University of Hawaii
BULLETIN

Graduate Study Announcement
THE UNIVERSITY OF HAWAII BULLETIN

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These publications include the report of the president, the general catalogue issue, the summer session announcements, the graduate announcement, research studies and the like.

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ADMINISTRATIVE OFFICERS

DAVID L. CRAWFORD, LL.D...................... President of the University
ARTHUR R. KELLER, M.S...................... Vice-President of the University
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THOMAS A. JAGGAR, Ph.D...................... Director of the Kilauea Volcano Laboratory
HELEN B. MACNEIL, M.A...................... Registrar

THE GRADUATE COMMITTEE


Advisory Council of the Graduate School of Tropical Agriculture—D. L. CRAWFORD (chairman), P. S. BACHMAN, J. H. BEAUMONT, P. BUCK, J. L. COLLINS, H. L. LYON.

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LYMAN A. DEAN, Ph.D.......................... Soil Chemistry
WINSTON W. JONES, Ph.D.......................... Horticulture

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GORDON T. BOWLES, Ph.D.......................... Anthropology
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BERNARD L. HÖRMANN, M.A.......................... Sociology

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HAROLD ST. JOHN, Ph.D.......................... Taxonomy
HARRY F. CLEMENTS, Ph.D.......................... Plant Physiology
HAROLD E. CLARK, Ph.D.......................... Biochemistry
OSCAR N. ALLEN, Ph.D.......................... Bacteriology
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CHARLES J. ENGARD, Ph.D.......................... Plant Physiology
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EARL M. BILGER, Ph.D. .......................................................... Physical Chemistry
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GIICHI FUJIMOTO, M.S. ......................................................... Analytical Chemistry

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WILLIAM H. TAYLOR, Ph.D. ................................................... International Economics and Trade
RALPH C. HOEBER, J.D. ....................................................... Business Law

Education

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E. VERN SAYERS, Ph.D. ........................................................ Educational Philosophy
FRED E. ARMSTRONG, M.A. .................................................... Agricultural Education
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WILLIS B. COALE, Ph.D. ........................................................ Teaching of English
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MADORAH E. SMITH, Ph.D. .................................................... Educational Psychology
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English

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LAURA V. SCHWARTZ, Ph.D. ................................................... English Literature
T. BLAKE CLARK, Ph.D. ........................................................ English Literature
CARL G. STROVEN, Ph.D. ..................................................... American Literature
WILLARD WILSON, Ph.D. ...................................................... English Drama
FLORENCE HENDERSON, Ph.D. ................................................ Speech

Geography

JOHN W. COULTER, Ph.D. ..................................................... Economic Geography
STEPHEN B. JONES, Ph.D. ..................................................... Political Geography

History and International Relations

PAUL S. BACHMAN, Ph.D. ..................................................... International Relations
SHOU-YI CH'EN, Ph.D. ........................................................ Chinese History
RALPH S. KUYKENDALL, M.A. ................................................ Hawaiian History
CHARLES H. HUNTER, Ph.D. ................................................... American History
KLAUS MEHNERT, Ph.D. ....................................................... European History
SHUNZO SAKAMAKI, Ph.D. ..................................................... Japanese History
Nutrition

CAREY D. MILLER, M.S. ........................................... Nutrition
MARTHA POTGIETER, Ph.D. ...................................... Nutrition

Oriental Studies

SHAO CHANG LEE, M.A. ........................................ Chinese History
WING-TSIT CHAN, Ph.D. .......................................... Chinese Institutions
SHOU-YI CH’EN, Ph.D. ............................................. Chinese History
CHENK-WOON TAAM, Ph.D. ...................................... Bibliography
SHUNZO SAKAMAKI, Ph.D. ....................................... Japanese History
YUKUO UYEHARA, M.A. .......................................... Japanese Language

Philosophy

CHARLES A. MOORE, Ph.D. ....................................... Philosophy
WING-TSIT CHAN, Ph.D. .......................................... Oriental Philosophy
E. VERN SAYERS, Ph.D. .......................................... Educational Philosophy
J. LESLIE DUNSTAN, Ph.D. ...................................... Philosophy of Religion

Physics

WILLARD H. ELLER, Ph.D. ....................................... Electricity and Magnetism
STANLEY S. BALLARD, Ph.D. ...................................... Spectroscopy
IWAO MIYAKE, M.S. ................................................. Acoustics and Communications

Zoology

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WALTER CARTER, Ph.D. .......................................... Entomology
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F. G. HOLDAWAY, Ph.D. ........................................ Entomology
JOSEPH E. ALICATA, Ph.D. ...................................... Parasitology
MILTON A. MILLER, Ph.D. ....................................... Zoology

Graduate School of Tropical Agriculture

JOSEPH E. ALICATA, Ph.D. ........................................ Parasitology
OSCAR N. ALLEN, Ph.D. ......................................... Bacteriology
STANLEY S. BALLARD, Ph.D. .................................... Physics
JOHN H. BEAUMONT, Ph.D. ..................................... Horticulture
LEONORA N. BILGER, Ph.D. .................................... Organic Chemistry
WALTER CARTER, Ph.D. .......................................... Entomology
HAROLD E. CLARK, Ph.D. ....................................... Biochemistry
HARRY F. CLEMENTS, Ph.D. ..................................... Plant Physiology
JULIUS L. COLLINS, Ph.D. ...................................... Genetics
FRANCIS E. HANCE, Ph.D. ....................................... Soil Chemistry
F. G. HOLDAWAY, Ph.D. .......................................... Entomology
MAURICE B. LINFORD, Ph.D. .................................. Plant Pathology
HAROLD L. LYON, Ph.D. .......................................... Forest Botany
ALBERT J. MANGELSDORF, D.Sc............................................ Genetics
HAROLD S. PALMER, Ph.D.................................................. Geology
G. K. PARRIS, Ph.D.......................................................... Plant Pathology
JOHN H. PAYNE, Ph.D...................................................... Organic Chemistry
CYRIL E. PEMBERTON, A.B............................................... Entomology
CARL T. SCHMIDT, Ph.D...................................................... Entomology
CHRISTOS P. SIDERIS, Ph.D................................................ Plant Physiology
HAROLD ST. JOHN, Ph.D..................................................... Taxonomy
OTTO H. SWEEZEY, M.S...................................................... Entomology
HAROLD A. WADSWORTH, B.S............................................. Soil Physics

Kilauea Volcano Laboratory

THOMAS A. JAGGAR, Ph.D.................................................... Director
HAROLD S. PALMER, Ph.D.................................................. Geology
WILLARD H. ELLER, Ph.D.................................................... Geophysics
STANLEY S. BALLARD, Ph.D................................................ Geophysics
JOHN H. PAYNE, Ph.D...................................................... Geochemistry
GRADUATE STUDY

IN THE

UNIVERSITY OF HAWAII

THE University of Hawaii offers opportunities for graduate study and research in agriculture, anthropology, botany, chemistry, economics and business, education, English, geography, history, international relations, nutrition, Oriental studies, philosophy, physical geology and geophysics, physics, sociology, speech, zoology, and the sciences basic to tropical agriculture.

