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Announcement
of
Graduate Studies
1949-1950

UNIVERSITY OF HAWAII
BULLETIN

VOLUME XXVIII NUMBER 4
SEPTEMBER 1949

UNIVERSITY CALENDAR

1949

Sept. 24, Saturday, 8:00 A.M.-1:00 P.M. } . . . Registration of graduate students
 Sept. 26, Monday, 2:30 P.M.-5:00 P.M. }
 Sept. 26, Monday Instruction begins
 Oct. 8, Saturday Last day of registration for new courses
 Oct. 29, Saturday Last day of withdrawal from courses without penalty
 Nov. 1, Tuesday First deficiency reports due
 Nov. 11, Friday Armistice Day (holiday)
 Nov. 23, Wednesday Last day for removal of "Incompletes"
 Nov. 24, Thursday, through Nov. 26, Saturday Thanksgiving recess
 Dec. 6, Tuesday Second deficiency reports due
 Dec. 21, Wednesday Last day of instruction before Christmas recess
 Dec. 21, Wednesday Last day to arrange final oral examinations, first semester

1950

Jan. 5, Thursday Instruction resumes
 Jan. 21, Saturday Last day of instruction, first semester
 Jan. 23, Monday Final examinations begin
 Jan. 25, Wednesday Last day for final oral examinations, first semester
 Jan. 30, Monday Franklin D. Roosevelt's Birthday (holiday)
 Jan. 31, Tuesday Last day to submit theses for Library, first semester
 Feb. 1, Wednesday First semester ends
 Feb. 11, Saturday, 8:00 A.M.-1:00 P.M. } . . . Registration of graduate students
 Feb. 14, Tuesday, 2:30 P.M.-5:00 P.M. }
 Feb. 13, Monday Holiday following Lincoln's Birthday
 Feb. 14, Tuesday Instruction begins
 Feb. 22, Wednesday Washington's Birthday (holiday)
 Feb. 25, Saturday Last day of registration for new courses
 Mar. 18, Saturday Last day of withdrawal from courses without penalty
 Mar. 21, Tuesday First deficiency reports due
 Mar. 25, Saturday Charter Day
 Mar. 27, Monday Prince Kuhio Day (holiday)
 Apr. 6, Thursday Last day for removal of "Incompletes"
 Apr. 7, Friday, Apr. 8, Saturday Easter recess
 Apr. 25, Tuesday Second deficiency reports due
 May 1, Monday Last day to arrange final oral examinations, second semester
 May 27, Saturday Last day of instruction, second semester
 May 29, Monday Final examinations begin
 May 30, Tuesday Memorial Day (holiday)
 May 31, Wednesday Last day for final oral examinations, second semester
 June 5, Monday Last day to submit theses for Library, second semester
 June 7, Wednesday Second semester ends
 June 12, Monday Holiday following Kamehameha's Birthday
 June 14, Wednesday Commencement
 June 26, Monday Registration for the summer session

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Aerial view of the University of Hawaii Campus

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GRADUATE STUDY AT THE UNIVERSITY OF HAWAII

The University of Hawaii is the only institution offering graduate work in the vast area of the Pacific, extending from California to the Philippines and from New Zealand to Alaska. By virtue of its location at one of the major "crossroads of the Pacific," with access to the rich research facilities of the Far East and the Pacific islands, the University can offer special opportunities for students interested in pursuing graduate work in certain of the natural and social sciences. The University of Hawaii also gives work leading to the master's degree in most of the basic arts and sciences.

The Territory of Hawaii is itself a notable example of the mingling of the peoples and cultures of the Orient, the Occident, and the South Pacific, and it provides unusually favorable conditions for the study of racial and cultural contacts and change. Hawaii's relative proximity to the Trust Territories in Micronesia and to the dependent areas of Polynesia, as well as Hawaii's own experience as an American territorial outpost, gives to the University special significance as a center for studies of the economic, social, and educational problems of Pacific island people. For the teacher, missionary, administrator, journalist, or research worker whose interests lie in Pacific and Asiatic countries, graduate study in the University affords an opportunity to acquire knowledge essential to the practice of his profession in those areas.

Hawaii's large population of persons of Oriental ancestry and its contacts with the Orient have encouraged special attention at the University to the cultures and civilizations of the Far East. The University has one of the outstanding American collections of Orientalia, with a library of some 77,000 volumes in Chinese and Japanese. Students also have access to the excellent Asiatic collection of the Honolulu Academy of Arts. Special facilities for the study of Oriental languages and for the translation of source materials are also available at the University.

Tropical agriculture and the associated basic sciences are additional areas in which Hawaii has special advantages to offer the graduate student. The highly technical character of sugar and pineapple production in the Islands has brought together a large and competent group of scientists in the biological and physical sciences. The University's instructional personnel and laboratory equipment in these fields are supplemented by the staffs and facilities of cooperating agricultural research institutions such as the Experiment Station, Hawaiian Sugar Planters' Association, the Pineapple Research Institute of Hawaii, the University of Hawaii Agricultural Experiment Station, and the Bernice P. Bishop Museum, with its extensive collections of

Hawaiian and South Pacific plants and insects. Because of the concentration here of scientists and of exceptional research opportunities within these fields, the University has offered graduate work leading to the doctor of philosophy degree in those sciences basic to tropical agriculture.

The mid-Pacific location of Hawaii offers students of marine biology a natural laboratory for the study of tropical and subtropical marine life. Facilities at the Hawaii Marine Laboratory are available to graduate students. Scientists on the staff of the United States Fish and Wildlife Service Laboratory, located on the University campus, cooperate with the regular faculty in offering a graduate curriculum in marine zoology which now extends to the doctor of philosophy degree. Students trained in the University program are qualified to participate in the investigations of Pacific oceanic fisheries conducted by the Federal government.

LIBRARIES AND RELATED INSTITUTIONS

The University Library contains approximately 190,000 bound volumes and 400,000 unbound parts and pamphlets and serves as a depository for government publications. Included in the library are extensive collections of research materials relating to the Pacific and the Far East. Publications in Chinese, Japanese, and Russian are catalogued in English, and translation facilities are obtainable.

Other collections available to graduate students are the Library of Hawaii, a general public library in downtown Honolulu; the reference library on Pacific and especially Polynesian history and culture at the Bishop Museum; the Hawaiian Mission Children's Library, with material on missionary activities in the Pacific; the Public Archives, emphasizing Hawaiian history; and libraries of the Hawaiian Sugar Planters' Association and the Pineapple Research Institute of Hawaii, of special interest to students of tropical agriculture. In addition, the Hawaiian Volcano Observatory at Kilauea Crater has a collection of publications relating to volcanology and seismology. Efforts have been made by these libraries to avoid needless duplication in their respective collections.

Graduate students of the University, when properly qualified and sponsored by members of the University staff, may take advantage of the materials and facilities of research and scientific services directly affiliated with the University. These include the Psychological and Psychopathic Clinic, which specializes in research on racial differences and in individual clinical examinations; the Legislative Reference Bureau, concerned with the study of current legislative and governmental problems; the Hawaii War Records Depository, charged with the collection of data relating to Hawaii's part in World War II; and



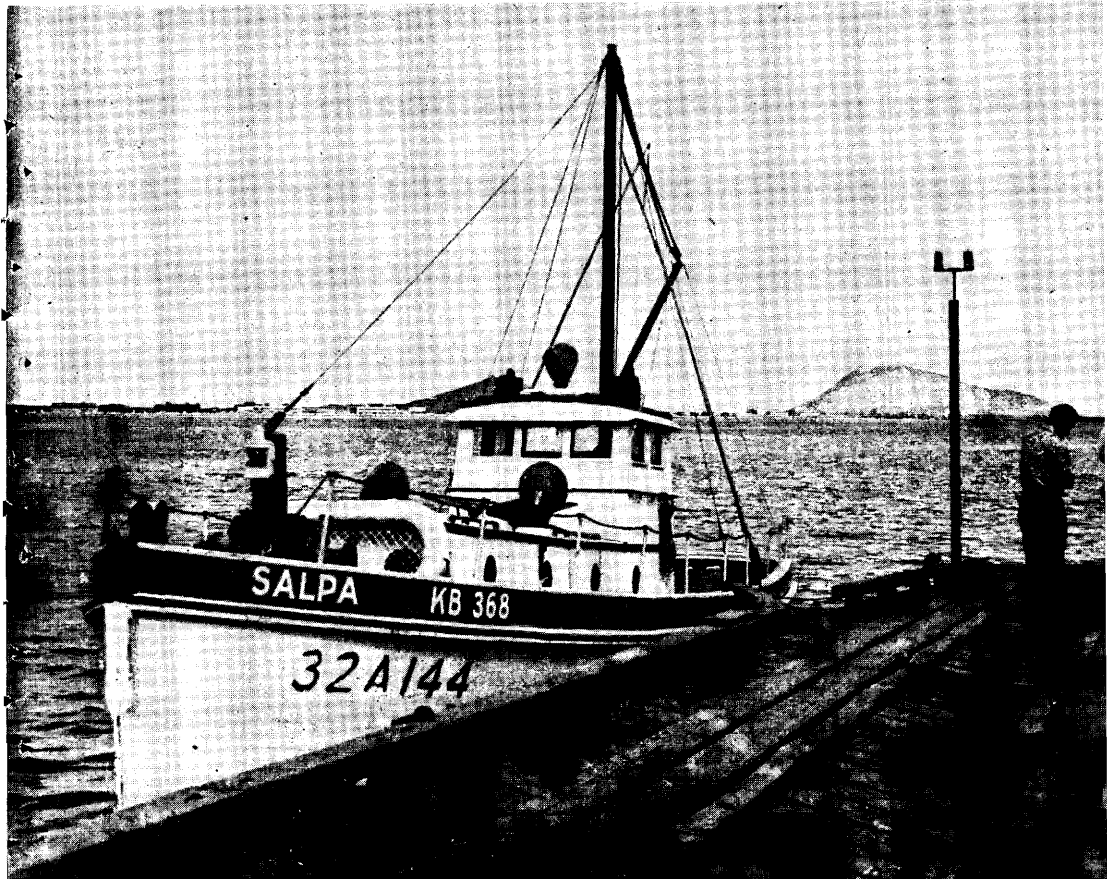
The "Salpa," the University's fisheries research ship

the Hawaii Social Research Laboratory, with its emphasis on study of basic social trends, including race relations, in Hawaii.

The Hawaiian Sugar Planters' Association has assisted in the establishment, on the University campus, of the Agricultural Engineering Institute, which is designed to provide both instruction and research on problems relating to mechanized crop production. Also situated on the campus is the laboratory maintained by the United States Bureau of Entomology for the study of fruit fly pests in Hawaii.

