERT B. BURCKEL, C. H. DEO, MICHEAL N. DYER, JAMES E. HUMPHREYS, JOHN B. JACOBS, RICHARD M. KOCH, JOHN V. LEAHY, FRANKLIN LOWENTHAL, ALLAN J. SIERADSKI, HUGH E. WARREN, BENJAMIN B. WELLS.

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

Two basic curricula are available for programs for the M.A. and M.S. degrees, one being designed for persons intending to continue toward the Ph.D. degree and the other designed for persons intending to terminate their study of mathematics upon receipt of the master's degree. No thesis is required in either program. Beginning graduate students are required to take placement examinations appropriate to their level of achievement in mathematics soon after they arrive on campus.

Work for the Ph.D. degree is offered in algebra, analysis, number theory, numerical analysis, differential and algebraic geometry, topology, differential equations and applied mathematics, topological algebra, probability, and statistics.

* No-grade course.

Acceptance into the Ph.D program is contingent upon passage of qualifying examinations over established syllabi in three general areas of mathematics chosen from several available options. The Ph.D. qualifying examinations are given each fall and spring. A faculty advisory committee is assigned to each candidate accepted into the Ph.D. program to assist him in planning subsequent course and seminar programs, examination scheduling and research undertakings. The variety of seminar offerings is large and the content varies considerably from year to year according to the research interests of the faculty and Ph.D. students.

Master's degree programs are available in computer science, either within the mathematics department or in conjunction with other related areas (see pages 20-22).

The department also offers coordinated graduate programs for the training of secondary-school and junior-college teachers of mathematics. Such programs are available exclusively within the mathematics department, as well as in conjunction with other related areas. See pages 44-45.

The University Library has an excellent collection of both mathematical books and journals. The University has two modern electronic computers and a well-equipped statistical laboratory.

- Mth 407. **Seminar.** (g) Hours to be arranged.
- Mth 411. **Introductory Linear Algebra.** (g) 3 hours.
- Mth 412. **Linear Algebra.** (G) 3 hours.
- Mth 413. **Geometric Algebra.** (G) 3 hours.
- Mth 414. **Introduction to Hilbert Space.** (G) 3 hours.
- Mth 415, 416, 417. **Introduction to Abstract Algebra.** (G) 3 hours each term.
- Mth 418. **Differential Equations.** (g) 3 hours.
- Mth 419. **Function of Several Variables.** (g) 3 hours.
- Mth 420. **Vector Analysis.** (g) 3 hours.
- Mth 421, 422. **Functions of a Complex Variable.** (g) 3 hours each term.
- Mth 425, 426, 427. **Elements of Statistical Methods.** (g) 3 hours each term.
- Mth 429, 430. **Introduction to Numerical Analysis.** (g) 3 hours each term.
- Mth 431, 432, 433. **Introduction to Analysis.** (G) 3 hours each term.
- Mth 434. **Linear Computations.** (G) 3 hours.
- Mth 435, 436. **Numerical Analysis.** (G) 3 hours each term.
- Mth 437, 438, 439. **Introduction to Topology.** (G) 3 hours each term.
- Mth 441, 442, 443. **Introduction to Statistical Theory.** (g) 3 hours each term.
- Mth 447, 448, 449. **Mathematical Statistics.** (G) 3 hours each term.
- Mth 454, 455, 456. **Discrete Probability Theory and Applications.** (G) 3 hours each term.
- Mth 457, 458, 459. **Foundations of Mathematics.** (g) 3-4 hours each term (summer session).
- Mth 465, 466, 467. **Ordinary and Partial Differential Equations.** (g) 3 hours each term.
- Mth 468, 469. **Probability and Statistics.** (g) 3-4 hours each term (summer session).
- Mth 478, 479. **Algebra.** (g) 3-4 hours each term (summer session).
- Mth 487, 488, 489. **Geometry.** (G) 3-4 hours each term.
- Mth 498, 499. **Analysis.** (g) 3-4 hours each term (summer session).
- *Mth 501. **Research.** Hours to be arranged.

* No-grade course.

- *Mth 503. **Thesis.** Hours to be arranged.
- Mth 505. **Reading and Conference.** Hours to be arranged.
- Mth 507. **Seminar.** Hours to be arranged.
- Algebraic Geometry:* Humphreys, Leahy. *Algebraic Topology:* Dyer, Sieradski. *Applied Mathematics:* Barrar, Freeman, Lowenthal. *Banach Algebras:* Barnes, Yood. *Commutative Algebra:* Anderson, Harrison. *Complex Variable Theory:* Koch, Lowenthal. *Differential Geometry:* Koch, Kuga, Leahy. *Fourier Analysis:* Ross. *Function Algebras:* Civin. *Groups and Representations:* Curtis, Grove, Wright. *Harmonic Analysis:* Ross. *Homological Algebra:* Anderson, Harrison. *Knot Theory:* Van Buskirk. *Lie Algebras and Algebraic Groups:* Curtis, Humphreys. *Noncommutative Rings:* Anderson, Curtis, Harrison. *Number Theory:* Kuga, Niven. *Numerical Analysis:* Loeb, D. Moursund. *Probability:* Deo, Truax. *Selected Topics for Mathematics Teachers:* Ghent, Maier, A. Moursund. *Statistics:* Andrews, Matthes, Tate, Truax. *Topics in Functional Analysis:* Civin, Ross, Yood. *Topological Semi-Groups:* Ward. *Topology:* Dyer, Sieradski, Van Buskirk, Ward.
- Mth 521, 522, 523. **Partial Differential Equations.** 3 hours each term.
- Mth 531, 532, 533. **Linear Analysis in Applied Mathematics.** 3 hours each term.
- Mth 541, 542, 543. **Abstract Algebra.** 3 hours each term.
- Mth 544, 545, 546. **Structure of Rings and Algebras.** 3 hours each term.
- Mth 547, 548, 549. **Algebraic Number Theory.** 3 hours each term.
- Mth 551, 552, 553. **Theory of Functions of a Real Variable.** 3 hours each term.
- Mth 554, 555, 556. **Theory of Functions of a Complex Variable.** 3 hours each term.
- Mth 557, 558, 559. **Topics in Classical Analysis.** 3 hours each term.
- Mth 561, 562, 563. **Modern Theories in Analysis.** 3 hours each term.
- Mth 571, 572, 573. **Topology.** 3 hours each term.
- Mth 578, 580. **Algebra.** 3-4 hours each term (summer session).
- Mth 581, 582, 583. **Theory of Estimation and Testing Hypotheses.** 3 hours each term.
- Mth 584, 585, 586. **Theory of Probability.** 3 hours each term.
- Mth 587, 588. **Stochastic Processes.** 3 hours each term.
- Mth 589. **Geometry.** 3-4 hours (summer session).
- Mth 591, 592, 593. **Advanced Mathematical Statistics.** 3 hours each term.
- Mth 594. **Theory of Games.** 3 hours.
- Mth 595, 596. **Statistical Decision Theory.** 3 hours each term.
- Mth 598, 599. **Analysis.** 3-4 hours each term (summer session).

Computer Science

Within the limits imposed by general degree requirements, graduate students may elect a significant concentration of computer science courses.

- CS 407. **Seminar.** (g) Hours to be arranged.
- CS 428. **Scientific and Statistical Computation.** (G) 3 hours.
- CS 481. **Assembly Language Programming.** (g) 4 hours.
- CS 482. **Advanced Programming Techniques.** (G) 4 hours.

* No-grade course.

- CS 483. **Systems Programming.** (G) 4 hours.
 CS 484. **Nonnumeric Information Processing.** (G) 4 hours.
 *CS 501. **Research.** Hours to be arranged.
 *CS 503. **Thesis.** Hours to be arranged.
 CS 505. **Reading and Conference.** Hours to be arranged.
 CS 507. **Seminar.** Hours to be arranged.
 CS 597. **Theory of Computation.** 3 hours.

Medical Sciences

The University of Oregon Medical School in Portland offers graduate instruction leading to the M.S. and Ph.D. degrees in the basic medical science departments (anatomy, bacteriology, biochemistry, medical psychology, microbiology, pathology, pharmacology, and physiology). The M.S. degree in Medical Technology is offered by the department of Clinical Pathology. 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: ROBERT M. TROTTER (dean), EXINE BAILEY, GEORGE BOUGHTON, EDMUND CYKLER, J. ROBERT HLADKY, HOMER KELLER, IRA LEE, ROBERT E. NYE, MAX RISINGER, ROBERT S. VAGNER.

Associate Professors: PETER BERGQUIST, LESLIE BREIDENTHAL, ROBERT CUNNINGHAM, FLOYD ELLEFSON, JOHN GUSTAFSON, JOHN HAMILTON, LAWRENCE MAVES, JAMES MILLER, ROYCE SALTZMAN, VIRGINIA WHITFIELD, NEIL E. WILSON, WILLIAM WOODS.

Assistant Professors: DORIS CALKINS, CHARLES FARMER, ROBERT HURWITZ, GENE LEWIS, GARY MARTIN, JOHN McMANUS, HAROLD OWEN, VICTOR STEINHARDT, RICHARD TROMBLEY, MONTE TUBB.

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

For admission to the master's program, the student must satisfy the general requirements for admission to the Graduate School. Formal admission to candidacy

* No-grade course.

is granted only after passing a qualifying examination in the theory, history, and performance of music, to be taken during the first term or summer session in residence. Further examinations are required in each area of concentration. Information concerning these examinations and concerning levels of performance competency required may be obtained from the dean of the School of Music.