In certain of these fields the opportunities are unusual. The mingling in the Territory of peoples of the Occident, the Orient, and the South Seas offers unusual opportunities for the first-hand study of racial and cultural contacts. The cooperative organization of the sugar and pineapple industries permits research in the various phases of large scale production as applied to agriculture. For qualified graduate students and research workers in physical geology and geophysics, the facilities of the Kilauea Volcano Laboratory are available, through cooperative agreement with the National Park Service. No superior natural laboratory for geology and geophysics exists. The location of the islands offers students of marine biology a natural laboratory for the study of marine life in the tropics. In the field of education the racial composition of the school population and experiments in progressive education being conducted in the schools of the Territory afford numerous opportunities for interesting and valuable studies.

For graduate work in the physical and biological sciences relating to tropical agriculture, the University's instructional personnel and laboratory equipment are supplemented by the staffs and facilities of research organizations cooperating with the University in the Graduate School of Tropical Agriculture. These cooperating institutions are: the experiment station of the Hawaiian Sugar Planters' Association, the experiment station of the Pineapple Producers Cooperative Association, the Hawaii Agricultural Experiment Station, under the direction of the University, and the Bernice P. Bishop Museum with its extensive collections of Hawaiian and South Pacific plants and insects.

The University emphasizes the study of the cultures and the civilizations of the Far East. For the development of this field the Oriental Institute was established in 1935, and the offering of graduate work in Far Eastern studies was increased. The University now has special facilities for the study of Oriental languages and for the translation of source material.

For the teacher, administrator, missionary, journalist, or research worker whose interests lie in Pacific and Asiatic countries, graduate study in the University affords an excellent opportunity to acquire the basic knowledge necessary to his profession.
LIBRARIES

The University Library contains approximately 125,000 volumes and 322,000 pamphlets. Special effort has been made to collect 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. The Library of the Institute of Pacific Relations was recently donated to the University, and the Hawaii group of the Institute now assists the University in maintaining a reference reading room devoted exclusively to the Pacific and the Orient.

Other libraries available to the graduate student are: the Library of Hawaii, a general public library; the library of the Bishop Museum, valuable for Polynesian history and culture; the Carter Library of Hawaiian history; the Territorial Archives; and the libraries of the Hawaiian Sugar Planters' Association and the Pineapple Producers Cooperative Association, which are of special importance to students of tropical agriculture. In addition, the Hawaiian Volcano Observatory at Kilauea Crater has a good collection of publications relating to volcanology and seismology. Efforts have been made by these libraries to avoid needless duplication in their respective collections.

GRADUATE STUDY
IN THE SUMMER SESSIONS

A six-weeks 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 all their requirements by attending summer sessions.

GRADUATE STUDY
AT KILAUEA VOLCANO LABORATORY

The University offers opportunity for a small number of qualified graduate students and research workers to pursue at Kilauea Crater research and advanced study in geophysics and the related fields of physics and botany.

ADMISSION

Admission to the Graduate Division is granted to graduates of accredited colleges and universities. Application for admission should be made to the Director 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 does not imply admission to candidacy for an advanced degree. Such admission is granted only after a committee representing the department in which the candidate pro-
poses 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.

Students desiring to take the qualifying examination in the first semester, second semester, or summer session must make application to the Director of the Graduate Division before October 1, February 1, or July 1, respectively. No assurance can be given that graduate credit earned prior to admission to candidacy will apply toward an advanced degree. Students desiring to work for advanced degrees should therefore take the qualifying examination as soon as possible after first registering for graduate work leading to advanced degrees.

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.

Graduate work completed at other institutions may be accepted as fulfilling part of the requirements for an advanced degree. For the Master's degree, the maximum amount accepted is eight semester hours.

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

No extension course may be counted toward an advanced degree.

REGISTRATION AND GRADES

Graduate students may not register for more than sixteen credit hours in any semester, or more than six credit hours in a six-weeks summer session. The number of credit hours which may be carried by student assistants is limited by the nature of their duties.

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 degree failing to complete successfully 75 per cent of the course credits carried are automatically dropped from candidacy.

REQUIREMENTS FOR ADVANCED DEGREES

The Master's Degree

The University awards three Master's degrees, namely, the Master of Arts, the Master of Science, and the Master of Education.
The minimum period of residence is one academic year or four six-weeks' summer sessions. Candidates failing to obtain the degree within five years after admission to candidacy must again qualify for candidacy.

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). A maximum of six semester hours may be earned in the thesis research course, except in the natural and physical sciences where a maximum of twelve is allowed. Of the credits toward the Master's degree, at least eight semester hours must be earned in courses numbered 300 to 399. All of the course work taken by the candidate should be in his major field of interest or in related courses in one or two closely allied fields. A reading knowledge of a foreign language is required in certain fields and, at the discretion of the qualifying committee, may be required of candidates in other fields.

A thesis is required of all candidates for the Master's degree. The thesis should deal with a topic within the field of the major. It must be written in acceptable English and show evidence of ability to pursue research intelligently and to arrive at logical conclusions. The topic must be approved by the committee which admits the student to candidacy. Only after this approval has been granted and the candidate has registered for the thesis research course is a committee appointed to supervise the preparation of the thesis. A candidate expecting to receive the Master's degree in June must submit copies of the completed thesis to the members of his committee for final checking by May 15. Instructions on the form of the thesis may be obtained from the Director of the Graduate Division.

A candidate expecting to receive the Master's degree in any semester or summer session must notify the Director not later than the last regular registration day of that semester or summer session.

Arrangements for the final examination should be made at least six weeks 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 especially 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 copy of the thesis and a carbon copy, both signed by the members of the examining committee, must be deposited in the Library to become the permanent property of the University. A fee for the binding of both copies must be paid to the University business office.

The Civil Engineer Degree

The degree of Civil Engineer (C. E.) is granted to Bachelors of Science in Civil Engineering from this institution who, after graduation, complete two years of practical experience in the profession, present a satisfactory paper upon some topic of interest connected with their
work, complete certain assigned problems, and pass required examinations. Regulations governing fees, registration, and completion dates are essentially the same as those stated for Master's degree candidates.

The Sugar Technologist Degree

The degree of Sugar Technologist (S. T.) is open to Bachelors of Science in Sugar Technology from this institution and to other Bachelors of Science whose undergraduate work has included the proper basic studies. To become a candidate for this degree a student must have two years of practical experience after graduation and must pass a qualifying examination based on assigned reading in the general field of sugar technology. Later a thesis, or final report, covering some topic distinctly important and closely allied to the practical work of the candidate, must be presented for the approval of the candidate's committee. Regulations governing candidates for this degree are essentially the same as those governing candidates for Master's degrees.

The Doctor of Philosophy Degree

Candidates for the Doctor of Philosophy degree are accepted only in those sciences basic to tropical agriculture.

The minimum period required for securing this degree is three years of graduate study, at least one year of which must be in residence at this institution and one year in residence at some other university. A qualifying general examination, which includes a test of reading knowledge of both French and German, must be passed at least one academic year (nine months) prior to the awarding of the degree; a student will not be considered a candidate for the Doctor's degree until he has passed this examination. The candidate must write a Doctor's dissertation and, in the final examination, present and defend it.

