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UNIVERSITY OF HAWAII

1956–1957 CALENDAR

FIRST SEMESTER

September 17-18, Monday and Tuesday — Orientation for freshmen
September 18, Tuesday — Registration of seniors
September 19, Wednesday — Registration of juniors
September 20, Thursday — Registration of sophomores
September 21, Friday — Registration of freshmen
September 22, Saturday — 8:00 A.M. to 1:00 P.M. Registration of graduate and unclassified students and auditors
September 24, Monday — 2:30 to 5:00 P.M. Registration of graduate and unclassified students and auditors
September 24, Monday — Instruction begins
October 1, Monday — Last day of registration for credit
October 6, Saturday — Primary Election Day (holiday)
October 29, Monday — Last day of withdrawal from courses without penalty
November 2, Friday — First deficiency reports due
November 6, Tuesday — General Election Day (holiday)
November 12, Monday — Holiday following Veterans' Day
November 21, Wednesday — Last day for removal of "Incompletes"
November 22-24, Thursday through Saturday — Thanksgiving recess
December 7, Friday — Second deficiency reports due
December 19, Wednesday — Last day of instruction before Christmas recess
January 3, Thursday — Instruction resumes
January 7, Monday — Last day of withdrawal from courses
January 19, Saturday — Last day of instruction, first semester
January 21, Monday — Final examinations begin
January 31, Thursday — First semester ends

SECOND SEMESTER

February 6, Wednesday — Registration of seniors and juniors
February 7, Thursday — Registration of sophomores
February 8, Friday — Registration of freshmen
February 9, Saturday — 8:00 A.M. to 1:00 P.M. Registration of graduate and unclassified students and auditors
February 11, Monday — 2:30 to 5:00 P.M. Registration of graduate and unclassified students and auditors
February 11, Monday — Instruction begins
February 18, Monday — Last day of registration for credit
February 22, Friday — Presidents' Day (holiday)
March 18, Monday — Last day of withdrawal from courses without penalty
March 22, Friday — First deficiency reports due
March 26, Tuesday — Prince Kuhio Day (holiday)
April 18, Thursday — Last day for removal of "Incompletes"
April 19-20, Friday and Saturday — Easter recess
April 26, Friday — Second deficiency reports due
May 13, Monday — Last day of withdrawal from courses
May 21, Tuesday — ROTC graduation exercises
May 25, Saturday — Last day of instruction
May 27, Monday — Final examinations begin
May 30, Thursday — Memorial Day (holiday)
June 6, Thursday — Second semester ends
June 9, Sunday — Commencement

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BOARD OF REGENTS

	Term Expires
J. GARNER ANTHONY *Attorney at Law* Honolulu	1957
PAUL S. BACHMAN, Ex Officio *President, University of Hawaii* Honolulu	——
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FRED K. LAM *Physician and Surgeon* Honolulu	1959
JACK H. MIZUHA *Attorney at Law* Lihue, Kauai	1959
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Faculty and Staff
1955-1956

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Tuttle, Daniel W., *Assistant Professor of Government*
B.A. 1945, Illinois College; M.A. 1946, Minnesota

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Uyehara, Yukuo, *Associate Professor of Japanese*
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B.A. 1941, San Jose State College

Vinacke, W. Edgar, *Associate Professor of Psychology*
B.A. 1939, Cincinnati; Ph.D. 1942, Columbia (on leave 1955–56)

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Wachter, William M., *Associate Professor of Engineering*
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Wakayama, Shuku, *Instructor in Nursing*
B.S., M.A. 1954, Columbia

Walker, Claude, *Associate Professor of Business*
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Walsh, Winifred A., *Associate Professor of Social Work*
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B.A. 1923, Willamette; M.A. 1932, Ph.D. 1935, University of Washington

White, Grace F. (Mrs. Bruce E.), *Lecturer in Mathematics*
B.A. 1923, Willamette

White, John A., *Associate Professor of History*
B.A. 1933, California; M.A. 1940, Columbia; Ph.D. 1947, Stanford

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Wish, Harvey, *Carnegie Visiting Professor of History*
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Young, John G., *Lecturer in Religion*
B.H. 1924, Springfield College; M.A. 1934, Columbia; M.A. 1935, Union Theological Seminary

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Zeigler, Harley H., *Professor of Religion*
B.A. 1930, Southwestern College; M.A. 1932, S.T.B. 1933, Ph.D. 1940, Boston University

Zeitlin, Harry, *Assistant Professor of Chemistry*
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Zimmerman, Staff Sergeant Donald F., *Instructor in Air Science*

HAWAII AGRICULTURAL EXPERIMENT STATION

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Akamine, Ernest K., *Assistant Plant Physiologist*
B.S. 1935, M.S. 1941, Hawaii (on leave 1955–56)

Alberts, Albert A., *Assistant in Horticulture*
B.A. 1952, San Jose State College

Alicata, Joseph E., *Parasitologist*
B.A. 1927, Grand Island College; M.A. 1928, Northwestern; Ph.D. 1934, George Washington

Aragaki, Minoru, *Junior Plant Pathologist*
B.S. 1950, M.S. 1954, Hawaii

Awada, Minoru, *Junior Plant Physiologist*
B.S. 1938, M.S. 1949, Hawaii

*Beaumont, John H., *Horticulturist*

*Bess, Henry A., *Entomologist*

Bowers, Francis A., *Junior Horticulturist*
B.S. 1924, Hawaii

Boyle, W. Wayne, *Assistant Entomologist*
B.S. 1949, Arizona; Ph.D. 1954, Cornell

*Britten, Edward J., *Associate Agronomist*

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Clements, Harry F., *Plant Physiologist*
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*Cooil, Bruce J., *Plant Physiologist*

Fujimoto, Giichi, *Assistant Chemist*
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Fukunaga, Edward T., *Associate Agriculturist*
B.S. 1934, M.S. 1935, Hawaii

*Gilbert, James C., *Assistant Olericulturist*

Goto, Shosuke, *Assistant Plant Pathologist*
B.S. 1941, M.S. 1943, Alberta; Ph.D. 1953, Minnesota

*Hamilton, Richard A., *Associate Horticulturist*

* Degrees listed under "Instruction."

Haramoto, Frank H., *Junior Entomologist*
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*Hardy, D. Elmo, *Entomologist*

Holmes, Wallace E., *Assistant Soil Scientist*
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Ishii, Mamoru, *Assistant Plant Pathologist*
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Kanehiro, Yoshinori, *Junior Chemist*
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*Miller, Carey D., *Nutritionist*

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*Sherman, G. Donald, *Chemist*

*Sherman, Martin, *Associate Entomologist*

*Shoji, Kobe, *Associate Plant Physiologist*

*Strohman, Robert E., *Associate Agricultural Engineer*

Takahashi, Makoto, *Assistant Agronomist*
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*Younge, Otto R., *Agronomist*

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*Dole, Arthur A., *Director, Bureau of Testing and Guidance*

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Holden, Margaret E., *Junior Research Librarian*
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Baver, Leonard D., Ph.D., *Director, Experiment Station*
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Brock, Vernon E., M.A., *Director, Division of Fish and Game*
Territorial Board of Agriculture and Forestry

Burr, George O., Ph.D., *Head, Department of Physiology and Biochemistry, Experiment Station*
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Cushing, Robert L., Ph.D., *Director*
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Ekern, Paul C., Ph.D., *Associate Soil Physicist*
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Farden, Carl A., B.S., *Statistician*
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Gortner, Willis A., Ph.D., *Head, Chemistry Department*
Pineapple Research Institute

Gowing, Donald P., Ph.D., *Plant Physiologist*
Pineapple Research Institute

Gressitt, J. Linsley, Ph.D., *Entomologist*
Bernice P. Bishop Museum

* Degrees listed under "Instruction."

† Members of co-operating institutions, and available for service on graduate committees. They do not offer courses at the University.

Hance, Francis E., PH.D., *Principal Chemist, Experiment Station*
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Hanson, Noel S., PH.D., *Senior Agronomist, Experiment Station*
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Hilton, H. Wayne, PH.D., *Principal Organic Chemist, Experiment Station*
Hawaiian Sugar Planters' Association

Humbert, R. P., PH.D., *Principal Agronomist, Experiment Station*
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Kerns, Kenneth R., M.S., *Plant Breeding Department*
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King, Joseph, M.S., *Fishery Biologist*
Pacific Oceanic Fishery Investigations

Klemmer, H. W., PH.D., *Associate Pathologist*
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Kondo, Yoshio, PH.D., *Malacologist*
Bernice P. Bishop Museum

Krauss, Beatrice, M.S., *Associate Plant Physiologist*
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Leeper, Robert W., PH.D., *Organic Chemist*
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Mangelsdorf, A. J., PH.D., *Principal Geneticist, Experiment Station*
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Martin, J. P., M.S., *Principal Pathologist, Experiment Station*
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Murphy, Garth, M.A., *Fishery Biologist*
Pacific Oceanic Fishery Investigations

Payne, John H., PH.D., *Principal Technologist, Experiment Station*
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Sakimura, K., *Associate Entomologist*
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Sanford, Wallace G., PH.D., *Head, Agronomy Department and Plant Physiologist*
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Schmidt, Carl T., PH.D., *Entomologist*
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Singleton, Vernon L., PH.D., *Associate Biochemist*
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Smith, Donald H., PH.D., *Soil Chemist*
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Spiegelberg, Carl H., PH.D., *Pathologist*
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Warner, John N., PH.D., *Senior Geneticist, Experiment Station*
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Wismer, Chester A., PH.D., *Senior Pathologist, Experiment Station*
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Wortman, Sterling, PH.D., *Head, Plant Breeding Department*
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Young, H. Y., M.S., *Associate Chemist*
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Among the members of the student body are representatives of the many peoples of the Pacific.

General Information

THE UNIVERSITY OF HAWAII lies at the mouth of Manoa Valley in Honolulu, on the island of Oahu. It is three miles from the business center of Honolulu and two miles from Waikiki Beach. Ten other tracts of land on the islands of Oahu, Maui, and Hawaii bring the University's landholdings to 710 acres.

Established by act of the Legislature of the Territory of Hawaii in 1907, the University bears the same relation to the Territory as state universities to their states. Support of the University comes from appropriations of the Territorial Legislature and the United States Congress, and miscellaneous funds that include gifts and student fees. Although the University of Hawaii did not receive a grant of land such as that provided for similar colleges of the states under the original Morrill Act of 1862, it is a federal land-grant college and shares in benefits from the Second Morrill Act of 1890, the Nelson Amendment of 1907, and subsequent legislation.

History. The institution was known as the College of Agriculture and Mechanic Arts from 1907 to 1911, and the College of Hawaii from 1911 to 1920. The College opened September 14, 1908, with five students in regular courses and a faculty of twelve. Before the end of the year thirty-one students had enrolled in special courses. The College was located on the grounds now occupied by Lincoln School in Honolulu until 1912 when it was moved to the present site. When the College of Arts and Sciences was added in 1920, the name was changed to the University of Hawaii. In 1931 the Territorial Legislature united the Territorial Normal and Training School with the University School of Education to form Teachers College of the University and placed the property of the Normal School under the control of the Board of Regents of the University. The College of Agriculture was established in 1946 and the College of Business Administration in 1949. Prior to 1951 all graduate work was organized under the heading of Graduate Division, but in that year the name was changed to Graduate School.

Control and Accreditation. Government of the University resides in a Board of Regents appointed by the Governor of the Territory for individual terms of four years. Copies of statutes and bylaws of the Board of Regents are available upon request.

The University is accredited by the Western College Association. Its students may transfer to other American and to European and Oriental universities on the same basis as students of other American universities.

Instruction. University classes are open to all academically qualified men

and women, regardless of racial ancestry or nationality.

Academic Year. The academic year is divided into two 18-week semesters and a 6-week summer session.

University Colors, Symbol, Seal, Coat of Arms. University colors are green and white. The popular symbol traditionally used by students on campus is the rainbow. The seal is a torch and book entitled *Ma Lama Lama* (the light of knowledge) in a circle of the Pacific, with the motto of Hawaii, *UA MAU KE EA O KA AINA I KA PONO* (The Life of the Land is Preserved in Righteousness). The University coat of arms is an adaptation of the Hawaiian coat of arms and includes the motto of Hawaii.

Communications. Prospective students should address letters of general inquiry to the Office of Admissions and Records, University of Hawaii, Honolulu 14, Hawaii.

ADMINISTRATIVE ORGANIZATION

The University has five colleges: College of Arts and Sciences, College of Applied Science, Teachers College, College of Agriculture (including the Hawaii Agricultural Experiment Station and the Agricultural Extension Service), and College of Business Administration. Graduate work is organized under the Graduate School. The Office of Student Personnel co-ordinates the work of admissions, counseling, and registration. Other administrative units are the Hilo Branch, the Library, the University Extension Division, the Legislative Reference Bureau, and the Summer Session.

Academic departments are units of the University as a whole, rather than of colleges, and are responsible to the Dean of Faculties on matters of finance and personnel. Co-ordination of the departments with the colleges in instructional matters is obtained through the Administrative Council, of which the President is chairman.

The University Senate acts as an advisory body to the President on matters of instruction and related problems.

RELATED SERVICES

In addition to its instructional program, the University offers several other forms of public service.

Speech Clinic. Diagnosis and therapy provided for all types of speech defects and disorders; diagnoses made and therapy directed by clinic staff members, utilizing advanced students in speech correction as clinicians. Small fees charged.

Reading Clinic. Diagnosis and therapy for reading disabilities; lessons in remedial reading with cases drawn from the campus and the community; work done by members of the classes in Education 294, 296-C, and 332, under the supervision of Clinic staff members. Small fees charged.

Legislative Reference Bureau. The 1943 Legislature created the Legislative Reference Bureau under University jurisdiction to help solve current legislative and governmental problems. The Bureau is situated on the campus, but during sessions of the Legislature an additional office is maintained in Iolani Palace. It provides members of the Legislature, the Governor, and departments, institutions, and agencies of the Territory with information and reports concerning legislative problems.

Volcano Research Laboratory. Located on the island of Hawaii, the Laboratory is conducted in co-operation with the U. S. Geological Survey, and offers research possibilities to both graduate students and investigators who wish to pursue their own studies in subjects pertaining to volcanology.

Aquarium. The Aquarium at Waikiki Beach is operated by the University as a place of education and entertainment for local residents and visitors.

Hawaii Sociological Research Laboratory. This Laboratory, located in Crawford Hall on the University campus, is staffed by members of the Sociology Department, and is concerned primarily with sociological studies relative to the peoples of Hawaii.

Human Relations Area Files. This organization, supported by sixteen major universities, systematically places basic information on various societies of the world in files at each member institution. Each file in this unique collection, located in the University Library, contains facts about a people or region that are judged to be of value to students of human behavior, social life, and culture.

Industrial Relations Center. This Center, located in Hawaii Hall on the campus, was established to promote a sound understanding of labor management problems in the community. It provides a library and reference service, for public use, of materials relative to labor management and relations; offers both credit and non-credit courses in the field of industrial relations; promotes lectures, conferences, and discussion groups; and conducts research on basic industrial relations problems.

CO-OPERATING INSTITUTIONS

Through co-operative agreements with institutions listed below, the University has added to its research facilities and expanded its services to the Territory.

Pineapple Research Institute of Hawaii. This Institute, independently supported by the pineapple industry, is affiliated with the University. The administrative offices and research laboratories are in Institute buildings on and adjacent to the University campus. Field studies are carried on at Wahiawa, where the Institute maintains a 100-acre experimental farm.

Bernice P. Bishop Museum. The University and the Bishop Museum reciprocate in the use of libraries, laboratories, collections, and other research

facilities. Advanced students may use the Museum facilities when working under proper direction, subject to Museum regulations.

Pacific and Asian Affairs Council. The Pacific and Asian Affairs Council, located adjacent to the University, sponsors lectures, seminars, and discussion meetings on international affairs, particularly on Asia and the Pacific. The Pacific House Library, which maintains close liaison with the University Library, provides excellent research facilities for the study of world affairs. The meeting rooms and facilities of Pacific House are available to student and faculty groups. In addition, the Council offers a special lowcost membership for University students.

Honolulu Academy of Arts. The Academy was built and endowed by Mrs. Charles M. Cooke. Its fine collections of art objects are available to the students and instructors of the University.

Hawaiian Sugar Planters' Association. In 1947 this Association provided $100,000 for the erection of a building on the University campus to house the Agricultural Engineering Institute, where shop facilities are available for instructional and research purposes.

Fruit Fly Laboratory. A research laboratory and a corps of investigators are maintained on the University campus by the United States Bureau of Entomology for the study of fruit fly pests in Hawaii.

Hawaii School of Religion. The Hawaii School of Religion, an independently supported institution managed by its own Board of Trustees, is affiliated with the University. Its courses are accepted for credit. Members of its staff are approved by the University Board of Regents and given academic rank on the University faculty.

United States Fish and Wildlife Service. Permanent headquarters of this Service for Pacific Oceanic Fishery Investigations are located on the University campus. Certain members of the staff of the organization co-operate with the Department of Zoology and Entomology in offering advanced courses and in directing thesis research in fishery biology. Several fellowships are available to citizen students working toward advanced degrees. Requests for information or fellowship application forms should be addressed to the Director, Pacific Oceanic Fishery Investigations, University of Hawaii.

CAMPUS AND BUILDINGS

Principal buildings on the campus are the Administration Building, Hawaii Hall, Gartley Hall, Dean Hall, the Library, Crawford Hall, Wist Hall and its laboratory centers (the Elementary School, the High School, Castle Memorial Hall, and Auditorium), Farrington Hall, the Engineering Quadrangle, Gilmore Hall, the Home Economics Building, the Gymnasium, Hemenway Hall, the Chemistry Building, the Music Building, and the Bookstore.

Farrington Hall, an auditorium with a backstage extension, is well equipped

for work in drama. The engineering laboratories and classrooms are in the four buildings of the Engineering Quadrangle. The Arthur L. Andrews Theatre, with a tropical garden and the Koolau mountain range for a backdrop, is the outdoor setting for commencement and other University programs.

The Agricultural Engineering Institute, financed largely by the Hawaiian Sugar Planters' Association, provides facilities for instruction and research in farm and plantation machinery.

The Library contains 261,073 bound volumes and 622,769 unbound parts and pamphlets, exclusive of Teachers College Elementary School Library. Also, it serves as a depository for government publications. Extensive collections of Chinese and Japanese works and a growing collection of valuable books and periodicals about Hawaii and the Pacific islands make the University of Hawaii an excellent place to study international relations, especially those concerning the Pacific area. The Library files include local and mainland newspapers, and literary, technical, and scientific periodicals. These materials are available to all persons complying with library regulations.

Hemenway Hall is the general social center for students and faculty with quarters for both student and alumni organizations. A cafeteria is maintained in the Hall.

Residence accommodations on or near the campus include the Charles H. Atherton House, the University housing barracks for men, Hale Laulima, and Mary Dillingham Frear Hall.

A swimming pool and locker buildings are located near Hemenway Hall. Cooke Field, which is used for football, baseball, and track practice, also affords opportunities for physical education and intramural sports.

The Honolulu Stadium, with a seating capacity of 22,000, is equipped for football, baseball, and other outdoor sports, and is regarded as an integral part of the University's plant resources for physical education and athletics. It is owned and managed by the Honolulu Stadium Corporation.

The Hawaii Marine Laboratory, with branches at Waikiki and Coconut Island, is devoted to teaching and research in the marine sciences.