All candidates for a master's degree in music must complete a core program, in addition to requirements in their areas of specialization. The core program is as follows: (1) participation in a large ensemble (Mus 595, Mus 596, Mus 597, Mus 598), three terms; (2) private instruction in performance, at a level to be determined by audition, three terms; (3) attendance at ten musical events each term in residence or five events each summer session in residence; (4) Introduction to Graduate Study (Mus 511 and either Mus 512 or Mus 513); (5) Seminar (Mus 507 or MuE 507), 6 term hours.

Information concerning requirements in the several areas of specialization of the master's program may be obtained from the dean of the School of Music.

The program leading to the Doctor of Musical Arts degree is designed to prepare college teachers of music who are qualified in two areas. Students elect either music education or performance as a primary area, with a supporting area chosen from among the following: performance or music education (whichever is not chosen as primary), or theory, or history-literature. For a detailed description of requirements for the doctor's degree, write to the dean of the School of Music.

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

Music

- Mus 407. **Seminar.** (G) Hours to be arranged.
 Mus 425. **Advanced Keyboard Harmony.** (G) 2 hours.
 Mus 426, 427. **Score Reading.** (G) 2 hours.
 Mus 433, 434. **Counterpoint II.** (G) 2 hours each term. Keller.
 Mus 436, 437. **Advanced Instrumental Scoring.** (G) 2 hours each term. Keller.
 Mus 438. **Scoring for Bands.** (G) 3 hours. Lewis.
 Mus 439. **Scoring for Voices.** (G) 3 hours. Owen, Tubb.
 Mus 440, 441, 442. **Composition II.** (G) 2 hours each term. Keller.
 Mus 450. **Listening with Understanding.** (g) 3 hours fall or winter.
 Mus 451. **The Music of Bach and Handel.** (g) 3 hours winter.
 Mus 452. **The Classic Symphony and Sonata.** (g) 3 hours spring.
 Mus 453. **Introduction to Opera.** (g) 3 hours winter. Maves.
 Mus 454. **Introduction to Twentieth-Century Music.** (g) 3 hours spring.
 Mus 455. **Hymnology.** (G) 3 hours. Saltzman.
 Mus 456. **Liturgics.** (G) 3 hours. Saltzman.
 Mus 457. **Sacred Choral Music.** (G) 3 hours. Saltzman.
 Mus 458, 459. **Administration of Church Music.** (G) 3 hours each term. Saltzman.
 Mus 460. **Music in Worship.** (G) 2 hours. Saltzman.
 Mus 461, 462, 463. **Music for Chamber Ensemble.** (G) 2 hours each term. Hladky.
 Mus 464, 465, 466. **Piano Music.** (G) 2 hours each term. Woods.
 Mus 467, 468, 469. **Solo Vocal Music.** (G) 2 hours each term. Miller, Wilson.

- Mus 470, 471, 472. **Orchestral Music.** (G) 2 hours each term.
 Mus 473, 474, 475. **History of Opera.** (G) 2 hours each term.
 Mus 476. **Organ Music.** (G) 3 hours. Hamilton.
 Mus 477. **Wind-Instrument Music.** (G) 3 hours. Vagner.
 Mus 485, 486. **Advanced Conducting.** (G) 3 hours each term. Risinger, Vagner.
 Mus 493. **Collegium Musicum.** (G) 1 hour any term. Owen.
 *Mus 501. **Research.** Hours to be arranged.
 *Mus 503. **Thesis.** Hours to be arranged.
 Mus 505. **Reading and Conference.** Hours to be arranged.
 Mus 507. **Seminar.** Hours to be arranged.
Composition. Music History. Music Theory. Church Music.
 Mus 511, 512, 513. **Research Methods in Music.** 3 hours each term. Bergquist, Martin, staff.
 Mus 533, 534. **Twentieth-Century Counterpoint.** 2 hours each term. Keller.
 Mus 540, 541, 542. **Composition for Electronic Media.** 3 hours each term. Keller, Hunter.
 Mus 543, 544. **Notation of Mediaeval and Renaissance Music.** 3 hours each term.
 Mus 560. **Music in the Middle Ages.** 3 hours fall. Bergquist, Hamilton.
 Mus 561. **Music in the Renaissance.** 3 hours winter. Bergquist, Hamilton.
 Mus 562. **Music in the Baroque Era.** 3 hours spring. Bergquist, Hamilton.
 Mus 563. **Music in the Classical Period.** 3 hours fall. Bergquist.
 Mus 564. **Music in the Romantic Era.** 3 hours winter. Bergquist.
 Mus 565. **Music in the Twentieth Century.** 3 hours spring. Bergquist.
 Mus 589. **Performance Practices before 1800.** 3 hours.
 Mus 590. **Performance Studies (Studio Instruction).** 2-4 hours any term.
 Mus 591. **Performance Studies (Studio Instruction).** 1-2 hours any term (6 hours maximum credit).
 Mus 592. **Performance Studies (Studio Instruction).** (p) 1 hour any term (3 hours maximum credit).
 Mus 593. **Jazz Ensemble.** 1 hour any term.
 Mus 594. **Chamber Ensemble.** 1 hour any term.
 Mus 595. **Symphonic Band.** 1 hour any term.
 Mus 596. **Orchestra.** 1 hour any term.
 Mus 597. **Chorus.** 1 hour any term.
 Mus 598. **Opera Workshop.** 2 hours any term.

Music Education

- MuE 407. **Seminar.** (G) Hours to be arranged.
 MuE 444. **Choral Materials for Schools.** (G) 2 hours. Risinger.
 MuE 445. **String Materials for Schools.** (G) 2 hours. Hladky.
 MuE 446. **Wind-Instrument Materials for Schools.** (G) 2 hours. Cunningham, Lee, Vagner.
 MuE 447. **Psychology of Music.** (G) 3 hours.

* No-grade course.

- *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. **Basic Concepts in the Teaching of Music.** 3 hours. Nye.
 MuE 533. **Music in the Elementary School.** 3 hours. Nye.
 MuE 534. **Music in the Junior High School.** 3 hours. Whitfield.
 MuE 535. **Music in the Senior High School.** 3 hours. McManus.
 MuE 536. **Administration of School Music.** 3 hours. Ellefson, Gustafson, Nye.
 MuE 537. **Comparative Music Pedagogy.** 3 hours. Cykler.
 MuE 538. **Curriculum Development in Music.** 3 hours.
 MuE 591. **Advanced Pedagogy.** 3 hours any term (9 hours maximum credit).

Nursing

The University of Oregon School of Nursing, located at the Medical School campus in Portland, offers an advanced curriculum leading to the degree of Master of Science in Nursing Education. A major in Medical Surgical Nursing is offered. The program is planned to prepare nurses for faculty positions. For further information, see the School of Nursing Catalog.

Philosophy

- Professors: FRANK EBERSOLE, BERTRAM JESSUP (emeritus), ARTHUR JOHN WISDOM.
 Associate Professors: ARNULF ZWEIG (department head), HENRY ALEXANDER, JOHN COOK, ROBERT HERBERT.
 Assistant Professors: LEONARD GEDDES, DON LEVI.

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

The department's graduate offerings are intended to meet the needs of three classes of students: (1) those preparing to work for the Ph.D. in philosophy with a view of 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.

- Phi 407. **Seminar.** (G) Hours to be arranged.
Berkeley. Philosophy of History. Descartes.
 Phi 411. **Plato.** (G) 3 hours.
 Phi 413. **Aristotle.** (G) 3 hours.
 Phi 416. **Descartes.** (G) 3 hours.
 Phi 419. **Locke.** (G) 3 hours.
 Phi 423. **Leibniz.** (G) 3 hours.
 Phi 425. **Berkeley.** (G) 3 hours.

* No-grade course.

- Phl 427. **Hume.** (G) 3 hours.
 Phl 429, 430. **Kant.** (G) 3 hours each term.
 Phl 431, 432. **Philosophy in Literature.** (G) 3 hours each term.
 Phl 435. **Existentialism.** (G) 3 hours.
 Phl 438. **Kierkegaard.** (G) 3 hours.
 Phl 439, 440. **Philosophy of Religion.** (G) 3 hours each term.
 Phl 441, 442, 443. **Aesthetics.** (G) 3 hours each term.
 Phl 447, 448. **Wittgenstein.** (G) 3 hours each term.
 Phl 452. **Philosophy of Language.** (G) 3 hours.
 Phl 453, 454. **Analytic Philosophy.** (G) 3 hours each term.
 Phl 455, 456. **History of Logic.** (G) 3 hours each term.
 Phl 458, 459. **Philosophy of Mind.** (G) 3 hours each term.
 Phl 461, 462. **Symbolic Logic.** (G) 3 hours each term.
 Phl 463. **Philosophy of Mathematics.** (G) 3 hours.
 Phl 465. **Logical Theory.** (G) 3 hours.
 Phl 468. **Problems in Philosophy of Science.** (G) 3 hours.
 *Phl 501. **Research.** Hours to be arranged.
 *Phl 503. **Thesis.** Hours to be arranged.
 Phl 505. **Reading and Conference.** Hours to be arranged.
 Phl 507. **Seminar.** Hours to be arranged.
Metaphysics. Analytic Aesthetics. Practical Reasoning. Philosophical Conflict. The Later Wittgenstein.
 Phl 511, 512, 513. **Problems of Knowledge.** 3 hours each term.
 Phl 514, 515, 516. **Ethical Theory.** 3 hours each term.
 Phl 517, 518. **Problems in Philosophy of Language.** 3 hours each term.
 Phl 523, 524. **Problems in Philosophy of Mind.** 3 hours each term.

Physics

Professors: RUSSELL J. DONNELLY (department head), SHANG-YI CH'EN, BERNIE CRASEMANN, FRANCES E. DART, EDWIN G. EBBIGHAUSEN, RAYMOND T. ELLICKSON, MARVIN D. GIRARDEAU, JOEL W. MCCLURE, MICHAEL J. MORAVCSIK, JOHN L. POWELL, GREGORY H. WANNIER.