Requirements for the Professional Certificate

The Territorial Department of Public Instruction has fixed the following requirements for the Professional Certificate which it grants in recognition of graduate work done by teachers in service: thirty hours of graduate credit, of which at least fifteen hours must be earned in courses primarily for graduates and including Philosophy of Education, History of Education, Advanced Educational Psychology, and Educational Administration. Of the remaining credits, eight may be obtained in extension courses, provided a grade of A or B is received.

Tuition and Fees

Tuition and registration fees for graduate students are identical with those for undergraduates. Students registered for ten or more credit hours in any semester pay $50 for tuition and $10 for registra-
tion per semester. Students registered for fewer than ten credit hours in any semester and all students in summer sessions pay $5 per credit hour. Laboratory fees, which are charged in many courses in the biological and physical sciences, vary with the individual course. Other fees include a $5 diploma fee and a $4 fee for the binding of the thesis or dissertation.

LIVING ACCOMMODATIONS AND EXPENSES

Comfortable lodgings for men students in the first and second semesters and for both men and women in the summer sessions are provided at Atherton House, a dormitory adjoining the campus. The rates for rooms in the autumn and spring sessions (men only) range from $40 to $100 per semester. The rates for the six-weeks summer session (during which both men and women live at Atherton House) are $50 for single rooms and $40 per person for double rooms.

Rooms in the Women's Dormitory are available in the summer to women graduate students at $25 for the six-weeks session. Residents supply their own linen.

The Student Personnel Office assists students in finding moderately priced living accommodations in private homes near the University.

Meals may be obtained at the University Union building, cafeteria style, at reasonable prices.

GRADUATE FELLOWSHIPS AND SCHOLARSHIPS

The University offers a number of fellowships to graduates of accredited institutions of higher learning who desire to pursue graduate study in the fields in which the University offers advanced degrees. Graduate fellows receive stipends ranging from $250 to $600, pay no registration, tuition, or laboratory fees, carry a limited program of graduate study toward the Master's degree, and act as readers and research or laboratory assistants.
FIELDS OF GRADUATE WORK

THE requirements for admission to candidacy and the courses accepted for graduate credit toward advanced degrees in various fields are listed below. For information regarding the courses to be offered in any particular semester, a schedule of courses must be obtained from the Registrar.

The courses listed here numbered 200 to 299 are open to both graduates and undergraduates. However, graduate students in such courses must make a grade of “B” or better to receive credit toward an advanced degree, and are usually required to do additional work. 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 Director of the Graduate Division is obtained.

AGRICULTURE

Candidates for the Master’s degree in agriculture ordinarily specialize in one of the following fields: genetics, horticulture, or soils.

Requirements for admission to candidacy for the Master’s degree:

(1) The candidate’s undergraduate preparation should be such as to have given him a thorough grounding in the principles basic to his field of specialization and such knowledge of related fields as required for the research in connection with the preparation of his thesis. Before registering for graduate work he must submit for examination a transcript of undergraduate credit.

(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master’s degree.

THE GRADUATE PROGRAM: Courses to be selected from those listed below and related courses in allied fields.

Agriculture

262 ADVANCED GENETICS
   One semester, 3 credits.  Mr. Collins

267 AGRICULTURAL CHEMISTRY
   One semester, 3 credits.  Mr. Dean

268 AGRICULTURAL CHEMISTRY LABORATORY
   One semester, 2 credits.  Mr. Dean

291 IRRIGATION PRACTICE
   One semester, 4 credits.  Mr. Wadsworth
300 RESEARCH WORK
Year course, credit by arrangement.

301 SEMINAR IN GENETICS
Year course, 2 credits each semester.

302 RESEARCH IN GENETICS
Year course, credit by arrangement.

305 RESEARCH IN SOIL CHEMISTRY OR SOIL PHYSICS
Year course, credit by arrangement. Mr. Wadsworth, Mr. Dean

306 RESEARCH IN TROPICAL HORTICULTURE
One semester, credit by arrangement. Mr. Beaumont, Mr. Jones

307 SOIL SCIENCE SEMINAR
Year course, 1 credit each semester. Mr. Wadsworth, Mr. Dean

400 THESIS RESEARCH
Year course, credit by arrangement. Staff

ANTHROPOLOGY

Requirements for admission to candidacy for the Master's degree:
(1) A minimum of 18 undergraduate credits in anthropology.
(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses in the major field to be selected from those listed below. A maximum of 6 credits may be earned in closely related courses in an allied field, if the consent of the qualifying committee is obtained.

Anthropology

250 THE POLYNESIANS
One semester, 3 credits. (Offered alternate years.) Mr. Keesing

252 PEOPLES OF THE PACIFIC
One semester, 3 credits. (Offered alternate years.) Mr. Keesing

254 PEOPLES OF ASIA
One semester, 3 credits. Mr. Bowles

261 RACE AND RACE MIXTURE
One semester, 3 credits. Mr. Bowles

263 PREHISTORY OF EUROPE AND AFRICA
One semester, 3 credits. (Offered alternate years.) Mr. Bowles

265 PRIMITIVE SOCIETY
One semester, 3 credits. Mr. Embree

267 PRIMITIVE RELIGION
One semester, 2 credits. Mr. Embree
Primitve Art and Craft
One semester, 2 credits.
Mr. Embree

Folklore
One semester, 2 credits. (Offered alternate years.)
Mr. Embree

Folk Society in Japan and China
One semester, 3 credits.
Mr. Embree

Modern America
One semester, 3 credits.
Mr. Embree

India
One semester, 3 credits. (Offered alternate years.)
Mr. Bowles

Prehistory of Asia
One semester, 3 credits. (Offered alternate years.)
Mr. Bowles

Southeast Asia
Mr. Bowles, Mr. Embree
One semester, 2 credits. (Offered alternate years.)

Physical Anthropology
Year course, 3 credits each semester.
Mr. Bowles

Advanced Reading and Research
Year course, 2 credits each semester.
Staff

Seminar in Anthropology
Year course, 2 credits each semester.
Staff

Thesis Research
Year course, credit by arrangement.
Staff

Botany
Candidates for the Master's degree in botany major in general botany, bacteriology, or plant physiology.

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

1. Undergraduate preparation
   General Botany
   A minimum of 36 undergraduate credits in botany, including courses in general botany, systematic botany of flowering plants, general bacteriology, and physical factors in plant nutrition and growth, or the equivalent.

   Bacteriology
   An undergraduate major in biology (botany and zoology), or a major in either botany or general zoology in addition to Chemistry 101 or 102, one semester of quantitative analysis, one year of organic chemistry and Physics 102. Mathematics through calculus is highly recommended although not required. At least 8 credits of undergraduate preparation should be obtained in bacteriology courses.

   Plant Physiology
   A major in botany (or chemistry and a minor in botany), one year of organic chemistry, one year of physics and at
least 15 credits from courses in tropical pomology, truck crop production, soils, sugar cane production, principles of genetics, pineapple production, and general irrigation practice.

(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses to be selected from those listed below and related courses in allied fields.