Other buildings connected with the University include the ROTC buildings, Hawaii Annex, the Nutrition Laboratory, the United States Bureau of Entomology building, the United States Fish and Wildlife Service building, and 40 temporary office and classroom buildings on the campus. A part of the campus is occupied by an experimental farm, devoted to solving problems of Hawaii's dairymen, poultrymen, and livestock raisers. It also provides instructional facilities for students of agriculture.

The herbaria of the University and of the Bernice P. Bishop Museum, which are combined under the custodianship of the Museum, contain the most nearly complete collection of Hawaiian plants in existence and include some species now extinct. The most valuable parts are the cotypes of Dr. W. Hillebrand's species and the types of many new species collected by later botanists.

Academic Information

STUDENTS (other than auditors and those taking extension and correspondence courses) are classified as *undergraduate* and *graduate.*

Undergraduate students are designated as *regular* or *unclassified.*

Regular students are those who are pursuing organized programs of study and who comply with the established regulations which lead, usually after four years of work, to the bachelor's degree. Regular students ordinarily carry full-time programs (12 semester hours or more), and for registration and classification purposes are divided as follows: freshmen, 1–24 credit hours completed; sophomores, 25–54; juniors, 55–88; seniors, 89 and above. Freshmen and sophomores are *lower division* students; juniors and seniors, *upper division* students.

Unclassified students are those who, although registered for credit, are not candidates for a degree and have not been admitted to a specific college of the University. No student may use the unclassified status to evade technical or scholastic graduation requirements of a college. They usually carry only part-time programs (fewer than 12 semester hours).*

Graduate students (graduates of this University or of other institutions of approved standing) are designated as *degree candidates, five-year diploma candidates,* and *unclassified.*

Degree candidates are those who are pursuing programs of study leading to advanced degrees.

Five-year diploma candidates are graduate students following a curriculum leading to the diploma.

Unclassified graduate students are those who, although registered for credit, are not degree candidates. Some are working toward the professional certificate of the Department of Public Instruction, and others later become candidates for advanced degrees.

Auditors are those who are permitted to attend certain courses as listeners, but who take no part in class work and receive no credit.

* Students taking fewer than 12 semester hours in any semester are considered "part-time" students. This classification, however, has significance only in so far as determination of fees is concerned. Both regular and unclassified students may be either part-time or full-time.

ADMISSION

Candidates for admission must present satisfactory evidence of ability to do university work.

Those who wish to become regular or unclassified students and who have not previously earned credits in an institution of higher learning must apply to the Director of Admissions. A high school senior who plans to enter the University within a year should file his application during the final semester of his high school course. In any case, application should be filed at least one month before the opening of the semester in which enrollment is desired. Requests for application forms and questions about admission should be addressed to the Director of Admissions.

The application procedure for persons who have credits from other institutions of higher learning is described under "Admission to Advanced Standing."

Admission of Regular Students Entering the University for the First Time. Admission to first-year standing in the University depends on a number of factors, including performance in college aptitude tests, quality of high school work, and various ratings by the preparatory school. A high rating in one factor alone will not insure admission; nor will poor performance on one measure alone exclude an applicant if other evidence indicates he might be successful. Ordinarily a student should average *B* or better in his high school work, although an applicant with a *C* average who scores above average on the college aptitude test may be admitted. The quality of work done during the last two years in secondary school receives special consideration.

College aptitude tests are given by the University in high schools of the Territory each spring. These tests are also given at the University several times during the summer. Applicants should communicate with the Director of Admissions for information as to dates.

Every applicant for admission as a regular student who has not previously earned credits in an institution of higher learning must take college aptitude examinations and submit evidence that he has satisfactorily completed at least 15 units of work in a four-year high school or at least 12 units of work in a three-year senior high school.

The word *unit* as employed here to describe prerequisite preparatory work signifies the satisfactory completion of a course of study pursued for a full school year, with five recitations a week of not less than 45 minutes each, or the equivalent laboratory or shop exercises. For an acceptable distribution of the units required of entering students, see the table on page 42.

Candidates from continental United States and certain foreign countries may, when authorized by the Admissions Office, take the scholastic aptitude test given by the College Entrance Examination Board (431 West 117th Street, New York City) and submit a certificate covering the results of this examination along with a complete record of work done in preparatory school.

Admission by Examination. Veterans and other mature individuals whose

Minimum Unit Requirements for Admission

From a 4-Year High School	Subject	From a 3-Year High School
3	ENGLISH	3
1	ALGEBRA	1 (Not required if the student had ninth-grade general mathematics in intermediate, i.e., junior high school.)
6	ENGLISH—(In addition to the 3-unit minimum requirement in English.) SCIENCES—Physical, biological, and social. MATHEMATICS—(In addition to the 1-unit minimum requirement in mathematics.) FOREIGN LANGUAGES—(Entrance credit in foreign language is not granted unless the total number of foreign language units offered includes at least 2 units in some one language.)	4 (If applicant offers ninth-grade mathematics, this requirement is 5 units.)
5	Any other subjects (except Physical Education and ROTC) credited by the high school toward its diploma (no less than ½ nor more than 2 units in any one subject) provided that these subjects have been pursued in accordance with regular classroom procedure involving a reasonable amount of preparation in addition to the time spent in class.	4
15	. . . . . Total	12

secondary school education was interrupted by war or other conditions may take entrance examinations covering preparatory school subjects. Successful performance on these tests and on the college aptitude tests will admit these candidates without reference to high school credits. Such individuals, however, must meet all special requirements, such as those in mathematics, for admission to the engineering or the premedical curriculum.

Special Requirements for Certain Programs. In addition to satisfying the requirements of the University as a whole, candidates for admission to certain programs of university work must meet special requirements. Each applicant should study the conditions set by the college he intends to enter and for the program he intends to pursue in that college. Special attention is directed to the following requirements.

Students who expect to study mathematics in the University, or to take subjects for which college mathematics is a prerequisite, should have had plane geometry and two years of algebra.

Prospective engineering and prearchitecture students must have had plane geometry and two years of algebra. It is strongly recommended that they also

have trigonometry, solid geometry, mechanical drawing, and physics. Engineering students who have not had Mathematics 150 (trigonometry) may take it in the summer session preceding the first year or take Mathematics 150 and 151 the first semester, Mathematics 152 the second semester, and Mathematics 153 in the following summer session.

Prospective students of medicine should have had plane geometry, trigonometry, two years of algebra, two years of a foreign language, two years of history, and three years of English.

Prospective students of agriculture should have had two years of algebra. Students with only one year must complete the second year by the end of the freshman year.

Every entering freshman is expected to be on the campus during the Freshman Orientation Period, the dates of which are stated in the "University Calendar." This program is designed to give special help to incoming freshmen and to acquaint them with the University. Examinations, conferences with advisers, introductory lectures, and social events occupy the period.

Admission to Advanced Standing. Students who transfer from other accredited universities or colleges may be granted advanced standing. These students must present to the Director of Admissions an official statement of the studies offered for admission at such institutions, of the studies pursued in college and the grade received in each, and of honorable dismissal. These transcripts become a permanent part of the University files. Credit toward graduation is given only in subjects in which grades of *C* or better are recorded. Candidates transferring with advanced standing are required to do a minimum of one year's work (30 semester hours) at the University of Hawaii to qualify for a bachelor's degree.

Students transferring from other than accredited institutions must meet University of Hawaii standards of admission. Upon the completion of a year's work (30 semester hours) at the University of Hawaii with an average grade of *C* or better, credit will be given for courses at the previous institution. This applies only to those courses which are considered by the University of Hawaii to be of college level.

Admission of Unclassified Students. Mature persons may register as unclassified students when their backgrounds, in the opinion of the Director of Admissions, qualify them for credit work. No such student, however, will be admitted to a college or allowed to become a degree candidate until he has satisfied all admission requirements.

Admission as an unclassified student is in no case permitted to serve as a means of avoiding compliance with the requirements laid down for regular students.

Admission of Auditors. Persons wishing to audit classes must have the written consent of the Director of Admissions, of the chairman of the department concerned, and of the instructor of the course. In general, auditors are not allowed in laboratory science, mathematics, language, English composition,

speech, or studio art courses, nor in classes limited in size where credit students might thereby be excluded. By definition auditors are "listeners" and are therefore not allowed to participate in class discussions or examinations.

Admission of Graduate Students. Graduates of accredited colleges and universities who wish to do graduate study should apply to the Dean of the Graduate School. Each application should be accompanied by an official transcript of undergraduate record and of any graduate work completed at another institution. Admission to graduate study is provisional until such records are on file. These transcripts become a permanent part of the University files.

REGISTRATION, WITHDRAWAL, AND OTHER CHANGES

Registration dates are given in the "University Calendar." Students entering in the autumn receive a circular telling them how to proceed in registering. Courses are described under "Courses of Instruction," and a schedule stating the time and place of meeting of each course is issued by the Office of Admissions and Records in September for the first semester, in January for the second semester, and in May for the summer session.

Registration of Undergraduate Students. Before they register, undergraduates must decide which of the five colleges of the University they wish to enter, and select one of the programs offered by the college chosen. Each undergraduate is assigned at registration time to a faculty member who acts as his adviser in selecting courses. *Credit is given only for courses regularly entered upon the registration card.*

Registration of Graduate Students. Graduate students follow the same procedure in registration as do undergraduates.

Registration of Auditors and Unclassified Students. Auditors and unclassified students register after the period assigned to the registration of regular students, and in accordance with instructions issued at the beginning of each semester.

Auditing of Courses by Regular Students. Regular students are not permitted to audit courses in excess of the maximum student load.

Arrangement of Credits in Advance. The number of credits obtainable in most courses is stated in the Catalogue and in the time schedule. However, certain courses in which students carry on individual work are marked "credit by arrangement." Such statements do not signify that the credits are to be determined at the end of the semester. The student registers for a definite number of credits and may earn no more than that number.

Late Registration. The University permits registration for credit after the announced registration days in any semester only in exceptional cases and for valid reasons. The following rules govern such late registration: (1) during the first seven days following the last official day of registration, written approval

must be obtained from the dean concerned; (2) subsequent to the seventh day, students may register only as auditors and must have the written approval of the dean and the instructor concerned. Corresponding restrictions apply to summer session registration and are stated in the summer session bulletin.

These same rules apply to students who wish to register for courses in addition to those signed for during the official registration period.

Auditors need not comply with these regulations, except that they cannot change to credit status after the above late registration periods.

Withdrawal from Courses or from the University. Withdrawal is the voluntary severance by a student of his connection with a course or with the University. To withdraw from a course an undergraduate must have the written consent of the dean of his college. This consent must be stated on a form obtained by the student from the dean and returned to the Office of Admissions and Records bearing the dean's signature. Withdrawals from the University must be applied for on a form available at the Office of Admissions and Records; signatures as indicated on the form must be obtained, and the completed application returned to the Office of Admissions and Records.

During the first five weeks of a semester a formal withdrawal is marked *W* on the student's record. After the first five weeks and prior to the last two weeks of instruction during a semester, a formal withdrawal is marked *W* if the work of the student was passable; otherwise it is marked *F* (for failure). No withdrawals from courses are permitted during the last two weeks of instruction in a semester, but a dean may allow a student to withdraw from the University for legitimate reasons. A student who ceases to attend a course without complying with the official procedure for withdrawing receives an *F* in the course. The effective date of withdrawal is the date recorded by the Business Office.

Other Changes of Students' Programs of Study. A student may transfer from one of the University's colleges to another at the end of either semester. Application for transfer must be made on a form supplied by the Office of Admissions and Records or one of the deans concerned. The application must be approved by the deans of the two colleges and should be returned to the Office of Admissions and Records at least two weeks before the end of the first semester, and by August 15 during the summer.

CREDITS, GRADES, GRADE POINTS, GRADE-POINT RATIOS

The University recognizes work accomplished by students in terms of *credits, grades, grade points, grade-point ratios,* and *honors.*

A *credit* (also called a *semester hour* and a *credit hour*) is given to a student for work satisfactorily accomplished during three hours a week spent in the preparation and recitation of assignments in a course, or in the field or laboratory. The normal division of time in nonlaboratory courses is one hour in the classroom and two hours in preparatory work.

Grades given in undergraduate courses are *A, B, C, D, F,* and *I.* The lowest passing grade is *D.* An *I* is given to a student who has failed to complete a small but important part of a semester's work before the semester grades are determined, if the instructor believes that failure was caused by conditions beyond the student's control and not by carelessness or procrastination. To receive credit for a course for which an *I* has been reported, the student must make up the incomplete work before Thanksgiving or the Easter recess of the semester following that for which the grade was given. If the work is not thus completed, the *I* will stand and the student will receive neither credits nor grade points in that course. If the work is completed, the instructor will report a semester grade, taking the completed work into consideration. Credit in a course for which an *F* is given may be obtained only by repeating the course and passing it.

Grades given in graduate courses are *H* (honors), *S* (satisfactory), and *U* (unsatisfactory). The honors grade is awarded for exceptionally good work. Graduate students in undergraduate courses are graded on the undergraduate scale, *A* to *F.*

Grade points are computed for all courses in which grades are reported, including Military Science, and Health and Physical Education. They are computed as follows: for each credit received in a course, 4 grade points are granted if the grade is *A,* 3 if the grade is *B,* 2 if the grade is *C,* and 1 if the grade is *D.*

Students entering as undergraduates with advanced standing are not given

The administration building is lighted at night for meetings and conferences. Other buildings on the campus are also used for evening courses offered by the Extension Division.

grade points upon work done elsewhere; but on work done in the University of Hawaii such students must gain grade points in the same proportion to credit hours required for graduation as that demanded of other students.

Grade-point ratios are determined by dividing the total number of grade points by the total number of credits for which a student has been registered. Courses for which grades of *W* or *I* were recorded are not included in the computation of such ratios nor are courses for which a grade of *F* was recorded, if credit is subsequently obtained for these courses.

Transfers to Other Institutions. Accredited American institutions of higher learning, including the University of Hawaii, give students who transfer credit toward graduation only in those courses in which they have received a grade of *C* or better. (See "Tuition and Fees" for further information about transfers.)

REQUIREMENTS FOR CONTINUED REGISTRATION

Scholastic accomplishment in the University of Hawaii is determined by the *grade-point ratio* (see above) at the end of any stated period, i.e., at the end of one semester, two semesters, etc.

Further registration is denied to the following classes of undergraduate students:

1. Those who have failed to pass in any semester (or who were not passing when they withdrew from the University) in 50 per cent of their registered credits.
2. Those who have failed to earn, after two semesters' attendance, a minimum of one and one-half times as many grade points as the total of their registered credits.
3. Those who are deficient in speech or composition after two semesters' attendance and who have less than a 2.0 grade-point ratio in other subjects.
4. Those who have failed to earn, after four semesters' attendance, a minimum of one and eight-tenths times as many grade points as the total of their registered credits.
5. Those whose progress in speech is unsatisfactory after three semesters of speech instruction. (Students who have persistently absented themselves from speech classes will not be allowed to appear before the examining board to remove this deficiency.)

Students who become ineligible for further registration at the close of the second semester of any year may register for the succeeding summer session. The credits and grade points earned in such sessions will then be included in determining eligibility for further registration.

Students who have been dropped from the University may apply for readmission. Such applications should be submitted, in writing, to the chairman of the Committee on Scholastic Standing at least one month prior to the opening of the semester for which admission is requested. Usually readmission will not be granted until at least one semester has elapsed since action was

taken in dropping the student. Only in unusual circumstances will a student be readmitted after having been dropped for the second time.

Whenever, in the opinion of the dean of a college, a student's work makes such action necessary, the dean may warn the student or place him on the grade-point rule. The grade-point rule is the requirement that a student earn twice as many grade points as credits for which he is registered, in other words, a *C* average. Failure to comply with the grade-point rule may result in refusal by the Committee on Scholastic Standing to permit further registration.

Ordinarily failure in the first semester of a year course bars the student from registering for the second semester of that course.

Warnings of low scholarship are given by instructors and deans, usually at the end of the first and second six-week periods of each semester, but the student should not assume that his work is of passing grade merely because he has not been warned. The University assumes no responsibility if a warning that has been mailed to a student fails to reach him.

If a student has been in attendance up to the time of the final examination but is absent from the examination, the instructor may give an "Incomplete" for the course. If within one week no satisfactory reason is given by the student for his absence from the final examination, the instructor must turn in a removal of the Incomplete, counting the final examination as *F* in computing the grade for the course.

Regular attendance at class and laboratory sessions is expected. Unavoidable absence should be explained to the instructors concerned.

STUDENT DISCIPLINE

University of Hawaii students are expected to observe accepted University and community standards of conduct. Disciplinary authority is exercised by the University Committee on Discipline, composed of the deans of the several colleges, a faculty member, and a student appointed by the President of the University, and the Dean of Student Personnel.

Traffic Violations. Students who receive written notices of the violation of campus traffic regulations will (1) have no grades recorded, and (2) be denied further registration until such time as the violations are adjusted to the satisfaction of the University Treasurer.

Library Fines. Students who fail to satisfy Library fines by the end of a semester will be denied (1) permission to register for the following semester or summer session, (2) graduation at the end of the semester in question, and (3) honorable dismissal.

UNDERGRADUATE DEGREE REQUIREMENTS

Credit and Grade-Point Requirements. The minimum credit requirement for the baccalaureate (bachelor's) degree in all colleges is 130. In addition,

the student must have earned at least twice as many grade points as the total of registered credits.

Kinds of Baccalaureate Degrees. Upon satisfactory completion of a regular program in the College of Applied Science and the College of Agriculture, a candidate is granted the degree of Bachelor of Science (B.S.); the diploma designates the particular program that has been pursued.

The degrees of Bachelor of Arts (B.A.) and Bachelor of Fine Arts (B.F.A. in Art) are granted upon the satisfactory completion of the prescribed programs in the College of Arts and Sciences.

Satisfactory completion of a regular program in Teachers College leads to the award of the degree of Bachelor of Education (B.Ed.). Holders of bachelor degrees who complete the Teachers College five-year program, by taking a year of additional work in Teachers College, are awarded five-year diplomas.

The degree of Bachelor of Business Administration (B.B.A.) is granted upon the satisfactory completion of a regular program in the College of Business Administration.

Residence Requirements. The University grants baccalaureate degrees only to those students who earn a minimum of 30 semester hours in residence (that is, in class or laboratory work at the University of Hawaii).

Degree candidates must be registered and in attendance during the semester or summer session in which the degree is to be granted. A college dean may modify this requirement, in certain exceptional cases, by granting a leave of absence.

Time Within Which Work Must Be Completed. All graduation requirements for baccalaureate degrees must be completed within 10 years of the first registration. The college deans are empowered to extend this period in certain exceptional cases.

Credit by Examination. Undergraduate students who have been in attendance at the University of Hawaii for one semester may, upon presentation of evidence that they have had the equivalent of a course through experience or training but have not received college credit for the course, make application to receive credit by examination in the course. Regular students should apply to the appropriate college dean, and unclassified students to the Dean of Student Personnel. Applications must be made before the end of the first six-week period of a semester, and only one examination in any course will be given during a semester. A fee is charged for each examination. (See p. 50.)

Failure to pass such an examination results in a grade of *F* being entered upon the student's permanent record.

Course Examinations. Final examinations are required in all undergraduate courses except directed reading, research, or seminar courses. No examinations (other than short quizzes) are allowed during the two weeks just prior to the final examination period.