GRADUATE STUDY IN THE SUMMER SESSIONS

A six-week session from late June to early August affords opportunity for graduate work in the summer. Candidates for the Master of Education degree may find it possible to complete most of their requirements by attending summer sessions.



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ADMISSION

Admission to the Graduate Division is granted to graduates of accredited American or foreign colleges and universities. Application for admission should be made to the Dean of the Graduate Division and should be accompanied by an official transcript of undergraduate record and of any graduate work completed at any other institution. Admission is provisional until such records are on file. These transcripts become a permanent part of the University files.

Admission to the Graduate Division implies only permission to enroll in graduate courses for which the student's previous training has prepared him. Admission to candidacy for an advanced degree occurs only on the recommendation of a qualifying committee of the faculty after the student has enrolled at the University.

Graduate students not interested in earning an advanced degree and those working for the professional certificate issued by the Territorial Department of Public Instruction need not meet the requirements for admission to candidacy.

The Graduate Division reserves the right to deny at any time further registration to any student whose work is not of a grade sufficiently high to warrant continuation.

Seniors in the University of Hawaii may carry a limited amount of graduate work during their last semester as undergraduates provided that the total number of credit hours for which they are registered during that semester does not exceed sixteen.

REGISTRATION AND GRADES

Graduate students may not register for more than sixteen credit hours in any semester or for more than seven credit hours in a six-week summer session. The number of credit hours which may be carried by student assistants is limited by the nature of their duties. The ordinary course load of a full graduate assistant is eight credit hours with a maximum of nine credit hours per semester.

A grade of *B* or better must be obtained in a course numbered 200 to 299 if it is to be credited toward an advanced degree. Work in courses numbered 300 to 399 is graded *H* (Honors), *S* (Satisfactory), or *U* (Unsatisfactory). No credit is granted in thesis research courses (number 400 in each field) until the thesis has been accepted. Failure to make satisfactory progress on a thesis is not a basis for a valid claim to a refund of tuition fees.

Candidates for advanced degrees failing to complete successfully two or more courses taken after admission to candidacy are automatically dropped from candidacy.

REQUIREMENTS FOR ADVANCED DEGREES

THE MASTER'S DEGREE

The University awards the master's degree in arts, science, education, and social work, with specializations in the following fields: agriculture, anthropology, bacteriology, botany, business, chemistry, economics, education, English, entomology, Far East area studies, genetics, geography, government, history, nutrition, philosophy, physics, psychology, social work (case work, group work), sociology, speech, zoology.

Admission to Candidacy. A graduate of an accredited institution may be admitted to candidacy for the master's degree during the first semester of residence. Such admission is granted only after a committee representing the department in which the candidate proposes to work for an advanced degree is satisfied as to the adequacy of his undergraduate preparation and his probable ability to pursue graduate work successfully.

No student will be considered for admission to candidacy for an advanced degree unless he can meet the following requirements:

- (1) Ability to use written English effectively as demonstrated by grades in undergraduate courses in English composition or by a special examination conducted by the University English Department.
- (2) An adequate undergraduate background in the major and minor fields in which the degree is to be taken.
- (3) A good undergraduate scholastic record, with a grade of *B* or better in undergraduate courses in the major field or with an average of at least *B* in all courses carried in the junior and senior years. Students failing to meet this requirement may be permitted to enroll in the Graduate Division on a provisional basis, and if their record of a semester or more at the graduate level is adequate, the qualifying committee may recommend to the Graduate Council that this rule be waived.

A graduate student desiring to work for an advanced degree should notify the Dean of the Graduate Division of his intentions on a form obtainable from the office of the Dean. The student will subsequently be notified of the time when he is to appear before the qualifying committee of his department.

Residence. The minimum period of residence is one academic year (two semesters) or four six-week summer sessions. All credits applying toward the master's degree must be obtained within the seven years preceding the date on which the degree is granted. Exceptions to this rule may be made for students whose program of study was interrupted

by military service. Candidates failing to obtain the degree within five years after admission to candidacy must again qualify for candidacy.

Course Work. Thirty semester hours of graduate study are required for the master's degree. All work connected with the thesis must be registered for as thesis research (course number 400 in each major field). For thesis research the usual credit allowance is six hours, but a maximum of twelve hours may be allowed in the natural and physical sciences. At least six credits, exclusive of the thesis, must be earned in courses primarily for graduate students (300–399). The remaining credits may be earned in courses numbered 200 to 299, but additional work must be done in such courses and a grade of *A* or *B* must be earned. All courses offered by the candidate should be in his major field of interest or in one or two closely allied fields. Candidates for the Master of Education degree are restricted to one minor of six to ten credits. A reading knowledge of a foreign language is required in certain fields and, at the discretion of the qualifying committee, may be required of a candidate in any field.

Students admitted to candidacy after September 1, 1947, must take at least one seminar relating to their major fields and a course in methods of research and thesis writing. They are likewise restricted to four semester hours in courses in directed reading and research, other than thesis research.

Graduate work completed at other institutions, to a maximum of eight semester hours, may be accepted as fulfilling part of the requirements for the master's degree.

No extension course may be counted toward an advanced degree.

The Thesis. A thesis is required of all candidates for the master's degree and should be selected within the field of the major. The thesis problem must be approved by the candidate's qualifying committee and by the Graduate Council, following which the candidate may register for the thesis research course (number 400 within each field) and a faculty committee is appointed to supervise the preparation of the thesis. The thesis must be written in acceptable English and show evidence of ability to conduct research intelligently and to arrive at logical conclusions.

Candidates must notify the Dean of the Graduate Division at the beginning of the semester or term in which they expect to receive their degrees and must submit copies of the completed thesis to members of the committee for final checking at least two weeks before the close of the term. Instructions on the form of the thesis may be obtained from the Dean of the Graduate Division.

The Final Examination. Arrangements for the final examination should be made at least one month prior to the end of the semester or summer session in which the candidate expects to receive the degree.

The examination is conducted by the members of the candidate's advisory committee and any other persons specially designated. It is open to all faculty members. The examination is on the thesis but may cover any fundamental knowledge required for the research work or necessary to the conclusions reached. If the results of the examination are satisfactory, a typewritten and a carbon copy of the thesis, both signed by the members of the examining committee, must be turned over to the Dean of the Graduate Division for deposit in the Library to become the permanent possession of the University. At the same time, a summary or abstract of the thesis, in 400 to 500 words, must be filed at the office of the Graduate Division.

THE DOCTOR OF PHILOSOPHY DEGREE

Work leading to the degree of doctor of philosophy is offered only in those fields in which the University, by virtue of its special facilities of teaching staff, library, and research equipment and its cooperative relations with other research institutions, can offer thorough advanced training. The program is designed to give the student a comprehensive and thorough command of a chosen field of knowledge and to train him in the methods of research and scholarship. The candidate must give evidence of distinguished scholastic attainments and must demonstrate the ability to conduct independent research and to make a worthy contribution to existing knowledge.

Doctoral candidates are accepted at present in the following fields: chemistry, soil science, and marine zoology. Other fields may be added as circumstances warrant.

Admission to Candidacy. Notice of intention to work toward the doctor's degree should be given on special forms provided at the office of the Dean of the Graduate Division as early as possible during the graduate student's career. A doctoral committee of not less than five members from the graduate faculty shall be appointed to determine the candidate's fitness and preparation for work leading to the doctor's degree in the field selected. The doctoral committee shall also assist the candidate in the preparation of a course of study, conduct his oral comprehensive and final examinations, and supervise and pass upon the dissertation.

In addition to the requirements specified on page 13, students wishing to become candidates for the doctor's degree must:

- (1) Pass an oral, or oral and written, comprehensive examination in the fields of his major and supporting subjects. The written examination may be administered by the major department, but the oral examination must be conducted by his doctoral committee. The comprehensive examination must be taken not later than the beginning of the academic year in which the final examination occurs.

- (2) Complete all required course work as outlined by the doctoral committee.
- (3) Present certification of reading knowledge of the required foreign languages (see below).
- (4) Secure the approval of his committee and the Graduate Council of a dissertation problem.

Language Requirement. A reading knowledge of German and at least one other foreign language useful in the student's chosen field of specialization is required. The second language is selected by the mutual assent of the student, his doctoral committee, and the Dean of the Graduate Division. The appropriate language department must certify to the student's ability to read the prescribed language. All foreign language requirements must be completed by the end of the fourth semester of graduate work, and students delinquent in this respect will not be permitted to enroll for a full program of graduate work.

Residence and Course Work. At least six full semesters of graduate study or the equivalent are required. One year's credit will be allowed for a master's degree provided it is approved by the doctoral committee. A student must complete at least one undivided academic year of thirty hours of course work at the University of Hawaii beyond the master's degree.

The Thesis. The student must present an acceptable thesis on some topic in the field of his major subject. The dissertation must give evidence of independent and original research and of scholarly analysis. It must also exhibit creditable literary workmanship and be suitable for publication.

The thesis shall be typewritten in approved form, and copies of the completed manuscript shall be filed with the chairman of his committee at least two weeks prior to the date of the final examination. After the thesis has been successfully defended in the final examination, two copies (the original and first carbon), both signed by the members of the doctoral committee, shall be presented to the office of the Graduate Division for permanent deposit in the University Library. At the same time, an abstract of the thesis, not exceeding 1000 words in length and suitable for publication, shall also be filed at the office of the Graduate Division.

The Final Examination. Arrangements for the final examination must be made at least one month in advance and it must be taken at least two weeks before the end of the semester. This examination is designed to test the candidate's ability to defend his thesis in the light of the generally recognized principles and the accepted body of knowledge within his major field. It shall be conducted by the candidate's doctoral committee and shall be open to all faculty members.

THE TEACHER'S PROFESSIONAL CERTIFICATE

The Department of Public Instruction of the Territory of Hawaii grants the professional certificate to teachers in the employ of the Department who complete the following work: a total of thirty semester hours of graduate work, ten of which must be earned in courses primarily for graduates (300 to 399) including Philosophy of Education and Advanced Educational Psychology.

SCHOOL OF SOCIAL WORK

The University of Hawaii offers a two-year program to men and women who wish to become trained social workers. The first year of graduate work is basic to all types of social work and the curriculum is planned to provide content which includes fundamental principles underlying all fields of practice in the profession. Students who satisfactorily complete the year (two semesters) are awarded a Certificate in Social Work. The curriculum for the Master of Social Work degree requires an additional year of graduate study (a total of four semesters).