Botany

253 **Plant Ecology**  
*One semester, 4 credits. (Offered alternate years.)*  
Mr. St. John

254 **Advanced Taxonomy**  
*One semester, 2 or more credits.*

258 **Agricultural Microbiology**  
*One semester, 4 credits. (Offered alternate years.)*

260 **Medical Bacteriology**  
*One semester, 4 credits. (Offered alternate years.)*

263 **Plant Pathology**  
*One semester, 3 credits. (Offered alternate years.)*

268 **Microtechnique**  
See Zoology 362

269 **Plant Anatomy**  
*One semester, 3 credits. (Offered alternate years.)*

273 **Plant Biophysics**  
*One semester, 3 credits. (Offered alternate years.)*

274 **Laboratory Technique in Plant Biophysics**  
*One semester, 2 credits. (Offered alternate years.)*

275 **Plant Biochemistry**  
*One semester, 3 credits. (Offered alternate years.)*

276 **Laboratory Technique in Plant Biochemistry**  
*One semester, 2 credits. (Offered alternate years.)*

300 **Botanical Research**  
*Year course, credit by arrangement.*

303 **Plant Pathology Seminar**  
*One semester, 1 credit. (Offered alternate years.)*

310 **Botanical Seminar**  
*Year course, 1 credit each semester.*

351 **Plant Physiology Seminar**  
*One semester, 1 credit.*

352 **Microbial Decomposition of Plant Material**  
*One semester, 1 credit. (Offered alternate years.)*

Mr. Allen
353 THE NITROGEN CYCLE SEMINAR  
Mr. Allen  
One semester, 1 credit. (Offered alternate years.)

360 IMMUNOLOGY  
Mr. Allen, Mr. Sia  
One semester, 3 credits. (Offered alternate years.)

365 TAXONOMY OF THE DICOTYLEDONS  
Mr. St. John  
One semester, 1 credit. (Offered alternate years.)

367 TAXONOMY OF THE HIGHER DICOTYLEDONS  
Mr. St. John  
One semester, 1 credit. (Offered alternate years.)

370 PHYSIOLOGY OF BACTERIA  
Mr. Allen  
One semester, 3 credits. (Offered alternate years.)

372 DETERMINATIVE BACTERIOLOGY  
Mr. Allen  
One semester, 3 credits. (Offered alternate years.)

400 THESIS RESEARCH  
Staff  
Year course, credit by arrangement.

CHEMISTRY

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

1. Courses in general chemistry or advanced inorganic chemistry, qualitative analysis, elementary and intermediate organic chemistry, physical chemistry, quantitative analysis, and colloidal chemistry.

2. An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses in the major field selected from those listed below. A maximum of 6 credits may be earned in courses in physics, mathematics, botany, zoology, or nutrition closely related to the candidate's thesis topic.

Chemistry

211 PHYSICAL CHEMISTRY  
Mr. Bilger  
Year course, 3 credits each semester.

212 PHYSICAL CHEMISTRY LABORATORY  
Mr. Bilger  
Year course, 1 credit each semester.

260 BIOLOGICAL CHEMISTRY  
Mr. Dillingham  
One semester, 3 credits.

262 BIOLOGICAL CHEMISTRY LABORATORY  
Mr. Dillingham  
One semester, 1 credit.

263 FOOD ANALYSIS  
Mr. Dillingham  
One semester, 3 credits.

310 SEMINAR IN CHEMISTRY  
Mrs. Bilger  
Year course, 1 credit each semester.
313 Selected Topics in Advanced Physical Chemistry
One semester, 2 credits. Mr. Bilger

315 Chemical Literature
Year course, 1 to 2 credits each semester. Staff

316 Advanced Quantitative Analysis
Year course, 3 credits each semester. Mr. Dillingham, Mr. Fujimoto

317 Advanced Organic Chemistry
One semester, 3 credits. Mr. Payne

318 Chemistry Research
Year course, credit by arrangement. Staff

319 Quantitative Microanalysis
One semester, 2 credits. Mr. Fujimoto

320 Theoretical Organic Chemistry
Year course, 2 credits each semester. Mrs. Bilger

350 Organic Analysis
One semester, 3 credits. Mr. Payne

400 Thesis Research
Year course, credit by arrangement. Staff

ECONOMICS AND BUSINESS

Requirements for admission to candidacy for the Master's degree:
(1) A minimum of 18 undergraduate credits in economics and business, including the basic course.
(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses in the major field selected from those listed below. A maximum of 6 credits may be earned in closely related courses in an allied field.

Economics

223 History of Economic Institutions
Year course, 3 credits each semester. Mr. Cameron

250-251 Economic History and Problems of Japan
Year course, 3 credits each semester. (Offered alternate years.) Mr. Taylor

252-253 Economic History and Problems of China
Year course, 3 credits each semester. (Offered alternate years.) Mr. Taylor

254 Economic Problems of Europe
One semester, 3 credits. (Offered alternate years.) Mr. Taylor
256 Money, Credit and Prices
One semester, 3 credits.

257 Banking
One semester, 3 credits.

261 Public Finance
One semester, 3 credits.

265 International Finance
One semester, 3 credits. (Offered alternate years.)

270 Public Utilities
One semester, 3 credits. (Offered alternate years.)

273 Ocean Transportation
One semester, 3 credits. (Offered alternate years.)

276 Trusts and Industrial Combinations
One semester, 3 credits. (Offered alternate years.)

281 Labor Problems
One semester, 3 credits.

285 Theory and Control of Foreign Trade
One semester, 3 credits. (Offered alternate years.)

288 Risk, Risk Bearing and Speculation
One semester, 3 credits. (Offered alternate years.)

291 Economics of Agriculture
One semester, 3 credits. (Offered alternate years.)

296 Recent Economic Thought
One semester, 3 credits.

305-306 Seminar in General Economics
Year course, 3 credits each semester.

310-311 Seminar in the Economic History and Problems of the Far East
Year course, 3 credits each semester.

400 Thesis Research
Year course, credit by arrangement.

Business

250-251 Intermediate Accounting
Year course, 3 credits each semester

255 Analysis of Financial Statements
One semester, 2 credits. (Offered alternate years.)

256 Income Tax Problems and Procedure
One semester, 2 credits. (Offered alternate years.)

264 Principles of Business
One semester, 3 credits. (Offered alternate years.)

265 Corporation Finance
One semester, 3 credits. (Offered alternate years.)
266 **INVESTMENTS AND INVESTMENT BANKING**  
*One semester, 3 credits. (Offered alternate years.)*  

267 **BUSINESS CYCLES AND BUSINESS FORECASTING**  
*One semester, 3 credits.*  

273 **ECONOMICS OF ADVERTISING**  
*One semester, 3 credits. (Offered alternate years.)*  

275 **PRACTICE OF FOREIGN TRADE**  
*Mr. Taylor*  
*One semester, 3 credits. (Offered alternate years.)*  

276 **ECONOMICS OF RETAIL MERCHANDISING**  
*One semester, 3 credits. (Offered alternate years.)*  

280 **SALESMANSHIP AND SALES MANAGEMENT**  
*One semester, 3 credits. (Offered alternate years.)*  

282 **STATISTICS**  
*One semester, 3 credits.*  

285 **LAW OF CONTRACTS**  
*Mr. Hoeber*  
*Year course, 2 credits each semester. (Offered alternate years.)*  

286 **LAW OF SALES**  
*Mr. Hoeber*  
*One semester, 2 credits. (Offered alternate years.)*  

287 **LAW OF BILLS, NOTES AND INTEREST**  
*Mr. Hoeber*  
*One semester, 2 credits. (Offered alternate years.)*  

288 **LAW OF PARTNERSHIPS AND CORPORATIONS**  
*Mr. Hoeber*  
*One semester, 3 credits. (Offered alternate years.)*  

291 **LAW OF PERSONAL PROPERTY**  
*Mr. Hoeber*  
*One semester, 2 credits. (Offered alternate years.)*  

292 **LAW OF REAL PROPERTY**  
*Mr. Hoeber*  
*One semester, 2 credits. (Offered alternate years.)*  

305-306 **SEMINAR IN GENERAL BUSINESS**  
*Staff*  
*Year course, 3 credits each semester.*  

**EDUCATION**

Requirements for admission to candidacy for the Master of Education degree:

(1) Ed. B. degree, or equivalent, from an accredited institution.