TUITION AND FEES

Students registered for 12 or more credit hours in any semester pay $85 for tuition and $10 for registration per semester. Summer session students and students registered for fewer than 12 credit hours in any semester pay $8.00 per credit hour. In addition, summer session students pay $1.00 activities fee.

Persons who register after the announced days of registration pay a late registration fee of $1.00.

All students registered for daytime courses pay a "Student Health Fee" of 75 cents each semester.

All fees must be paid in full at the time of registration, and no registration card will be finally accepted until it is endorsed showing payment.

Veterans registering under the G. I. Bill must present proper Certificates of Eligibility and Entitlement, or register as nonveterans and pay all fees. Reimbursement, as authorized by the Veterans Administration, will be made to those who present the above certificates prior to the middle of the semester.

Laboratory fees, uniform and awards fees in Military Science, and special course fees are stated in the description of courses. If the instructor feels it is justified, students may be charged for excessive breakage of equipment.

Students who take the college aptitude test pay a $2.00 fee at the time of examination.

Tuition and laboratory fees may be refunded to students who withdraw from courses, the percentage refunded to be in accordance with the following schedule:

Withdrawal during

first two weeks of instruction	100%	fifth week of instruction	40%
third week of instruction	80%	sixth week of instruction	20%
fourth week of instruction	60%	remainder of semester	0%

In no case is the registration fee, or any part of it, refunded.

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. This fee does not apply to complete withdrawals from the University.

A fee for diploma or certificate must be paid to the Business Office before any such diploma or certificate can be received by a student. The five-year diploma fee is $2.50. For all other degrees and diplomas the fee is $5.00.

A graduate student receiving an advanced degree must pay, before the degree is awarded, a fee of $4.00 to cover the cost of binding two copies of his thesis.

Caps, gowns, and hoods for graduation ceremonies may be rented for $2.00.

A student who requests the Office of Admissions and Records to send a transcript of his work to another institution is not required to pay for the first copy but is charged $1.00 for each subsequent copy. Transcripts of students whose records indicate indebtedness to the University carry the following statement: "Denied further registration. See Discipline file."

A fee of $8.00 per credit is charged for "Credit by Examination," payable at the time of application for the examination.

A fee of $10 is charged for any special examination in regularly constituted courses at other than the specified time.

Steel book lockers for student use are situated in Wist Hall. The use of a locker for the first and second semester may be obtained at Room 9, Hawaii Hall, for $1.00. All keys must be returned before Commencement.

At the request of the Associated Students of the University of Hawaii (ASUH) and with the consent of the Board of Regents, the University Business Office collects certain ASUH fees at the time tuition and registration fees are collected. These ASUH fees, approximately $10 each semester, include membership in the ASUH for undergraduates taking 12 or more credit hours, class dues, the use of Hemenway Hall, and participation in the social, cultural, and recreational programs provided by the Hemenway Hall Board of Governors. For other students the ASUH fee is optional. These fees are not collected for the summer session. Privileges that these fees purchase are described in the *ASUH Handbook* available to all students.

MILITARY TRAINING

Instruction is offered in military and air science and tactics in accordance with the requirements stipulated by Congress in legislation relating to land-grant colleges. The first two years of courses in military or air science must be taken by every male student who is an American citizen, who meets the required physical standards, whose twenty-third birthday has not passed at the time of enrollment in the University, who (1) is a freshman or sophomore, or (2) is an unclassified student carrying more than 11 credit hours of work and having fewer than 60 college credits. An alien or a student not physically qualified may register for the basic courses at his own expense with the consent of the department chairman. Students who have satisfactorily completed three years of training in the Junior Division may be excused from the first year; veterans with more than six months of military service may be excused from part or all of the first year by the dean of a college upon the recommendation of the department chairman; and veterans with more than one year of service may receive credit for the basic courses. All such students should clarify their status with the Military or Air Science Department prior to their first registration in the University.

Training in the advanced courses is optional for selected juniors and seniors who have completed or received credit for the basic courses, provided the number of such students does not exceed the quotas authorized by the Department of the Army or Air Force. Students must be enrolled for 12 or more semester hours in order to take advanced military training. Completion of the advanced courses leads to a Reserve commission in the Army or Air Force.

Advanced students and certain selected freshmen and sophomores are given Selective Service deferments within authorized quota limitations. Deferments are initially given in the second semester of the freshman year and remain in effect as long as the student is regularly enrolled (12 or more semester hours), is in good standing, and continues in military training.

UNIVERSITY EXTENSION DIVISION

The Extension Division offers both credit and noncredit courses on the campus, and in centers off the campus at convenient locations. For the convenience of the public, such courses are usually scheduled after 5:00 P.M.

A program of correspondence credit courses is offered for those who cannot attend regularly scheduled classes. Credits earned in correspondence courses may be counted toward a bachelor's degree, but not more than 25 per cent of the total required for the degree may be in correspondence courses, and such courses do not give residence credit.

Admission to credit courses is governed by general University admission requirement (see pp. 41–44).

Noncredit courses are open to all adults who have had the equivalent of a high school education.

Announcements of courses and other forms of service are issued from time to time.

HEALTH, PHYSICAL EDUCATION, AND SPORTS

The University expects every student to safeguard his health and offers certain aids toward that end. Before entering the University, every new student must have a medical examination by a licensed physician. The student makes his own arrangements and pays the physician. The University provides a form for the physician to use in reporting the examination. If subsequent examinations are needed, the University makes them in its dispensary without cost to the student.

All students are required to have yearly chest X-ray examinations. These are provided free-of-charge by the mobile unit of the Department of Health. Failure to comply with this requirement precludes registration for the following semester.

At the dispensary a registered nurse is on duty throughout the day and a physician during certain hours. First-aid service is available to students suffering from minor ills and injuries; no charge is made for this service and no responsibility is assumed by the University. Any student who needs medical attention beyond that which the University can reasonably give should make his own arrangements with a physician.

The University also offers instruction in health and conducts a program of recreation and sports designed to promote the health of students. Freshman and sophomore men and women under 25 years of age who are registered for 12 or more semester hours of academic work must take at least one credit hour in Health and Physical Education courses each semester (see "Health and Physical Education" under "Courses of Instruction"). All students are required to take Health and Physical Education 130, Personal Hygiene.

Students engaged in officially sanctioned varsity sports may be exempted from the normal Health and Physical Education requirement during the semester

of such participation upon petition to the academic Dean and substantiation of such participation by the Director of Athletics.

Intramural sports are planned with a view to serving the Health and Physical Education Department and to supplementing the regular courses offered.

Varsity sports are conducted independently of the activities of the Health and Physical Education Department. They are governed by a Board of Athletic Control composed of 11 members: three faculty members appointed by the President; three alumni members appointed by the Governing Board of the Alumni Association; three students—the president of the ASUH, and one senior and one junior appointed by the president of the ASUH, with approval of the Student Council; the Treasurer of the University, ex officio; and the Director of Athletics, ex officio. The Board forms policies for intercollegiate athletics, drafts budgets, and makes contracts and other arrangements for contests between the University of Hawaii and other colleges and athletic groups.

Although the University takes reasonable precautions, it assumes no responsibility for injuries received in sports or games.

SCHOLARSHIPS AND FELLOWSHIPS

Scholarship aid is provided through appropriations by the Territorial Legislature and contributions from private organizations. A few scholarships are supported by endowment funds. Awards are based, in general, on (1) character, (2) scholastic ability and achievement, and (3) financial need.

The period covered is usually one year, the chief exception being in the case of the Territorial Scholarships which cover four years. The granting of a scholarship implies that the recipient is expected to carry a regular load of college work with success. A scholarship may be withdrawn at the close of any semester in which a satisfactory academic record is not maintained.

The chief kind of aid for entering freshmen consists of the Territorial Scholarships described below. For freshman students there are few other scholarships available. However, several community organizations provide scholarships for deserving local students who wish to enter the University. Full information about scholarships offered by the University for entering freshmen is sent to the principals of all local high schools during the spring.

For undergraduate students of sophomore rank or above, numerous scholarships are available. Information may be obtained from the chairman of the Scholarship Committee.

Prospective graduate students who need financial assistance should communicate with the Dean of the Graduate School, who will give information concerning aid which can be offered.

Grants and Other Aids. For students from abroad, the University Board of Regents has provided a limited number of tuition scholarships which have the value of $190 each. Requests for such aid will be considered only after admission to the University has been granted.

The Standard Oil Company of California provides two $400 grants to outstanding students. Information may be obtained from the Scholarship Committee.

The Sears Roebuck Foundation grants four $500 scholarships in general agriculture. These scholarships are administered by a committee of five—three representing the College of Agriculture and two the University Scholarship Committee.

The Kekaha Sugar Company offers a four-year scholarship of $250 a year to a young man whose family is connected with the company. Information may be obtained from the chairman of the Scholarship Committee or from the company.

The John Fee Embree Scholarship of $300 is awarded to an outstanding upper division or graduate student in the Social Sciences, preferably Anthropology or Sociology.

Mildred and Leland Ira Doan offer two annual $500 scholarships to island students specializing in Chemistry.

The Li Foundation (New York) offers a fellowship of $5,000 including transportation, good for two years at an accredited American university for full-time graduate work leading to an advanced degree which may be obtained within a two-year period, to a Hawaiian-born graduate of the University of Hawaii. Medicine, dentistry, or other professional fields requiring more than two years of graduate work are excluded. Candidates must furnish proof of good physical health, good moral character, democratic mindedness, and good command of English. In addition, they must have completed the baccalaureate degree not more than three years prior to the fellowship selection, must have been in the upper 5 per cent of the graduating class, and must be able to meet the academic requirements for acceptance as a full-time advanced degree candidate.

Territorial Scholarships. Twelve scholarships of $190 each, awarded annually to entering freshmen (two scholarships to residents of each representative district in Hawaii); held four years, provided that beneficiary maintains a satisfactory record of work on the campus; supported by the Territorial Legislature.

Other Scholarships Administered by the Scholarship Committee. Alex C. Rattray (sponsored by the Hawaii Chapter of the National Association of Cost Accountants); Alonzo Gartley (in agriculture); ASUH Scholarship-Leadership grants; Chinese Community; Fushiminomiya Memorial Scholarship Endowment Fund; Harry H. Collins; Hawaiian Junior Chamber of Commerce; Kenji Yamaguma Memorial; Korean University Club; Leora Parmelee Dean (sponsored by the Women's Campus Club); Rama Watumull Memorial; Riley H. Allen; Ruth C. Scudder Memorial (sponsored by the Women's League of Central Union Church); Stephen Spaulding; Teachers College Club; Theodore R. Rhea Hawaii Cancer Society Memorial; United Chinese Society.

Scholarships Administered by Individuals and Private Organizations, with Assistance from the University Scholarship Committee. Associated Chinese University Women; Chinese Women's Club; City Mill Company; Ha-

waii Congress of Parents and Teachers, Inc.; Hawaiian Pineapple Company; Honolulu Japanese Chamber of Commerce; Hung Wo and Elizabeth L. Ching; Kauai High School Alumni Association; Leilehua High School Alumni Association; Retail Board of the Chamber of Commerce of Honolulu; Soroptimist Club; Te Chih Sheh; Wallace Rider Farrington (for graduates of Wallace Rider Farrington High School, sponsored by the Honolulu Star-Bulletin); Western Pacific Teachers' Scholarship (sponsored by the Zonta Club of Honolulu); Yang Chung Hui.

Scholarships Administered Entirely by Private Organizations. The Scholarship Committee has no direct information about the independent awards listed. Buddhist Fellowship Society; Chinese University Club; "Chu" Baldwin Memorial (sponsored by Puunene Community Association); Easy Appliance Company; Elks (the Benevolent and Protective Order of Elks, Lodge No. 616, of Honolulu); Hawaii Federation, Young Buddhists Association; Honolulu Chapter, National Foundation for Infantile Paralysis; Honolulu Community Chest; Hui Hanalike; Jack Johnson Memorial Scholarship; Kalihi U-Drive Company; Leeward Oahu Lions Club; Luz-Vi-Min-Club of Maui; Maui A.J.A. Veterans Club; Molokai Lions Club; Pacific Fellowship (sponsored by the American Association of University Women); Pilot Club; Timarau Club of Honolulu; Wahiawa Chamber of Commerce; YWCA.

General inquiries should be addressed to the Chairman of the Scholarship Committee, University of Hawaii, Honolulu 14, Hawaii.

LOAN FUNDS

Through the generosity of various organizations and individuals, certain funds have been provided from which students may borrow—either in small amounts to meet emergencies or in larger sums in order to defer part of the payment of tuition costs. A student wishing to make use of these funds should consult the Dean of Student Personnel with respect to the proper procedure for application and the conditions under which the various loans are granted. Loan funds include the following:

Alumni Fund—Molokai Chapter
Chinese Students' Alliance Fund
Commerce Club Fund
Edgar Wood Memorial Fund
Future Farmers of America, Uniwai Chapter Fund
George H. Lamy Fund
Hawaiian University Association Fund
Helen Strong Carter Dental Fund
Honolulu Civic Association Fund
Inez Wheeler Westgate Fund
Japanese Students' Alliance Fund
Louise S. Jessen Memorial Fund
Mary L. Kelsey Fund
Minnesota Club Fund
Moir-Ross Health Fund
N.G.B. Fund
Ruth Alexander, M.D., Student Fund
Representatives Club Fund
Senior Class Fund
Student Fund of Teachers College

PRIZES AND AWARDS

Dean Prize for Undergraduate Research. In 1927 the faculty of the University, in honor of Dr. Arthur Lyman Dean, resigning President, established the Dean Prize Fund, the proceeds to be used in stimulating interest in undergraduate research. Any senior in the University may compete for this prize of not less than $25 nor more than $50 each year by presenting to the Dean Prize Committee a thesis in which he reports fully upon his research in any field of intellectual endeavor. The committee, appointed by the President, selects the thesis which in its judgment is the best example of originality, independence, logic, and form of presentation. The winning paper is placed in the Hawaiian Room of the Library.

Banks Memorial Prize. The Charles Eugene Banks Memorial Prize, the income from a $500 endowment, is awarded each year to the student whose manuscript is judged to be the best received in a creative writing contest.

O. C. Magistad Award of the Hawaiian Section of the American Chemical Society. A one-year student membership in the American Chemical Society, and subscriptions to several of the society's journals, are awarded each year to the outstanding senior majoring in chemistry. The name of the winner is engraved on a bronze plaque in the Chemistry Building.

Phi Beta Kappa Recognition Award. An award by the University of Hawaii Alpha Chapter of Phi Beta Kappa in recognition of high scholastic standing among sophomores in the College of Arts and Sciences

Phi Kappa Phi Prize. The Hawaii chapter of Phi Kappa Phi honor society awards a $20 cash prize to the senior who graduates with the highest scholastic record in his class.

Carl F. Knobloch Prize in Government. Awarded to an outstanding student in government.

Best Soldier Awards. The Honolulu Star-Bulletin sponsors an annual award in which two gold medals are presented to cadets of the first-year basic course of the Reserve Officers' Training Corps, one to the outstanding Army cadet and one to the outstanding Air Force cadet. Judgment is based on scholastic standing in military or air science as well as leadership.

Real Deans Awards of Honor. The Associated Students of the University of Hawaii annually awards medals to students who, in the opinion of fellow students, have given time and effort willingly, untiringly, and without thought of reward to the promotion of ASUH activities.

Berndt Prizes for Extemporaneous Public Speaking. The Associated Students of the University of Hawaii annually awards medals to the students judged best in an extemporaneous speaking contest.

University Oratory Prizes. The Associated Students of the University of Hawaii annually awards medals to the students judged best in an oratorical competition.

Theatre Group Awards. The Theatre Group Council annually awards pins to those graduating seniors who have been most valuable to the Theatre Group.

Warrior of the Pacific Trophy. Since 1928 the United States Department of the Army has supervised an annual rifle marksmanship competition among Reserve Officers' Training Corps infantry units in American universities and colleges for the possession of a bronze statuette of a native Hawaiian soldier. Residents of Hawaii offer the trophy for the competition.

Hawaiian Pineapple Company Summer Travel Award. An annual award, for two juniors in home economics, based on scholarship, extracurricular activities, and ability. It provides a trip to the American Home Economics Convention, where the students assist with the Hawaiian Pineapple Company's exhibit and visit various educational institutions and commercial establishments employing home economists.

Danforth Summer Fellowship Awards. Awards by the Danforth Foundation and Ralston Purina Company of St. Louis, Missouri, for an outstanding junior in agriculture and an outstanding junior in home economics. Transportation is provided from San Francisco to St. Louis. Representatives of 48 state universities spend two weeks in classes at the Ralston Plant and two weeks in leadership training at the American Youth Foundation, Shelby, Michigan.

Major John A. Johnson Memorial Award. An annual award to the Army ROTC student with the best scholastic record at the end of the sophomore year who is approved for advanced training.

Captain H. Gaylord Dillingham Memorial Award. An annual award to the Air Force ROTC student with the best scholastic record at the end of the sophomore year who is approved for advanced training.

Hawaiian Botanical Society Award. An annual award, customarily $50, to a senior student on the basis of a thesis on an announced topic in theoretical or applied botany.

Das Prize in Asian History and Politics. An annual cash prize of $50, offered by the Taraknath Das Foundation, awarded to a senior selected by a faculty committee appointed by the President.

Sigma Pi Sigma Recognition Award. An award by the University of Hawaii Chapter of Sigma Pi Sigma in recognition of high scholastic standing among sophomores in physics.

HONORS

Honors may be granted at graduation to undergraduates who have a grade-point average of 3.4 or above for their undergraduate work. At least 60 semester hours of such work must have been at the University of Hawaii during a period not exceeding six years prior to graduation.

Shortly after the close of each semester the *Deans' List* gives the names of all full-time undergraduate students who achieved a grade-point average of 3.5 or above for the preceding semester.

In addition the University has campus chapters of six national honorary societies—Phi Beta Kappa (founded at William and Mary in 1776, encourages study in the liberal arts and sciences and recognizes high scholastic attainment in these areas; to be eligible for election a student must have pursued a broad course of study, definitely liberal in character including work in foreign languages and mathematics, leading to the Bachelor of Arts degree; election to Phi Beta Kappa is regarded as one of the highest undergraduate honors; Alpha Chapter was installed at the University of Hawaii in 1952); Phi Kappa Phi (General Scholarship); Sigma Xi (Sciences); Pi Gamma Mu (Social Sciences); Phi Delta Kappa (Education); Sigma Pi Sigma (Physics); and Omicron Delta Kappa (Scholarship and Leadership in Activities).

SUMMER SESSION

The University regularly conducts a six-week summer session in which many of the required courses of the college curricula are offered. Student programs are usually limited to six credit hours. The *Summer Session Announcement* may be obtained from the Office of Publications and Information.

The 1957 regular summer session will run from June 24 to August 2 and the postsession from August 5 to August 23.

Student Activities and Housing

THE ASSOCIATED STUDENTS of the University of Hawaii is a self-governing organization whose major objective is to promote and direct undergraduate extracurricular student activities and to co-operate with the University administration in student affairs. Its members include all regular students who pay ASUH fees. An elected council directs its activities. The *ASUH Handbook* describes the organization and functions in detail.

Among the activities in which the ASUH engages are athletics (football, baseball, track, basketball, swimming, and minor sports), debating, dramatics, a semiweekly newspaper *(Ka Leo o Hawaii)*, and a yearbook *(Ka Palapala)*.