Associate Professors: AMIT GOSWAMI, JAMES C. KEMP, HARLAN W. LEFEVRE, GERALD D. MAHAN, DAVID K. MCDANIELS, BRIAN W. MATTHEWS, JACK C. OVERLEY, GEORGE W. RAYFIELD.

Assistant Professors: PAUL L. CSONKA, RICHARD J. HIGGINS, KWANGJAI PARK, ROBERT L. ZIMMERMAN.

Senior Instructors: JOHN C. BURG, JAMES V. RADOSTITZ.

The Department of Physics offers a program of graduate work leading to the M.A., M.S., and Ph.D. degrees. Current research in the department is concerned with experimental and theoretical aspects of nuclear and atomic physics, optical spectroscopy, solid-state physics, the physics of fluids, and theoretical high energy physics.

* No-grade course.

Experimental research in solid-state physics includes electron spin resonance and optical properties of insulating crystals, as well as the electrical and magnetic properties of metals and alloys. Theoretical research includes the study of the fundamentals of electronic motion in solids, calculations of various electronic properties for materials with unusual energy band structures, statistical mechanics, and many-body theory.

Experimental research is conducted on the properties of superfluid helium, especially the quantized vortices. Theoretical work on the many-body problem emphasizes variational methods and exactly soluble models, with applications to equilibrium and nonequilibrium properties of helium, superconductors, and ferro magnets.

Nuclear physics research is centered around a 4-MeV Van de Graaff accelerator. In nuclear structure and reaction studies, work is carried out in neutron physics utilizing the pulsed beam, in capture gamma rays, charged particle reactions, and in beta- and gamma-ray spectroscopy, including atomic effects in beta decay. Research in theoretical nuclear physics concerns the use of nuclear reactions in obtaining information about nuclear structure, and the detailed study of nuclear structure, particularly employing many-body techniques.

The perturbation of atomic energy levels under conditions of high temperature and pressure is being investigated through optical spectroscopy. In astronomy, research on the motions of double-star systems is in progress, and seminar work is offered; no advanced degrees are offered in astronomy.

Research in theoretical high energy physics ranges over a broad spectrum including field theory, S-matrix, phenomenological models, strong and weak interaction, neutrino physics, photo-induced particle reactions, the two-nucleon interactions, and general relativity.

The department is located in the Physics Building of the modern science complex which contains well-equipped research laboratories. Also lodged in the Physics Building is the Science Services Department, which provides such auxiliary facilities as a machine shop, an electronics shop, a glass-blowing shop, a liquid-nitrogen storage facility, and a student shop.

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

Course requirements for a master's degree with a major in physics normally include, in addition to the substantial equivalent of the undergraduate physics degree: two year sequences in physics, at least one of which must be a 500 sequence; and one of the following sequences in mathematics:

Linear Algebra, Geometric Algebra, and Introduction to Hilbert Spaces (Mth 412, 413, 414); Functions of a Complex Variable (Mth 421, 422) and Linear Algebra (Mth 411 or 412); Introduction to Analysis (Mth 431, 432, 433); Ordinary and Partial Differential Equations (Mth 465, 466, 467); Partial Differential Equations (Mth 521, 522, 523); Linear Analysis in Applied Mathematics (Mth 531, 532, 533). The master's degree is offered with or without presentation of a thesis.

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

Teaching and research assistantships are available. Research assistantships are offered in connection with projects sponsored by such organizations as the National Science Foundation, the Air Force Office of Scientific Research, the Army Research Office, Tektronix Foundation, and the Weyerhaeuser Company. Several National Defense Education Act fellowships and National Science Foundation traineeships are awarded. Students from foreign countries are required to

submit results of the Graduate Record Examination and, where applicable, of the Test of English as a Foreign Language. Further information on graduate work in physics at the University is available from the department.

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

Ph 417, 418, 419. **Elements of Atomic, Nuclear, and Solid-State Physics.** (G) 4 hours each term.

Ph 421, 422, 423. **Structure of Matter.** (G) 3 hours each term.

Ph 431. **Optics.** (G) 3 hours each term.

Ph 432, 433. **Atomic Spectra.** (G) 3 hours each term.

Ph 434. **Optics Laboratory.** (G) 1 hour.

Ph 441, 442, 443. **Electricity and Magnetism.** (G) 3 hours each term.

Ph 451, 452, 453. **Introduction to Quantum Mechanics.** (G) 3 hours each term.

Ph 461, 462, 463. **Electronics.** (G) 3 hours each term.

Ph 471, 472, 473. **Introduction to Theoretical Physics.** (G) 3 hours each term.

Ph 481. **Special Relativity.** (G) 3 hours each term.

*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 Theory. Elementary Particles. Liquid Helium. Astrophysics. General Relativity. Advanced Elementary Particles.

Ph 511, 512, 513. **Theoretical Mechanics.** 3 hours each term.

Ph 521, 522, 523. **Electromagnetic Theory.** 3 hours each term.

Ph 531, 532, 533. **Quantum Mechanics.** 3 hours each term.

Ph 541, 542, 543. **Statistical Physics.** 3 hours each term.

Ph 551, 552, 553. **Nuclear Physics.** 3 hours each term.

Ph 554, 555, 556. **Theoretical Nuclear Physics.** 3 hours each term.

Ph 561, 562, 563. **Elementary Particle Physics.** 3 hours each term.

Ph 564, 565, 566. **Advanced Elementary Particle Physics.** 3 hours each term.

Ph 571, 572, 573. **Solid State Physics.** 3 hours each term.

Ph 574, 575, 576. **Theory of Condensed Matter.** 3 hours each term.

Ph 581, 582, 583. **Atomic Spectra.** 3 hours each term.

Ph 584, 585, 586. **Experimental Spectroscopy.** 1 hour each term.

Political Science

Professors: THOMAS HOVET, JR. (department head), ROBERT E. AGGER, JAMES C. DAVIES, JOHN F. GANGE, DANIEL GOLDRICH, WILLIAM C. MITCHELL, CHARLES P. SCHLEICHER, LESTER G. SELIGMAN, L. HARMON ZEIGLER.

Associate Professors: DAVID J. FINLAY, JOSEPH R. FITZMAN, ARTHUR M. HANHARDT, JR., JAROLD A. KIEFFER, JOYCE M. MITCHELL, M. GEORGE ZANINOVICH.

Assistant Professors: JOSEPH M. ALLMAN, JAMES P. LEVINE, JOHN ORBELL, LAWRENCE C. PIERCE.

* No-grade course.

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

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 Center for the Advanced Study of Educational Administration, and the Institute for Comparative Experimental Research on Behavioral Systems. Each of these programs provides a center of interdisciplinary and interdepartmental study, focused on aspects of political science. Individual faculty research projects, financed by foundations, the government, the University, and other agencies, provide further opportunities for the student to work closely with faculty members, and to share directly in the tasks of planning, designing, and conducting systematic studies of various kinds.

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

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

Doctor's Degree. Two years of full-time study beyond the bachelor's degree are generally required in preparation for the preliminary comprehensive examination for the Ph.D. degree. During these years the student is expected to take regular courses and seminars and reading courses to prepare himself for the examination. After successful completion of the language and/or statistics requirement the student takes the preliminary general written examination and writes a dissertation.

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

Financial Assistance. Teaching and research assistantships and fellowships are available for qualified students. Application forms may be secured from the Office of Admissions; applications should be submitted to the department by February 15.

- PS 412, 413. **Administrative Organization and Behavior.** (G) 5 hours each term, winter and spring. Pierce.
- PS 414. **Political Parties.** (G) 5 hours. Seligman.
- PS 415. **Political Parties.** (G) 5 hours. Seligman.
- PS 416. **Political Parties.** (G) 5 hours. Seligman.
- PS 420. **International Organization.** (G) 5 hours. Hovet.
- PS 421. **International Organization.** (G) 5 hours. Hovet.
- PS 422. **International Law.** (G) 5 hours spring. Hovet.
- PS 424. **Politics of Western Europe I.** (G) 5 hours. Hanhardt.
- PS 425. **Politics of Western Europe II.** (G) 5 hours. Hanhardt.
- PS 427, 428. **Government and Politics of the Soviet Union.** (G) 5 hours each term. Fiszman.
- PS 430. **Political Theory: General Issues.** (G) 5 hours fall. Zaninovich.
- PS 431. **Political Theory: Nature, Community, and Authority.** (G) 5 hours winter. Zaninovich.
- PS 432. **Political Theory: Participation, Change, and Leadership.** (G) 5 hours spring. Zaninovich.
- PS 440. **Comparative Foreign Policies.** (G) 5 hours. Hovet.
- PS 441. **Comparative Foreign Policies.** (G) 5 hours. Hovet.
- PS 442. **Comparative Foreign Policies.** (G) 5 hours. Hovet.
- PS 452. **Public Opinion and Political Participation.** (G) 5 hours. Orbell.
- PS 453. **Public Opinion and Political Participation.** (G) 5 hours. Orbell.
- PS 454. **Public Opinion and Political Participation.** (G) 5 hours. Orbell.
- PS 456. **Democratic Institutions.** (G) 5 hours. W. Mitchell.
- PS 457. **Democratic Processes.** (G) 5 hours. W. Mitchell.
- PS 458. **Development of Democracy.** (G) 5 hours. W. Mitchell.
- PS 460, 461. **Government and Politics of the Far East: China.** (G) 5 hours each term. Fiszman.
- PS 463. **Government and Politics of Latin America.** (G) 5 hours. Goldrich.
- PS 464. **Government and Politics of Latin America.** (G) 5 hours. Goldrich.
- PS 467. **Federal Public Administration: The Presidency.** (G) 5 hours. Kieffer.
- PS 468. **Federal Public Administration: Departments and Agencies.** (G) 5 hours. Kieffer.
- PS 469. **Federal Public Administration: Departmental Leadership and Administration.** (G) 5 hours. Kieffer.
- PS 470. **Political Behavior.** (G) 5 hours. Davies.
- PS 475. **Political Revolution.** (G) 5 hours. Davies.
- PS 476. **Political Revolution: Research and Theory.** (G) 5 hours. Davies.
- PS 478. **Political Fiction.** (G) 5 hours. Davies.
- PS 482. **Legislative Politics.** (G) 5 hours.
- PS 483. **Allocation of Justice.** (G) 5 hours. Levine.
- PS 484. **The Supreme Court in America.** (G) 5 hours. Levine.
- PS 485. **The Supreme Court in America.** (G) 5 hours. Levine.
- PS 488. **The Policy Process.** (G) 5 hours. J. Mitchell.
- PS 489. **Comparative Public Policies.** (G) 5 hours. J. Mitchell.