Candidates must submit an application, a statement of their interest in the field of social work, and a transcript of any academic work taken at institutions other than the University of Hawaii. Notice of acceptance will be sent to successful candidates, and written corroboration of intention to register for the full year's program is requested.

Admission of employed social workers to certain courses in the regular curriculum is permitted and encouraged in order to assist the social agencies of the community in their staff development programs. Admission to courses does not admit part-time students to the School of Social Work as candidates for the degree or certificate. If a part-time student desires at a later date to become a candidate for the degree or certificate, he must follow the regular procedure for admission. Not more than 12 semester hours completed while a part-time student may be applied toward the degree or certificate.

Admission to the School of Social Work requires, in addition to the usual eligibility to graduate standing at the University of Hawaii (see page 12), the following:

- (1) A minimum of 30 hours of undergraduate social science, including six semester hours in each of the following areas: the nature of social organization; motivations to behavior; the nature of our economic order; the structure and function of government. Applicants from the University of Hawaii are expected to have taken, as undergraduates, the course entitled *The Field of Social Work*.
- (2) Evidence of personal qualifications that promise to make an applicant useful in social work.

Candidates for the Certificate in Social Work must complete satisfactorily the basic curriculum (at least 28 semester hours of designated courses), of which 6 credits are in field work and represent 450 clock hours of supervised experience in a social agency. A written comprehensive examination covering the first year's work may be required for the certificate.

Candidates for the Master of Social Work degree are required to complete a four-semester program (48 semester units), including at least 10 units of supervised field work (750 clock hours), and pass an oral comprehensive examination covering the two-year program and the thesis.

Detailed information regarding the requirements and program may be obtained by applying to the Director of the School of Social Work, University of Hawaii, Honolulu 14, Hawaii.

TUITION AND FEES

Tuition and registration fees for graduate students are the same as those for undergraduates. Students registered for ten or more credit hours in any semester pay \$50 for tuition and \$10 for registration per semester. Students registered for fewer than ten credit hours in any semester and all students in summer sessions pay \$5.00 per credit hour. Laboratory fees, which are charged in many courses in the biological and physical sciences, vary with the individual course. Persons who register after the announced day of registration pay a fee of \$1.00.

A fee of \$2.00 is charged for each change in registration after the initial registration, unless such changes are due to reasons beyond the control of the student.

All recipients of advanced degrees are required to pay a diploma fee of \$5.00 and an additional fee of \$4.00 to cover the cost of binding two copies of their thesis.

LIVING ACCOMMODATIONS AND EXPENSES

Satisfactory housing accommodations are still at a premium in Honolulu, and prospective students are advised to make the necessary arrangements for lodging prior to their arrival in the city. At the present time the University does not have facilities for housing graduate students. Veterans, eligible under the G. I. Bill of Rights, may apply to the Veterans' Adviser for admission to the quarters provided in former army barracks located on the campus. Moderately priced living accommodations in private homes near the University are sometimes available, and prospective students may find it advantageous to apply to the Housing Counselor, Office of Student Personnel, for such openings.

Meals, at reasonable prices, may be obtained at the University Cafeteria, situated in Hemenway Hall on the campus.

Minimum expenses of the average student are estimated at from \$600 to \$950 a year for board, room, tuition, registration, course fees, and books. These estimates do not cover the cost of clothing, laundry, and other personal necessities, or of recreation.

GRADUATE ASSISTANTSHIPS, SCHOLARSHIPS, AND FELLOWSHIPS

The University offers a number of assistantships to graduates of accredited institutions of higher learning who wish to pursue graduate study in the fields in which the University offers advanced degrees. Graduate assistants serve as readers or part-time laboratory assistants and are expected to carry a limited program of graduate study. They receive remuneration of \$1,290 and are exempt from all tuition and fees. The period of service is from September 15 to June 15. Applications should be received by May 1. Each application should be accompanied by a transcript of academic record, a photograph, and a letter of recommendation from a professor under whom the applicant has taken his major courses.

A limited number of tuition scholarships, having a value of \$100 each, are available for graduate students from abroad. Application should be made to the Dean of the Graduate Division.

Fish and Wildlife Service Fellowships. Through cooperative arrangements with the United States Fish and Wildlife Service several fellowships are available to citizen students working toward advanced degrees in marine zoology and the sciences related to fisheries. Recipients of these fellowships are employed in part-time research significant to fisheries in the following fields: chemical, electrical, and mechanical engineering, chemistry, bacteriology, marine biology, oceanography, physiology, and economics. They receive remuneration at an annual rate of either \$2,724.00 or \$2,974.80, plus whatever cost-of-living allowance is currently in effect (25 per cent at present), calculated on a full-time basis, to be reduced proportionately for part-time employment. Maximum employment contemplated is half-time for nine months of the academic year, plus full-time for the remaining three months of the fellowship year. Tuition fees are waived. Applications should be addressed to the Director, Pacific Oceanic Fishery Investigation, University of Hawaii.

THE FIELDS OF GRADUATE STUDY REQUIREMENTS AND COURSES

The courses listed here numbered 200 to 299 are open to both graduates and undergraduates. Courses numbered 300 and higher are primarily for graduates.

Credit from courses not listed here may be applied toward an advanced degree only if the permission of the Dean of the Graduate Division is obtained.

Following each course description are the *number of credits* and the *semester* in which the course is given. Thus, (3) I indicates a 3-credit first-semester course; (3) II, a 3-credit second-semester course; (3) I and II, a 3-credit course repeated the second semester; (3-3) Yr., a 3-credit year course; (Ar.), that the credits are variable and must be arranged with the instructor; (n. o. 1949-50), that the course is not offered during 1949-50.

AGRICULTURE

The master's degree is offered in the following areas of specialization: genetics and plant breeding, vegetable crops, and soil science. A student wishing to qualify for a master's degree in any other field of agriculture may do so if an adequate program can be arranged which will meet the approval of the Graduate Council.

Requirements for admission to candidacy for the master's degree:

(1) Undergraduate preparation

Genetics and Plant Breeding: Courses in general botany, general zoology, and principles of genetics and a minimum of 18 undergraduate credits in courses basic to horticulture—principally botany, chemistry, entomology, genetics, and college algebra.

Vegetable Crops: A minimum of 18 undergraduate credits in vegetable crops courses or courses basic to vegetable production—principally botany, chemistry, entomology, pathology, genetics, and soils.

Soil Science: A minimum of 18 undergraduate credits including credit in soil science, organic chemistry, quantitative chemistry, plant physiology, bacteriology, and physics.

(2) An oral qualifying examination covering previous work in the selected field to be taken as soon as possible after becoming a graduate student.

The graduate program: Courses in the major field to be selected from those listed below and from associated fields with the approval of the qualifying committee. The following courses are required for each of the designated specializations:

Genetics and Plant Breeding:

- Agriculture 254, Principles of Genetics
- Agriculture 262, Advanced Genetics
- Agriculture 278, Principles of Plant Breeding
- Agriculture 292, Agricultural Applied Statistics
- Agriculture 302, Genetics Seminar
- Zoology 276, Biometry

Vegetable Crops:

- Agriculture 292, Agricultural Applied Statistics
- Agriculture 304, Horticultural Seminar
- Agriculture 309, Advanced Vegetable Crops
- Agriculture 310, Systematic Vegetable Crops

Soil Science:

- Agriculture 301, Advanced Soil Technology
- Agriculture 308, Soil Science Seminar

Agriculture

250 SOILS (4) I	Mr. Sherman
254 PRINCIPLES OF GENETICS (3) I	Mr. Mainland
258 GENETICS LABORATORY (1) I	Mr. Mainland
262 ADVANCED GENETICS (3) I	Mr. Mainland
267 SOIL ANALYSIS (3) II	Mr. Sherman
268 SOIL DIAGNOSIS LABORATORY (2) II	Mr. Sherman
278 PRINCIPLES OF PLANT BREEDING (3) I	Mr. Poole
281 AGRICULTURAL MACHINERY (3) I	Mr. Guillou
282 ADVANCED AGRICULTURAL MACHINERY (3) II	Mr. Guillou
291 IRRIGATION PRACTICE (4) II	Mr. Wadsworth
292 AGRICULTURAL APPLIED STATISTICS (3) II	Mr. Poole
300 DIRECTED READING AND RESEARCH (Ar.) I and II	Staff
301 ADVANCED SOIL TECHNOLOGY (3) I	Mr. Sherman
302 GENETICS SEMINAR (1) I and II	Mr. Mainland, Mr. Storey
303 ADVANCED SOIL CLASSIFICATION (Ar.)	Mr. Sherman
304 HORTICULTURAL SEMINAR (1) I and II	Mr. Storey
308 SOIL SCIENCE SEMINAR (1) II	Mr. Sherman
309 ADVANCED VEGETABLE CROPS (4-4) Yr. (Alternate years; n. o. 1949-50)	
310 SYSTEMATIC VEGETABLE CROPS (3) II (Alternate years; o. 1949-50)	
400 THESIS RESEARCH (Ar.) I and II	Staff

ANTHROPOLOGY

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 24 undergraduate credits in anthropology, of which 6 credits may be substituted from closely related fields

with department approval. In addition, introductory courses in geography, sociology, psychology, and zoology are recommended.

- (2) An oral examination covering previous work in anthropology to be taken as soon as possible after becoming a graduate student.

The graduate program: Courses in the major to be selected from those listed below. Required courses are marked with an asterisk. A maximum of 6 credits may be earned in related courses in sociology, psychology, history, geography, economics, and government.

Anthropology

250 HAWAIIAN CULTURE (3) II	Mr. Emory
251 POLYNESIANS AND THEIR CULTURE (3) I	Mr. Emory
252 PEOPLES OF THE PACIFIC (3) I	Mr. Emory
253 MICRONESIA IN A MODERN WORLD (3) II	Mr. Mason
254 PEOPLES OF SOUTHERN ASIA (3) I	Miss Luomala
255 PEOPLES OF NORTHERN ASIA (3) II	Miss Luomala
256 THE AMERICAN INDIAN (3) I	Miss Luomala
265 PRIMITIVE SOCIETY (3) I	Mr. Riesenber
266 CULTURE CONFLICT IN PACIFIC DEPENDENCIES (3) I	Mr. Mason
267 PRIMITIVE RELIGION (3) II (n. o. 1949-50)	Miss Luomala
268 PRIMITIVE ART (3) II	Mr. Mason
269 FOLKLORE (3) I (n. o. 1949-50)	Miss Luomala
270 ARCHEOLOGY (3) II	Mr. Emory
271 ANTHROPOLOGICAL CLASSICS (3) II	Miss Luomala
*300 DIRECTED READING OR RESEARCH (Ar.) I and II	Staff
*400 THESIS RESEARCH (Ar.) I and II	Staff

BACTERIOLOGY

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 18 undergraduate credits in bacteriology and in closely related biological science courses, including basic courses in bacteriology, chemistry, zoology, and botany. In addition, the following undergraduate courses are required: general chemistry, organic chemistry, college physics, and a modern foreign language.
- (2) An oral examination covering previous work in the field to be taken as soon as possible after becoming a graduate student.