Ka Leo o Hawaii and *Ka Palapala* are integral parts of the curriculum in journalism and are to be regarded as workshops for students enrolled in English 120-121 (Newswriting) and English 222 (Publishing and Editing). Students are not eligible for positions on the editorial staffs of student publications unless they are taking or have taken at least one of the regular courses in journalism.

The University of Hawaii Theatre Group presents each year plays which give opportunities for participation and study to the maximum number of interested students.

All regular students of the University are eligible to try out for membership in the music organizations. Tryouts for the A Cappella Choir, Chorus, University Band, Orchestra, and vocal and instrumental ensembles are conducted at the beginning of each school year, and at other times by special appointment.

Hemenway Hall is the center of campus leisure-time activities, facilities, and services. Faculty, students, and alumni are represented on the Board of Governors, which administers the building and sponsors the programs. The Board is affiliated with the National Association of College Unions.

Student societies include some 70 scholastic, honorary, professional, religious, and social organizations.

The staff of the Office of Student Personnel assists students with such personal problems as residence, health, part-time employment, scholastic progress, social life, vocational guidance, and finance. In co-operation with the University Treasurer, arrangements are made for loans to students in good standing.

The Bureau of Testing and Guidance offers educational, vocational, and personal counseling and gives aptitude, interest, and other psychological tests as well as tests required by other institutions.

LIVING ACCOMMODATIONS AND EXPENSES

Limited housing and eating facilities are maintained on the campus. The University cafeteria serves two meals a day, six days a week, at an average cost of $1.00 per day. The Snack Bar is open during the school day for light refreshments.

Campus Housing. Requests for assignment to University dormitories should be addressed to the Office of Student Residences, Administration 126, University of Hawaii, Honolulu 14, Hawaii.

MARY DILLINGHAM FREAR HALL has accommodations for 144 women. The rooms are attractively furnished, and each room has a large picture window with a view of either the Koolau Mountains or Diamond Head. All rooms are double, but arrangements may be made for single accommodations if space is available. Rent is $90 per semester, and $60 for the summer session. A snack bar operates during the early morning and evening hours.

HALE LAULIMA is a co-operative dormitory which houses 27 women in double rooms. Residents assist in the cooking and housekeeping. It is reserved for Island girls and assignments are based largely on financial need. Rent is $75 per semester. On school days only breakfast and dinner are served. Living expenses approximate $55 per month.

MEN'S HOUSING BARRACKS are converted army barracks with accommodations for 65 men in small single rooms. Showers, washrooms, and lounge facilities are in separate adjacent buildings. Rent is $40 per semester.

The are no housing facilities on the campus for married students.

Off-Campus Housing. To supplement campus housing, the University maintains a file of off-campus dormitories, rooming houses, single rooms in private homes, and a few apartments. The Office of Student Housing and Part-Time Employment gives all possible assistance in locating suitable accommodations after the student arrives.

ATHERTON HOUSE, the YMCA dormitory adjoining the campus, houses 68 men. Inquiries should be addressed to the Director, Charles Atherton House, 1810 University Avenue, Honolulu 14, Hawaii.

Expenses. Minimum expenses of the average student are estimated at from $800 to $1,200 a year for board, room, tuition, registration, course fees, class and student body fees, and books. These estimates do not include the cost of clothing, laundry, transportation, and other personal items. Students from outside the Territory should add the cost of transportation to and from Hawaii and additional items for adjustments in a new community. Some students earn part of their expenses by part-time employment.

For further information on either off-campus housing or part-time employment, address the Counselor for Student Housing and Part-Time Employment, Administration 130, University of Hawaii, Honolulu 14, Hawaii.

College of Arts and Sciences

THE COLLEGE OF ARTS AND SCIENCES is dedicated to the task of giving to its students a general education that will have breadth as well as depth. It moves in the liberal arts tradition and attempts to give a comprehensive acquaintance with the thought and achievement basic to civilization. Its courses are directed toward the development in students of ideals, interests, and attitudes characteristic of cultured people. They attempt to develop the ability to think clearly and to act upon conviction.

Preprofessional training for such activities as dentistry, medicine, law, the fine arts, social work, and public administration is also provided by stipulated combinations of courses. All of the four-year programs lead either to the Bachelor of Arts or the Bachelor of Fine Arts (in Art) degree.

Its geographical position midway between continental America and the Far East makes Hawaii more than ordinarily conscious of the increasing importance of the Orient in world affairs and thinking. Therefore, it is logical that more than usual attention is given to the history, languages, literature, art, institutions, and philosophy of the major Asian countries and the people of the Pacific area.

ADMISSION

Admission requirements, except for the premedical and predental programs, are the same as those for admission to the University as a whole. (See pp. 00–00.)

Each freshman in the College is admitted, for lower division classification purposes, to one of the following Groups, the selection depending upon his interests: Social Sciences; Languages, Literature, and Art; Biological and Physical Sciences.

DEGREE REQUIREMENTS

To be entitled to the Bachelor of Arts or Bachelor of Fine Arts degree from this College a student must:

(1) Meet certain basic requirements of the first two years.
(2) Complete a major field of study as outlined by the major department.
(3) Have at least 50 semester hours of credit in other than introductory courses.
(4) Have an aggregate of at least 130 semester hours of credit.
(5) Have a 2.0 (a *C* average) grade-point ratio for all registered credits, and in the major field. (See "Undergraduate Degree Requirements.")

CURRICULA

The curricula of the College of Arts and Sciences are built around the major fields of concentration. All students must meet the basic requirements of the first two years, and complete a *major,* with related courses, during the last two years. These requirements, with the necessary electives, constitute a curriculum in each case. A major consists of 24 to 36 semester hours in some one field of concentration. Related courses (generally upper division) are courses in other departments which are associated with and contribute to the major. They are not counted in the total number of hours required for the major. Twelve semester hours is the maximum which any department may require in related courses. *The major must be indicated by the beginning of the third year, and for chemistry and fine arts and the premedical program it should be indicated at the beginning of the first year.*

BASIC REQUIREMENTS

FIRST YEAR	SECOND YEAR
English 100 or 101	English 150
Foreign language (B.A. only)	Foreign language (B.A. only)
Health and Phys. Ed. 101, 102, or 105, 106	Government 150
History 100	Health and Phys. Ed. 103 or 107 and 130
MS 100 or AS 102	History 110
Science	MS 150 or 151 or AS 152
Speech 100	Speech (as required)

(The B.F.A. curriculum requires some changes of sequence in order to allow for more Art courses in the first two years.)

In addition, six of the following must be completed: Anthropology 150, Art 140, Drama 140, Economics 140 or 150, Mathematics 150 or 151, Music 110, Philosophy 100 or 150, Psychology 150, Religion 150 or 151, Sociology 151.

A number of these basic requirements may be anticipated in the secondary school program. Entering freshmen who have had four years of a single language at the secondary school level are excused from the foreign language requirement, and those in the Social Sciences, and Languages, Literature, and Art, who have had three years of science in a senior high school may be excused from the science requirement. Qualified students, upon reporting to the Admissions Office, may also take an examination in American history to satisfy the requirement of History 110.

For students in the Social Sciences and Languages, Literature, and Art who must take a year of science, the requirement may be satisfied by 6 to 8 credits from the following courses: Bacteriology 151; Botany 100; Chemistry 103; Entomology 170; Geography 150; Geology 150, 151, 152-153; Physics 102; Psychology 150; Zoology 100 or 110; or Science 120-121. If Science is elected, the whole year should be taken.

MAJORS

The following list indicates the departments in which students may major and the requirements for the major, viz., the total number of semester hours required and the specific courses in the department. A 2.0 (*C* average) grade-point ratio in the major is required for graduation.

ANTHROPOLOGY. *Major requirement:* 27 semester hours. *Required courses:* Anthropology 150, Sociology 151, and an even distribution between regional courses (250 to 260) and topical courses (265 to 275).

ART. *Major requirement:* 36 semester hours. *Required courses:* Art 150-151; 154-155, at least 12 hours in approved Art history courses, and others as needed to complete one of the divisions—Drawing and Painting, Applied Design, Ceramics, Advertising Art, History of Art, Weaving.

BACTERIOLOGY. *Major requirement:* 26 semester hours. *Required courses:* Bacteriology 151, 250, 260, 262, 264, Botany 259, Chemistry 232, Zoology 253.

BOTANY. *Major requirement:* 24 semester hours. *Required courses:* Botany 100, 201, 220, 253, 269, 279, 283, 297, or approved substitutes.

CHEMISTRY. *Major requirement:* 36 semester hours. *Required courses:* Chemistry 103, 149, 150, 230, 231, 255. As related courses, Mathematics 154, and a reading knowledge of scientific German are required.

CHINESE. *Major requirement:* 30 semester hours. *Required courses:* Chinese 100, 101, 200, 293-294, History 225.

DRAMA AND THEATRE. *Major requirement:* 24 semester hours. *Required courses:* Drama 150-151; 12 hours from 210, 220-221, 230-231, 240, and 245; 6 hours from 250, 260, and 265. In addition, 6 hours in dramatic literature, 3 hours in phonetics, interpretation, radio, or playwriting, are required.

ECONOMICS. *Major requirement:* 33 semester hours. *Required courses:* Economics 150-151, 256, 264, 296. Six hours from the following courses in Business may be counted toward the major: 261, 263, 265, 266, 267, 270, 282, 287.

ENGLISH. *Major requirement:* 24 semester hours of upper division courses. *Required courses:* 9 hours in "periods" of literature, 6 hours in single authors, 3 hours in American literature, 6 hours in the English language, writing, and criticism. The language requirement should be met by an ancient or modern European language.

ENTOMOLOGY. *Major requirement:* 30 semester hours. *Required courses:* Zoology 100, 170, 254, 255, 273, 298.

FRENCH. *Major requirement:* 20 semester hours, exclusive of French 100. *Required courses:* French 101, 201, 250, 280-281 or 282-283.

GEOGRAPHY. *Major requirement:* 27 semester hours. *Required courses:* Geography 150, 240, three continental courses, and one systematic course.

GERMAN. *Major requirement:* 20 semester hours, exclusive of German 100. *Required courses:* German 101, 200, 201.

GOVERNMENT. *Major requirement:* 27 semester hours. *Required courses:* Government 150, 289, and one course from each of the following groups: Com-

parative Government, International Relations, Politics, Public Administration.

HISTORY. *Major requirement:* 24 semester hours of upper division courses. *Required courses:* 9 hours from each of two of the three fields—United States, Pacific and Far East, European.

JAPANESE. *Major requirement:* 26 semester hours. *Required courses:* Japanese 100, 101, 203, 260, 299.

MATHEMATICS. *Major requirement:* 27 semester hours. *Required courses:* Mathematics 151, 152, 153, 154, 155, and at least 9 hours in upper division courses.

MUSIC. *Major requirement:* 36 semester hours. *Required courses:* Music 160-161, 170-171, 211, 260-261, 265, 268, and 6 hours in Applied Music, including 269. Piano technique sufficient to play ordinary accompaniments is recommended.

PHILOSOPHY. *Major requirement:* 24 semester hours. *Required courses:* Philosophy 150, 151, 200, 210, 280.

PHYSICS. *Major requirement:* 31 semester hours. *Required courses:* Physics 102, 255, 256, 262, 263, 270, 275, 276, 280, 281. English 210 and Engineering MD 101 are recommended.

PSYCHOLOGY. *Major requirement:* 29 semester hours. *Required courses:* Psychology 150, 260, 264 or 267, 275, 295, 298. As related courses, Mathematics 149 (or the equivalent) and Zoology 100 or 110 or 191 are required, and further work in Mathematics and Science recommended.

RELIGION. *Major requirement:* 24 semester hours. *Required courses:* Religion 151, 200, 201, 250-251 or 282-283.

SOCIOLOGY. *Major requirement:* 24 semester hours. *Required courses:* Sociology 151, 282, and one each from the following two groups: 254, 268, 270, 271; 262, 269, 272, 273.

SPANISH. *Major requirement:* 20 semester hours, exclusive of Spanish 100. *Required courses:* Spanish 101, 256, 257, 258.

SPEECH. *Major requirement:* 29 semester hours. *Required courses:* Speech 100 or 150, 201, 204, 220, 221 (first semester), 228, 250, 255, plus 3 hours in theatre. For students majoring in speech correction, Psychology 185, 270, 292 (or 295) and Zoology 110 and 191 are also required.

ZOOLOGY. *Major requirement:* 30 semester hours. *Required courses:* Zoology 100, 151, 261, 291, 298.

PREPROFESSIONAL AND GRADUATE PREPARATION

The following programs are recommended as offering desirable preparation in the various fields. They are suggested rather than required, as variations are often necessary in order to meet student needs or the stipulations of a particular professional or graduate school. Student programs should follow the recommendations of the appropriate national professional organizations, provide a good background in the humanities and social sciences, and meet the requirements of the College of Arts and Sciences.

There are no dental, law, medical, ministerial, or osteopathic schools in Hawaii.

FINE ARTS PROGRAM

This program is designed to provide basic preparation for a career in any one of several fields of art. Requirements include approximately twice the number of semester hours in art as for the Bachelor of Arts degree with a consequent lessening of the credits to be taken outside the department. A major may be obtained in Drawing and Painting, Applied Design, Ceramics, Advertising Art, History of Art, and Weaving.

PACIFIC ISLANDS STUDIES PROGRAM

The University offers graduate work leading to the Master of Arts degree in Pacific Islands Studies. This program provides both a regional specialization for those who intend to continue work for the Doctorate in a particular discipline, and an area background for those contemplating employment in business, government, or mission work in the Pacific Islands—Polynesia (including Hawaii), Micronesia, and Melanesia.

The required undergraduate preparation is 18 semester hours of courses dealing with the Pacific Islands, to be chosen from the following: Anthropology 250, 251, 252, 253, 266, 277, 278; Economics 262, 291, 292; English 263; Geography 260, 263, 265, 280; Government 261, 270, 271; History 221, 273, 276, 277; Psychology 280, 283; Sociology 250, 256, 257. A basic course in either Anthropology or Geography of the Pacific Islands is required.

PREDENTAL PROGRAM

AMERICAN DENTAL ASSOCIATION RECOMMENDATIONS

The Council of Dental Education has established the following *minimum* list of requirements for admission to approved dental schools:

		University of Hawaii Equivalent
Chemistry	General, and a half year of Organic	Chemistry 103, 159
Physics	One year	Physics 102
Biology or Zoology	One year	Zoology 100, 151
English	One year	English 101

Generally, at least 90 credit hours are required.

PRELEGAL PROGRAM

Most reputable law schools require a bachelor's degree for entrance. They do not specify major fields to be covered, but in general prefer a well-rounded background with a major in Economics, English Literature, Government, History, Philosophy, Psychology, or Sociology. A mastery of elementary logic and

mathematics, together with a good grasp of scientific principles, is considered desirable and work in elementary accounting is strongly advised; but increasingly it is being stated that the best prelegal training consists of a thorough grounding in the social sciences and humanities together with extensive practice in the arts of oral and written communication.

Basic requirements of the first two years, regardless of the chosen major, are the same. Because of apparent law school preference, Chemistry 103 is suggested for the science requirement, and either French or German for the language. The work of the last two years, aside from the major, is largely elective, but the following courses are especially recommended: Business 150-151; Economics 256, 261; Government 282; History 211, 252; Psychology 250, 295; Speech 150, 151.

PREMEDICAL PROGRAM

AMERICAN MEDICAL ASSOCIATION RECOMMENDATIONS

Preparatory school requirements include a minimum of 15 units of which at least 3 must be in English, 2 in some one foreign language, 2 in algebra, 1 in geometry, and 1 in history.

University requirements are a minimum of 60* credit hours as follows:

	Credits	University of Hawaii Equivalent
Chemistry	16	Chemistry 103, 159, 230
Physics	8	Physics 102
Biology	10	Zoology 100, 151, 261
English Composition	6	English 101
French, German, or Spanish	6	
Total	45	

Fifteen semester hours of electives from the following fields: bacteriology, botany, chemistry, economics, English, history, mathematics, psychology, sociology, and zoology.

PREMINISTERIAL PROGRAM

Accredited schools for ministers and directors of religious education require a bachelor's degree for entrance. They prefer students with a well-rounded background. A major in Religion itself is advised only when the background is particularly weak in Christian training. Majors in English, History, Philosophy, Psychology, or Sociology are almost equally helpful.

A preministerial student, by his junior year, should confer with the Director of the Hawaii School of Religion, which is affiliated with the University of Hawaii. He should also seek to meet the basic requirements recommended by

* A majority of medical schools now require 90 credit hours and give preference to applicants with a bachelor's degree.

the American Association of Theological Schools and examine the catalogues of the graduate schools he is considering attending.

PUBLIC ADMINISTRATION PROGRAM

Students expecting to enter the field of public administration major in Government and follow the program in public administration. They must complete the work required of a major in Government (see p. 63–64) and all courses offered in public administration.

In order to insure an adequate background of preparation, the following courses are strongly recommended: Government 248, 252, 254, 259, 276; Economics 261, 265, 270, 283; English 210; and a course in statistical methods.

Enrollment in the public administration program is open to persons engaged in public service who are desirous of training in public administration, and who are able to satisfy University admission requirements.

PREOSTEOPATHIC PROGRAM

The Osteopathic Bureau of Professional Education and Colleges recommends, and several osteopathic schools require, that preosteopathic students complete at least three years of college work. Such students are urged to emphasize general education rather than science specialization.

The minimum requirements for admission to an approved college of osteopathy are 60 semester hours (two years) from a college or university accredited by a regional or national accrediting agency. The specific subject and credit requirements, and the University of Hawaii equivalents, are identical with those of the predental program.

PRESOCIAL WORK PROGRAM

Students who plan to enter the School of Social Work (see p. 98–99) may major in any of the social sciences. They must have a minimum of 30 semester hours in social science, with 6 semester hours each from Economics, Government, Psychology, and Sociology. In addition to the introductory course, advanced courses may be chosen from the following: Economics 261, 281, 282, 283; Government 256, 282, 283; Psychology 185, 260, 264, 280, 290, 292, 295; Sociology 255, 256, 264, 267, 269, 280, 282. In addition, Social Work 200 must be taken in the junior or senior year.

A biological science should be elected to satisfy the lower division science requirement. A course in Statistics is recommended.

Intention of preparing for social work should be indicated to the College Dean by the beginning of the third year.

College of Applied Science

THE COLLEGE OF APPLIED SCIENCE prepares students for work in Engineering, Medical Technology, Nursing, and Recreation Leadership. This preparation includes training in fundamental scientific principles, development of leadership and professional ethics, and the general education of the individual. These programs lead to the degree of Bachelor of Science. The first two years of an Architectural program are offered.

ADMISSION

The number of students admitted in Engineering and Nursing is limited. Selection is made from applicants best qualified on the basis of admissions tests and high school records. Some of the programs of this College require special preparation in addition to the requirements for admission to the University as a whole (pp. 41–44). Engineering students who lack the required special preparation, or who are unable to carry heavy schedules, or who elect Advanced Military or Air Science usually require more than four years to meet degree requirements.

DEGREE REQUIREMENTS

In order to be eligible for the Bachelor of Science degree from this College a student must:

(1) Complete the course requirements of a curriculum.

(2) Have an aggregate of at least 130 semester hours of credit.

(3) Have a 2.0 grade-point ratio for all registered credits. (See "Undergraduate Degree Requirements.")