- PS 490. **Community Politics I.** (G) 5 hours. Orbell.
- PS 491. **Community Politics II.** (G) 5 hours. Orbell.
- PS 492. **Political Decision-Making.** (G) 5 hours. J. Mitchell, W. Mitchell.
- PS 493. **Political Decision-Making.** (G) 5 hours. Pierce.
- PS 494. **Federal Education Policy.** (G) 5 hours.
- PS 495. **Federal Welfare Policy.** (G) 5 hours.
- PS 496. **National Security Policy.** (G) 5 hours. J. Mitchell.
- *PS 501. **Research.** Hours to be arranged.
- *PS 503. **Thesis.** Hours to be arranged.
- PS 505. **Reading and Conference.** Hours to be arranged.
- PS 507. **Seminar.** Hours to be arranged.
- Africa:* Finlay. *Comparative Community Politics:* Agger, Goldrich. *Comparative Labor Movements:* Fiszman. *Comparative Communist Systems:* Fiszman. *Political Behavior:* Davies. *Comparative Political Elites:* Seligman. *Contemporary Political Theory:* W. Mitchell. *International Politics:* Schleicher. *International Relations Theory:* Hovet, Finlay. *Policy Implementation Abroad:* Gange. *Political Development in the Newer Nations:* Davies, Goldrich. *Political Revolution:* Davies. *The Political System:* W. Mitchell. *Theory of American Politics:* W. Mitchell. *United States Foreign Policy:* Schleicher. *Politics of Public Administration:* Pierce. *Scope and Methods of Political Science:* Ziegler. *Marxist Political Theory:* Zaninovich. *Premodern Thought:* Zaninovich. *Philosophy of Political Inquiry:* Zaninovich. *Communication and Perception:* Ziegler. *Political Organization:* Ziegler. *Comparative Political Recruitment:* Seligman. *Western European Politics:* Hanhardt. *Orientation to Political Science:* Seligman. *Comparative Authoritarianism. Political Fiction: Novels and Other Writings:* Davies. *Introduction to Comparative Politics:* Hanhardt. *International Organization:* Hovet. *Policy Analysis:* J. Mitchell. *Metropolitan Political Sociology:* Orbell. *Implementing Social Change:* Orbell. *Civil Liberties:* Levine. *Public Control of Economic Life:* Pierce. *Organizational Decision-Making:* Pierce. *Mathematical Theories of Politics:* Medler. *Politics of Change:* Agger. *Social Control in Politics:* Medler. *Students and Politics:* Finlay. *Public Control of Economic Life:* Pierce.
- PS 509. **Teaching Practicum.** 1-5 hours.

Psychology

Professors: ROBERT F. FAGOT (department head), FRED ATTNEAVE, JACOB BECK, FREDERICK R. FOSMIRE, LEWIS R. GOLDBERG, RAY HYMAN, ROBERT W. LEEPER, PETER M. LEWINSOHN, RICHARD A. LITTMAN, GERALD R. PATTERSON, MICHAEL I. POSNER, PHILIP RUNKEL, NORMAN D. SUNDBERG, LEONA E. TYLER, ROBERT L. WEISS, ROBERT C. ZILLER.

Associate Professors: ROBYN DAWES, ROBERT B. ELLSWORTH, MARVIN GREENBAUM, DANIEL P. KIMBLE, EDWARD LICHTENSTEIN.

Assistant Professors: JOEL W. ADKINS, HAROLD ARKOWITZ, JOHN C. FENTRESS, RICHARD W. HALLER, STEPHEN JOHNSON, STEVEN W. KEELE, MARVIN E. LICKEY, GERALD M. REICHER, BENSON SCHAEFER, WILLIAM C. SHEPPARD.

Preparation for Graduate Study. A bachelor's degree is seldom a sufficient qualification for professional work in psychology; even the simpler professional positions require at least a master's degree.

Students should not undertake graduate work unless their grades in undergraduate psychology and related courses have averaged better than B.

* No-grade course.

Prospective graduate students in psychology are advised to take only the minimum of 36 hours in psychology required for an undergraduate major (a suggested maximum is 42 hours)—leaving time for work in such related fields as anthropology, biology, chemistry, mathematics, physics, and sociology. Preparation for graduate work should include courses in quantitative methods and foreign languages. All prospective graduate students should take at least one upper-division laboratory course and are strongly urged to take at least two terms of statistics in the Department of Mathematics. A student who intends to work for a Ph.D. degree should acquire a reading knowledge of two foreign languages; languages with particular relevance for psychologists are German, French, Russian, and Japanese.

Graduate Work. The department offers graduate work leading to the degrees of Master of Arts, Master of Science, and Doctor of Philosophy. Candidates for graduate work are accepted in the following fields: general experimental, physiological and comparative, mathematical, clinical, developmental, social and personality, and assessment. The department maintains a general experimental laboratory, rat and monkey laboratories, a child-study center, and a psychological clinic.

All students beginning graduate work in psychology, regardless of prior graduate training, are required to take a series of core courses (Psy 511—Psy 521, below) which provide a breadth of background in psychology as well as an introduction to research. A thesis is required for all advanced degrees. Teaching and research experience is required of all students working toward the Ph.D. degree. Further information concerning the core program and other requirements may be obtained on request to the department.

All students applying for admission for graduate work in psychology must provide scores on the Graduate Record Examination, including psychology, verbal, and quantitative scores, and three letters of recommendation on special forms provided by the department. Detailed information on admission, including application forms and information on awards and assistantships, may be obtained from the Department of Psychology.

Clinical Program. A research-oriented approach to theories and methods of clinical psychology is followed by the Department of Psychology. A clinical psychologist, in the view of the department, is a behavioral scientist with an area of specialization in clinical psychology. As part of his graduate training, the student learns to devise approaches to clinical problems which lead to a better conceptual understanding of the phenomena under study. The program stresses a data-oriented approach to the complexities of clinical problems. During the first and second years of graduate study the student completes (1) the core program, including work in experimental psychology and quantitative methods, (2) a proseminar in clinical research topics, and (3) a clinical core sequence in assessment and in behavior change, with an associated practicum. The second-year practicum experience, as well as advanced-level clinical-research training is provided in large part through the University Psychology Clinic, a training clinic operated by the clinical staff and students.

Beyond the second year, there is considerable latitude in planning a program of study and research. The student must pass a major clinical preliminary examination (covering assessment, psychopathology, and behavior change) and a minor preliminary examination in an area selected by the student as a special interest (e.g., learning approaches to behavior change, social psychology, etc.). A one-year clinical internship, which may be taken in either the third or fourth year, is required to provide the necessary breadth of experience.

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

Perception: Attneave, Beck. *Thinking. Human Performance:* Posner. *Neural Basis of Psychology:* Kimble, Lickey. *Psychopathology:* Fosmire. *Group Processes:* Ziller. *Mathematical Models:* Haller. *Motivation:* Adkins. *History and Systems:* Leeper. *Animal Behavior:* Fentress.

Psy 417, 418. **Laboratory in Advanced Psychological Statistics.** (G) 1 hour each term.

Psy 420. **Introduction to Mathematical Psychology.** (G) 3 hours. Haller.

Psy 421. **Principles and Methods of Psychological Assessment.** (g) 3 hours. Goldberg.

Psy 426. **Thinking.** (G) 3 hours. Hyman.

Psy 435. **Theories of Personality.** (g) 3 hours. Leeper.

Psy 436. **Personality Research.** (g) 3 hours. Weiss.

Psy 437. **Social Psychology.** (g) 3 hours. Fosmire, Runkel, Ziller.

Psy 438. **Experimental Social Psychology Laboratory.** 3 hours. Ziller.

Psy 439. **Group Consultation.** (G) 3 hours. Fosmire.

Psy 441. **Group and Individual Differences.** (g) 3 hours. Goldberg.

Psy 449. **Psychology of Work.** (g) 3 hours. Keele.

Psy 450. **Abnormal Psychology.** (g) 3 hours. Fosmire, Lewinsohn, Lichtenstein.

Psy 451. **Physiological Psychology.** (g) 3 hours. Adkins, Kimble, Lickey.

Psy 460. **Developmental Psychology.** (g) 3 hours. Littman, Schaeffer, Sheppard.

Psy 461. **Developmental I: Psychobiological.** (G) 3 hours.

Psy 462. **Developmental II: Learning and Perception.** (G) 3 hours.

Psy 463. **Developmental III: Socialization.** (G) 3 hours.

Psy 465. **Motivation.** (g) 3 hours. Adkins, Leeper, Littman.

Psy 470. **Comparative Psychology.** (g) 3 hours. Adkins, Kimble.

Psy 471. **Laboratory in Animal Psychology.** (g) 2 hours. Adkins, Kimble.