The graduate program: Required courses in bacteriology are listed below. In addition, the following related courses are required: biochemistry, mycology, parasitology, biometry, and preparation of scientific manuscripts. Other related courses recommended but not required are: plant pathology, agricultural chemistry, hematology, entomology, and general physiology.

Bacteriology

250 ECONOMIC BACTERIOLOGY (2-2) Yr.	Mr. Bushnell
260 MEDICAL BACTERIOLOGY (3) I	Mr. Bushnell
262 LABORATORY IN MEDICAL BACTERIOLOGY (2) I	Mr. Chu
264 IMMUNOLOGY (3) II	Mr. Bushnell, Mr. Chu
300 BACTERIOLOGICAL PROBLEMS (Ar.) I and II	Staff
310 DETERMINATIVE BACTERIOLOGY (2) I and II	Mr. Bushnell
400 THESIS RESEARCH (Ar.) I and II	Staff

BOTANY

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 18 undergraduate credits in botany, including courses in cryptogams, physiology, taxonomy, and anatomy or morphology. A course in bacteriology and one in inorganic chemistry are also required.
- (2) An oral examination covering previous work in this field, to be taken upon completion of one semester of graduate study.

The graduate program: Courses in the major field to be selected from those listed below. Required courses are marked with an asterisk. A maximum of 6 credits may be earned in advanced courses in agriculture, anthropology, bacteriology, chemistry, geology, physics, and zoology. A knowledge of German, French, or Latin may be required. All candidates for the master's degree will be expected to enroll in the graduate seminar.

Botany

202 TAXONOMY AND EXPLORATION (3) II	Mr. St. John
253 PLANT ECOLOGY (4) II	Mr. St. John
254 ADVANCED TAXONOMY (1) I	Mr. St. John
258 ADVANCED MYCOLOGY (3) I	Mr. Lohman
263 PLANT PATHOLOGY (3) II (Alternate years; o. 1949-50)	Mr. Lohman
264 PLANT PATHOLOGY TECHNIQUE (3) II (Alternate years; n. o. 1949-50)	Mr. Lohman
268 PLANT MICROTECHNIQUE (3) II (Alternate years; n. o. 1949-50)	Mr. Britten
269 PLANT ANATOMY (3) I (Alternate years; n. o. 1949-50)	Mr. Britten
273 ADVANCED PLANT PHYSIOLOGY-BIOPHYSICS (3) I (Alternate years; n. o. 1949-50)	Mr. Engard
274 LABORATORY TECHNIQUE IN BIOPHYSICS (2) I (Alternate years; n. o. 1949-50)	Mr. Engard
275 ADVANCED PLANT PHYSIOLOGY-BIOCHEMISTRY (3) II (Alternate years; o. 1949-50)	Mr. Engard
276 LABORATORY TECHNIQUE IN BIOCHEMISTRY (2) II (Alternate years; o. 1949-50)	Mr. Engard

279 MORPHOLOGY OF CRYPTOGAMIC PLANTS (3) I (Alternate years; o. 1949-50)	Mr. Lohman
280 CYTOGENETICS (3) I	Mr. Britten
281 CYTOLOGY (3) I (Alternate years; n. o. 1949-50)	Mr. Britten
282 BIOLOGICAL PHOTOGRAPHY (3) II	Mr. Britten
299 BOTANICAL PROBLEMS (Ar.) I and II	Staff
300 BOTANICAL RESEARCH (Ar.)	Staff
*310 BOTANICAL SEMINAR (1) I and II	Staff
351 PLANT PHYSIOLOGY SEMINAR (1) II	Mr. Engard
365 TAXONOMY OF THE DICOTYLEDONS (1) II (Alternate years; o. 1949-50)	Mr. St. John
367 TAXONOMY OF THE HIGHER DICOTYLEDONS (1) II (Alternate years; n. o. 1949-50)	Mr. St. John
378 NOMENCLATURE (2) I (Alternate years; n. o. 1949-50)	Mr. St. John
*400 THESIS RESEARCH (Ar.) I and II	Staff

CHEMISTRY

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 36 undergraduate credits in chemistry, including courses in general chemistry, organic chemistry, qualitative analysis, quantitative analysis, and physical chemistry. In addition, courses in college physics, college algebra, analytical geometry, and trigonometry are required at the undergraduate level. If Mathematics 153 (Differential Calculus) and Mathematics 154 (Integral Calculus) have not been taken at the undergraduate level, they must be included in the graduate program.
- (2) Oral or written qualifying examination to be taken as soon as possible after becoming a graduate student.

The graduate program: Courses in the major field to be selected from those listed below. Required courses are marked with an asterisk.

Chemistry

236 AGRICULTURAL CHEMISTRY (3) II	Mr. Smith
*238 ADVANCED INORGANIC CHEMISTRY (3) I (Alternate years; n. o. 1949-50)	
249 ADVANCED ORGANIC CHEMISTRY (4) I	Mr. Sherk
250 ORGANIC ANALYSIS (4) II	Mr. Naughton
255 PHYSICAL CHEMISTRY (4-4) Yr.	Mr. Bilger
266 ADVANCED BIOCHEMISTRY (3) II	Mr. Bilger
271 COLLOIDAL CHEMISTRY (3) I	
281 HISTORY OF CHEMISTRY (3) I	Mrs. Bilger
295 CHEMICAL LITERATURE (2) I and II	Mr. Smith

300 DIRECTED RESEARCH (Ar.)	Staff
338 ATOMIC STRUCTURE AND NUCLEAR CHEMISTRY (3) II (Alternate years; n. o. 1949-50)	
355 THEORETICAL ORGANIC CHEMISTRY (3) II	Mrs. Bilger
358 CHEMICAL THERMODYNAMICS (3) II	Mrs. Jacoby
*360 SEMINAR (1-1) Yr.	Mr. Bilger
*400 THESIS RESEARCH (Ar.) I and II	Staff

ECONOMICS AND BUSINESS

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 24 undergraduate credits in economics and business, including elementary principles, money and banking, and either business statistics or elementary accounting.
- (2) An oral examination covering previous work in the field (to be taken soon after becoming a graduate student).

The graduate program: Courses in the major field to be selected from those listed below. Required courses are starred. In addition, a course in methods of research is required. With the consent of his advisory committee, the candidate may include a maximum of 6 credits in related fields.

Economics

223-224 HISTORY OF ECONOMIC INSTITUTIONS (3-3) Yr.	Mr. Cameron
251 ECONOMIC PROBLEMS OF EUROPE (3) I (n. o. 1949-50)	Mr. Kraemer
252 ECONOMIC PROBLEMS OF THE FAR EAST (3) I (n. o. 1949-50)	Mr. Shoemaker
254 THE ECONOMIC SYSTEM OF SOVIET RUSSIA (3) II (n. o. 1949-50)	Mr. Shoemaker
263 INTERNATIONAL FINANCE (3) II	Mr. Kirkpatrick
265 PRINCIPLES AND PROBLEMS OF ECONOMIC CONTROL (3) II (n. o. 1949-50)	Mr. Shoemaker
270 PUBLIC UTILITIES (3) I	Mr. Cameron
273 OCEAN TRANSPORTATION (3) II	Mr. Cameron
276 TRUSTS AND INDUSTRIAL COMBINATIONS (3) I	Mr. Cameron
277 ECONOMICS OF MACHINE INDUSTRY (3) II	Mr. Cameron
281 LABOR PROBLEMS (3) I	Mr. Roberts
283 LABOR LEGISLATION (3) I	Mr. Ferguson
285 INTERNATIONAL TRADE (3) I	Mr. Kraemer
291 AGRICULTURAL ECONOMICS (3) I	Mr. Kraemer
292 LAND ECONOMICS (3) II	Mr. Kraemer
296 HISTORY OF ECONOMIC THOUGHT (3) I	Mr. Kirkpatrick
*300 DIRECTED READING OR RESEARCH (2-2) Yr.	Staff
310 SEMINAR IN LABOR PROBLEMS (3) I	Mr. Roberts

315 SEMINAR IN ECONOMIC PROBLEMS (3) I

(n. o. 1949-50)

Mr. Shoemaker, Staff

*400 THESIS RESEARCH (Ar.) I and II

Staff

Business

250 INTERMEDIATE ACCOUNTING (3) I

Mr. Glover

251 ADVANCED ACCOUNTING (3) II

Mr. Glover

254 COST ACCOUNTING (3) I

Mr. Glover

255 ANALYSIS OF FINANCIAL STATEMENTS (3) II

Mr. Glover

256 INCOME TAX PROBLEMS (3) I

Mr. Glover

257 MERCHANDISE ACCOUNTING AND CONTROL (3) II

Mr. Adler

258 AUDITING (3) I

Mr. Adler

261 COLLECTIVE BARGAINING (3) II

Mr. Roberts

263 PERSONNEL MANAGEMENT (3) II

Mr. Ferguson

264 PRINCIPLES OF BUSINESS (3) I

Mr. Cameron

265 CORPORATION FINANCE (3) II

Mr. Luke

266 INVESTMENTS AND INVESTMENT BANKING (3) I

Mr. Kirkpatrick

267 BUSINESS CYCLES AND BUSINESS FORECASTING

(3) II

Mr. Kirkpatrick

270 PRINCIPLES OF MARKETING (3) I

Mr. Hoerber

276 RETAIL MERCHANDISING (3) I

Mr. Luke

280 SALES MANAGEMENT (3) II

Mr. Kraemer

*300 DIRECTED READING OR RESEARCH (2-2) Yr.

Staff

*400 THESIS RESEARCH (Ar.) I and II

Staff

EDUCATION

Requirements for admission to candidacy for the master's degree:

- (1) The Bachelor of Education degree or the equivalent. (Whether a given bachelor's degree is equivalent to the Bachelor of Education degree will be determined in each case by the Ed.M. Committee, which is the graduate committee of the Education Department.)
- (2) Successful teaching experience.
- (3) Satisfactory completion of the following courses: Education 340, 361, 390, and Psychology 351.
- (4) A qualifying examination covering previous work in the field. This examination may be written or oral at the discretion of the Ed.M. Committee.
- (5) Satisfactory completion of Education 380.