ENGINEERING CURRICULA

CIVIL ENGINEERING

The Civil Engineering curriculum is a four-year program preparing for the professional practice of civil engineering in hydraulic, sanitary, structural, and transportation work and for engineering work in construction and public service. This program leads to the degree of Bachelor of Science in Civil Engineering.

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Chemistry 103	4	Chemistry 103	4
English 100 or 101	3	English 101	3
Health & Phys. Ed. 101	1	Health & Phys. Ed. 102	1
Mathematics 151	3	History 110	3
Mathematics 152	3	Mathematics 153	3
Engineering Drawing 101	2	Mechanical Drawing 152	2
MS 100 or AS 102	1	MS 100 or AS 102	1
Civil Engineering 100	1	Speech 100	1
Total	18	Total	18

SECOND YEAR

Civil Engineering 101	4	Civil Engineering 102	4
English 155	3	Civil Engineering 251	3
Health & Phys. Ed. 103 or 130	1	Health & Phys. Ed. 130 or 103	1
Mathematics 154	3	Mathematics 155	3
MS 150 or AS 152	1	MS 150 or AS 152	1
Physics 104	5	Physics 104	5
Speech (as required)	1	Speech (as required)	1
Total	18	Total	18

SUMMER SESSION

Civil Engineering 227—3 semester hours

THIRD YEAR

Civil Engineering 252	3	Civil Engineering 231	3
Civil Engineering 253	4	Civil Engineering 255	4
Economics 140	3	Civil Engineering 276	3
English 210	3	Mechanical Engineering 203	2
Mechanical Engineering 202	2	Mechanical Engineering 282	3
Elective (Group I)	3	Elective (Free)	3
Total	18	Total	18

FOURTH YEAR

Civil Engineering 228	3	Civil Engineering 229	3
Civil Engineering 257	3	Civil Engineering 277	3
Civil Engineering 278	3	Civil Engineering 280	3
Civil Engineering 279	3	Civil Engineering 291	2
Physics 202	3	Civil Engineering 292	2
Elective (Group II)	3	Physics 202	2
		Elective (Group II)	3
Total	18	Total	18

GENERAL ENGINEERING

The General Engineering curriculum is a four-year program leading to the degree of Bachelor of Science in General Engineering. It is designed to provide broad training in the fundamental scientific principles upon which professional engineering is based.

FIRST YEAR

Same as the first year of Civil Engineering

SECOND YEAR

First Semester	Credits	Second Semester	Credits
Civil Engineering 101	4	Civil Engineering 251	3
English 155	3	Economics 140	3
Health & Phys. Ed. 103 or 130	1	Health & Phys. Ed. 130 or 103	1
Mathematics 154	3	Mathematics 155	3
MS 150 or AS 152	1	MS 150 or AS 152	1
Physics 104	5	Physics 104	5
Speech (as required)	1	Speech (as required)	1
Total	18	Total	17

THIRD YEAR

Civil Engineering 252	3	Mechanical Engineering 210	3
Civil Engineering 253	4	Civil Engineering 255	4
Mechanical Engineering 202	2	Mechanical Engineering 203	2
Physics 275	3	Physics 253	3
Mechanical Engineering 283	3	Civil Engineering 276	3
Elective (Group I)	3	Elective (Free)	3
Total	18	Total	18

A scale model of the University campus was built and presented to the University by the members of the student chapter of the American Society of Civil Engineers. Such projects are helpful in the University's program of expansion.

FOURTH YEAR

First Semester		Second Semester	
Physics 202	3	Physics 202	2
English 210	3	Physics 279	3
Mechanical Engineering 284	3	Physics 258	3
Mechanical Engineering 285	1	Mechanical Engineering 287	1
Electives (Group III)	8	Electives (Group III)	9
Total	18	Total	18

RECOMMENDED ELECTIVES

GROUP I: Air Science 202 or Military Science 200; Anthropology 150; Geography 150, 151; Government 155; History 100; Music 110; Philosophy 100, 150; Psychology 156; Sociology 151; Speech 150.

GROUP II: Air Science 252 or Military Science 250; Bacteriology 140; Business 230; Economics 292; Civil Engineering 293, 295, 296, 297, 298, 299; Geology 150; Mathematics 280; Mechanical Engineering 254.

GROUP III: Air Science 252 or Military Science 250; Business 150-151, 210, 230; Civil Engineering 291, 292, 299; Mathematics 280, 252-253; Mechanical Engineering 286, 293; Physics 255, 280, 281.

PREARCHITECTURAL PROGRAM

Students intending to take a degree in architecture must transfer to another institution at the beginning of the junior year. The second year of this program may be modified to fit the requirements of any school to which the student intends to transfer.

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Architectural Engineering 101	3	Architectural Engineering 101	3
Art 150	2	Art 151	2
Art 154	2	Art 155	2
English 100 or 101	3	English 101	3
Health & Phys. Ed. 101	1	Health & Phys. Ed. 102	1
Mathematics 151	3	Mathematics 152	3
MS 100 or AS 102	1	MS 100 or AS 102	1
Speech 100	1	Speech (as required)	1
Total	16	Total	16

SECOND YEAR

Architectural Engineering 103	3	Architectural Engineering 103	3
Architectural Engineering 153	2	Health & Phys. Ed. 130 or 103	1
English 155	3	Humanities Elective	3
Health & Phys. Ed. 103 or 130	1	Mathematics 154	3
Mathematics 153	3	Mechanical Drawing 152	2
MS 150 or AS 152	1	MS 150 or AS 152	1
Physics 102	4	Physics 102	4
Speech (as required)	1	Speech (as required)	1
Total	18	Total	18

MEDICAL TECHNOLOGY CURRICULUM

The Medical Technology curriculum provides for three years of course work on the campus and a fourth year of practical experience in hospital laboratories. Beginning with the summer session preceding the fourth year and continuing throughout the year, students register for Medical Technology 266, 267, and 268. Completion of this curriculum makes the student eligible for the Bachelor of Science degree and certification as a Medical Technologist.

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Chemistry 103	4	Chemistry 103	4
English 100 or 101	3	English 101	3
Health & Phys. Ed. 101 or 105	1	Health & Phys. Ed. 102 or 106	1
Mathematics 150	3	Mathematics 151	3
MS 100 or AS 102	1	MS 100 or AS 102	1
Speech 100	1	Speech (as required)	1
Zoology 100	4	Zoology 151	4
Total	17	Total	17

SECOND YEAR

Chemistry 149	4	Bacteriology 151	4
Chemistry 150	4	Chemistry 230	4
English 155	3	HPE 130 or 103 or 107	1
HPE 103 or 107 or 130	1	History 110	3
MS 150 or AS 152	1	MS 150 or AS 152	1
Speech (as required)	1	Speech (as required)	1
Zoology 191	3	Zoology 260	3
Total	17	Total	17

THIRD YEAR

Bacteriology 260	3	Bacteriology 264	3
Bacteriology 262	2	Chemistry 266	4
Chemistry 232	4	Elective	9
Zoology 253	3		
Zoology 262	3		
Elective	3		
Total	18	Total	16

SUMMER SESSION

Medical Technology 266—4 semester hours

FOURTH YEAR

Medical Technology 267	12	Medical Technology 268	12
Total	12	Total	12

SCHOOL OF NURSING

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN NURSING

This program combines academic and professional courses with practice and requires four academic years and two summer sessions. It is designed to prepare

young men and women for competent preventive and bedside nursing in any field of nursing, including public health nursing, and to provide a sound foundation of preparation for supervision, teaching, and administration in nursing.

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Chemistry 104	4	Bacteriology 145	3
English 101	3	Chemistry 104	4
Health & Phys. Ed. 105	1	English 101	3
Nursing 100	2	Health & Phys. Ed. 106	1
Nursing 105	1	Household Science 155	3
Sociology 151	3	Nursing 101	2
Speech 100	1	Speech (as required)	1
Total	15	Total	17

SUMMER SESSION

Nursing 102	2
Zoology 191	3
Zoology 192	1
Total	6

SECOND YEAR

English 155	3	Health & Phys. Ed. 107	1
Nursing 110	8	History 110	3
Nursing 115	3	Household Science 156	2
Psychology 156	3	Nursing 111	8
		Nursing 281	2
Total	17	Total	16

SUMMER SESSION

Nursing 210—8 semester hours

THIRD YEAR

Nursing 220	8	Nursing 220	8
or		or	
Nursing 230	8	Nursing 230	8
Nursing 231	2	Nursing 241	1
Psychology 185	2	Nursing 283	3
Sociology 267	3	Psychology 250	3
Total	15	Total	15

FOURTH YEAR

Nursing 200	8	Nursing 200	8
Nursing 240	5	Nursing 240	5
or		or	
Nursing 245	10	Nursing 245	10
Total	10 or 13	Total	10 or 13

CURRICULUM FOR REGISTERED PROFESSIONAL NURSES LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN NURSING

This program is designed to increase the ability of registered professional nurses for preventive and bedside nursing in any field of nursing, to provide

a sound foundation for preparation for supervision, teaching, and administration in nursing, and to prepare registered professional nurses for positions in public health nursing. It combines general education with professional courses so that registered professional nurses may obtain the degree of Bachelor of Science within a reasonable period of time.

Qualified applicants, approved by a special committee on selection, may enter the fourth year of the program to obtain training in Public Health Nursing for certification without completing the requirements for the degree.

In addition to the regular University entrance requirements, admission to this curriculum requires: (1) graduation from a school of nursing approved by the University; (2) registration as a nurse; (3) personal and professional fitness for advanced nursing positions as shown by credentials, interviews, and tests; and (4) good health as evidenced by a physical examination satisfactory to the University.

FIRST TWO YEARS

A maximum of sixty (60) semester hours of credit in advanced standing *may be allowed* for professional work in an approved hospital school. Credit will be granted only under the following conditions:

1. Satisfactory instruction in clinical courses required in the four-year nursing curriculum of the University of Hawaii as determined by scores on qualifying examinations prepared and scored by the National League for Nursing.
2. Completion of one year of successful work at the University of Hawaii (minimum of 2.0 grade-point ratio).

THIRD YEAR

First Semester	Credits	Second Semester	Credits
English 101	3	English 101	3
Health & Phys. Ed. 105	1	English 155	3
History 110	3	Health & Phys. Ed. 106	1
Household Science 270	3	Sociology 267	3
Psychology 156	3	Speech (as required)	1
Sociology 151	3	Electives	6
Speech 100	1		
Total	17	Total	17

FOURTH YEAR

Nursing 255	4	Nursing 255	3
Nursing 280	4	Nursing 281	2
Nursing 282	3	Nursing 283	3
Nursing 291	3	Psychology 280	3
Nursing 293	3	Social Work 200	3
		Electives	3
Total	17	Total	17

SUMMER SESSION

Nursing 290—6 semester hours

ELECTIVES

The nine credits of electives required in this program must be an integrated series of courses. The student may make a choice of an approved three course sequence, but will not be allowed to choose indiscriminately.

RECREATION LEADERSHIP CURRICULUM

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Anthropology 150	3	Botany 105 or 160	2
English 101	3	Economics 140	3
Health & Phys. Ed. 101	1	English 101	3
Health & Phys. Ed. 132	2	Government 155	3
MS 100 or AS 102	1	Health & Phys. Ed. 102	1
Sociology 151	3	Health & Phys. Ed. 170	2
Speech 100	1	MS 100 or AS 102	1
Zoology 110	3	Speech 101	1
Total	17	Total	16

SECOND YEAR

Art 142	2	Art 143	2
English 155	3	Health & Phys. Ed. 103	1
Health & Phys. Ed. 115	1	Health & Phys. Ed. 120	2
History 110	3	Health & Phys. Ed. 140	2
MS 150 or AS 152	1	MS 150 or AS 152	1
Music 140	2	Psychology 186	2
Psychology 156	3	Speech 150	3
Speech 102	1	Elective	4
Total	16	Total	17

THIRD YEAR

Health & Phys. Ed. 215 (for men) or 225 (for women)	2	Health & Phys. Ed. 217 (for men) or 227 (for women)	2
Health & Phys. Ed. 221	2	Health & Phys. Ed. 222	2
Health & Phys. Ed. 246	2	Health & Phys. Ed. 246	2
Health & Phys. Ed. 250	2	Health & Phys. Ed. 250	2
Health & Phys. Ed. 280	3	Health & Phys. Ed. 285	3
Sociology 250	3	Elective	6
Elective	3		
Total	17	Total	17

FOURTH YEAR

Education 252	2	Health & Phys. Ed. 241	2
Health & Phys. Ed. 234	2	Health & Phys. Ed. 249	2
Health & Phys. Ed. 248	2	Health & Phys. Ed. 252	5
Health & Phys. Ed. 252	5	Psychology 292	3
Health & Phys. Ed. 263	2	Elective	4
Elective	3		
Total	16	Total	16

ELECTIVES

Eight credits of electives must be selected from Group I. Additional electives from Group II must be selected to complete curriculum requirements of 130 semester hours. Substitutions for suggested electives may be approved by the adviser.

GROUP I: Art 154-155, 156, 160; Drama 150-151; Health and Physical Education 110, 111, 112, 113, 114, 116, 117, 123, 124, 211, 212, 219, 230, 233, 235, 237, 239, 247, 299; Household Science 150; Music 209, 210.

GROUP II: Air Science 202, 252; Anthropology 250; Art 140; Chinese 100; Drama 140; Geography 150; Geology 150; Hawaiian 100; History 100, 201, 276; Japanese 100; Military Science 200, 250; Music 110; Philosophy 100; Psychology 250, 257, 258, 260; Religion 150; Speech 151; Science 120-121.

Teachers College

THE FUNCTION of Teachers College is to prepare teachers for the public schools of Hawaii and to afford those already in service an opportunity to improve themselves professionally. Standard preparation for teaching positions in the public schools of the Territory requires four years of undergraduate work and a graduate year. The four-year program leads to the Bachelor of Education degree, and the year of graduate work to the Five-Year Diploma. Both the degree and the diploma indicate the level—Preschool-Primary, Elementary, or Secondary —for which the curriculum is designed.

ADMISSION

In addition to the general University admission requirements, applicants for admission to undergraduate curricula in Teachers College must meet certain standards of college aptitude, scholarship, health, personality, and oral English. Applicants for admission to the fifth-year or any other advanced program must take the National Teacher Examinations or present scores previously earned in this examination. The National Teacher Examinations are included in Education 261, required of all seniors in Teachers College. Admission to the fifth-year program leading to the Five-Year Diploma requires a grade of *C* or better in Practice Teaching, and professional preparation equivalent to that represented by the Bachelor of Education degree or the Bachelor of Science degree in Vocational Education.

DEGREE REQUIREMENTS

To be eligible for the Bachelor of Education degree, a student must:

(1) Have an aggregate of at least 130 semester hours of credit.
(2) Have a 2.0 grade-point ratio for all registered credits. (See "Undergraduate Degree Requirements.")
(3) Have met all University degree requirements.
(4) Have met the course requirements specified for one of the Teachers College curricula.

FIVE-YEAR DIPLOMA REQUIREMENTS

To be eligible for the Five-Year Diploma a student must:

(1) Have the Bachelor of Education degree or its equivalent, including:
    (a) directed teaching in amount and under conditions comparable to

those provided in the University of Hawaii laboratory schools; and

(b) course background, both in general education and in professional education, comparable to the specific requirements of one of the curricula offered by Teachers College.

(2) Have satisfactorily met the intern teaching and course requirements of the fifth-year curriculum offered by Teachers College.

PROFESSIONAL CERTIFICATE REQUIREMENTS

The standard certificate for public school teaching service in Hawaii is the professional certificate granted by the Department of Public Instruction. The general requirement for this certificate is five years of college work, including practice teaching and other professional course experiences. In addition, the candidate must have met the specific course and curriculum requirements for the grade of certificate sought (e.g., Preschool-Primary, Elementary, Secondary).

Requirements for the professional certificate can be met as follows:

(1) By fulfillment of requirements for the Teachers College Five-Year Diploma; or

(2) By earning 30 semester hours of credit after receiving the Bachelor of Education degree or its equivalent. Seven of these credits must be in Education courses designed primarily for graduate students, including Philosophy of Education, and 3 must be in Advanced Educational Psychology.

CURRICULA

The curricula in Preschool-Primary, Elementary, and Secondary education, with minor exceptions, are identical for the first two years, where the curriculum is designed to provide for a broad general background.

During the third year students are introduced to the professional information and background necessary for public school service. Differentiation appropriate to the selected curriculum (Preschool-Primary, Elementary, or Secondary) begins at this point. Students preparing for secondary school teaching utilize the electives included in the curriculum outline for this and subsequent years in meeting requirements for teaching field concentrations. These requirements range from 18 to 36 credits, and are designed to meet Department of Public Instruction requirements for certification.

The fourth-year program consists largely of professional education. One semester is devoted to practice teaching in the University laboratory schools, while the other provides necessary professional courses. One half of the students engage in practice teaching the first semester and take courses the second semester, while the other half reverses the order.

The program of the fifth year again becomes practically identical for all curricula, with intern teaching appointments being made at the appropriate level, and, in the case of prospective secondary school teachers, in the appro-

priate teaching fields. An alternation of supervised teaching and course work, similar to that in the senior year, is followed.

The curriculum in Dental Hygiene is sufficiently different to require separate listing.

PRESCHOOL-PRIMARY, ELEMENTARY, AND SECONDARY CURRICULA

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Anthropology 150	3	Education 100	1
Education 100	1	English 101	3
English 101	3	Health & Phys. Ed. 102 or 106	1
Health & Phys. Ed. 101 or 105	1	History 100	3
History 100	3	MS 100 or AS 102	1
MS 100 or AS 102	1	Sociology 151	3
Speech 100	1	Speech 105	1
Science 120	4	Science 121	4
Total	17	Total	17

SECOND YEAR

Art 142	2	Art 143*	2
English 150	3	English 150	3
HPE 103 or 107 or 130	1	Government 150 or History 110	3
History 110 or Government 150	3	HPE 130 or 103 or 107	1
MS 150 or 151 or AS 152	1	MS 150 or 151 or AS 152	1
Psychology 156	3	Psychology 185 or 186	2
Speech 106	1	Speech 107	1
Music 150*	3	Elective	4
Total	17	Total	17

PRESCHOOL-PRIMARY CURRICULUM

THIRD YEAR

Education 234	3	Education 236	2
Education 236	2	Education 284	5
Education 239	2	Household Science 156	2
Education 283	5	Elective	7
Speech 230	1		
Elective	3		
Total	16	Total	16

FOURTH YEAR

Education 261	3	Education 254	14
Health & Phys. Ed. 230	2	Education 255	2
Psychology 292	3		
Sociology 250	3		
Speech 265	3		
Elective	2		
Total	16	Total	16

* Not required in Secondary Curriculum.