Psy 475. **Animal Behavior.** (G) 3 hours. Fentress.

Psy 485. **Sensory Processes.** (G) 3 hours. Attneave, Beck.

Psy 490. **Psychology of Learning.** (g) 3 hours. Keele, Posner, Reicher, Sheppard.

Psy 491. **Laboratory in Learning.** (g) 2 hours. Posner, Reicher.

Psy 492. **Psychology of Perception.** (g) 3 hours. Attneave, Beck, Haller.

Psy 493. **Laboratory in Perception.** (g) 2 hours. Attneave, Beck.

Psy 494. **Human Performance.** (g) 3 hours. Keele, Posner.

Psy 495. **Conditioning and Learning.** (G) 3 hours. Sheppard.

Psy 496. **Human Learning and Cognition.** (G) 3 hours. Keele, Posner, Reicher.

Psy 499. **History and Systems of Psychology.** (g) 3 hours. Leeper, Littman.

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

*Psy 502. **Advanced Psychology Laboratory.** 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.

Seminars offered vary from year to year, depending on faculty interests. Typical offerings are: *Human Performance:* Keele, Posner. *Neural Basis of Learning:* Lickey. *Theories of Choice Behavior:* Fagot. *Inferential Processes in Perception:* Beck. *Physiological Models in Motivation:* Adkins. *Learning Theory Approaches to Psychopathology:* Schaeffer. *Behavior Modification:* Weiss, Sheppard. *Group Psychotherapy:* clinical staff. *Milieu Therapy:* clin-

* No-grade course.

ical staff. *Mathematical Models*: Haller. *Computer Simulation*: Haller. *Animal Behavior*: Fentress. *Memory*: Reicher. *Physiological Basis of Perception*: Attneave, Kimble. *Anatomy of Memory*: Kimble, Posner. *Clinical Psychology seminar*: clinical staff.

- Psy 508. **Clinical Work with Children.** 3 hours any term.
 Psy 509. **Practicum Experience.** 3 hours.
 Psy 511, 512, 513. **Statistical and Quantitative Methods in Psychology.** 3 hours each term. Dawes, Fagot, Hyman.
 Psy 514. **Learning.** 3 hours. Keele, Posner, Reicher, Sheppard.
 Psy 515. **Perception.** 3 hours. Attneave, Beck.
 Psy 516. **Physiological Psychology.** 3 hours. Adkins, Kimble, Lickey.
 Psy 517. **Social Psychology.** 3 hours. Runkel, Ziller.
 Psy 518. **Developmental Psychology.** 3 hours. Schaeffer.
 Psy 519. **Personality.** 3 hours. Leeper, Weiss.
 Psy 520. **Psychopathology.** 3 hours. Fosmire, Lewinsohn, Lichtenstein.
 Psy 521. **History and Systems of Psychology.** 3 hours. Leeper, Littman.
 *Psy 524, 525, 526. **Proseminar in Clinical Psychology.** 1 hour each term.
 Psy 527. **The Counseling Process.** 3 hours.
 Psy 528. **Assessment I: Psychological Testing.** 3 hours. Goldberg, Lichtenstein.
 Psy 529. **Assessment II: Personality Assessment.** 3 hours. Lichtenstein, Weiss.
 Psy 530. **Assessment III: Assessment of Cognitive Functions.** 3 hours. Arkowitz, Lewinsohn.
 Psy 531. **Behavior Change I: Interview Therapies.** 3 hours. Arkowitz, Lichtenstein.
 Psy 532. **Behavior Change II: Behavior Modification.** 3 hours. Arkowitz, Johnson, Weiss.
 Psy 534. **Research in Psychotherapeutic Methods.** 3 hours. Arkowitz, Johnson, Lichtenstein.
 Psy 535. **Advanced Social Psychology.** 3 hours. Runkel, Ziller.
 Psy 536. **Experimental Methods in Social Psychology.** 3 hours. Dawes, Runkel, Ziller.
 Psy 537, 538, 539. **Advanced Clinical-Research Practicum.** 3 hours each term.
 Psy 543. **Measurement: Theory and Application.** 3 hours. Fagot.
 Psy 544. **Choice Behavior.** 3 hours. Fagot.
 Psy 546. **Multivariate Methods in Psychology.** 3 hours. Dawes, Goldberg.
 Psy 560. **Advanced Physiological Psychology.** 3 hours. Kimble, Lickey.
 Psy 566. **Advanced Psychology of Perception.** 3 hours. Attneave, Beck.
 Psy 570. **Advanced Animal Psychology.** 3 hours.
 Psy 572, 573, 574. **Advanced Psychology of Learning and Thinking.** 3 hours each term.

Religious Studies

Professor: P. B. MEANS (emeritus).

Associate Professors: DOUGLAS STRATON (department head), ALFRED BLOOM, JACK T. SANDERS.

* No-grade course.

ROMANCE LANGUAGES

Assistant Professor: STEPHEN C. REYNOLDS.

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

- R 405. **Reading and Conference.** (g) Hours to be arranged.
 R 407. **Seminar.** (g) Hours to be arranged.
Patristics: Reynolds. *Japanese Religion*: Bloom.
 R 419, 420. **Philosophy of Religion.** (g) 3 hours each term, fall and winter. Straton.
 R 421. **Contemporary Social Problems and Religion.** (g) 3 hours spring. Straton.
 ArH 421, 422, 423. **Mediaeval Art.** (G) 3 hours each term.
 R 422. **Psychology of Religion.** (g) 3 hours.
 R 423, 424, 425. **Contemporary Concepts of God.** (g) 3 hours each term. Straton.
 R 430, 431, 432. **Oriental Philosophies of Religion.** (g) 3 hours each term. Bloom.
 Phil 439, 440. **Philosophy of Religion.** (G) 3 hours each term.
 Anth 444. **Religion and Magic of Primitives.** (G) 3 hours.
 Mus 456. **Liturgics.** (G) 3 hours.
 Mus 457. **Sacred Choral Music.** (G) 3 hours.
 Soc 461. **Sociology of Religion.** (G) 3 hours.
 Hst 471. **Social Factors in American History.** (G) 3 hours.

Romance Languages

Professors: PERRY J. POWERS (department head), CHANDLER B. BEALL, DAVID M. DOUGHERTY, THOMAS R. HART, JR., CARL L. JOHNSON.

Associate Professors: EMMANUEL S. HATZANTONIS, THOMAS E. MARSHALL.

Assistant Professors: RANDI M. BIRN, RICHARD H. DESROCHES, ROBERT M. JACKSON, ANTONIO ILLIANO, ELISABETH K. MARLOW, STEVEN F. RENDALL, STANLEY L. ROSE, THOMAS J. TOMANEK.

Instructor: PRISCILLA E. BECK.

Lecturer: ARTURO CAYUELA-MIRÓ.

The Department of Romance Languages offers programs of study leading to the M.A. degree in French, Italian, Spanish, and Romance Languages, and to the degree of Doctor of Philosophy in Romance Languages. See also COMPARATIVE LITERATURE, above.

The program for the master's degree may be completed in from three to six terms, the time depending largely upon the candidate's preparation. This program may be planned to terminate formal education or to prepare for further advanced study. Courses are offered in the languages and literatures of France, Italy, Spain, and Spanish America; preferably the student's work should include work in two of these fields.

A new program for the master of arts with emphasis on the training of teach-

ers affords candidates for positions in secondary schools an opportunity to achieve competence in the written and spoken language, to study literature at the graduate level, and to study and practice methods of presenting both language and literature. A feature of this program is an eight-week summer term in France, Mexico, or Spain, to be completed immediately after the nine-month session at the University. This program will fulfill the Oregon requirements for the Standard Secondary Teaching Certificate; candidates must have completed the requirements for the Basic Certificate and have completed course work in civilization and phonetics required for the Standard Certificate.

The program for the doctorate in Romance Languages includes work in the major fields of French and Spanish, a second literature as a minor field, and a minimum of one year's work in philology. The program is designed to provide a high degree of fluency in the major language, a thorough knowledge of its important literary works in all periods, and familiarity with relevant scholarship. The minor requires a reasonable command of a second Romance language, a knowledge of the major texts of its literature, and thorough familiarity with one period. These requirements for the minor field may be met in German or in Classics, but candidates exercising this option must demonstrate a reading knowledge of a second Romance language. Courses and seminars offered in the Comparative Literature program frequently form a part of a student's graduate program in Romance languages.

After successful completion of the comprehensive examinations, candidates present a prospectus of the dissertation to their advisory committee. The dissertation must demonstrate the candidate's capacity for original investigation and effectiveness of presentation, and must be completed within three years after passing the comprehensive examination.

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

Graduate students who intend to teach may gain valuable experience in connection with the department's undergraduate program. Qualified assistants serve as regular teachers of elementary classes under the direction of senior members of the department.

French

- RL 407. Seminar. (G) Hours to be arranged.
- RL 411, 412, 413. **Seventeenth-Century French Literature.** (G) 3 hours each term. Rendall.
- 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. Birn, Marshall.
- RL 429, 430, 431. **French Culture and Civilization.** (G) 3 hours each term.
- RL 435, 436, 437. **Eighteenth-Century French Literature.** (G) 3 hours each term. Desroches.
- RL 467, 468, 469. **Advanced French Composition.** (G) 2 or 3 hours each term. Dougherty, Marlow.
- *RL 503. **Thesis.** Hours to be arranged.
- RL 505. **Reading and Conference.** Hours to be arranged.
- RL 507. **Seminar.** Hours to be arranged.

* No-grade course.

- 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.
- RL 547. **Voltaire.** 3 hours. Desroches.
- RL 548. **Baudelaire.** 3 hours. Johnson.
- RL 549. **Paul Valéry.** 3 hours. Marshall.
- RL 550, 551. **Proust.** 3 hours each term. Birn.