The graduate program: Courses in education to be selected from those listed below. Required courses are indicated by an asterisk. Six to 10 hours may be earned in advanced courses in one of the following fields: agriculture, anthropology and sociology, art, biological sciences, economics and business, English, geology and geography, health and physical education, his-

tory and government, home economics, library science, mathematics, philosophy, physical sciences, psychology, any foreign language, music, or speech.

Education

- 258 AUDIO-VISUAL AIDS IN EDUCATION (2) II (n. o. 1949-50)
 259 PRINCIPLES OF ADULT EDUCATION (3) I (n. o. 1949-50)
 265 ADMINISTRATION OF THE GUIDANCE PROGRAM (2) II Mr. Beyers
 271 PRINCIPLES OF VOCATIONAL EDUCATION (3) II Mr. Armstrong
 289 HISTORY OF EDUCATION (3) I and II Mr. Clopton
 290-291 TEACHING OF SLOW LEARNERS (2-2) Yr. Mr. Haan
 292 WORKSHOPS (usually 6 credits) in various fields of education offered in summer sessions and all numbered 292 with a lower-case letter indicating the field.
 296 HISTORY OF EDUCATION IN HAWAII (2) II Mr. White
 300 DIRECTED READING OR RESEARCH (Ar.) Staff
 *340 PHILOSOPHY OF EDUCATION (3) I and II Mr. Clopton
 *361 EVALUATION IN EDUCATION (3) I and II Mr. Chun
 363 SEMINAR IN EDUCATIONAL ADMINISTRATION (2) I Mr. Everly
 365 SUPERVISION OF INSTRUCTION (2) II Mr. Everly
 366 CURRICULUM DEVELOPMENT AND SPECIAL METHODS IN ADULT EDUCATION (3) I (n. o. 1949-50)
 367 ADMINISTRATION OF ADULT EDUCATION (3) II (n. o. 1949-50)
 369 SEMINAR IN SPEECH PEDAGOGY (3) I Mr. Smith
 376 SEMINAR IN VOCATIONAL EDUCATION (2) I and II Mr. Armstrong
 *380 RESEARCH AND THESIS WRITING (3) I Mr. Clopton
 *390 PUBLIC SCHOOL ADMINISTRATION (2) I and II Mr. Everly
 396 SEMINAR IN CURRICULUM IMPROVEMENT (2) I Staff
 *400 THESIS RESEARCH (Ar.) I and II Staff

ENGLISH

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 24 undergraduate credits in English, or closely related subjects, including courses in English composition, an introduction to English literature, American literature, and Shakespeare. In addition, courses in English history and in classical literature are desirable.
- (2) Courses indicating a fair reading knowledge of a modern European language or Latin.
- (3) A qualifying interview with the departmental committee, to determine the candidate's fitness for admission to candidacy.

A comprehensive written examination in English and American literature is a department prerequisite to registration in English 400.

The graduate program: Courses in English to be selected from those listed below. Required courses are marked with an asterisk.

English

205	BACKGROUND OF ENGLISH LITERATURE (3) I	Mr. Green
240	HISTORY OF LITERARY CRITICISM (3) II (Alternate years; o. 1949-50)	Mr. Day
260-261	AMERICAN LITERATURE (3-3) Yr.	Mr. Stroven
270	CHAUCER (3) I (Alternate years; o. 1949-50)	Mr. Green
272	HISTORY OF THE ENGLISH LANGUAGE (3) I (Alternate years; n. o. 1949-50)	Mr. Green
274	THE ENGLISH DRAMA TO 1642 (Exclusive of Shakespeare) (3) I (Alternate years; o. 1949-50)	Mr. Day
275	NONDRAMATIC ELIZABETHAN AND SEVENTEENTH-CENTURY ENGLISH LITERATURE (1558-1660) (3) I (Alternate years; n. o. 1949-50)	Mr. Korn
276-277	SHAKESPEARE (3-3) Yr.	Mr. Ernst
280	RESTORATION AND EIGHTEENTH-CENTURY LITERATURE (3) II (Alternate years; n. o. 1949-50)	Mr. Korn
282	POETRY AND PROSE OF THE ROMANTIC MOVEMENT IN ENGLAND (3) I (Alternate years; n. o. 1949-50)	Mr. Day
284	VICTORIAN LITERATURE (Exclusive of the Novel) (3) II (Alternate years; n. o. 1949-50)	Mr. Bouslog
285	THE ENGLISH NOVEL TO 1832 (3) I (Alternate years; o. 1949-50)	Mr. Korn
286	THE ENGLISH NOVEL, 1832-1900 (3) II (Alternate years; o. 1949-50)	Mr. Korn
287	MODERN DRAMATIC LITERATURE (3-3) Yr. (Alternate years; o. 1949-50)	Mr. Wilson
288	CONTEMPORARY EUROPEAN LITERATURE (3) I	Mr. Day
289	CONTEMPORARY AMERICAN LITERATURE (3) II	Mr. Day
*300	DIRECTED RESEARCH. May be repeated for a maximum of 4 credits. (2) I and II	Staff
*310	SEMINAR IN AMERICAN OR ENGLISH LITERATURE (2) II	Staff
*313	SEMINAR IN BIBLIOGRAPHY AND RESEARCH METHODS (1) I and II	Staff
*400	THESIS RESEARCH (Ar.) I and II	Staff

FAR EAST AREA STUDIES

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 37 semester hours of undergraduate credit in courses on the Area in the following disciplines: language, literature, history, government, economics, sociology, anthropology, geography, philosophy, religion, and art.
- (2) A reading knowledge of Chinese, Japanese, or Korean.
- (3) An oral examination covering previous work in the Area to be taken as soon as possible after becoming a graduate student.

The graduate program: The major field to be China, Japan, or Korea. Courses to be selected, with the advice and approval of the qualifying committee, from those listed below. At the discretion of the qualifying committee, additional language course work may be required.

Chinese

- | | | |
|---------|---|------------|
| 200 | THIRD-YEAR CHINESE (3-3) Yr. | Mrs. Chong |
| 250-251 | CHINESE LITERATURE IN ENGLISH (3-3) Yr. | Mr. Wu |
| 280-281 | CHINESE DRAMA IN ENGLISH (3-3) Yr. | Mr. Ching |
| 293-294 | METHODS IN CHINESE STUDIES (3-3) Yr. | Mr. Taam |
| 300 | DIRECTED READING OR RESEARCH (Ar.) | Staff |

Japanese

- | | | |
|-----|---|-------------|
| 203 | JAPANESE TRANSLATION AND INTERPRETATION (3-3) Yr. | Mr. Uyehara |
| 260 | JAPANESE LITERATURE IN ENGLISH (2-2) Yr. | Mr. Uyehara |
| 300 | DIRECTED READING OR RESEARCH (Ar.) | Mr. Uyehara |

History

- | | | |
|-----|---|--------------|
| 201 | HISTORY OF THE FAR EAST (3-3) Yr. | Mr. Sakamaki |
| 225 | HISTORY OF CHINA (3-3) Yr. | Mr. White |
| 226 | HISTORY OF JAPAN (3-3) Yr. | Mr. Sakamaki |
| 229 | HISTORY OF THE RELATIONS BETWEEN CHINA AND THE OCCIDENT (3-3) Yr. | Mr. White |
| 250 | HISTORY OF EARLY CIVILIZATION IN THE FAR EAST (3) I | Mr. Sakamaki |
| 251 | HISTORY OF THOUGHT IN JAPAN (3) II | Mr. Sakamaki |
| 285 | RUSSIA IN ASIA (3-3) Yr. | Mr. White |
| 295 | CULTURAL HISTORY OF CHINA (3-3) Yr. (n. o. 1949-50) | Mr. White |
| 300 | DIRECTED RESEARCH (Ar.) | Staff |
| 315 | SEMINAR IN JAPANESE HISTORY (3) II | Mr. Sakamaki |
| 316 | SEMINAR IN CHINESE HISTORY (3) I (n. o. 1949-50) | Mr. White |

Anthropology

- | | | |
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| 254 | PEOPLES OF SOUTHERN ASIA (3) I | Miss Luomala |
| 255 | PEOPLES OF NORTHERN ASIA (3) II | Miss Luomala |
| 300 | DIRECTED READING OR RESEARCH (Ar.) | Staff |

Sociology

- | | | |
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| 259 | PEOPLES AND INSTITUTIONS OF JAPAN (3) II | Mr. Yamamoto |
| 277 | PEOPLES AND INSTITUTIONS OF CHINA (3) II | Mr. Cheng |
| 300 | DIRECTED READING OR RESEARCH (Ar.) | Staff |

Philosophy

- | | | |
|-----|---|-----------|
| 265 | PHILOSOPHY, EAST AND WEST (3) II | Mr. Moore |
| 270 | INDIAN PHILOSOPHY (3) I | Mr. Moore |
| 271 | CHINESE PHILOSOPHY (3) I | Mr. Wu |
| 273 | MODERN CHINESE POLITICAL THOUGHT (3) II | Mr. Wu |

- 282 TAOIST PHILOSOPHY (3) I (n. o. 1949-50)
 283 BUDDHIST PHILOSOPHY (3) I Mr. Suzuki
 300 READING AND RESEARCH (Ar.) Staff
 304 SEMINAR IN BUDDHIST PHILOSOPHY (2) I Mr. Suzuki

Government

- 262 GOVERNMENT AND POLITICS OF THE FAR EAST (3) II Mr. Bridgham
 263 INTERNATIONAL RELATIONS OF THE FAR EAST (3) I Mr. Leebrick
 300 DIRECTED READING AND RESEARCH (Ar.) Staff
 303 SEMINAR IN GOVERNMENT AND POLITICS OF THE FAR EAST (2) I and II Mr. Bridgham, Mr. Leebrick

Economics

- 252 ECONOMIC PROBLEMS OF THE FAR EAST (3) I (n. o. 1949-50) Mr. Shoemaker
 254 THE ECONOMIC SYSTEM OF SOVIET RUSSIA (3) II (n. o. 1949-50) Mr. Shoemaker
 300 DIRECTED READING OR RESEARCH (Ar.) Staff

Geography

- 255 GEOGRAPHY OF ASIA (3) I Mr. Bowers
 256 GEOGRAPHY OF JAPAN (2) II Mr. Manchester
 257 GEOGRAPHY OF CHINA (3) II Mr. Bowers
 264 GEOGRAPHY OF INDIA AND SOUTHEAST ASIA (3) II Mr. Bowers
 300 DIRECTED RESEARCH (Ar.) Staff

Far East

- 400 THESIS RESEARCH (Ar.) I and II Staff

GENETICS

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 20 semester hours of undergraduate credit in elementary and advanced courses in botany, zoology, chemistry, and genetics.
- (2) An oral qualifying examination covering previous work in this field to be taken as soon as possible after registering as a graduate student.