(2) Undergraduate credit in the following fields: history of education in the United States, comparative education, elementary or secondary education, educational measurements, mental hygiene, and educational psychology.

(3) Probationary teaching credit or three years of successful teaching experience.

(4) Graduate credit in the following fields: philosophy of education, general history of education, advanced educational psychology, and educational administration.
(5) A written qualifying examination in the four fields named in (4).

THE GRADUATE PROGRAM: Courses in the education major selected from those listed below. A maximum of 10 credits may be earned in one of the following fields: agriculture, anthropology and sociology, art, biological science, natural science, mathematics, economics and business, history and political science, English, a foreign language, geography and geology, home economics, music, philosophy, physical education.

Education

237 DIRECTED LEARNING
One semester, 2 credits. Mr. Bryan

250-251 SECONDARY EDUCATION
Year course, 3 credits each semester. Mr. Bryan

259 CHILD PSYCHOLOGY
One semester, 2 credits. Miss Smith

260 STATISTICAL METHOD
One semester, 2 credits. Miss Smith

261 EDUCATIONAL MEASUREMENTS
One semester, 2 credits. Miss Smith

267 PSYCHOLOGY AND TREATMENT OF EXCEPTIONAL CHILDREN
One semester, 2 credits. Miss Smith

268 MENTAL HYGIENE
One semester, 2 credits. Miss Smith

285-286 ELEMENTARY EDUCATION
Year course, 3 credits each semester. Mr. Sayers, Mr. Bryan

291 ADULT EDUCATION—AIMS AND PRINCIPLES
One semester, 2 credits. Mr. Scott

293 COMPARATIVE EDUCATION
One semester, 2 credits. Mr. Gordon

294 EDUCATIONAL SOCIOLOGY
One semester, 2 credits. Mr. Gordon

295 HISTORY OF EDUCATION IN THE UNITED STATES
One semester, 2 credits. Mr. Tanner

296 HISTORY OF EDUCATION IN HAWAII
One semester, 2 credits. Mr. Gordon

297 HAWAIIAN EDUCATIONAL HISTORY IN MODERN TIMES
One semester, 2 credits. Mr. Gordon

300 READING AND RESEARCH
One semester, 1 to 3 credits. Staff
340 Philosophy of Education
One semester, 4 credits.

Mr. Sayers

345 Seminar in Philosophy of Education
Year course, 2 credits each semester.

Mr. Sayers

350 History of Education
One semester, 4 credits.

Mr. Tanner

351 Advanced Educational Psychology
One semester, 2 credits.

Mr. White

363 Seminar in Educational Administration
One semester, 2 credits.

Mr. Wist

365 Supervision of Instruction
One semester, 2 credits.

Mr. Wist

371 Experimental Child Study
One semester, 2 credits.

Miss Smith

376 Seminar in Vocational Education
One semester, 2 credits.

Mr. Armstrong

380 Research and Thesis Writing
One semester, 2 credits.

Mr. Tanner

390 Public School Administration
One semester, 2 credits.

Mr. Wist

400 Thesis Research
Year course, credit by arrangement.

Staff

ENGLISH AND SPEECH

Requirements for admission to candidacy for the Master's degree in literature:

(1) A minimum of 18 undergraduate credits in English, including a general course in English literature.

(2) A comprehensive written examination in literature.

(3) The oral and written presentation of the purpose, scope, and proposed treatment of the thesis subject.

THE GRADUATE PROGRAM: Courses in literature selected from those listed below. Courses numbered 297, 298, 299, 300, and 302 are not ordinarily accepted for the degree in literature.

Requirements for admission to candidacy for the Master's degree in speech:

(1) A minimum of 32 credits in English, speech, and psychology, including public speaking, voice and diction, phonetics, and a general course in English literature.

(2) A comprehensive written examination in English speech, literature, and psychology.
(3) The oral and written presentation of the purpose, scope, and proposed treatment of the thesis subject.

THE GRADUATE PROGRAM: Courses in speech and allied subjects, including English 298, 299, 300, 302, 310, and Psychology 361.

**English**

250 **European Masters**
Mr. Sinclair
*Year course, 3 credits each semester. (Offered alternate years.)*

252 **World Literature**
Mr. Sinclair
*Year course, 3 credits each semester. (Offered alternate years.)*

254 **Modern Continental Drama**
Mr. Wilson
*Year course, 3 credits each semester. (Offered alternate years.)*

260 **American Literature**
Mr. Stroven
*Year course, 3 credits each semester.*

270 **The English Novel From Its Beginnings to the Present**
Mr. Neil
*Year course, 3 credits each semester.*

272 **English Drama From Its Beginnings to the Present**
Mr. Wilson
*Year course, 3 credits each semester.*

274 **The Age of Chaucer**
Miss Schwartz
*One semester, 3 credits. (Offered alternate years.)*

275 **The Age of Elizabeth**
Miss Schwartz
*One semester, 3 credits. (Offered alternate years.)*

276 **Shakespeare**
Miss Schwartz
*Year course, 3 credits each semester. (Offered alternate years.)*

280 **The Age of Milton**
Miss Schwartz
*One semester, 3 credits. (Offered alternate years.)*

282 **The Age of Pope and Johnson**
Mr. Clark
*Year course, 3 credits each semester.*

284 **The Age of Wordsworth**
Mr. Neil
*Year course, 3 credits each semester.*

286 **The Victorian Age**
Mr. Neil
*Year course, 3 credits each semester. (Offered alternate years.)*

288 **The Twentieth Century**
Miss Schwartz
*Year course, 3 credits each semester. (Offered alternate years.)*

289 **Literary Criticism**
Mr. Beck
*One semester, 3 credits.*

296 **Development of Modern English**
*One semester, 2 credits. (Offered alternate years.)*

297 **The Sounds of English**
Miss Henderson
*Year course, 2 credits each semester.*
298 Correction of Speech Defects, Elementary Course  
Miss Henderson  
One semester, 2 credits.

299A Technique of Speech Improvement in the Elementary School  
Miss Henderson  
One semester, 2 credits. (Offered alternate years.)

299B Techniques of Speech Improvement in the Secondary School  
Miss Henderson  
One semester, 2 credits. (Offered alternate years.)

300 Correction of Speech Defects, Advanced Course  
Miss Henderson  
One semester, 2 credits. (Offered alternate years.)

302 Speech Clinic  
Miss Henderson  
Year course, maximum of 6 credits.

350 Seminar in English Literature  
Staff  
Year course, 2 credits each semester.

355 Individual Studies  
Staff  
Year course, 2 credits each semester.

360 Seminar in American Literature  
Mr. Stroven  
Year course, 2 credits each semester.

400 Thesis Research  
Staff  
Year course, credit by arrangement.

GEOGRAPHY

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

(1) A minimum of 18 undergraduate credits in geography, including the basic course.