Italian

- AL 477, 478, 479. **Dante and His Times.** (g) 3 hours each term. Beall.
- RL 480, 481, 482. **Italian Renaissance Literature.** (G) 3 hours each term. Beall.
- RL 483, 484, 485. **Nineteenth-Century Italian Literature.** (G) 3 hours each term. Illiano.
- RL 486, 487, 488. **Twentieth-Century Italian Literature.** (G) 3 hours each term. Hatzantonis.

Portuguese

- RL 471, 472, 473. **Portuguese and Brazilian Literature.** (G) 3 hours each term. Rose.
- RL 474, 475, 476. **Brazilian Novel.** (G) 3 hours each term. Rose.
- RL 477, 478. **Advanced Portuguese Language.** (G) 3 hours each term, winter and spring. Rose.

Spanish

- RL 407. **Seminar.** (G) Hours to be arranged.
- RL 432, 433, 434. **Hispanic Culture and Civilization.** (G) 3 hours each term. Cayuela-Miró.
- RL 438, 439, 440. **Nineteenth-Century Spanish Literature.** (G) 3 hours each term. Beck.
- RL 441, 442, 443. **Modern Spanish Literature.** (G) 3 hours each term. Beck.
- RL 444, 445, 446. **Spanish-American Literature.** (G) 3 hours each term. Tomanek.
- 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. Cayuela-Miró.
- *RL 503. **Thesis.** Hours to be arranged.
- RL 505. **Reading and Conference.** Hours to be arranged.
- RL 507. **Seminar.** Hours to be arranged.
- RL 541, 542, 543. **Old Spanish Readings.** 2 hours each term. Hart.
- RL 554, 555, 556. **Drama of the Golden Age.** 3 hours each term. Powers.
- RL 557, 558, 559. **The "Modernista" Movement.** 3 hours each term. Tomanek.

* No-grade course.

- RL 561, 562, 563. **Spanish-American Novel.** 3 hours each term. Tomanek.
 RL 564. **The Enlightenment in Spain.** 3 hours fall.
 RL 565. **Realismo.** 3 hours winter.
 RL 566. **Romanticismo y Costumbrismo.** 3 hours spring.

Romance Philology

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

Sociology

Professors: BENTON JOHNSON (acting department head), HARRY ALPERT, THEODORE R. ANDERSON, HERBERT BISNO, ROBERT DUBIN, ROBERT A. ELLIS, JOHN M. FOSKETT, JAY JACKSON, THEODORE B. JOHANNIS, JR., WALTER T. MARTIN, ROLAND J. PELLEGRIN, WILLIAM S. ROBINSON.

Associate Professors: J. MICHAEL ARMER, STEVEN DEUTSCH, KENNETH POLK, ROY H. RODGERS.

Assistant Professors: JOAN ACKER, RICHARD GALE, GERALD KING, JOHN MACGREGOR, ANN PARELIUS, ROBERT PARELIUS, WALTER E. SCHAFER, DONALD VAN HOUTEN.

Lecturer: TED GOERTZEL.

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

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

The department does not offer graduate study in social work.

Although the department accepts students who are interested only in the master's degree, its program is intended primarily for doctoral candidates. All students of good academic ability are encouraged to follow a course of study leading to the Ph.D. degree. All graduate students are required to serve the equivalent of one academic year as a teaching or research assistant.

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

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

- Soc 407. **Seminar.** (G) Hours to be arranged.
Economic Sociology: Deutsch. *Sociology of Education:* Armer, Schafer. *Juvenile Delinquency:* Polk. *Sociology of Illness and Health:* Bisno. *Sociology of Professions:* Bisno. *Sociology of Leisure:* Johannis.
- Soc 411, 412, 413. **Sociological Research Methods.** (G) 3 hours each term. Robinson.
- Soc 415. **Theory and Methods in Population and Ecology.** (G) 3 hours. Anderson.
- Soc 423. **The Family.** (g) 3 hours. Johannis, A. Parelius, Rodgers.
- Soc 430. **Theory of Small Groups.** (G) 3 hours. Jackson, Johannis, King.
- Soc 431. **Group Dynamics.** (g) 3 hours. Jackson.
- Soc 436. **Collective Behavior.** (g) 3 hours. MacGregor.
- Soc 438. **Social Psychology of the Family.** (G) 3 hours. Johannis, Rodgers.
- Soc 440, 441. **Criminology and Delinquency.** (g) 3 hours each term. Polk.
- Soc 442. **Urbanization and the City.** (G) 3 hours. Anderson, Martin.
- Soc 443. **Social Control.** (G) 3 hours.
- Soc 445. **Sociology of Race Relations.** (g) 3 hours.
- Soc 446. **Sociology of Work.** (G) 3 hours. Deutsch, Gale.
- Soc 447. **Industrial Sociology.** (G) 3 hours. Deutsch, Gale.
- Soc 448. **Sociology of Occupation.** (G) 3 hours. Pellegrin, Van Houten.
- Soc 449. **Social Change.** (G) 3 hours. Bisno.
- Soc 451, 452. **Social Stratification.** (G) 3 hours. Ellis, Johnson.
- Soc 460. **Social Institutions.** (G) 3 hours. Johannis.
- Soc 461. **Sociology of Religion.** (G) 3 hours. Johnson.
- Soc 462. **Sociology of the Family.** (G) 3 hours. Johannis, Rodgers.
- Soc 465. **Political Sociology.** (G) 3 hours. R. Parelius.
- Soc 467. **Sociology of Social Work.** (G) 3 hours. Acker, Bisno.
- Soc 470. **Development of Sociology.** (g) 3 hours. MacGregor.
- Soc 490. **Sociology of Leisure.** (G) 3 hours. Johannis.
- Soc 491. **Sociology of Education.** (G) 3 hours. Armer, R. Parelius, Schafer.
- *Soc 501. **Research.** Hours to be arranged.
- *Soc 502. **Supervised College Teaching.** Hours to be arranged.
- *Soc 503. **Thesis.** Hours to be arranged.
- Soc 505. **Reading and Conference.** Hours to be arranged.
- Soc 506. **Supervised Field Study.** 1 hour each term.
- Soc 507. **Seminar.** Hours to be arranged.
Sociology of Religion: Johnson. *Social Stratification:* Ellis, Johnson. *Urbanization:* Anderson. *Quantitative Sociology:* Robinson. *Sociology of Adolescence:* Polk. *College Teaching of Sociology:* Rodgers. *Role Theory and Research:* Jackson. *Social Influence:* Jackson. *Social Psychology:* Jackson. *Socialization:* Johannis. *Contemporary Family Theory:* Rodgers. *Scaling:* Polk. *Contemporary Methodological Problems:* Anderson. *Mathematical Models in Sociology:* Anderson. *Latin American Studies:* Gale. *Industrial Sociology:* Deutsch. *Problems of Change in Underdeveloped Areas:* Deutsch. *The Teaching of Sociology:* Rodgers.
- Soc 508. **Workshop.** Hours to be arranged (summer session).
- Soc 518. **Experimental Sociology.** 3 hours. Dubin.

* No-grade course.

- Soc 530. **Analytical Problems in Social Psychology.** 3 hours. Jackson.
 Soc 532. **Propaganda and Social Control.** 3 hours.
 Soc 537. **Social Movements.** 3 hours.
 Soc 540. **Social Structure and Processes.** 3 hours. Pellegrin.
 Soc 541. **Theory of Organization.** 3 hours. Dubin.
 Soc 542. **Power and Influence in Community and Society.** 3 hours. Pellegrin.
 Soc 560. **Analytical Problems in Social Institutions.** 3 hours. Foskett.
 Soc 561. **Values and Social Structure.** 3 hours. Johnson.
 Soc 570. **Analytical Problems in Sociological Theory.** 3 hours. Dubin, Johnson.
 Soc 571. **History of Social Thought.** 3 hours. Foskett.
 Soc 572. **Development of American Sociology.** 3 hours. Foskett.
 Soc 573. **Contemporary Sociology.** 3 hours. Johnson.
 Soc 575. **Theory Building in Sociology.** 3 hours. Dubin.

Speech

Professors: CHARLEY A. LEISTNER (department head), BOWER ALY, T. L. DAHLER, ROBERT P. FRIEDMAN, DOMINIC A. LARUSSO, HORACE W. ROBINSON, JOHN R. SHEPHERD, D. GLENN STARLIN, KENNETH S. WOOD.

Associate Professors: NED J. CHRISTENSEN, JEAN V. CUTLER, FABER DECHAMPE, E. A. KRETSINGER, KIRT E. MONTGOMERY, BRUCE P. RYAN, OTTILIE T. SEIBOLT (emeritus).

Assistant Professors: CARL W. CARMICHAEL, RALPH O. COLEMAN, JR., JAMES BRINGWOOD, ROBERT J. MERTZ, RONALD E. SHERRIFFS.

The Department of Speech offers work leading to the M.A., M.S., M.F.A., and Ph.D. degrees. The fields of study are: rhetoric and public address, radio and television broadcasting, speech pathology and audiology, theater, and speech education.

Students concentrate their studies in one of these five fields, but may elect courses in the other subject fields of the department.

The activities and special services of the department provide laboratories and practicum in which students may gain experience in direction as well as in limited participation. The University Theater 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 University Speech and Hearing Center and other clinics in the community give students an 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 417. **Rhetorical Theory: 400 B.C.-400 A.D.** (G) 3 hours. LaRusso.