The graduate program: Courses to be selected from those listed below and others from allied fields as recommended by the advisory committee.

Botany

- 253 PLANT ECOLOGY (4) II Mr. St. John
 263 PLANT PATHOLOGY (3) II Mr. Lohman
 264 PLANT PATHOLOGY TECHNIQUE (3) II (n. o. 1949-50) Mr. Lohman

268	PLANT MICROTÉCHNIQUE (3) II (n. o. 1949-50)	Mr. Britten
280	CYTOGENETICS (3) I	Mr. Britten
281	CYTOLOGY (3) I (n. o. 1949-50)	Mr. Britten
300	DIRECTED RESEARCH (Ar.) I and II	Staff

Agriculture

254	PRINCIPLES OF GENETICS (3) I	Mr. Mainland
262	ADVANCED GENETICS (3) I	Mr. Mainland
278	PRINCIPLES OF PLANT BREEDING (3) I	Mr. Poole
292	AGRICULTURAL APPLIED STATISTICS (3) II	Mr. Poole
300	DIRECTED RESEARCH (Ar.) I and II	Mr. Storey
302	GENETICS SEMINAR (1) I and II	Mr. Storey, Mr. Mainland
400	THESIS RESEARCH (Ar.) I and II	Staff

Zoology

276	BIOMETRY (3) I	Mr. Tester
277	BIOMETRICAL ANALYSIS (3) II	Mr. Tester
285	ORGANIC EVOLUTION (2) II	Mr. de Laubenfels
351	CYTOLOGY (3) I	Miss Heizer

GEOGRAPHY

Requirements for admission to candidacy for the master's degree:

- (1) An adequate background in geography and basic courses in geology, history, anthropology or sociology, and government or economics.
- (2) A reading knowledge of a foreign language.
- (3) An oral examination covering previous work in the field to be taken as soon as possible after becoming a graduate student.

The graduate program: Courses in the major to be selected from those listed below. Required courses are marked with an asterisk. Six to 10 hours may be earned in advanced courses in related fields.

Geography

*250	CARTOGRAPHY (3) I	Mr. Manchester
252	GEOGRAPHY OF NORTH AMERICA (3) II (n. o. 1949-50)	
255	GEOGRAPHY OF ASIA (3) I	Mr. Bowers
256	GEOGRAPHY OF JAPAN (2) II	Mr. Manchester
257	GEOGRAPHY OF CHINA (3) II	Mr. Bowers
258	GEOGRAPHY OF EUROPE (3) II	Mr. Manchester
260	GEOGRAPHY OF HAWAII (n. o. 1949-50)	
261	WORLD GEOGRAPHIC PATTERNS (3) I and II	Mr. Bowers
*262	WEATHER AND CLIMATE (3) I	Mr. Bowers
263	GEOGRAPHY OF THE PACIFIC ISLANDS (2) I	Mr. Manchester
264	GEOGRAPHY OF INDIA AND SOUTHEAST ASIA (3) I	Mr. Bowers
271	POLITICAL GEOGRAPHY (3) II	Mr. Bowers



Map room, University Library

299 DIRECTED READING (Ar.) I and II	Staff
300 DIRECTED RESEARCH (Ar.)	Staff
302 MICRONESIA (3) II	Mr. Bowers
*310 SEMINAR IN GEOGRAPHY (Ar.) I and II	Staff
*400 THESIS RESEARCH (Ar.) I and II	Staff

GOVERNMENT

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 18 undergraduate credits in government, including American government, political theory, and international relations.
- (2) An oral examination covering previous work in the field to be taken as soon as possible after becoming a graduate student.

The graduate program: Courses in the major field required of all candidates are Government 260, 282, 290, and 400, and a course in methods of research (Government 288, Psychology 260, His-

tory 310, or an equivalent). The candidate may specialize in one* of the following four fields, in which case the additional courses listed below are required:

International Relations

Government 261, International Organization
 History 245, Diplomatic History of the United States
 Economics 285, Foreign Trade

Public Administration

Government 283, Personnel Administration
 Government 284, Administrative Law
 Government 286, State and Local Administration
 Government 288, Methods and Problems of Research in
 Public Administration

Political Philosophy

Philosophy 200, Ethics—Philosophies of Life
 History 246, American Thought and Culture
 Government 290, Modern Political Philosophy

Comparative Government

Government 266, Comparative Government
 Government 268, Government and Politics of the Soviet
 Union

A maximum of 6 credits may be earned in other social sciences (economics, history, sociology, anthropology, and psychology) as determined by the supervising committee. These courses will be selected to strengthen and widen the candidate's field of major interest.

Government

240	DEMOCRACY AND COMMUNISM (3) I	Mr. Saunders
248	AMERICAN STATE GOVERNMENT (3) II (n. o. 1949-50)	Mr. Spellacy
252	INTRODUCTION TO CONSTITUTIONAL LAW (3) I	Mr. Spellacy
253	INTERNATIONAL LAW (3) I	Mr. Bridgham
254	MUNICIPAL GOVERNMENT (3) I	Mr. Spellacy
256	AMERICAN POLITICAL PARTIES (3) II	Mr. Bridgham
260	INTERNATIONAL RELATIONS (2) II	Mr. Bachman
261	INTERNATIONAL ORGANIZATION (3) II	Mr. Bridgham
262	GOVERNMENT AND POLITICS OF THE FAR EAST (3) II	Mr. Bridgham
263	INTERNATIONAL RELATIONS OF THE FAR EAST (3) I	Mr. Leebrick
264	POSTWAR INTERNATIONAL PROBLEMS (3) I	Mr. Bridgham
266	COMPARATIVE GOVERNMENT (3) I	Mr. Saunders
267	AMERICAN FOREIGN RELATIONS (3) II	Mr. Bridgham
270	GOVERNMENT OF HAWAII (3) (n. o. 1949-50)	Mr. Spellacy

271	GOVERNMENT OF DEPENDENCIES (3) II (n. o. 1949-50)	Mr. Leebrick
282	INTRODUCTION TO PUBLIC ADMINISTRATION (3) I	Mr. Spellacy
283	PERSONNEL ADMINISTRATION (3) I	Mr. Akina
284	ADMINISTRATIVE LAW (3) II	Mr. Spellacy
285	PUBLIC FINANCIAL MANAGEMENT (3) II	Mr. Spellacy
286	STATE AND LOCAL ADMINISTRATION (3) II	Mr. Spellacy
288	METHODS AND PROBLEMS OF RESEARCH IN PUBLIC ADMINISTRATION (3) II	Mr. Spellacy
290	MODERN POLITICAL PHILOSOPHY (3) II	Mr. Saunders
300	DIRECTED READING AND RESEARCH (Ar.) I and II	Staff
302	SEMINAR IN INTERNATIONAL RELATIONS (2) II	Mr. Bridgham
303	SEMINAR IN GOVERNMENT AND POLITICS OF THE FAR EAST (2) I and II	Mr. Bridgham, Mr. Leebrick
304	SEMINAR IN PUBLIC LAW (2) I	Mr. Spellacy
307	SEMINAR IN POLITICAL THEORY (2) II	Mr. Saunders
310	SEMINAR IN PUBLIC ADMINISTRATION (2) II	Mr. Spellacy
400	THESIS RESEARCH (Ar.) I and II	Staff

HISTORY

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 18 undergraduate credits in history, including 10 hours in courses relating to the general field of the thesis.
- (2) An oral examination covering previous work in the field to be taken as soon as possible after becoming a graduate student.

The graduate program: Courses in the major field to be selected from those listed below. Required courses are marked with an asterisk. A maximum of 6 credits may be earned toward the degree in such closely related advanced courses as government, international relations, economics, or foreign languages.

History

201	HISTORY OF THE FAR EAST (3-3) Yr.	Mr. Sakamaki
208	EXPANSION OF EUROPEAN CIVILIZATION (3) I	Mr. Sakamaki
209-210	HISTORY OF ENGLAND (3-3) Yr.	Mr. Murphy
211	CONSTITUTIONAL HISTORY OF ENGLAND (3) I (n. o. 1949-50)	Mr. Hunter
213	HISTORY OF MODERN RUSSIA (3) I	Mr. Delzell
214	HISTORY OF SOVIET RUSSIA (3) II	Mr. Delzell
220-221	HISTORY OF THE BRITISH EMPIRE (3-3) Yr.	Mr. Murphy
225	HISTORY OF CHINA (3-3) Yr.	Mr. White
226	HISTORY OF JAPAN (3-3) Yr.	Mr. Sakamaki
229	HISTORY OF THE RELATIONS BETWEEN CHINA AND THE OCCIDENT (3-3) Yr.	Mr. White
242-243	HISTORY OF THE UNITED STATES (3-3) Yr.	Mr. Hunter
245	DIPLOMATIC HISTORY OF THE UNITED STATES (3) I	Mr. Hunter

246	AMERICAN THOUGHT AND CULTURE (3) II	Mr. Hunter
• 250	HISTORY OF EARLY CIVILIZATION IN THE FAR EAST (3) I	Mr. Sakamaki
251	HISTORY OF THOUGHT IN JAPAN (3) II	Mr. Sakamaki
252	CONSTITUTIONAL HISTORY OF THE UNITED STATES (3) II (n. o. 1949-50)	Mr. Hunter
253-254	HISTORY OF HISPANIC AMERICA (3-3) Yr.	Mr. Johnson
257	EUROPE IN THE NINETEENTH CENTURY (3) I	Mr. Delzell
258	EUROPE SINCE VERSAILLES (3) II	Mr. Delzell
276	HISTORY OF THE HAWAIIAN ISLANDS (3) I	Mr. Kuykendall
277	THE PACIFIC REGION IN MODERN TIMES (2-2) Yr. (n. o. 1949-50)	Mr. Kuykendall
285	RUSSIA IN ASIA (3-3) Yr.	Mr. White
295	CULTURAL HISTORY OF CHINA (3-3) Yr. (n. o. 1949-50)	Mr. White
300	DIRECTED RESEARCH (Ar.)	Staff
*310	SEMINAR IN HISTORICAL METHOD (3) I	Mr. Hunter
311	SEMINAR IN AMERICAN DIPLOMATIC HISTORY (3) I	Mr. Johnson
*313	SEMINAR IN HISTORIOGRAPHY (3) II	Mr. Hunter
315	SEMINAR IN JAPANESE HISTORY (3) II	Mr. Sakamaki
316	SEMINAR IN CHINESE HISTORY (3) I (n. o. 1949-50)	Mr. White
*400	THESIS RESEARCH (Ar.) I and II	Staff

NUTRITION

Requirements for admission to candidacy for the master's degree:

- (1) An undergraduate major in home economics, chemistry, or general science which includes courses in foods and nutrition. In addition, courses in chemistry and college algebra are required.
- (2) An oral qualifying examination to be taken upon completion of one semester of graduate work.