(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses in the major field selected from those listed below. A maximum of 6 credits may be earned in closely related courses in one of the following fields: geology, economics, history, political science and sociology.

Geography

200 Field Geography  
Mr. Coulter, Mr. Jones  
Year course, credit by arrangement.

252 Geography of North America  
Mr. Coulter  
One semester, 3 credits.

255 Geography of Asia  
Mr. Coulter  
One semester, 3 credits.
Mr. Coulter Mr. Jones

Mr. Jones

Mr. Coulter

Mr. Coulter

Mr. Jones

Mr. Coulter, Mr. Jones

Mr. Jones

Mr. Coulter, Mr. Jones

HISTORY AND INTERNATIONAL RELATIONS

Requirements for admission to candidacy for the Master's degree in history:

(1) A minimum of 18 undergraduate credits in history, of which at least 10 must relate to the field of the thesis.

(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses in the major field selected from those listed below. Candidates for the Master's degree in history must be registered in or must have completed History 310 before enrolling for thesis. A maximum of 6 credits may be earned toward the degree in closely related advanced courses in political science, economics, or history of education.

Requirements for admission to candidacy for the Master's degree in international relations.

(1) A minimum of 18 undergraduate credits in courses in political science and history relating to international affairs, including a general course in international relations.

THE GRADUATE PROGRAM: Courses relating to Far Eastern international relations selected from those listed under Oriental Studies.

Mr. Mehnert

Mr. Mehnert

204 DIPLOMATIC AND COLONIAL HISTORY OF MODERN EUROPE

Year course, 2 credits each semester. (Offered alternate years.)

205 CULTURAL HISTORY OF EUROPE

Year course, 2 credits each semester. (Offered alternate years.)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>207</td>
<td>Nationalism in the Modern World</td>
<td>Mr. Sakamaki</td>
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<td>209-210</td>
<td>Political and Social History of England</td>
<td>Mr. Hunter</td>
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<tr>
<td>211</td>
<td>Constitutional History of England</td>
<td>Mr. Hunter</td>
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<tr>
<td>216</td>
<td>History of Russian Culture and Thought in the 19th and 20th Centuries</td>
<td>Mr. Mehnert</td>
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<td>218</td>
<td>Europe in the Pacific</td>
<td>Mr. Mehnert</td>
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<td>219</td>
<td>Europe in Asia</td>
<td>Mr. Mehnert</td>
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<td>225</td>
<td>History of China</td>
<td>Mr. Lee</td>
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<tr>
<td>226</td>
<td>History of Japan</td>
<td>Mr. Sakamaki</td>
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<tr>
<td>229</td>
<td>History of the Cultural Relations Between China and the Occident</td>
<td>Mr. S. Y. Ch'ên</td>
</tr>
<tr>
<td>235</td>
<td>History of Ancient China</td>
<td>Mr. S. Y. Ch'ên</td>
</tr>
<tr>
<td>235-237</td>
<td>History of Modern China</td>
<td>Mr. S. Y. Ch'ên</td>
</tr>
<tr>
<td>241-242</td>
<td>History of the United States</td>
<td>Mr. Hunter</td>
</tr>
<tr>
<td>243</td>
<td>The United States, 1890-1936</td>
<td>Mr. Hunter</td>
</tr>
<tr>
<td>244-245</td>
<td>Diplomatic History of the United States</td>
<td>Mr. Hunter</td>
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<tr>
<td>249</td>
<td>Representative Americans</td>
<td>Mr. Hunter</td>
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<tr>
<td>250</td>
<td>History of Early Civilization in the Far East</td>
<td>Mr. Sakamaki</td>
</tr>
<tr>
<td>251</td>
<td>History of Thought in Japan</td>
<td>Mr. Sakamaki</td>
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<tr>
<td>252</td>
<td>Constitutional History of the United States</td>
<td>Mr. Hunter</td>
</tr>
<tr>
<td>253-254</td>
<td>History of Hispanic America</td>
<td>Mr. Hunter</td>
</tr>
<tr>
<td>266</td>
<td>Diplomatic History of Japan</td>
<td>Mr. Sakamaki</td>
</tr>
</tbody>
</table>
276 History of the Hawaiian Islands  
Mr. Kuykendall  
*Year course, 2 credits each semester.*

277 The Pacific Region in Modern Times  
Mr. Kuykendall  
*One semester, 2 credits.* (Offered alternate years.)

285 Russia in Asia  
Mr. Mehnert  
*One semester, 3 credits.* (Offered alternate years.)

286 Russia in the Pacific  
Mr. Mehnert  
*One semester, 3 credits.* (Offered alternate years.)

295 Social History of China  
Mr. S. Y. Ch'en  
*Year course, 2 credits each semester.* (Offered alternate years.)

310 Seminar in Historical Method  
Mr. Hunter  
*One semester, 2 credits.*

311 Seminar in American Diplomatic History  
Mr. Hunter  
*One semester, 2 credits.* (Offered alternate years.)

313 Seminar in Historiography  
Mr. Hunter  
*One semester, 2 credits.* (Offered alternate years.)

315 Seminar in Japanese History  
Mr. Sakamaki  
*Year course, 2 credits each semester.*

316 Seminar in Chinese Cultural History  
Mr. S. Y. Ch'en  
*Year course, 2 credits each semester.*

318 Seminar: Russia in the Far East  
Mr. Mehnert  
*Year course, 2 credits each semester.* (Offered alternate years.)

319 Seminar: Europe in the Pacific  
Mr. Mehnert  
*Year course, 2 credits each semester.* (Offered alternate years.)

327 Seminar in Hawaiian History  
Mr. Kuykendall  
*One semester, 2 credits.*

400 Thesis Research  
Staff  
*Year course, credit by arrangement.*

**Political Science**

258 Conduct of American Foreign Relations  
Mr. Hunter  
*One semester, 2 credits.* (Offered alternate years.)

261 International Law  
Mr. Bachman  
*One semester, 2 credits.* (Offered alternate years.)

301 Seminar in Far Eastern International Relations  
Mr. Bachman  
*Year course, 2 credits each semester.*

**Nutrition**

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

1. A minimum of 18 undergraduate credits in courses in foods and nutrition, plus courses in general, organic, and biological chemistry.
(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses ordinarily are selected exclusively from those listed below. However, with the permission of the qualifying committee, a maximum of 6 credits may be earned in related courses in an allied field.

Chemistry

263 Food Analysis
   One semester, 3 credits.
   Mr. Dillingham

316 Advanced Quantitative Analysis
   Year course, 3 credits each semester.
   Mr. Dillingham

Mathematics

280 Statistics
   One semester, 3 credits.

Zoology

260 Histology
   One semester, 3 credits.
   Mr. Hamre

362 Microtechnique
   One semester, 2 credits.
   Mr. Hamre

Household Science

349 Research in Nutrition
   Year course, credit by arrangement.
   Miss Miller, Miss Potgieter

350-351 Seminar in Nutrition
   Year course, 1 credit each semester.
   Miss Miller, Miss Potgieter

373 Racial Food Habits in Hawaii
   One semester, 4 credits.
   Miss Miller, Mrs. Lind

400 Thesis Research
   Year course, credit by arrangement.
   Miss Miller, Miss Potgieter

ORIENTAL STUDIES

Graduate students taking work in this field specialize in either history and civilizations of Eastern Asia or Oriental philosophy. Requirements for admission to candidacy are the same in all cases. The graduate program, however, varies with the student's field of interest.