- Sp 418. **Directing the Forensic Program.** (G) 3 hours.
 Sp 421. **History and Criticism of Classical Speeches.** (G) 3 hours. Aly.
 Sp 422. **History and Criticism of British Speeches.** (G) 3 hours. Aly, LaRusso.
 Sp 423. **History and Criticism of American Speeches.** (G) 3 hours. Aly, Leistner.
 Sp 424. **Ethics and Freedom of Speech.** (G) 3 hours. Friedman.
 Sp 430. **Quantitative Methods in Speech.** (G) 3 hours. Carmichael.
 Sp 431. **Speech Communication Research.** (G) 3 hours. Carmichael.
 Sp 432. **Speech Communication and the Group Process.** (G) 3 hours. Carmichael.
 Sp 434. **Nonverbal Communication.** (G) 3 hours. LaRusso.
 Sp 435. **Public Address.** (G) 3 hours. Aly.
 *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 Teaching Speech. History of Speech Education. British Oratory from 1867. Rhetoric of Racial Revolt. Rhetoric of Black Power. Persuasion. Argumentation and Debate. Communication and Language.
 Sp 509. **Practicum.** Hours to be arranged.
 Sp 513. **Rhetorical Theory: 1450-1600.** 3 hours. LaRusso.
 Sp 514. **Eighteenth-Century Rhetorical Theory.** 3 hours. LaRusso.
 Sp 515. **Recent Rhetorical Criticism.** 3 hours.
 Sp 520. **American Public Address to 1850.** 3 hours. Aly.
 Sp 521. **American Public Address, 1850-1912.** 3 hours. Leistner.
 Sp 522. **American Public Address Since 1912.** 3 hours. Friedman.
 Sp 523. **Documentary Research in American Public Address.** 3 hours. Aly, Friedman.
 Sp 530. **Attitude Formation and Change.** 3 hours. Carmichael.

Broadcast Communication

- J 432. **Radio-Television News II.** (G) 3 hours.
 Sp 433. **Theory of Mass Communication.** (G) 4 hours. Mertz.
 Sp 444. **Radio-Television Production.** (G) 3 hours. Shepherd.
 Sp 445. **Radio-Television Direction.** (G) 3 hours. Shepherd.
 Sp 446. **Radio-Television Programming.** (G) 3 hours. Starlin, Sherriffs.
 Sp 448. **Radio and Television and the Public.** (G) 3 hours spring. Kretsinger, Shepherd, Starlin.
 Sp 449. **Government Regulation of Broadcasting in the United States.** (G) 3 hours. Sherriffs.
 Sp 470. **Methods in the Production of Educational Television.** (G) 3 hours. Sherriffs.
 *Sp 501. **Research.** Hours to be arranged.
 *Sp 503. **Thesis.** Hours to be arranged.

* No-grade course.

- 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. British Broadcasting. Research in Broadcasting. Film for Television.
- Sp 541. **Theory and Criticism of Broadcasting.** 3 hours. Starlin.
- Sp 544. **Radio-Television Program Evaluation.** 3 hours. Kretsinger, Mertz.

Speech Pathology and Audiology

- Sp 409. **Practicum.** (G) Hours to be arranged.
- Sp 472. **Advanced Speech Science.** (G) 3 hours. Wood.
- Sp 473. **Visual Language and Lip Reading.** (G) 3 hours. Christensen.
- Sp 474. **Methods in Public School Speech Therapy.** (G) 3 hours. Ryan.
- Sp 481. **Functional Speech Disorders.** (G) 3 hours. Christensen, Ryan, Wood.
- Sp 482. **Organic Speech and Language Disorders.** (G) 3 hours. Ryan.
- Sp 483. **Speech Therapy Procedures.** (G) 3 hours. Ryan, Wood.
- Sp 487. **Fundamentals of Audiology.** (G) 3 hours. Christensen.
- Sp 488. **Audiological Assessment.** (G) 3 hours. Christensen.
- Sp 489. **Audiological Rehabilitation.** (G) 3 hours. Christensen.
- Sp 490. **Lip Reading for the Deaf and Hard-of-Hearing.** (G) 3 hours (extension).
- Sp 491. **Advanced Language Development for the Deaf.** (G) 3 hours (extension).
- Sp 492. **Voice and Speech for the Deaf.** (G) 3 hours (extension).
- *Sp 501. **Research.** Hours to be arranged.
- *Sp 503. **Thesis.** Hours to be arranged.
- Sp 505. **Reading and Conference.** Hours to be arranged.
- Sp 507. **Seminar.** Hours to be arranged.
Behavior Modification in Speech Therapy.
- Sp 509. **Practicum.** Hours to be arranged.
- Sp 570. **Psychology of Speech.** 3 hours. Wood.
- Sp 571. **Auditory Disorders.** 3 hours. Christensen.
- Sp 572. **Disorders of Articulation.** 3 hours. Ryan.
- Sp 573. **Speech and Language Development.** 3 hours. Wood.
- Sp 574. **Adult Aphasia.** 3 hours. Wood.
- Sp 575. **Stuttering.** 3 hours. Ryan.
- Sp 576. **Voice Disorders.** 3 hours. Christensen.
- Sp 577. **Cleft Palate and Speech.** 3 hours. Christensen, Ryan.
- Sp 578. **Diagnostic Procedures in Speech Pathology.** 3 hours. Wood.

Theater

- Eng 411, 412, 413. **English Drama.** (G) 3 hours each term.
- Eng 420, 421, 422. **Modern Drama.** (G) 3 hours each term.
- Sp 460. **Advanced Play Direction.** (G) 3 hours. Cutler, DeChaine, Robinson.

* No-grade course.

- Sp 461. **Introduction to Scene Design.** (G) 3 hours.
- Sp 462. **Advanced Technical Practice in Staging.** (G) 3 hours.
- Sp 467. **Lighting for the Stage.** (G) 3 hours.
- *Sp 501. **Research.** Hours to be arranged.
- *Sp 503. **Research.** 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. Cinematography. Theater Structure. Theater Management. Producing the New Play. Advanced Technical Practice. Classical Theater. Advanced Acting. Twentieth-Century Scenic Aesthetics.
- Sp 509. **Practicum.** Hours to be arranged.
- Sp 520. **History of the American Theater.** 3 hours. Cutler.
- Sp 530. **Continental Theater.** 3 hours. Cutler.
- Sp 531. **Avant-Garde Theater.** 3 hours. Cutler.
- Sp 532. **Theater of Ibsen.** 3 hours.
- Sp 533. **Theater of Strindberg.** 3 hours.
- Sp 551, 552, 553. **Theory of Dramatic Production.** 3 hours each term. Cutler, Robinson.
- Sp 562. **Advanced Problems in Scene Design.** 3 hours.
- Sp 563. **Styles in Scene Design.** 3 hours.
- Sp 564, 565. **History of the Theater.** 5 hours each term.
- Sp 568. **Advanced Stage Lighting.** 3 hours.

* No-grade course.

Research Institutes

Several interdisciplinary institutes administered through the Graduate School provide opportunities for graduate training and research in addition to those offered by schools and departments. Institute staff members hold joint appointments in related teaching departments. Graduate students who intend to do thesis research work in one of the institutes must also satisfy the graduate degree requirements of the related department through which they will receive their degree.

Students who wish to work in any of these fields may obtain detailed information concerning the programs and available financial aid from the institute directors.

Institute of Molecular Biology

AARON NOVICK, Ph.D., Director of Institute of Molecular Biology; Professor of Biology.

SIDNEY A. BERNHARD, Ph.D., Professor of Chemistry.

JOHN R. MENNINGER, Ph.D., Assistant Professor of Biology.

WILLIAM T. SIMPSON, Ph.D., Professor of Chemistry.

FRANKLIN W. STAHL, Ph.D., Professor of Biology.

GEORGE STREISINGER, Ph.D., Professor of Biology.

PETER H. VON HIPPEL, Ph.D., Professor of Chemistry.

ASSOCIATES

EDWARD HERBERT, Ph.D., Professor of Chemistry.

JOHN A. SCHELLMAN, Ph.D., Professor of Chemistry.

WILLIAM R. SISTROM, Ph.D., Professor of Biology.

RAYMOND G. WOLFE, Ph.D., Professor of Chemistry.

The Institute of Molecular Biology is a center for research and research instruction in areas of biology where understanding is found in terms of the properties of macromolecules, particularly nucleic acids and proteins. Staff members hold joint appointments in a department (biology, chemistry, or physics).

Current research projects in the institute are concerned with such topics as genetic recombination and mutation in bacteria and bacterial viruses, the genetic control of protein synthesis, the regulation of the rate of protein formation, molecular structural aspects of biological specificity, biocatalysis, and biological coding.

The institute sponsors seminars, special lectures, visiting professorships, and instruction in research, but does not conduct a formal teaching program. Members of the institute staff offer courses in their fields of competence through the departments with which they are affiliated.

Research instruction is offered at both the graduate and postdoctoral levels. With the approval of the department concerned, graduate students in biology, chemistry, or physics may do research in the institute as a part of their program leading to graduate degrees. Research advisers may be members either of the institute staff or of a departmental faculty.

Institute of Theoretical Science

MARVIN D. GIRARDEAU, JR., Ph.D., Director of Institute of Theoretical Science; Professor of Physics.

RICHARD B. BARRAR, Ph.D., Professor of Mathematics.

PAUL L. CSONKA, Ph.D., Assistant Professor of Physics.

ROBERT S. FREEMAN, Ph.D., Associate Professor of Mathematics.

AMIT GOSWAMI, Ph.D., Associate Professor of Physics.

GERALD D. MAHAN, Ph.D., Associate Professor of Physics.

ROBERT M. MAZO, Ph.D., Professor of Chemistry.

MICHAEL J. MORAVCSIK, Ph.D., Professor of Physics.

MICHAEL R. PHILPOTT, Ph.D., Assistant Professor of Chemistry.

WILLIAM T. SIMPSON, Ph.D., Professor of Chemistry.