The graduate program: Courses to be selected from those listed. Required courses are marked with an asterisk. In addition, courses in statistical methods and thesis writing are required. A minor (6 to 9 credits) may be chosen in chemistry or some other field of science, in business and economics, or in education.

Home Economics

300 DIRECTED READING OR RESEARCH (Ar.) I and II Staff

Household Science

250 DIET AND DISEASE (3) II

*273 FOOD HABITS IN HAWAII (4) II Mrs. Gruelle

277 ADVANCED NUTRITION (3) II Miss Miller

299 DIRECTED RESEARCH IN EXPERIMENTAL COOKERY
(Ar.) I and II Staff

*300 DIRECTED RESEARCH IN NUTRITION (Ar.)	Miss Miller
*301 DIETARY STUDIES (Ar.) I and II	Miss Miller
305 LABORATORY METHODS IN NUTRITION (3) I and II	Miss Miller, Staff
*350-351 SEMINAR IN NUTRITION (1-1) Yr.	Miss Miller
*400 THESIS RESEARCH (Ar.) I and II	Miss Miller, Staff

PHILOSOPHY

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 18 semester hours of undergraduate credit in philosophy, including courses in history of philosophy, ethics, and logic. A course in general psychology is required.
- (2) An oral qualifying examination to be taken as soon as possible after registering for graduate work.

The graduate program: Courses to be selected from those listed below. Required courses are indicated by an asterisk. Recommended related courses are: American Thought and Culture, History of Thought in Japan, Philosophy of Education, Modern Political Philosophy.

Philosophy

*210 CONTEMPORARY PHILOSOPHY (3) II	
*252 TYPES OF PHILOSOPHY (3) I	Mr. McCarthy
*253 PROBLEMS OF PHILOSOPHY (3) II	Mr. McCarthy
262 AESTHETICS (3) I (n. o. 1949-50)	
265 PHILOSOPHY, EAST AND WEST (3) II	Mr. Moore
270 INDIAN PHILOSOPHY (3) I	Mr. Moore
271 CHINESE PHILOSOPHY (3) I	Mr. Wu
275 PHILOSOPHY OF RELIGION (3) I	
281 CONFUCIAN PHILOSOPHY (3) I (n. o. 1949-50)	
282 TAOIST PHILOSOPHY (3) I (n. o. 1949-50)	
283 BUDDHIST PHILOSOPHY (3) I	Mr. Suzuki
286 PHILOSOPHY OF SCIENCE (3) I	Mr. McCarthy
287 SCIENTIFIC METHOD (3) II	Mr. McCarthy
*288 SYMBOLIC LOGIC (3) II	Mr. McCarthy
*300 READING AND RESEARCH (Ar.)	Staff
303 SEMINAR IN CHINESE PHILOSOPHY (Ar.) (n. o. 1949-50)	
304 SEMINAR IN BUDDHIST PHILOSOPHY (2) I	Mr. Suzuki
*400 THESIS RESEARCH (Ar.) I and II	Staff

PHYSICS

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 18 undergraduate credits in physics, including courses in general physics, light, electricity and magnetism, mechanics, and modern physics. In addition, courses in general

chemistry, mathematics through calculus, and mechanical drawing are required.

- (2) An oral qualifying examination covering previous work in the field to be taken as soon as possible after becoming a graduate student.

The graduate program: Courses in the major field to be selected from those listed below. Required courses are marked with an asterisk. Recommended related courses are: Structural Mechanics, Hydraulics, Advanced Calculus, and Mathematics of Theoretical Physics.

Physics

258 ELECTRONICS (3) I	Mr. Miyake
259 SEISMOLOGY (3) I	Mr. Eller
260 GEOPHYSICS (3) II	
262 SOUND (3) II	Mr. Miyake
299 READING OR LABORATORY WORK IN ADVANCED PHYSICS (Ar.)	Staff
*300 DIRECTED READING OR RESEARCH (Ar.)	Staff
*302 THEORETICAL PHYSICS (3-3) Yr.	Mr. Eller
*400 THESIS RESEARCH (Ar.) I and II	Staff

PSYCHOLOGY

Requirements for admission to candidacy for the master's degree:

- (1) An adequate background in psychology. Ordinarily, 28 undergraduate credits in psychology, including general psychology and experimental psychology, will represent such background.
- (2) An oral examination covering previous work in the field to be taken immediately after becoming a graduate student.

The graduate program: Courses to be selected from those listed below. Required courses are marked with an asterisk. A maximum of 6 credits may be earned in closely related courses in anthropology, philosophy, physics, sociology, and zoology.

Psychology

250 APPLIED PSYCHOLOGY (3) II	Mr. Forbes
254 PRINCIPLES OF GUIDANCE (3) I	Mr. Bitner
256 BUSINESS AND INDUSTRIAL PSYCHOLOGY (3) I	Mr. Forbes
257 PRINCIPLES OF COUNSELLING (3) II	Mr. Beyers
*260 STATISTICAL TECHNIQUES IN PSYCHOLOGY (3) I and II	Mrs. Springer
*264 PSYCHOLOGICAL MEASUREMENTS (3) II	Mr. Briggs
*267 EXPERIMENTAL PSYCHOLOGY (3) I and II	Mr. Forbes
*270 PHYSIOLOGICAL PSYCHOLOGY (3) I	Mr. Morsh
272 PSYCHOLOGY OF LEARNING (3) I	Mr. Briggs

*275	SYSTEMATIC PSYCHOLOGY (3) II	Mr. Briggs
*280	SOCIAL PSYCHOLOGY (3) II	Mr. Vinacke
283	PSYCHOLOGY OF PERSONALITY (3) I and II	Mr. Vinacke
286	POLITICAL PSYCHOLOGY (3) I	Mr. Vinacke
290	CLINICAL PSYCHOLOGY (3) I	
292	MENTAL HYGIENE (3) I and II	Mr. Morsh
*295	ABNORMAL PSYCHOLOGY (3) I and II	Mr. Morsh
300	DIRECTED READING OR RESEARCH (Ar.)	Staff
*320	GRADUATE SEMINAR ON METHODS IN RESEARCH AND THESIS WRITING (2) I	Mr. Forbes
*321	GRADUATE SEMINAR (2) II	Mr. Forbes
356	PROBLEMS IN CLINICAL PSYCHOLOGY (3) I and II	Mrs. Allen
362	INDIVIDUAL INTELLIGENCE TEST TECHNIQUE (3) I	Clinic Staff
*382	HISTORY OF PSYCHOLOGY (3) I (n. o. 1949-50)	Mr. Briggs
*400	THESIS RESEARCH (Ar.) I and II	Staff

SOCIAL WORK

Requirements for admission to candidacy for the master's degree:

- (1) Successful completion of the basic graduate curriculum in social work (at least 28 semester hours of designated courses), including 6 semester hours in field work.
- (2) An oral examination covering previous work in the field to be taken when application for admission to candidacy is made.

The full graduate program consists of 48 semester hours to be selected from the following. Courses marked with an asterisk are required of students completing the basic curriculum at this University. Those marked with a dagger are required in addition of students working toward the master's degree. The choice of advanced courses in either case work or group work depends upon the student's major interest.

Social Work

*305	SOCIAL CASE WORK (3) I	Miss Houwink
306	SOCIAL CASE WORK (2) II	Miss Houwink
*308	SOCIAL GROUP WORK (3) I	Miss Lyle
309	SOCIAL GROUP WORK (2) II	Miss Lyle
*310	DYNAMICS OF HUMAN BEHAVIOR (2) II	Mr. Guesnberg
*315	COMMUNITY ORGANIZATION (2) II	Miss Lyle
325	CHILD WELFARE (2) II	Mrs. Handley
*330	HEALTH AND DISEASE (2) I	Miss Houwink
*350	INTRODUCTION TO PUBLIC WELFARE (2) I	Mrs. Handley
351	SOCIAL INSURANCE (2) II	Mr. Jambor
*352	SOCIAL STATISTICS AND RESEARCH (2) I	Mr. Jambor
353	LEGAL ASPECTS OF SOCIAL WORK (2) II	

355	PUBLIC WELFARE ADMINISTRATION (2) II	Mrs. Handley
*360-361	SUPERVISED FIELD WORK (3-3) Yr.	Staff
†362-363	ADVANCED SUPERVISED FIELD WORK (4-4) Yr.	Staff
365	ADVANCED SOCIAL CASE WORK (2) I	Miss Houwink
366	SEMINAR IN SOCIAL CASE WORK (2) II	Miss Houwink
370	ADVANCED SOCIAL GROUP WORK (2) I (n. o. 1949-50)	Miss Lyle
371	SEMINAR IN SOCIAL GROUP WORK (2) II (n. o. 1949-50)	Miss Lyle
375	ADVANCED SOCIAL PSYCHIATRY (2) I	Mr. Guensberg
380	SEMINAR IN PUBLIC WELFARE ADMINISTRATION (2) I	Mrs. Handley
†383	ADMINISTRATION OF SOCIAL WORK AGENCIES (2) II	Mr. Jambor
385	METHODS OF SUPERVISION IN SOCIAL CASE WORK (2) II (Alternate years; n. o. 1949-50)	
386	METHODS OF SUPERVISION IN SOCIAL GROUP WORK (2) II (Alternate years; o. 1949-50)	Miss Lyle
387	CURRENT PRACTICE IN COMMUNITY ORGANIZATION AGENCIES (2) I (Alternate years; o. 1949-50)	Miss Lyle
390	CULTURAL FACTORS IN SOCIAL WORK PRACTICE (2) I (n. o. 1949-50)	Mrs. Handley, Mr. Lind, others
399	SEMINAR IN RESEARCH (2) I	Mr. Jambor
†400	THESIS RESEARCH (4) II	Staff

SOCIOLOGY

Requirements for admission to candidacy for the master's degree:

- (1) A minimum of 18 semester hours of undergraduate credit in sociology, including the introductory course and three of the following courses: The Family, Human Migrations, Personality and Culture, Population and Society, Human Ecology, and Collective Behavior. In addition, introductory courses in philosophy, economics, psychology, anthropology, and government are recommended.
- (2) An oral qualifying examination to be taken as soon as possible after registering for graduate work.