ELEMENTARY CURRICULUM

THIRD YEAR

First Semester	Credits	Second Semester	Credits
Education 241	2	Education 262	2
Education 243	3	Education 240	3
Education 244 or		Education 286	4
Health & Phys. Ed. 221	2	Health & Phys. Ed. 221 or	
Education 285	4	Education 244	2
Music 251	2	Music 252	2
Sociology 250	3	Elective	3
Speech 230	1		
Total	17	Total	16

FOURTH YEAR

Agriculture 271	2	Education 254	14
Education 261	3	Education 255	2
Geography 261	3		
Health & Phys. Ed. 230	2		
Psychology 292	3		
Speech 265	3		
Total	16	Total	16

SECONDARY CURRICULUM

THIRD YEAR

Education 250	4	Education 245 or 247†	2
Sociology 250	3	Education 246 or 257†	2 or 3
Elective*	9	Education 251	4
		Health & Phys. Ed. 230	2
		Elective*	5 or 6
Total	16	Total	16

FOURTH YEAR

Education 261	3	Education 254	14
Psychology 292	3	Education 255	2
Speech 265	3		
Elective*	7		
Total	16	Total	16

PRESCHOOL-PRIMARY, ELEMENTARY, AND SECONDARY CURRICULA

FIFTH YEAR

Education 340	3	Education 354‡	14
Education 390	2	Education 395	2
Psychology 351	3		
Social Work 200*	3		
Elective†	5		
Total	16	Total	16

* As required to meet teaching field concentrations.
† For other teaching fields, appropriate methods courses will be substituted.

DENTAL HYGIENE CURRICULUM

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Chemistry 103	4	Chemistry 103	4
English 101	3	English 101	3
Health & Phys. Ed. 105	1	Health & Phys. Ed. 106	1
History 100	3	History 100	3
Home Economics 101	2	Household Science 150	3
Speech 100	1	Speech 105	1
Elective	3	Elective	2
Total	17	Total	17

SECOND YEAR

English 150	3	Bacteriology 151	4
Health & Phys. Ed. 107 or 130	1	English 150	3
History 110 or Government 150	3	Health & Phys. Ed. 130 or 107	1
Psychology 156	3	Government 150 or History 110	3
Speech 106	1	Psychology 185	3
Zoology 100	4	Speech 107	1
Elective	2	Elective	2
Total	17	Total	17

THIRD YEAR

Dental Hygiene 200	1	Dental Hygiene 201	2
Dental Hygiene 251	3	Dental Hygiene 235	2
Dental Hygiene 252	1	Dental Hygiene 258	1
Education 285	4	Education 286	4
Household Science 272	3	Health & Phys. Ed. 230	2
Speech 230	1	Elective	5
Zoology 191	3		
Total	16	Total	16

FOURTH YEAR

Dental Hygiene 254	5	Dental Hygiene 254	5
Dental Hygiene 260	1	Dental Hygiene 256	2
Dental Hygiene 262	2	Dental Hygiene 264	1
Speech 265	3	Dental Hygiene 265	1
Elective	5	Education 261	3
		Elective	4
Total	16	Total	16

LABORATORY SCHOOLS

Practical experience in teaching is given in Teachers College laboratory schools. In order to insure a rich experience for the children enrolled and to set a high standard of achievement for the student teachers, conditions are made as nearly ideal as possible, with small classes, selected children, and a strong supervising staff assisted by specialists in art, health, library science, physical education, music, and gardening.

* Required in Preschool-Primary Curriculum only.
† Must include two credits in graduate courses in Education.
‡ Dental Hygiene 354 in the Dental Hygiene Curriculum.

Observation-participation experience in the third year and probationary or intern teaching in the fifth year are provided in selected public schools under the joint supervision of Teachers College and the Department of Public Instruction.

VOCATIONAL EDUCATION

Prospective vocational agriculture and home economics teachers obtain their undergraduate preparation in the College of Agriculture. (See "College of Agriculture.") Basic professional education courses and practice teaching are required. Selective standards, including those in English, used in Teachers College apply to prospective vocational teachers. Students in these divisions register in Teachers College Secondary Curriculum for the fifth (graduate) year. For the work of this year, see "Five-Year Diploma Requirements."

CERTIFICATION IN SCHOOL COUNSELING

The Department of Public Instruction grants certification in the area of School Guidance Counseling on three levels: Minor in Counseling; Provisional Certificate in Counseling; Professional Certificate in Counseling. Requirements for a Minor in Counseling include the Professional Teachers Certificate and certain courses especially pertinent to the area. Higher certification is dependent on specified experience and advanced courses. The undergraduate student interested in this area of teaching should confer with the Counselor Trainer before the beginning of the junior year.

LIBRARY SCIENCE

Regulations of the Department of Public Instruction provide that "A teacher holding a Professional Elementary or Secondary Certificate may have stated on its face 'Requirements Met for Library' if he has had 12 semester hours in library courses." Individuals interested in this provision should confer with one of the instructors in Library Science, preferably before the beginning of the junior year.

College of Agriculture

THE COLLEGE OF AGRICULTURE prepares students for professional work in the fields of agriculture and home economics. In agriculture the student may secure basic training in the agricultural sciences or specialize in tropical crop production or vocational agriculture. A wide choice of electives permits the building of a program for special needs.

Four curricula are offered in home economics: General Home Economics, Institutional Management, Vocational Home Economics Teaching, and Foods and Nutrition.

All curricula in the College of Agriculture lead to the Bachelor of Science degree.

The College of Agriculture also includes the Hawaii Agricultural Experiment Station and the Co-operative Extension Service in Agriculture and Home Economics.

ADMISSION

The requirements for admission to this College are, in general, the same as those for admission to the University as a whole (pp. 41–44). Students who are lacking some of this required preparation are unable to follow the regular programs and usually need more than four years to complete the degree requirements.

DEGREE REQUIREMENTS

In order to be eligible for the Bachelor of Science degree from this College a student must:

(1) Complete the course requirements of a curriculum.
(2) Have an aggregate of at least 130 semester hours of credit.
(3) Have a 2.0 grade-point ratio for all registered credits. (See "Undergraduate Degree Requirements.")

Summer practice work in the area of major interest may be required if, in the opinion of the adviser, such experience is necessary for reasonable competence.

CURRICULA IN AGRICULTURE

The program in agriculture is designed to give the student a knowledge of the fundamental principles underlying agriculture as a science and to prepare him for effective service in practical farming, teaching of agriculture, or re-

search. The program is broadly conceived to give a background in the biological and physical sciences, and in the social sciences as well.

Students interested in agricultural engineering may, with approval of the Dean, substitute certain courses in engineering, mathematics, and physics for some of the required courses in agriculture.

GENERAL AGRICULTURE

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Agriculture 100	0	Agriculture 151	3
Agriculture 152	3	Botany 100 or Zoology 100	4
Botany 100 or Zoology 100	4	Chemistry 103	4
Chemistry 103	4	English 101	3
English 100 or 101	3	Health & Phys. Ed. 102	1
Health & Phys. Ed. 101	1	MS 100 or AS 102	1
MS 100 or AS 102	1	Speech (as required)	1
Speech 100	1		
Total	17	Total	17

SECOND YEAR

Agriculture 164	3	Agriculture 162	3
Health & Phys. Ed. 103 or 130	1	English 155	3
History 110	3	Health & Phys. Ed. 130 or 103	1
MS 150 or 151 or AS 152	1	MS 150 or 151 or AS 152	1
Speech (as required)	1	Speech (as required)	1
Elective	9	Elective	8
Total	18	Total	17

THIRD YEAR

Agriculture 250	4	Botany 283	4
Agriculture 254	3	Zoology 273	3
Zoology 170	4	Elective	10
Elective	6		
Total	17	Total	17

FOURTH YEAR

The only required course in the fourth year is English 210. This should be taken in the second semester. Elective courses necessary to complete the 130 semester hours required for graduation must include nine credits in animal science, nine credits in plant science, six credits in agricultural engineering, and six credits in agricultural economics.

VOCATIONAL AGRICULTURE*

FIRST YEAR

Agriculture 100	0	Agriculture 151	3
Agriculture 152	3	Botany 100 or Zoology 100	4
Botany 100 or Zoology 100	4	Chemistry 103	4
Chemistry 103	4	English 101	3
English 100 or 101	3	Health & Phys. Ed. 102	1

* The curriculum in Vocational Agriculture has been temporarily suspended.

First Semester	Credits	Second Semester	Credits
Health & Phys. Ed. 101	1	MS 100 or AS 102	1
MS 100 or AS 102	1	Speech 105	1
Speech 100	1		
Total	17	Total	17

SECOND YEAR

Agriculture 164	3	Agriculture 162	3
Health & Phys. Ed. 103 or 130	1	English 155	3
MS 150 or 151 or AS 152	1	Health & Phys. Ed. 130 or 103	1
Psychology 156	3	History 110	3
Speech 106	1	MS 150 or 151 or AS 152	1
Zoology 170	4	Psychology 185	3
Elective	4	Speech 107	1
		Elective	2
Total	17	Total	17

THIRD YEAR

Agriculture 250	4	Botany 283	4
Agriculture 254	3	Zoology 273	3
Education 270	3	Elective	9
Education 271	3		
Speech 230	1		
Elective	3		
Total	17	Total	16

FOURTH YEAR

Education 274	3	Education 275	3
Speech 265	3	English 210	3
Elective	11 or 12	Elective	11 or 12
Total	17 or 18	Total	17 or 18

The electives of the fourth year must meet the requirements of the Territorial Department of Public Instruction. The Agricultural Teacher Trainer in the University acts as student adviser in this curriculum.

TROPICAL CROP PRODUCTION

FIRST YEAR

Botany 100 or Zoology 100	4	Botany 100 or Zoology 100	4
Chemistry 103	4	Chemistry 103	4
English 100 or 101	3	English 101	3
Health & Phys. Ed. 101	1	Health & Phys. Ed. 102	1
Mathematics 150	3	History 110	3
MS 100 or AS 102	1	MS 100 or AS 102	1
Speech 100	1	Speech (as required)	1
Total	17	Total	17

SECOND YEAR

Chemistry 149	4	Botany 283	4
Health & Phys. Ed. 103 or 130	1	English 155	3
MS 150 or 151 or AS 152	1	Health & Phys. Ed. 130 or 103	1
Physics 102	4	MS 150 or 151 or AS 152	1
Speech (as required)	1	Physics 102	4

First Semester	Credits	Second Semester	Credits
Elective	6 or 7	Speech (as required)	1
		Elective	3 or 4
Total	17 or 18	Total	17 or 18

THIRD YEAR

Agriculture 250	4	Agriculture 291	3
Agriculture 254	3	English 210	3
Zoology 170	4	Zoology 273	3
Elective	5 or 6	Elective	7 or 8
Total	16 or 17	Total	16 or 17

SUMMER PRACTICE IN INDUSTRY—10 weeks

FOURTH YEAR

Agriculture 281	3	Agriculture 267	3
Elective	15	Agriculture 282	3
		Elective	12
Total	18	Total	18

TECHNICAL AGRICULTURE

FIRST YEAR

Botany 100 or Zoology 100	4	Botany 100 or Zoology 100	4
Chemistry 103	4	Chemistry 103	4
English 100 or 101	3	English 101	3
Health & Phys. Ed. 101	1	Health & Phys. Ed. 102	1
MS 100 or AS 102	1	MS 100 or AS 102	1
Speech 100	1	Speech (as required)	1
Elective	3 or 4	Elective	3 or 4
Total	17 or 18	Total	17 or 18

SECOND YEAR

Chemistry 149	4	Chemistry 149	4
Health & Phys. Ed. 103 or 130	1	English 155	3
Mathematics 150	3	Health & Phys. Ed. 130 or 103	1
MS 150 or 151 or AS 152	1	Mathematics 151	3
Speech (as required)	1	MS 150 or 151 or AS 152	1
Elective	7 or 8	Speech (as required)	1
		Elective	4 or 5
Total	17 or 18	Total	17 or 18

THIRD YEAR

Agriculture 250	4	Physics 102	4
Agriculture 254	3	Elective	13 or 14
Physics 102	4		
Elective	6 or 7		
Total	17 or 18	Total	17 or 18

FOURTH YEAR

Agriculture 299	3	English 210	3
History 110 or 242	3	Elective	14 or 15
Elective	11 or 12		
Total	17 or 18	Total	17 or 18

The following list indicates the fields of Technical Agriculture in which students in this curriculum may specialize. In each case the specifically required courses are listed as well as additional courses from which electives may be chosen with approval of the adviser.

ANIMAL SCIENCE. *Requirements:* Agriculture 151, 253, 257, 261; Bacteriology 151; Zoology 151—20 credits, and 16 credits selected from the following courses with approval of the adviser: Agriculture 152, 256, 259, 298; Bacteriology 260, 262; Chemistry 150, 230, 232; Zoology 170, 253, 260, 261, 262, 276, 291.

ENTOMOLOGY. *Requirements:* Bacteriology 151; Botany 263; Zoology 170, 254, 255, 273—23 credits, and 12 credits selected from the following courses with approval of the adviser: Agriculture 162, 164, 267, 268, 281, 282, 291, 299; Botany 105, 201, 253, 282, 283; Chemistry 150; Geography 262; Geology 150, 151; Zoology 240, 253, 257, 260, 262, 276, 291, 298.

POULTRY SCIENCE. *Requirements:* Agriculture 152, 255, 259, 297; Bacteriology 151; Zoology 151, 170—24 credits, and 15 credits selected from the following courses with approval of the adviser: Agriculture 151, 256, 257, 262, 279, 281, 282; Chemistry 150, 230; Economics 140, 291; Zoology 253, 261, 273.

SOIL SCIENCE. *Major Requirements:* Agriculture 267, 268, 291, 299; Chemistry 150, 230—18 credits, and 18 credits selected from the following courses with approval of the adviser: Agriculture 162, 256, 281, 282; Bacteriology 151, 250; Botany 161, 273, 274, 275, 276, 283; Chemistry 160, 232, 236, 250, 255, 271; Geography 150, 250; Geology 150, 151; Mathematics 151, 152; Philosophy 280.

TROPICAL HORTICULTURE. *Major Requirements:* Agriculture 162, 278; Bacteriology 151; Botany 263, 269, 283—20 credits, and 16 credits from the following courses with approval of the adviser: Agriculture 163, 164, 262, 267, 268, 273, 274, 281, 282, 291; Botany 161, 201, 253, 268, 273, 275, 281; Chemistry 150, 230; Zoology 170, 273, 276.

CURRICULA IN HOME ECONOMICS

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Art 142	2	Art 143	2
Chemistry 103* or 104	4	Chemistry 103* or 104	4
English 100 or 101	3	English 101	3
Health & Phys. Ed. 105	1	Health & Phys. Ed. 106	1
Home Economics 100	2	Home Economics 101	2
Household Art 150 or Household Science 150	3	Household Art 150 or Household Science 150	3
Speech 100	1	Speech (as required)	1
Total	16	Total	16

* Required only in the Foods and Nutrition curriculum.

SECOND YEAR

First Semester	Credits	Second Semester	Credits
English 150	3	Economics 140	3
Health & Phys. Ed. 107 or 130	1	English 150	3
Household Science 102	3	Health & Phys. Ed. 130 or 107	1
Psychology 156	3	Home Economics 252	3
Zoology 110 or 191	3	Household Science 102	3
Speech (as required)	1	Speech (as required)	1
Elective	3	Elective	3
Total	17	Total	17

In addition to the courses listed above, students in Home Economics must complete the requirements for special curricula. Additional work is ordinarily devoted to courses relating to these special fields.

Four such special curricula are offered. The major requirements and the additional recommended electives for each are listed below.

During the second and third years, students in General and Vocational Home Economics should elect Bacteriology 140, Household Art 110, 111, and Zoology 110 or 191. Students in Institutional Management and Dietetics should elect Bacteriology 151, Chemistry 232, and Zoology 191.

Students intending to specialize in Clothing and Textiles, Dress Design, or Interior Decoration follow the General Home Economics curriculum, selecting electives according to their interests. Students interested in preparing for Agricultural Extension Service follow the Vocational Home Economics curriculum. Those interested in research should follow the Foods and Nutrition curriculum.

GENERAL HOME ECONOMICS

THIRD YEAR

Home Economics 201	2	History 110 or 243	3
Home Economics 250	3	Home Economics 256	2
Home Economics 254	2	Household Art 214 or 255	2 or 3
Household Art 214	2	Sociology 151	3
Household Science 272	4	Elective	6
Elective	3		
Total	16	Total	16 or 17

FOURTH YEAR

Home Ec. 291 or Elective	4	Home Economics 262	3
Elective	12	Home Ec. 291 or Elective	4
		Household Science 273	3
		Elective	6
Total	16	Total	16

VOCATIONAL HOME ECONOMICS

THIRD YEAR

Education 250	4	Education 251	4
Home Economics 250	3	Home Economics 251	3
Home Economics 254	2	Home Economics 256	2

First Semester	Credits	Second Semester	Credits
Household Art 214	2	Household Art 214 or 255	2 or 3
Household Science 272	4	Sociology 151 or 250	3
Elective	3	Elective	3
Total	18	Total	17 or 18

FOURTH YEAR

Educ. 253, 256, or HE 291	8 or 4	Home Economics 262	3
Home Economics 201	2	HE 291 or Educ. 253, 256	4 or 8
History 242	3	Speech 265	3
Elective	4	Elective	3
Total	17 or 13	Total	13 or 17

INSTITUTIONAL MANAGEMENT

THIRD YEAR

History 242	3	Household Science 250*	3
Home Economics 250	3	Household Science 261	3
Household Science 260	3	Household Science 265	3
Household Science 263	3	Household Science 277	3
Household Science 272	4	Sociology 151	3
Elective	2	Elective	3
Total	18	Total	18

FOURTH YEAR

Home Ec. 291 or Elective	4	Home Economics 251*	3
Household Science 264 or 266	4	Home Ec. 291 or Elective	4
Elective	6	Household Science 264 or 266	4
		Elective	3
Total	14	Total	14

Foods and Nutrition Research Majors follow the second-year program including Chemistry 150, 159; Mathematics 151; Zoology 100. During the third and fourth years, the following are required: Bacteriology 151; Chemistry 230, 232; History 110 or 242; Home Economics 250, 291; Household Science 272, 277, 299.

SUGGESTED ELECTIVES

General and Vocational Home Economics: Art 140, 154-155, 160, 161, 175, 176, 250-251, 276; English 120-121, 260-261, 263; Household Art 255, 299; Household Science 260, 273, 299; Music 110, 111; Psychology 185, 250, 292; Sociology 250, 256.

Institutional Management: In addition to the above electives, Household Art 110, 111; Home Economics 254, 256, 262.

Foods and Nutrition: Chemistry 266, 270; English 210, 260-261, 263; German 100, 102; Home Economics 262; Household Art 110, 111; Household Science 273; Physics 102; Sociology 151, 250; Zoology 191, 192, 276.

* Required by the American Dietetic Association for additional training in hospital dietetics. Home Economics students are eligible for membership in the American Dietetic Association after a year's internship in an approved mainland hospital.

HAWAII AGRICULTURAL EXPERIMENT STATION

By an act of Congress in 1928, the University of Hawaii was empowered to set up a department to be designated as the Hawaii Agricultural Experiment Station and was entitled to receive the federal grants for agricultural research appropriated by Congress for such experiment stations in each of the states. By provisions made at the same time, the federal experiment station, established in 1901 on the slopes of Punchbowl and Tantalus, was to be gradually absorbed into the new station as the federal grant funds increased from year to year. This transition was completed in 1938. The history of the federal station is an inseparable part of the history of the Hawaii Agricultural Experiment Station, and the latter may also be said to share in the history and accomplishments of all the state land-grant colleges and experiment stations.

The facilities of the Experiment Station, including the research staff, the field laboratory, and the Agricultural Engineering Institute, are available in part for undergraduate and graduate instruction. Thus, students have unusual opportunities to come into close contact with the newer advances in agricultural research and to see and study their application. The close collaboration maintained with the experiment stations of the Hawaiian Sugar Planters' Association and the Pineapple Research Institute of Hawaii is of value in the agricultural research of all parties and in University instruction, because in Hawaii diversified agricultural interests must, in most instances, be integrated with those of the dominant crops.