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

(1) Undergraduate credit in the history of two of the following countries: Japan, China, India. A minimum of 6 credits is required in each.
(2) Reading knowledge of Chinese or Japanese. Reading knowledge of French or German may be required if essential to the candidate's research problem.

(3) Upon fulfillment of (1) and (2), a qualifying examination covering previous work in the field.

THE GRADUATE PROGRAM: Courses in the major field selected from those listed below. Certain related courses may be taken if the consent of the qualifying committee is obtained.

Oriental Studies

211 Continuation Chinese Reading Course
One semester, 6 credits.

216 Continuation Japanese Reading Course
One semester, 6 credits.

221 Chinese Literature in Chinese
Year course, 3 credits each semester.

223 Japanese Literature in Japanese
Year course, 2 credits each semester.

240 Japanese Literature in English
Year course, 2 credits each semester. (Offered alternate years.)

241 History of Oriental Religions
Year course, 2 credits each semester.

250-251 Chinese Literature in English
Year course, 2 credits each semester.

253 Oriental Art
Year course, 2 credits each semester.

254-255 Chinese Philosophy and Art
Year course, 2 credits each semester. (Offered alternate years.)

256-257 History of Japanese Culture and Institutions
Year course, 2 credits each semester.

263-264 Chinese Aesthetics
Year course, 2 credits each semester.

268 Great Oriental Philosophers
One semester, 2 credits.

269 Spirit of Oriental Philosophy
One semester, 2 credits.

281 Confucian Philosophy
One semester, 2 credits. (Offered alternate years.)

282 Taoist Philosophy
One semester, 2 credits. (Offered alternate years.)

283 Buddhist Philosophy
One semester, 2 credits.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Credits per Semester</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>291</td>
<td>Chinese Civilization</td>
<td>Mr. S. Y. Ch'en</td>
<td>2</td>
<td>Year course, (Offered alternate years)</td>
</tr>
<tr>
<td>293</td>
<td>Methods and Bibliography in Chinese Studies</td>
<td>Mr. Taam</td>
<td>3</td>
<td>One semester</td>
</tr>
<tr>
<td>300</td>
<td>Advanced Reading and Research</td>
<td>Staff</td>
<td></td>
<td>Year course, credit by arrangement</td>
</tr>
<tr>
<td>301</td>
<td>Seminar in Japanese Historical Literature in Japanese</td>
<td>Mr. Lee</td>
<td>2</td>
<td>Year course, (Offered alternate years)</td>
</tr>
<tr>
<td>302</td>
<td>Seminar in Chinese Historical Literature in Chinese</td>
<td>Mr. Lee</td>
<td>2</td>
<td>Year course, (Offered alternate years)</td>
</tr>
<tr>
<td>303</td>
<td>Seminar in Chinese Philosophy</td>
<td>Mr. Chan</td>
<td>2</td>
<td>Year course,</td>
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<tr>
<td>400</td>
<td>Thesis Research</td>
<td>Staff</td>
<td></td>
<td>Year course, credit by arrangement</td>
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</table>

**History**

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<th>Credits per Semester</th>
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<tbody>
<tr>
<td>219</td>
<td>Europe in Asia</td>
<td>Mr. Mehnert</td>
<td>3</td>
<td>One semester, (Offered alternate years)</td>
</tr>
<tr>
<td>235</td>
<td>History of Ancient China</td>
<td>Mr. S. Y. Ch'en</td>
<td>3</td>
<td>One semester, (Offered alternate years)</td>
</tr>
<tr>
<td>236-237</td>
<td>History of Modern China</td>
<td>Mr. S. Y. Ch'en</td>
<td>3</td>
<td>Year course,</td>
</tr>
<tr>
<td>250</td>
<td>History of Early Civilization in the Far East</td>
<td>Mr. Sakamaki</td>
<td>3</td>
<td>One semester</td>
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<tr>
<td>251</td>
<td>History of Thought in Japan</td>
<td>Mr. Sakamaki</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>266</td>
<td>Diplomatic History of Japan</td>
<td>Mr. Sakamaki</td>
<td></td>
<td></td>
</tr>
<tr>
<td>285</td>
<td>Russia in Asia</td>
<td>Mr. Mehnert</td>
<td>3</td>
<td>One semester, (Offered alternate years)</td>
</tr>
<tr>
<td>295</td>
<td>Social History of China</td>
<td>Mr. S. Y. Ch'en</td>
<td></td>
<td>Year course, (Offered alternate years)</td>
</tr>
<tr>
<td>315</td>
<td>Seminar in Japanese History</td>
<td>Mr. Sakamaki</td>
<td>2</td>
<td>Year course,</td>
</tr>
<tr>
<td>316</td>
<td>Seminar in Chinese Cultural History</td>
<td>Mr. S. Y. Ch'en</td>
<td>2</td>
<td>Year course,</td>
</tr>
<tr>
<td>318</td>
<td>Seminar: Russia in the Far East</td>
<td>Mr. Mehnert</td>
<td>2</td>
<td>Year course, (Offered alternate years)</td>
</tr>
</tbody>
</table>
Philosophy

270-271 Eastern Philosophies  Mr. Chan
Year course, 2 credits each semester.

321 Seminar in Comparative Philosophy  Mr. Moore, Mr. Chan
Year course, 2 credits each semester.

The following related courses may be included in the programs of candidates for the Master's degree in Oriental Studies with the consent of the qualifying committee:

Anthropology

254 Peoples of Asia  Mr. Bowles
270 Folk Society in Japan and China  Mr. Embree
274 India  Mr. Bowles
275 Prehistory of Asia  Mr. Bowles
277 Southeast Asia  Mr. Bowles, Mr. Embree

Economics

250-251 Economic History and Problems of Japan  Mr. Taylor
252-253 Economic History and Problems of China  Mr. Taylor
310-311 Seminar in the Economic History and Problems of the Far East  Mr. Taylor

Geography

255 Geography of Asia  Mr. Coulter

Political Science

262 The Governments of the Far East  Mr. Bachman
301 Seminar in Far Eastern International Relations  Mr. Bachman

PHILOSOPHY

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

(1) A minimum of 18 undergraduate credits in philosophy, including a general course in the history of philosophy.

(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses in the major field selected from those listed below. A maximum of 6 credits may be earned in advanced courses in a closely related field.
**Philosophy**

253 **Problems of Philosophy**  
One semester, 3 credits. *(Offered alternate years.)*

262 **Philosophy of Experimentalism**  
One semester, 2 credits.

268 **Great Oriental Philosophers**  
One semester, 2 credits.

269 **Spirit of Oriental Philosophy**  
One semester, 2 credits.

270-271 **Eastern Philosophies**  
Year course, 2 credits each semester.

275-276 **Philosophy of Religion**  
Year course, 3 credits each semester.