The graduate program: Courses in the major to be selected from those listed below. Required courses are indicated by an asterisk. A maximum of 6 credit hours may be earned in related courses in economics, anthropology, psychology, and history.

Sociology

252	THE COMMUNITY (3) I (n. o. 1949-50)	
253	RURAL SOCIOLOGY (3) I	Mr. Yamamura
254	URBAN SOCIOLOGY (3) II (n. o. 1949-50)	
255	SOCIAL DISORGANIZATION (3) II	Mr. Hormann

256 RACE AND CULTURE CONTACTS IN HAWAII (3) II	Mr. Yamamoto
257 RACE RELATIONS IN THE PACIFIC (3) I	Mr. Glick
258 RACE RELATIONS (3) II	Mr. Glick
259 PEOPLES AND INSTITUTIONS OF JAPAN (3) II	Mr. Yamamoto
262 SOCIAL CONTROL (3) II	Mr. Yamamura
263 PUBLIC OPINION AND THE COMMUNITY (3) II	
265 CRIMINOLOGY (3) I	Mr. Cheng
266 SOCIAL INSTITUTIONS (3) I	Mr. Cheng
267 THE FAMILY (3) I and II	Mr. Glick, Mr. Cheng
268 HUMAN MIGRATIONS (3) II	Mr. Cheng
269 PERSONALITY AND CULTURE (3) I	Mr. Glick
270 POPULATION AND SOCIETY (3) I (n. o. 1949-50)	
271 HUMAN ECOLOGY (3) I	Mr. Yamamoto
272 COLLECTIVE BEHAVIOR (3) II	Mr. Glick
273 SOCIAL MOVEMENTS (3) II	
274 SOCIAL CHANGE (3) I	Mr. Cheng
275 AMERICAN SOCIETY IN TRANSITION (3) II	
277 PEOPLES AND INSTITUTIONS OF CHINA (3) II	Mr. Cheng
282 METHODS OF SOCIAL RESEARCH (3) II	Mr. Glick
300 DIRECTED READING OR RESEARCH (Ar.)	Staff
*351 GRADUATE SEMINAR (2-2) Yr.	Mr. Lind, Mr. Hormann
*400 THESIS RESEARCH (Ar.) I and II	Staff

SPEECH

Requirements for admission to candidacy for the master's degree:

- (1) At least 24 credits in speech, including one course in each of the six major areas: speech correction, interpretation, rhetoric and public address, radio, theater, and speech education.
- (2) An oral qualifying examination to be taken as soon as possible after registering as a graduate student.

The graduate program: Courses to be selected from those listed below. The qualifying committee will determine which courses are required in the case of each candidate. A maximum of 6 semester hours may be earned in closely related courses in other fields.

Speech

220 PHONETICS (3) I	Mr. Wise
221 PRINCIPLES OF SPEECH CORRECTION (3-3) Yr.	Mr. Parry
222 SPEECH THERAPY (3) I	Mr. Parry
223 ADVANCED SPEECH THERAPY (3) II	Mr. Parry
228 SEMANTICS (3) II	
232 ADVANCED INTERPRETATION (3) II	Mr. Smith
241 ACTING (3-3) Yr.	Mr. Trapido
242 THEORY AND PRACTICE OF DIRECTION (3) II	Mr. Ernst

243	STAGECRAFT (3-3) Yr.	Mr. Trapido
244	HISTORY OF THE THEATER (3) II (n. o. 1949-50)	Mr. Ernst
245	AESTHETICS OF THE THEATER (3) I (n. o. 1949-50)	Mr. Ernst
246	MODERN THEORIES OF STAGE PRESENTATION (3) I	Mr. Ernst
250	DISCUSSION (3) I	Mr. Lefforge
251	DEBATING (3) II	Mr. Ewbank
262	SPEECH IMPROVEMENT (1) I and II	Mrs. Krantz, Mr. Parry
265	SPEECH FOR THE CLASSROOM TEACHER (2) I and II	Staff
270	INTRODUCTION TO RADIO (3) I	Mr. Highlander
271	RADIO PRODUCTION (3) II	Mr. Highlander
272	RADIO WORKSHOP (2-2) Yr.	Mr. Highlander
278	RADIO WRITING (3) I	Mr. Highlander
279	ADVANCED RADIO WRITING (3) II	Mr. Highlander
295	RHETORIC (3) I	Miss Borchers
298	SPECIAL PROBLEMS (Ar.) I and II	Staff
300	RESEARCH (Ar.) I and II	Staff
310	SEMINAR IN RESEARCH TECHNIQUES AND METHODS (3-3) Yr.	Staff
320	SEMINAR IN SPEECH CORRECTION (3-3) Yr.	Mr. Parry, Staff
330	SEMINAR IN INTERPRETATION (3) I and II (n. o. 1949-50)	Mr. Smith, Staff
340	SEMINAR IN DRAMATICS (3) II	Mr. Ernst, Mr. Trapido, Staff
350	SEMINAR IN RHETORIC AND PUBLIC ADDRESS (3) I and II (n. o. 1949-50)	
*400	THESIS RESEARCH (Ar.) I and II	Staff

ZOOLOGY AND ENTOMOLOGY

Requirements for admission to candidacy for advanced degrees:

- (1) Undergraduate preparation. Candidates planning to specialize in entomology should have completed a minimum of 18 undergraduate credits in zoology and entomology, including general zoology, general entomology, general physiology, insect morphology, and systematic entomology. Candidates in general or marine zoology should have completed a minimum of 18 undergraduate credits in zoology, including comparative anatomy of invertebrates and vertebrates, embryology, histology, genetics, and general physiology. Majors in all fields also should have completed two years of chemistry (including inorganic and organic), one year of physics, and courses in algebra and botany.
- (2) For the master's degree, the student must meet with the qualifying committee as soon as possible after registering as a graduate student.
- (3) For the doctor's degree, see requirements on pages 15 and 16.

The graduate program: Courses in the major field to be selected from those listed below. Courses marked with an asterisk are required of students specializing in entomology. Those marked with a dagger are required of students working toward a degree in zoology. For the master's degree, a maximum of 6 credits may be earned in related courses in botany, genetics, horticulture, and chemistry by candidates in entomology; and in botany, chemistry, genetics, mathematics, and physics by candidates in zoology. For the doctor's degree, additional requirements will be designated by the supervisory committee.

Zoology

- 240 INTRODUCTION TO ECOLOGY (2) I
Mr. Gosline, Mr. Hardy, Mr. Hiatt
- 245 ZOOGEOGRAPHY (2) I (Alternate years; n. o. 1949-50)
Mr. Gosline
- 253 PARASITOLOGY (3) I
Mr. Chu
- *254 INSECT MORPHOLOGY (3) I
Mr. Tuthill
- *255 SYSTEMATIC ENTOMOLOGY (3) II
Mr. Tuthill
- 256 MEDICAL AND VETERINARY ENTOMOLOGY (3) I
Mr. Hardy
- †260 HISTOLOGY (3) I
- †261 VERTEBRATE EMBRYOLOGY (3) II
Miss Heizer
- 262 MICROTÉCHNIQUE (3) II
- 266 HEMATOLOGY (3) II
- 273 ECONOMIC ENTOMOLOGY (3) II
Mr. Hardy
- 275 GENERAL ICHTHYOLOGY (3-3) Yr.
Mr. Gosline
- 276 BIOMETRY (3) I
Mr. Tester
- 277 BIOMETRICAL ANALYSIS (3) II
Mr. Tester
- †280 COMPARATIVE ANATOMY OF INVERTEBRATES (3) I
Mr. Banner
- 281 TAXONOMY OF MARINE INVERTEBRATES (3) II
(Alternate years; o. 1949-50)
Mr. Hiatt
- 282 ECOLOGY OF REEF AND SHORE FAUNA (3) II
(Alternate years; n. o. 1949-50)
Mr. Hiatt
- 284 COMPARATIVE INVERTEBRATE PHYSIOLOGY (3) II
Mr. Scheer
- 285 ORGANIC EVOLUTION (2) II
Mr. de Laubenfels
- 286 HISTORY OF ZOOLOGY (2) I
Mr. de Laubenfels
- 287 METHODS OF FISHERY INVESTIGATION (3) I
Mr. Tester
- 290 OCEANOGRAPHY (3) II (Alternate years;
o. 1949-50)
Mr. Banner
- †*291 GENERAL PHYSIOLOGY (3) I
Mr. Scheer
- † PRINCIPLES OF GENETICS AND ADVANCED GENETICS,
see Agriculture 254 and 262
- 300 DIRECTED RESEARCH (Ar.)
Staff
- †310 GENERAL ZOOLOGY SEMINAR (1) II
Staff
- *311 ENTOMOLOGY SEMINAR (1) I
Staff
- †312 SEMINAR IN MARINE ZOOLOGY (1) I
Staff

†313 SEMINAR IN FISHERIES BIOLOGY (1) I	Staff
†314 SEMINAR IN ADVANCED FISHERIES BIOLOGY (1) II	Staff
†*315 ZOOLOGICAL LITERATURE (1) I	Staff
†*316 PREPARATION OF SCIENTIFIC MANUSCRIPTS (1) II	Mr. Tuthill
320 DEVELOPMENT OF MARINE INVERTEBRATES (3) II (Alternate years; n. o. 1949-50)	Mr. Banner
350 ADVANCED SYSTEMATIC ENTOMOLOGY (3) II (Alternate years; o. 1949-50)	Mr. Tuthill
351 CYTOLOGY (3) I	Miss Heizer
352 INSECT ECOLOGY (3) I (Alternate years; o. 1949-50)	Mr. Bess
353 PRINCIPLES OF APPLIED ENTOMOLOGY (3) I (Alternate years; n. o. 1949-50)	Mr. Bess
355-356 INSECT-TRANSMITTED DISEASES OF PLANTS (3-1) Yr.	Mr. Carter
370 PRINCIPLES OF SYSTEMATIC ZOOLOGY (3) I (Alternate years; o. 1949-50)	Mr. Gosline
387 POPULATION DYNAMICS (3) II (Alternate years; o. 1949-50)	Mr. Tester
388 FISHERIES MANAGEMENT (3) II (Alternate years; n. o. 1949-50)	Mr. Tester
391 ADVANCED GENERAL PHYSIOLOGY (3) II (Alternate years; n. o. 1949-50)	Mr. Scheer
392 PHYSIOLOGICAL ECOLOGY (3) II (Alternate years; o. 1949-50)	Mr. Scheer
†*400 THESIS RESEARCH (Ar.) I and II	Staff