The function of the Station is "to promote scientific investigation and experiments respecting the principles and applications of agricultural science" (Hatch Act of 1887). Facilities for carrying on this work are provided by the headquarters offices and laboratories located on the University campus, and farms at Poamoho and Waimanalo, Oahu; a branch station at Makawao, Maui; and a branch station at Kainaliu, Hawaii. Because the two major agricultural industries of the Territory of Hawaii—sugar and pineapple—support their own experiment stations, little attention is given to these crops. Emphasis is placed upon animal husbandry, poultry production, agronomy, and horticulture—fields which are considered extremely important in themselves. Investigations cover the physiology of plants and animals; diseases, insects, and parasites; soils and soil chemistry; human and animal nutrition; breeding and genetics; as well as other research in culture or production. Scientific facts discovered have broad application, since both individual farmers and the large plantations may receive benefits. Many plantations operate ranches, dairies, orchards, and gardens which contribute to the subsistence of the plantation families and add to the total plantation income. These diversified agricultural undertakings, as well as those of independent ranchers and farmers, constitute the wider background of the activities of the Experiment Station.

The research of the Station has formed the basis for a rapid expansion of production of all food and feed crops, particularly through development and introduction of improved and adapted varieties of tomato, sweet corn, papaya,

macadamia nuts, and other crops. Animal feeding trials with dairy cattle, poultry, and hogs have shown how local feeds can be used profitably in lieu of imported feeds if necessary. Investigations with yeast, molasses, ensilage, and urea indicate how imported feeds may be replaced by or supplemented with local products—and this with profit to the producer. Information concerning culture, control of disease and insects, and especially the use of mechanical equipment in planting, cultivation, irrigation, and harvesting of the major food crops, is providing a great stimulus to production on a scale never before attempted in the Territory.

CO-OPERATIVE EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS

This program, conducted jointly by the College of Agriculture and the United States Department of Agriculture, is devoted to the advancement of agriculture in Hawaii and to the improvement of rural home life. Funds for the maintenance of the Agricultural Extension Service are derived jointly from federal and Territorial legislative appropriations.

Agricultural Extension Service. This Service maintains personal contacts with the rural population through its field staff of county farm agents, home demonstration agents, and their assistants, with the help of the specialists at the Territorial headquarters at the University of Hawaii. The staff, 70 in number, operates out of eleven offices located as follows:

Oahu—Honolulu, Kaneohe, Wahiawa
Kauai—Lihue
Hawaii—Hilo, Naalehu, Kealakekua, Honokaa, Kohala
Maui—Kahului
Molokai—Kaunakakai

Improved farm and home practices are taught by means of practical demonstrations before University Extension clubs of men and women, commodity groups, and 4-H clubs of boys and girls. This group instruction is supplemented by farm and home visits and personal conferences. Each year a 4-H Ahaolelo is held on the University campus; for 1956 the dates are August 12 to 18, inclusive.

An important phase of Extension work is to demonstrate in a practical manner the results of scientific experiments conducted by the Hawaii Agricultural Experiment Station, by state experiment stations, and by the USDA.

Bulletins and circulars containing varied, timely information pertaining to farming and rural home life are issued from time to time by the subject-matter specialists at the headquarters on the University campus which also directs the activities of the agents in the field.

The Agricultural Extension Service in Hawaii is part of a nation-wide program established in 1914 and operating throughout the United States. Since its local inception in 1928, the efforts of the staff members have been largely directed toward developing a greater degree of self-sufficiency in the food economy of the Territory. To this end the home demonstration agents give par-

ticular attention to teaching the uses and nutritive values of Island-produced foods.

The Extension Service has for many years collected and published crop estimates and market statistics of value to commercial farmers and businessmen. Assistance in keeping proper records for tax accounting has come to be a much-appreciated phase of this project. Emphasis is placed on grading and marketing of farm products.

Other important projects include demonstration of improved practices in soil conservation, vegetable production, fruit growing, swine raising, dairying, pasture improvement, poultry production, human nutrition, home management, home furnishing, and clothing.

Special emphasis is placed on assisting the families of farmers and plantation workers through the services of Extension agents, who devote most of their time to imparting information on such subjects as crop and livestock production, poultry raising, farm management, soil management, home food supply, nutritious meals, and home improvement.

Research is conducted on food products of the Pacific area in the Foods and Nutrition Laboratory of the Hawaii Agricultural Experiment Station.

College of Business Administration

THE COLLEGE OF BUSINESS ADMINISTRATION aims to provide an understanding of the structure, functions, and objectives of American business enterprise and to train for active participation in the business and industrial activities in Hawaii. The four-year program leads to the degree of Bachelor of Business Administration.

For the first two years, all students follow a common program of required basic courses. During the junior and senior years, provision is made for specialization in one of the following curricula: General Business, Banking and Finance, Personnel and Industrial Relations, Accounting, Merchandising, and Office Management.

ADMISSION

Admission requirements are the same as those for admission to the University as a whole. (See pp. 41–44.)

DEGREE REQUIREMENTS

In order to qualify for the Bachelor of Business Administration degree from this College, a student must:

(1) Meet certain basic requirements of the first two years.
(2) Complete one of the six curricula of the College.
(3) Have at least 50 semester hours in other than introductory courses.
(4) Have an aggregate of at least 130 semester hours of credit.
(5) Have a 2.0 grade-point ratio for all registered credits. (See "Undergraduate Degree Requirements.")

CURRICULA

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Business 100 or Geography 151	3	Economics 151	3
Economics 150	3	English 101	3
English 100 or 101	3	Geography 151 or Business 100	3
Health & Phys. Ed. 101 or 105	1	Government 150 or Philosophy 110	3
History 100	3	Health & Phys. Ed. 102 or 106	1
MS 100 or AS 102	1	History 100	3
Philosophy 110 or Government 150	3	MS 100 or AS 102	1
Speech 100	1	Speech (as required)	1
Total	18	Total	18

SECOND YEAR

First Semester	Credits	Second Semester	Credits
Business 150	3	Business 151	3
Business 160	3	Business 161	3
English 155	3	English 109	3
HPE 103 or 130 or 107	1	HPE 130 or 103 or 107	1
History 110 or Psychology 150	3 or 4	MS 150 or 151 or AS 152	1
MS 150 or 151 or AS 152	1	Psychology 150 or History 110	4 or 3
Speech (as required)	1	Speech (as required)	1
Total	15 or 16	Total	16 or 15

Required upper division courses for each curriculum are given below.

GENERAL BUSINESS

THIRD YEAR

Bus. 256 Income Tax Problems
Bus. 270 Principles of Marketing
Bus. 282 Business Statistics
Econ. 256 Money and Banking
Econ. 281 Labor Problems
Bus. 276 Retail Merchandising
Econ. 265 Government and Business

FOURTH YEAR

Bus. 220 Bus. Reports and Corres.
Bus. 280 Prin. of Salesmanship
Econ. 261 Public Finance
Bus. 263 Personnel Management
Bus. 287 Bus. Organ. and Mgmt.
Econ. 258 Econ. Resources of the U.S.

BANKING AND FINANCE

THIRD YEAR

Bus. 250 Intermediate Accounting
Bus. 265 Corporation Finance
Bus. 282 Business Statistics
Econ. 256 Money and Banking
Bus. 255 Analysis of Fin. Statements
Econ. 261 Public Finance
Econ. 265 Government and Business

FOURTH YEAR

Bus. 256 Income Tax Problems
Bus. 278 Credit Management
Econ. 270 Public Utilities
Bus. 266 Investments and Invest. Bkng.
Bus. 286 Negotiable Instruments
Econ. 285 International Trade and Fin.

PERSONNEL AND INDUSTRIAL RELATIONS

THIRD YEAR

Bus. 282 Business Statistics
Econ. 281 Labor Problems
Econ. 283 Labor Legislation
Bus. 230 Indus. Safety and Health
Bus. 245 Time and Motion Study
Bus. 263 Personnel Management
Econ. 282 American Trade Unionism

FOURTH YEAR

First Semester	Second Semester
Bus. 261 Collective Bargaining	Bus. 268 Employment Interviewing
Econ. 256 Money and Banking	Econ. 289 Arbitration of Grievances
Econ. 265 Government and Business	
Econ. 294 Research in Indus. Rel.	

ACCOUNTING

THIRD YEAR

First Semester	Second Semester
Bus. 250 Intermediate Accounting	Bus. 251 Advanced Accounting
Bus. 256 Income Tax Problems	Bus. 255 Analysis of Fin. Statements
Bus. 265 Corporation Finance	Bus. 282 Business Statistics
Econ. 256 Money and Banking	Econ. 261 Public Finance

FOURTH YEAR

Bus. 254 Cost Accounting	Bus. 249 Budgetary Acctg. and Control
Bus. 258 Auditing	Bus. 284 Accounting Systems
Bus. 287 Bus. Organ. and Mgmt.	

MERCHANDISING

THIRD YEAR

Bus. 250 Intermediate Accounting	Bus. 257 Merchandise Acctg. and Control
Bus. 270 Prin. of Marketing	Bus. 273 Prin. of Advertising
Econ. 256 Money and Banking	Bus. 276 Retail Merchandising
Econ. 265 Government and Bus.	Bus. 282 Business Statistics

FOURTH YEAR

Bus. 265 Corporation Finance	Bus. 287 Bus. Organ. and Mgmt.
Bus. 278 Credit Management	
Bus. 279 Methods of Market Res.	
Bus. 280 Prin. of Salesmanship	

OFFICE MANAGEMENT

THIRD YEAR

Bus. 220 Bus. Reports and Corres.	Bus. 259 Office Organ. and Mgmt.
Bus. 250 Intermediate Accounting	Bus. 263 Personnel Management
Econ. 256 Money and Banking	Bus. 282 Business Statistics
Econ. 281 Labor Problems	

FOURTH YEAR

Bus. 170 Tech. of Typewriting	Bus. 241 Bus. and Sec. Machines
Bus. 177 Tech. of Shorthand	Bus. 272 Adv. Secretarial Training
Bus. 261 Collective Bargaining	Bus. 277 Secretarial Practice

Graduate School

THE GRADUATE SCHOOL provides opportunities for further study, research, and professional training to students who have earned a Bachelor's degree from an accredited institution of higher learning. The graduate program is not, however, merely an extension of work at the undergraduate level. More rigorous academic standards are applied and a greater degree of independence in the pursuit of knowledge is allowed. Special emphasis is placed on the cultivation of scholarly attitudes and methods of research.

The University offers graduate work leading to:

(1) The Doctor of Philosophy degree in botany, chemistry, entomology, genetics, soil science, and zoology.

(2) The Master's degree in anthropology, art, bacteriology, botany, business administration, chemistry, drama and theatre, economics, education, English, entomology, Far East studies, genetics, geography, government, history, mathematics, nutrition, Pacific Islands studies, philosophy, physics, psychology, social work, sociology, soil science, speech, vegetable crops, and zoology.

(3) The professional certificate for teachers in the employ of the Department of Public Instruction of the Territory of Hawaii. (See p. 00.)

Students may likewise earn graduate credit at the University of Hawaii for transfer to other institutions.

ADMISSION AND CANDIDACY

Students wishing to enroll for graduate work must make application to the Dean of the Graduate School. This application should be accompanied by an official transcript of the undergraduate record and of any graduate work completed at another institution.

Admission to the Graduate School does not imply admission to candidacy for an advanced degree. Such admission is granted only after a qualifying committee is satisfied as to the adequacy of the undergraduate preparation and probable ability to pursue graduate work successfully.

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

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

(1) An adequate undergraduate background in the major and related fields in which the degree is to be taken.

(2) 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.

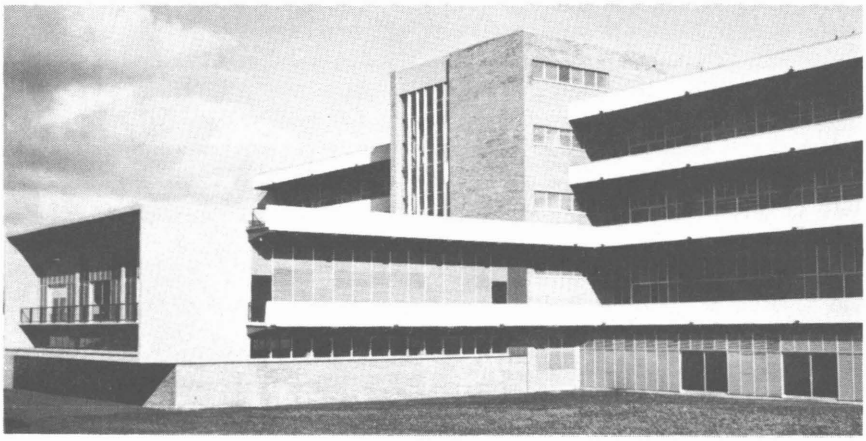
Students failing to meet one of these requirements may be permitted to enroll on a provisional basis, and, if the record for a semester at the graduate level is adequate, the subsequent qualifying committee may recommend to the Dean of the Graduate School that the rule be waived.

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

Registration Limitations. Sixteen credit hours in a semester and seven in a six-week summer session are considered a normal course load and may be exceeded only by approval of the Dean. The number of credit hours which may be carried by student assistants is limited by the nature of their duties.

Examinations. Candidates for advanced degrees are required to take the regular examinations in courses for which they desire graduate credit, a comprehensive examination, a final oral examination in defense of the thesis, and, for the doctorate, examinations in the required languages. Adequate proficiency in the languages required for the doctorate must be certified by the appropriate language departments before a student will be admitted to the comprehensive examination.

The office of the Graduate School must be notified at the beginning of the term or semester in which a candidate expects to receive his degree, and arrangements for the final examination must be made at least one month before the end of the term. The final oral examination, conducted by the thesis committee and open to all faculty members, relates primarily to the thesis but may cover any fundamental knowledge essential to the research or



Newest addition to the campus is the Gregg M. Sinclair Library, which has stimulated student attendance with its well ventilated and illuminated study areas adjacent to the open stacks.

to the conclusions reached. In the case of the Master's degree, the examination on the thesis may be replaced by presentation in a seminar or advanced course in the department, if approved by the committee.

Thesis. All candidates for advanced degrees, except the Master of Fine Arts, must submit a thesis on a topic selected from the major field. The thesis committee is appointed as soon as the candidate is ready to formulate his thesis problem. Copies of the completed thesis must be submitted to members of the committee at least two weeks prior to the date of the final examination. Two typewritten copies of the thesis, certified as acceptable to the thesis committee by its chairman, must be deposited in the Library to become the permanent possession of the University. A fee for the binding of the Library copies must be paid to the University Business Office.

REQUIREMENTS FOR THE MASTER'S DEGREE

The University awards the degrees of Master of Arts, Master of Business Administration, Master of Education, Master of Fine Arts, Master of Science, and Master of Social Work.

The minimum period of residence is one academic year (two semesters) or four six-week summer sessions.

Thirty semester hours of graduate study are required for the Master's degree, 24 in courses and 6 for the thesis. (In unusual cases, upon certification by the thesis committee no later than the registration period of the session in which the degree is to be conferred, a maximum of 12 credits may be allowed for thesis research.) In Social Work the requirement is 42 semester hours of course work and 6 for the thesis, or 48 in all. (See below.)

At least 6 credits toward the Master's degree must be earned in courses primarily for graduate students (300-399). The remaining credits may be elected from courses numbered 200-298, provided such courses are listed in the Graduate School Bulletin, but a grade *A* or *B* must be earned. The program of courses offered by the candidate should be in his major field of interest, but supplementary courses, when approved by the thesis committee, may be selected from one or two closely allied fields. A reading knowledge of a foreign language is required in certain fields and may be required in any field.

Graduate work completed at other institutions, up to a maximum of 8 semester hours, may be accepted as fulfilling part of the requirements for the Master's degree. No credits earned in correspondence courses may be counted toward an advanced degree.

School of Social Work. The University of Hawaii offers a two-year program in social work leading to the degree of Master of Social Work. The first year is basic to all types of social work and is designed to familiarize the student with the fundamental principles underlying all fields of practice in the profession.

Admission to the School of Social Work requires, in addition to completion of the undergraduate program (see p. 67), (1) a Bachelor's degree from a university or college of recognized standing and eligibility for admission to

graduate standing at the University of Hawaii, and (2) evidence of personal qualifications necessary for success in social work.

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 applicants, and written corroboration of intention to register for the full year's program is requested.

Instructors may admit to individual courses a few qualified persons who have had experience in social work but do not intend to take the full program.

Candidates for the Master of Social Work degree are required to complete 42 semester hours including 10 hours of supervised field work (750 clock hours) and a general research project or group research project, or a thesis.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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 co-operative relations with other research institutions, can offer thorough advanced training.

Notice of intention to qualify for the doctorate should be given as early as possible during the graduate student's career.

The candidate is required to spend a minimum of six full semesters, or the equivalent, in graduate study, during which at least 48 semester hours of course work beyond the Master's degree must be taken at the University of Hawaii. The six semesters, or three academic years, are interpreted as representing 48 semester hours of course work plus a dissertation for which 24 semester hours are allowed. The research for, and preparation of, the dissertation is expected to require a year of full-time application. Twenty-four semester hours toward the doctorate may be allowed for a Master's degree. Of the required 72 hours, 12 must be in a department other than the major, or in related courses in other departments.

In summary, the doctoral candidate must complete a program prescribed by the committee in charge of his candidacy, pass a comprehensive examination in his major and supporting fields, present certification of a reading knowledge of the two languages useful in his field of investigation, present a dissertation combining original research and scholarly analysis, and defend his thesis in a final examination.

Announcement of Courses for 1956-57

COURSES ARE LISTED alphabetically by subject. Courses numbered 100 to 199 are lower division courses intended for freshmen and sophomores. Those numbered 200 to 299 are upper division courses intended for juniors and seniors but open to graduate students when needed to complete a major field. Courses numbered 300 and above are intended for graduate students, but in a few cases qualified seniors may enroll with the consent of the instructor.

Heading each course description are the number and title of the course, the number of credits, and the semester in which the course is given. Credits and semesters are indicated as follows: (3) I means a 3-credit first-semester course; (3) II, a 3-credit second-semester course; (3) I, 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.

In general, courses are listed by departments, but in a few cases (Library Science, Medical Technology, Science Courses) the material does not logically belong in an academic department and so is listed separately. The various languages are grouped under the departments of Asian and Pacific Languages, and European languages. The faculty list heading each department indicates the instructors giving courses in that department rather than the actual members of the department. The rank and title of each instructor are given under "Faculty and Staff" at the beginning of the Catalogue.

A schedule stating the time and place of meeting of all classes is issued prior to the beginning of each semester and the summer session.

AGRICULTURE

Senior Professor BEAUMONT; Professors BICE, GOTO, KINCH, POOLE, ROSENBERG, D. SHERMAN; Associate Professors BRITTEN, KAMIMOTO, MCGUIRE, PHILIPP, SCOTT, STROHMAN, WAYMAN, YOUNGE; Assistant Professors GILBERT, HOLMES, KOSHI, LANGE, OTAGAKI; Instructors IWANAGA, NAKASONE

100 ORIENTATION COURSE (0) I — **MCGUIRE**

Lectures to acquaint the student with the fields of agriculture in Hawaii and to help select a major field of study.