278 **Political Philosophy**  
One semester, 3 credits.

280 **Logic and Scientific Method**  
One semester, 3 credits.

300 **Directed Reading in Philosophy**  
Year course, 2 credits each semester.

321 **Seminar in Comparative Philosophy**  
Mr. Moore, Mr. Chan  
Year course, 2 credits each semester.

400 **Thesis Research**  
Year course, credit by arrangement.

**Oriental Studies**

281 **Confucian Philosophy**  
One semester, 2 credits. *(Offered alternate years.)*

282 **Taoist Philosophy**  
One semester, 2 credits. *(Offered alternate years.)*

283 **Buddhist Philosophy**  
One semester, 2 credits. *(Offered alternate years.)*

303 **Seminar in Chinese Philosophy**  
Year course, 2 credits each semester.

**Education**

340 **Philosophy of Education**  
One semester, 3 credits.

345 **Seminar in Philosophy of Education**  
Year course, 2 credits each semester.

**Physic**

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

(1) A minimum of 18 undergraduate credits in physics, including the basic course.
(2) An oral qualifying examination, covering previous work in
this field, to be taken as soon as possible after first register-
ing for graduate work leading to the Master’s degree.

THE GRADUATE PROGRAM: Courses in physics selected from
those listed below. Related courses in mathematics and chem-
istry may be taken with the approval of the candidate's com-
mittee. A maximum of 12 credits may be earned in advanced
courses in mathematics.

*Physics*

255 **Light**
One semester, 3 credits. (Offered alternate years.)

Mr. Ballard

256 **Optics Laboratory**
One semester, 1 credit. (Offered alternate years.)

Mr. Ballard

263 **Theoretical Mechanics**
One semester, 3 credits. (Offered alternate years.)

Mr. Eller

270 **Heat**
One semester, 3 credits. (Offered alternate years.)

Mr. Eller

275 **Electricity and Magnetism**
One semester, 3 credits. (Offered alternate years.)

Mr. Eller

280 **Modern Physics**
One semester, 3 credits. (Offered alternate years.)

Mr. Ballard

355 **Spectroscopy**
One semester, 3 credits. (Offered alternate years.)

Mr. Ballard

356 **Theory of Spectra**
One semester, 3 credits. (Offered alternate years.)

Mr. Ballard

361 **Graduate Physics**
Year course, credit by arrangement.

Staff

375 **Advanced Electricity and Magnetism**
One semester, 3 credits. (Offered alternate years.)

Mr. Eller

400 **Thesis Research**
Year course, credit by arrangement.

Staff

**SOCIOMETRY**

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

(1) A minimum of 18 undergraduate credits in sociology.

(2) An oral qualifying examination, covering previous work in
this field, to be taken as soon as possible after first register-
ings for graduate work leading to the Master’s degree.

THE GRADUATE PROGRAM: Courses in the major field selected
from those listed below. A maximum of 6 credits may, with
the consent of the qualifying committee, be earned in closely
related courses in an allied field.
Sociology

256 RACE RELATIONS IN HAWAII
One semester, 3 credits. (Offered alternate years.)
Mr. Lind

258 RACE RELATIONS IN THE PACIFIC
One semester, 3 credits. (Offered alternate years.)
Mr. Lind

266 SOCIAL INSTITUTIONS
One semester, 3 credits.
Mr. Lind

267 THE FAMILY
One semester, 3 credits.
Mr. Lind

268 HUMAN MIGRATIONS
One semester, 3 credits.
Mr. Hörmann

269 PERSONALITY AND CULTURE
One semester, 3 credits.
Mr. Lind

270 POPULATION AND SOCIETY
One semester, 3 credits.
Mr. Hörmann

271 HUMAN ECOLOGY
One semester, 3 credits.
Mr. Hörmann

272 COLLECTIVE BEHAVIOR
One semester, 3 credits.
Mr. Lind

274 SOCIAL CHANGE
One semester, 3 credits. (Offered alternate years.)
Mr. Hörmann

276 PRINCIPLES OF SOCIOLOGY
One semester, 3 credits.
Mr. Hörmann

300 ADVANCED READING AND RESEARCH
Year course, credit by arrangement.
Mr. Lind

350-351 SEMINAR IN SOCIOLOGY
Year course, 2 credits each semester.
Mr. Lind

400 THESIS RESEARCH
Year course, credit by arrangement.
Mr. Lind

TROPICAL AGRICULTURE

Candidates for the Doctor of Philosophy degree in the Graduate School of Tropical Agriculture specialize in one of the sciences basic to tropical agriculture, namely, entomology, genetics, plant physiology, and soil science. Requirements for this degree include adequate undergraduate training in the major and closely related fields, one year of approved graduate work at this institution, one year of approved graduate work at another institution, the passing of a qualifying general examination, a reading knowledge of both French and German, and the presentation and defense of a dissertation.

ZOOOLOGY

Candidates for the Master's degree in zoology major in general zoology or in entomology.

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Requirements for admission to candidacy for the Master's degree in general zoology:

(1) Undergraduate credit in general zoology, comparative anatomy of vertebrates, histology, embryology, systematic zoology, or the equivalent, plus work in chemistry and elementary college physics. Previous training in botany desirable.

(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses in zoology selected from those listed below. A maximum of 6 credits may be earned in advanced courses in chemistry or botany.

Requirements for admission to candidacy for the Master's degree in entomology:

(1) At least 12 credits in botany including basic courses in botany and courses selected from systematic botany, plant physiology, bacteriology and mycology; at least 12 credits in chemistry including basic courses in chemistry and courses selected from qualitative chemistry, quantitative chemistry, and organic chemistry; general zoology; basic courses in physics; general entomology and agricultural entomology; principles of genetics. Candidates who have not taken insect morphology, systematic entomology, parasitology, histology and microtechnique during their undergraduate years must include them in the graduate program.

(2) An oral qualifying examination, covering previous work in this field, to be taken as soon as possible after first registering for graduate work leading to the Master's degree.

THE GRADUATE PROGRAM: Courses to be selected from those courses in entomology listed below and related courses in allied fields.

Zoology

253 Parasitology
\textit{One semester, 3 credits.}  
Mr. Alicata

254 Insect Morphology
\textit{One semester, 2 credits.}  
Mr. Holdaway

255 Systematic Entomology
\textit{One semester, 2 credits.}  
Mr. Holdaway

260 Histology
\textit{One semester, 3 credits.}  
Mr. Hamre

261 Vertebrate Embryology
\textit{One semester, 3 credits.}  
Mr. Hamre

285 Evolution and Eugenics
\textit{One semester, 2 credits.}  
Mr. Miller

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300 Research in Zoology
Year course, credit by arrangement.

310 Zoology Seminar
Year course, 1 credit each semester.

351 Cellular Biology
One semester, 2 credits.

352 Insect Ecology
One semester, 3 credits. (Offered alternate years.)

353 Principles of Applied Entomology
One semester, 3 credits. (Offered alternate years.)

355-356 Insect-Transmitted Diseases of Plants
Year course; first semester, 3 credits; second semester, 1 credit.

362 Microtechnique
One semester, 2 credits.

370 Systematic Zoology
Year course, 2 credits each semester.

400 Thesis Research
Year course, credit by arrangement.