ROBERT L. ZIMMERMAN, Ph.D., Assistant Professor of Physics.

ASSOCIATES

JOEL W. MCCLURE, Ph.D., Professor of Physics.

JOHN L. POWELL, Ph.D., Professor of Physics.

GREGORY H. WANNIER, Ph.D., Professor of Physics.

The Institute of Theoretical Science provides a center for interdisciplinary research in overlapping areas of theoretical physics, theoretical chemistry, and mathematics.

Current research is centered in the areas of statistical mechanics, chemical physics, theory of solids and liquids, nuclear theory, elementary particle theory, and applied and applicable mathematics.

Graduate students with adequate preparation in one of the science departments may elect thesis research in the institute. The institute also sponsors postdoctoral research associateships and visiting professorships.

Statistical Laboratory and Computing Center

FRED C. ANDREWS, Ph.D., Director of Statistical Laboratory and Computing Center; Professor of Mathematics.

GEORGE W. STRUBLE, Ph.D., Associate Director; Associate Professor of Mathematics.

ROBERT F. TATE, Ph.D., Research Associate; Professor of Mathematics.

HENRY LEON LOEB, Ph.D., Research Associate; Associate Professor of Mathematics.

DAVID G. MOURSUND, Ph.D., Research Associate; Associate Professor of Mathematics.

DONALD R. TRUAX, Ph.D., Research Associate; Associate Professor of Mathematics.

THEODORE K. MATTHES, Ph.D., Research Associate; Associate Professor of Mathematics.

CHANDRAKANT M. DEO, Ph.D., Research Associate; Assistant Professor of Mathematics.

*GERALD AHERTON KING, B.A., Research Associate; Acting Assistant Professor of Sociology.

RICHARD W. HALLER, Ph.D., Research Associate; Assistant Professor of Psychology.

GORDON P. ASHBY, M.B.A., Computer Systems Programming Supervisor; Instructor in Mathematics.

ROBERT L. HEILMAN, M.A., Computer Systems Development Programmer; Instructor in Mathematics.

NORBERT E. DEY, B.S., Computer Systems Maintenance Programmer.

CHARLES L. RIMPLEY, M.S., Research Assistant; Instructor in Mathematics.

NORMAN L. BECK, B.A., Computer Systems Programmer.

The Statistical Laboratory and Computing Center conducts research in statistics, numerical analysis, and computer science, and provides a consulting service in statistical methodology and computational procedures. Facilities maintained in the Computing Center include an IBM 360 Model 50H, and peripheral data processing equipment. The staff and facilities of the Computing Center provide assistance to research projects and instructional programs of the various colleges, schools, departments, and institutes of the University. The Computing Center also provides consultation in use of the facilities, an applied programming service, a documents room, a card punching service and tutorials on elementary and advanced topics relevant to the use of computers.

Institute of International Studies and Overseas Administration

JOHN F. GANGE, M.A., Director of Institute of International Studies and Overseas Administration; Professor of Political Science.

YU-SHENG LIN, Ph.D., Research Associate, Institute of International Studies and Overseas Administration; Acting Assistant Professor of History.

EDWARD MARASCIOLO, M.A., Research Associate, Institute of International Studies and Overseas Administration; Professor of Geography.

GENE E. MARTIN, Ph.D., Associate Director, Institute of International Studies and Overseas Administration; Associate Professor of Geography.

WILSON E. MERRILL, M.S., Research Associate, Institute of International Studies and Overseas Administration; Lecturer in Geography.

RONALD E. SHERRIFFS, Ph.D., Research Associate, Institute of International Studies and Overseas Administration; Assistant Professor of Speech.

CLARENCE E. THURBER, Ph.D., Deputy Director of Institute of International Studies and Overseas Administration; Professor of International and Public Affairs.

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

* On leave of absence 1968-69.

personnel, both on the campus and overseas; (2) to assist the Committee on International Studies and Overseas Administration in the administration of graduate study in international affairs and to provide research training for graduate students; and (3) to serve as the University's center for other faculty and student activities concerned with international affairs.

The institute supervises a graduate study program leading to the Master of Arts in international studies (a two-year degree program) and cooperates with major departments in supervising Ph.D. programs for students who elect an emphasis on international affairs within their chosen disciplines.

The institute sponsors and encourages faculty research in international affairs and assists in providing opportunities for joint faculty and student research projects on campus and overseas. Research assistantships are available in the institute; research and research training bases have been established in many foreign countries.

The institute also conducts graduate seminars to provide opportunities for students and members of the faculty to share ideas and experiences with visiting lecturers, special consultants, and among themselves. In addition to its campus programs, the institute arranges for advanced students opportunities for overseas study and for administrative experience on foreign projects.

The institute supports the University's annual Summer World Affairs Program and the program of the Oregon High School International Relations League.

Institute for Community Studies

ROLAND J. PELLEGRIN, Ph.D., Director of Institute for Community Studies and the Center for the Advanced Study of Educational Administration; Professor of Sociology.

MAX G. ABBOTT, Ph.D., Deputy Director, Center for the Advanced Study of Educational Administration; Professor of Education.

THEODORE R. ANDERSON, Ph.D., Director, Center for Ecological Studies; Professor of Sociology.

TERRY L. EIDELL, Ph.D., Director, Educational Resources Information Center; Associate Professor of Education.

The Institute for Community Studies conducts and encourages research in the behavioral and social sciences, education, and related areas. Most projects carried on under the auspices of the institute have a community orientation, focusing on the structure and functioning of the community as a social and political system. Emphasis is on the policy-formulation processes in the economy, government, education, and other institutional areas of the community.

The institute provides facilities for individual research by members of the faculty and for cooperative projects, together with opportunities for continuing communication, criticism, and reports of progress by participating scholars. It also provides research training for graduate students in connection with institute projects, with emphasis on the development of specific research designs as a basis for graduate dissertations.

The Center for the Advanced Study of Educational Administration, a division of the institute, was established in 1964 with funds granted by the Research and Development Center Program of the United States Office of Education. The program of the center is concerned with the internal organization and functioning of public educational institutions and educational systems and with the relationships of these institutions and systems to the larger environments in which they are located.

Under contract with the United States Office of Education and in conjunction

with the program of the Center for the Advanced Study of Educational Administration, the institute has operated a unit of the Educational Resources Information Center since 1966. This unit, the ERIC Clearinghouse on Educational Administration, receives, processes, stores, and analyzes documents in the field of Educational Administration and distributes them to nationwide audiences.

The Center for Ecological Studies was established in 1967 in order to conduct research on ecological and demographic factors in social organization.

As divisions of the institute, centers draw upon the services of staff members and graduate students in the behavioral sciences and in the field of education.

Bureau of Business and Economic Research

DONALD A. WATSON, Ph.D., Director of Bureau of Business and Economic Research; Associate Director, Institute of Industrial and Labor Relations; Professor of Business Economics.

PAUL L. KLEINSORGE, Ph.D., Associate Director, Bureau of Business and Economic Research; Director, Institute of Industrial and Labor Relations; Professor of Economics.

JEANNETTE F. LUND, M.A., Research Assistant.

DAVID E. EDING, B.B.A., Research Assistant.

JAMES G. HARRIS, M.A., Research Assistant.

CAROLYN J. CORNETT, M.S., Research Assistant.

CHI SU KIM, M.A., Research Assistant.

RICHARD A. BARNETT, B.A., Research Assistant.

The Bureau of Business and Economic Research conducts and encourages research in business, economics, and related fields. Studies undertaken by the bureau or for which it provides assistance in research design and facilities are financed through University funds and through grants from foundations, government agencies, and the business community.

The bureau publishes the *Oregon Business Review* monthly, the *Oregon Economic Statistics* annually, and occasional monographs reporting the results of business and economic research.

The bureau works in close cooperation with the Institute of Industrial and Labor Relations.

Institute of Industrial and Labor Relations

PAUL L. KLEINSORGE, Ph.D., Director of Institute of Industrial and Labor Relations; Associate Director, Bureau of Business and Economic Research, Professor of Economics.

DONALD A. WATSON, Ph.D., Director, Bureau of Business and Economic Research; Professor of Business Economics.

EATON H. CONANT, Ph.D., Associate Director; Associate Professor of Management.

STEVEN E. DEUTSCH, Ph.D., Assistant Director; Associate Professor of Sociology.

The Institute of Industrial and Labor Relations conducts a program of research, public service, and graduate study in the field of industrial relations. The

institute's research program includes studies in manpower resources, labor mobility, wage structures, personnel problems, management and labor organizations, communications in labor relations, labor legislation, and collective bargaining. The approach is interdisciplinary, involving the cooperative efforts of scholars in the several social sciences and related professional schools. In its research program, the institute is closely associated with the Bureau of Business and Economic Research. Research assistantships are available for graduate students.

The institute also sponsors programs in labor education and management, including regular campus courses, evening classes through the Division of Continuing Education, special seminars, and conferences, and provides an information service on problems of industrial relations.

Institute for College Teaching

WILLIAM C. JONES, Ph.D., Director of the Institute for College Teaching; Dean of Administration; Professor of Higher Education.

The programs of the Institute for College Teaching include: (1) the conduct of research on various problems relating to college teaching, the improvement of the quality of college teaching, the preparation of college teachers, and related professional problems of direct concern to college teachers; (2) the organization, supervision, and coordination of systematic programs of carefully supervised teaching experiences for students preparing for college teaching careers; (3) the preparation and presentation of courses and seminars dealing with the nature, structure, history, philosophy, and organization of institutions of higher learning.

The institute, with the cooperation of members of the faculties of the several schools and departments, offers a seminar concerned with the broad problems of higher education and college teaching: Seminar: Higher Education (IS 507). 1 hour.

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