151 ANIMAL HUSBANDRY (3) II — **IWANAGA**

A general study of the important breeds of horses, cattle, sheep, and swine, and of their care and management. Lectures, assigned readings, and laboratory work. Laboratory fee $1.00.

152 POULTRY HUSBANDRY (3) I — **BICE**

An introduction to poultry husbandry. Two lectures and one laboratory period. Laboratory fee $2.00.

162 TROPICAL POMOLOGY (3) II **LANGE**

Origin, description, and cultural requirements of the fruit and nut crops of Hawaii. Two lectures and one laboratory period. Prerequisite: Botany 100; Chemistry 103; Zoology 100. Laboratory fee $1.00.

163 PLANT PROPAGATION (3) I **NAKASONE**

Principles and methods of propagating plants by seeds, cuttings, layers, division, grafting, and budding. Two lectures and one laboratory period. Prerequisite: Botany 100. Laboratory fee $3.00.

164 TRUCK CROP PRODUCTION (3) I **GILBERT**

Origin, description, and cultural requirements of the more important vegetable crops of Hawaii. Two lectures and one laboratory period. Prerequisite: Botany 100; Chemistry 103; credit or concurrent registration in Zoology 170. Laboratory fee $3.00.

209 ADVANCED VEGETABLE CROPS (4-4) Yr. **McGUIRE**

Production of vegetable crops. First semester, environmental factors; second semester, improvement of major vegetable crops by breeding and selection. (The semesters are independent and either may be taken without the other.) Prerequisite: Agriculture 164, 250; Botany 283. (Alternate years; not offered 1956–57.)

210 SYSTEMATIC VEGETABLE CROPS (3) II **McGUIRE**

Types, varieties, climatic adaptation, market quality, disease and insect resistance. Two lectures and one laboratory period. Prerequisite: Agriculture 164; Botany 100. Laboratory fee $5.00 (Alternate years; offered 1956–57.)

230 INTRODUCTION TO AGRICULTURAL EXTENSION (3) II **GOTO**

Objectives and organization of Extension work. Methods, selection, and training of voluntary leaders, and basic principles and procedure in program development and appraisal.

239 FARM MANAGEMENT (3) II **PHILIPP**

Organization and management of a farm with emphasis on use of economic principles. Selection, size, choice of enterprises, efficient use of labor and equipment, layout, and analysis. Use of records, capital requirements, leases. Two lectures and one laboratory period. Prerequisite: one course in Economics or consent of instructor.

241 MARKETING AGRICULTURAL PRODUCTS (3) I **SCOTT**

Nature of the problems, types of marketing agencies, principal marketing functions and their combinations, marketing costs and margins, price quotations and speculation in farm products; government in its relation to marketing; consideration of proposals for improvement. Prerequisite: an introductory course in Economics or consent of instructor. Two lectures and one laboratory period.

250 SOILS (4) I **HOLMES**

The basic principles of soil science. Origin, development, properties, and management of tropical soils, including the classification of Hawaiian soils. Three lectures and one laboratory period. Prerequisite: Chemistry 103, Laboratory fee $3.00.

251 TROPICAL CROP PRODUCTION (3) I **YOUNGE**

Survey of current agricultural practices in the production of sugar cane, pineapples, vegetables, fruits, and forage in the tropics. Two lectures; field trips to be arranged. Fee $2.00.

253 DAIRY HUSBANDRY (3) II **KOSHI**

The breeding, feeding, and management of dairy animals, with special reference to Hawaiian conditions. Two lectures and one laboratory period. Laboratory fee $1.00. (Alternate years; not offered 1956–57.)

254 PRINCIPLES OF GENETICS (3) I **BRITTEN**

Fundamental principles of genetics, including variations, their origins and interactions, cytological basis of heredity, and an introduction to biometric methods. Two lectures and one laboratory period. Prerequisite: one year of biological science. Laboratory fee $2.00.

255 ADVANCED POULTRY HUSBANDRY (3) II **ROSENBERG**

Recent advances in nutrition, breeding, and management of poultry, including participation in farm practices at the poultry farm. Two lectures and one laboratory period. Prerequisite: Agriculture 152, 254, 257. Laboratory fee $2.00. (Alternate years; offered 1956–57.)

256 PRINCIPLES OF AGRONOMY (3) II **YOUNGE**

Pasture and field crops, with special reference to crop ecology, cultural methods, and management in Hawaii. Two lectures and one laboratory period. Prerequisite: Botany 100; Chemistry 103; Zoology 100. Laboratory fee $1.00.

257 FEEDS AND FEEDING (3) I **OTAGAKI**

Principles of feeding and their application to feeding farm and plantation animals. Two lectures and one laboratory period.

259 POULTRY HUSBANDRY PROBLEMS (3) I, II **ROSENBERG**

Special problems in poultry husbandry; planning and interpretation of experiments. May be continued in second semester by consent of instructor. Prerequisite: Agriculture 152 and 255, or consent of instructor. (Alternate years; offered 1956–57.)

261 BEEF AND SWINE HUSBANDRY (3) II **KOSHI**

The breeds, care, management, and feeding of beef cattle and swine, with particular reference to Hawaiian conditions. Two lectures and one laboratory or study period. Laboratory fee $1.00. (Alternate years; offered 1956–57.)

262 ADVANCED GENETICS (3) I **BRITTEN**

Principles and theories of genetics; methods and results of modification of germinal materials, gene action, and a survey of recent advances in genetics. Prerequisite: Agriculture 254.

267 SOIL ANALYSIS (3) II **SHERMAN**

Soil composition and fertility. Special attention to field trials, soil tests, and foliar diagnosis in determining fertilizer requirements. Prerequisite: Agriculture 250.

268 SOIL DIAGNOSIS LABORATORY (2) II **SHERMAN**

Laboratory and field tests designed to determine the effects of deficiencies and toxicities of plant nutrients and the fertilizer requirements of soils. Prerequisite: Agriculture 250; credit or concurrent registration in Agriculture 267. Laboratory fee $2.00.

271 SCHOOL AND HOME GARDENING (2) I, II

Designed to develop ability to conduct home and school gardens; study of fertilizers, insect control, and plant propagation. For prospective elementary school teachers. (Not offered 1956–57.)

273 PRINCIPLES OF FLORICULTURE (3) I **KAMEMOTO**

Introduction to the methods of propagation and management of the important flower and foliage plants of Hawaii. Two lectures and one laboratory period. Prerequisite: Botany 100. Laboratory fee $3.00.

274 COMMERCIAL FLOWER PRODUCTION (3) II **KAMEMOTO**

A comprehensive study of flower and foliage plants, with particular attention to nursery practices, methods of culture, timing the crop, and marketing. Two lectures and one laboratory period. Prerequisite: Agriculture 273. Laboratory fee $2.50. (Alternate years; offered 1956–57.)

278 PRINCIPLES OF PLANT BREEDING (3) I **POOLE**

Selection, hybridization, and cytogenetics as applied to plant improvement. Two lectures and one laboratory period. Prerequisite: Agriculture 254. (Alternate years; not offered 1956–57.)

279 PHYSIOLOGY OF DOMESTIC ANIMALS (3) I **WAYMAN**

The organ systems, their structure and functions. Emphasis upon the economically most important farm livestock. Two lectures and one laboratory period. Prerequisite: Agriculture 151, 152. (Alternate years; not offered 1956–57.)

281 AGRICULTURAL MACHINERY (3) I **KINCH**

Principles of operation, construction, adjustment, power requirements, use, selection, and maintenance of farm and plantation machinery and general service equipment. Two lectures and one laboratory period.

282 AGRICULTURAL POWER (3) II **STROHMAN**

Principles of operation, adjustment, selection and maintenance of internal combustion engines, farm tractors, trucks, and other power sources. Two lectures and one laboratory period.

285 GENERAL SHOP PRACTICES (3) I

Shop sketching, reading of working drawings, carpentry, glazing, painting, concrete work, fencing, farm shop equipment, teaching methods. One lecture and two laboratory periods. Laboratory fee $5.00.

286 METAL SHOP PRACTICES (3) II

Arc and gas welding, soldering, cutting, filing, drilling, threading, machinery overhaul, farm shop equipment, teaching methods. One lecture and two laboratory periods. Laboratory fee $5.00.

291 IRRIGATION PRACTICE (3) II **KINCH**

Irrigation in its relation to crop production; development, distribution, and measurement of water; soil moisture and its effect on plant growth. Prerequisite: junior standing.

297 ANIMAL DISEASES AND THEIR CONTROL (3) I **CROSS**

Introduction to disease problems of domestic animals; emphasis upon the nature of disease processes with methods of prevention, control, and eradication of infectious diseases. Two lectures and one laboratory period. Prerequisite: Agriculture 151, 152. Laboratory fee $3.00.

298 SEMINAR IN ANIMAL NUTRITION (1) II **WAYMAN**

Recent investigation in animal nutrition; oral reports by students on special topics after a review of literature. Prerequisite: Agriculture 257; suffitient training in chemistry; consent of instructor.

299 AGRICULTURE THESIS (Ar.) I, II **STAFF**

Advanced individual work in field, laboratory, and library. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Agriculture.

300 DIRECTED RESEARCH (Ar.) I, II **STAFF**

Directed research in (1) Genetics—BRITTEN; (2) Soil Science—SHERMAN; (3) Tropical Horticulture—BEAUMONT; (4) Poultry Science—ROSENBERG. Prerequisite: graduate standing; consent of instructor.

301 ADVANCED SOIL TECHNOLOGY (3) I **SHERMAN**

Soil-weathering and soil-forming processes on the basis of modern pedologic principles. Prerequisite: graduate standing; consent of instructor.

302 GENETICS SEMINAR (1) I, II **BRITTEN**

Presentation of reports upon research or reviews of current literature on genetics and cytogenetics. May be repeated. Prerequisite: Agriculture 254 or consent of instructor.

303 SOIL CLASSIFICATION (3) II **SHERMAN**

A comprehensive study of the genesis of soils and the various systems of classification, with special reference to tropical soils. Lectures and field work.

304 HORTICULTURE SEMINAR (1) I, II **STAFF**

Presentation of reports upon research or reviews of current literature in the general field of horticulture. May be repeated. Prerequisite: consent of instructor.

308 SOIL SCIENCE SEMINAR (1) II **STAFF**

Review of recent findings in soil science research in the fields of soil chemistry, physics, classification, fertility, bacteriology, and technology. Prerequisite: graduate standing.

312 APPLIED AGRICULTURAL STATISTICS (3) II **POOLE**

Field plot technique; analysis of laboratory and field data for evaluating factors in agricultural experiments. Two lectures and one laboratory period. Prerequisite: Zoology 276.

AIR SCIENCE

Professor WELLER; Associate Professor HUNT; Assistant Professors DESILET, HUGHES, SMITH, TRUMBORE; Instructors CAGLE, EIDSON, ESCH, WOOD, WRIGHT, ZIMMERMAN

102 FIRST-YEAR AIR SCIENCE (1-1) Yr. **HUGHES**

Introduction to aviation. Fundamentals of global geography. International tensions and security organizations. The military instrument of national security. Leadership training laboratory. Three hours per week. Special uniform and awards fee 50 cents (not refundable).

152 SECOND-YEAR AIR SCIENCE (1-1) Yr. **SMITH**

Elements of aerial warfare. Targets, weapons, aircraft, bases, and operations. A career in the Air Force. Leadership training laboratory. Three hours per week. Special uniform and awards fee 50 cents (not refundable).

202 THIRD-YEAR AIR SCIENCE (3-3) Yr. **TRUMBORE**

The Air Force Commander and his Staff. Problem solving techniques. Communicating in the Air Force. Instructing in the Air Force. Military justice system. Navigation. Weather. Air Force base functions. Leadership training laboratory. Five hours per week. Open to selected students. Prerequisite: Air Science 102 and 152. Special uniform and awards fee 50 cents (not refundable).

252 FOURTH-YEAR AIR SCIENCE (3-3) Yr. **HUNT**

Critique of summer camp. Leadership management seminar. Career guidance. Military aspects of world political geography. Military aviation and evolution of warfare. Briefing for commissioned service. Leadership training laboratory. Five hours per week. Open to selected students. Prerequisite: Air Science 202. Special uniform and awards fee 50 cents (not refundable).

257 SUMMER CAMP (2) **STAFF**

Practical application of academic work. Air operations problems. Familiarization with military aircraft and equipment. Physical training. Attendance required during summer between Air Science 202 and 252. Prerequisite: Air Science 202.

ANTHROPOLOGY

Professors DuBois, Emory, Luomala; Associate Professors Elbert, Riesenberg; Assistant Professor R. Lane; Lecturer B. Lane

150 INTRODUCTION TO STUDY OF MAN (3) I, II **STAFF**

An introduction to the changing cultures and physical characteristics of nonliterate peoples, as an aid to better understanding of current problems in human relations.

250 HAWAIIAN CULTURE (3) I **EMORY**

An introduction to native Hawaiian culture in all its aspects: mythology, tradition, history, religion, social organization, and material culture. Some attention also to language and physical type.

251 THE POLYNESIANS AND THEIR CULTURE (3) II **LUOMALA**

A study of indigenous peoples in Hawaii, Samoa, Tahiti, New Zealand, and other Polynesian areas. Their way of life and historical relationships to each other.

252 PEOPLES OF THE PACIFIC (3) I **R. LANE**

A survey of the peoples and cultures of the Pacific area—Polynesia, Micronesia, Melanesia, and Australia.

253 MICRONESIA IN A MODERN WORLD (3) II **RIESENBERG**

A cultural survey of the Marianas (including Guam), Carolines, Marshalls, and Gilberts, with attention to geographical and historical factors as they relate to current problems in Micronesia.

254 PEOPLES OF SOUTHERN ASIA (3) II **DuBOIS**

Ethnology and social organization of India, Southeast Asia, and Malaysia. Discussion of cultural diffusion and contact within the area.

255 PEOPLES OF NORTHERN ASIA (3) I **LUOMALA**

Ethnology and social organization of China, Japan, Siberia, and Southwest Asia. Discussion of cultural diffusion and contact within the area.

256 THE AMERICAN INDIAN (3) II **R. LANE**

Indian tribes and culture areas of North and South America, including the civilizations of Mexico, Central America, and Peru.

257 PEOPLES OF AFRICA (3) I **RIESENBERG**

A survey of the peoples and cultures of Africa. Races, languages, material culture, magic and religion, social organization, and political institutions. Native kingdoms. The higher civilizations of North Africa. Archeology.

265 PRIMITIVE SOCIETY (3) II **B. LANE**

Study of diverse types of social organization with the aim of a better understanding of human society.

266 CULTURE CONFLICT IN PACIFIC DEPENDENCIES (3) II **RIESENBERG**

Existing native cultural patterns in American, British, Dutch, and French dependencies; problems raised by native-European interaction; cultural factors bearing upon administrative policies and programs.

267 PRIMITIVE RELIGION (3) II **LUOMALA**

Religious beliefs and practices in primitive society. Function of religion in society. Reading of monographs on religion of various tribes.

268 PRIMITIVE ART (3) II **R. LANE**

Survey of art forms and techniques of nonliterate peoples of the world. Types of design, relation of art forms and culture.

269 FOLKLORE (3) I **LUOMALA**

Myth and legend in nonliterate society. Function of myth in society. Development and spread of plot patterns.

270 ARCHEOLOGY (3) II **EMORY**

Methods and techniques of archeology. Excavation of prehistoric sites, preservation of materials, and interpretation of archeological data, with illustrations from Oceanic studies. Practical field work in excavation and museum preparation.

271 ANTHROPOLOGICAL CLASSICS (3) II **LUOMALA**

Lectures, reading, and discussion of selected anthropological classics, both theoretical and descriptive, and their significance in the development of social science.

272 ECONOMIC LIFE OF PRIMITIVE PEOPLES (3) I **R. LANE**

A study of the various types of economy among nonliterate peoples. Technology, means of production, distribution, consumption, and property. Integration of economies with cultural patterns.

273 PHYSICAL ANTHROPOLOGY (3) I **RIESENBERG**

Human evolution; the influence of heredity and environment upon man; fossil man; racial differences in modern man.

274 NATURE OF CULTURE (3) I **R. LANE**

The concept of culture: patterns, configurations, themes; integration; culture processes, change, and growth.

275 INTRODUCTION TO LINGUISTICS (3) I **ELBERT**

The origin and development of linguistic science. Training in phonetics with speakers of English and other languages as informants. Historical linguistics, with special attention to English. Methods of comparative linguistics and survey of the languages of the world.

276 LINGUISTIC ANALYSIS (3) II **ELBERT**

Language as an aspect of culture. Ethnolinguistics and the use of linguistics by social scientists. Descriptive linguistics with emphasis on phonemics. Prerequisite: Anthropology 275 or consent of instructor.

277 STRUCTURAL LINGUISTICS (3) I **ELBERT**

Continuation of descriptive linguistics with training in morphological theory and analysis. Prerequisite: Anthropology 276 or consent of instructor. (Not offered 1956–57.)

278 MALAYO-POLYNESIAN LANGUAGES (3) II **ELBERT**

A brief description of the Malayo-Polynesian languages. Field techniques in transcribing one language of this family, with phonological and morphological analysis. Comparative Malayo-Polynesian studies. Prerequisite: Anthropology 277 or consent of instructor. (Not offered 1956–57.)

299 DIRECTED READING (Ar.) I, II **STAFF**

Limited to senior majors with a 2.7 grade point ratio or a 3.0 grade point ratio in Anthropology.

300 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

Prerequisite: graduate standing; consent of instructor.

309 SEMINAR IN CULTURE AND PERSONALITY (2) II **DuBOIS**

Review of significant studies in the field of culture and personality. Prerequisite: consent of department chairman.

310 SEMINAR IN OCEANIA (2) II **STAFF**

Critical examination of source materials concerning the backgrounds and migrations of Oceanic peoples. Prerequisite: consent of instructor. May be repeated. (Not offered 1956–57.)

311 APPLIED ANTHROPOLOGY (2) I **RIESENBERG**

Application of anthropological principles to present-day problems of human relations in underdeveloped areas influenced by Western civilization. Prerequisite: consent of instructor.

312 TECHNIQUES OF FIELD WORK (3) II **EMORY**

The field approach to research problems; methods of recording field data; problems of communication and the use of interpreters; interviewer-informant relationships. Prerequisite: consent of instructor. (Not offered 1956–57.)

ART

Professors CHARLOT, ECKE, NORRIS; Associate Professors COX, HORAN, KINGREY, H. ROBINSON, TURNBULL; Assistant Professor KIMURA; Instructor McVAY

Certain courses may be repeated for credit with the consent of the instructor.

The University reserves the right to retain any student work which may be needed for exhibition or for the Art Department files.

140 INTRODUCTION TO THE VISUAL ARTS (3) I, II **TURNBULL, NORRIS**

A course designed to give insight into the nature of visual art and its relationship to contemporary life, including expression in various forms, such as painting, architecture, sculpture, photography, and industrial design. Lectures, demonstrations, and museum visits. Course fee $1.00.

142-143 ART FUNDAMENTALS (2-2) Yr. **STAFF**

Background material and studio practice to stimulate understanding of the arts. Lectures, museum visits, and studio work. Primarily for Teachers College, Home Economics, and Recreation majors. Studio fee $1.00 each semester.

144 SCULPTURE A (2) I, II **ROBINSON**

Introductory study of sculptural form. Basic techniques and problems in clay, employing both individual and specified subject matter. Lectures and studio work. Studio fee $10.00.

145 SCULPTURE B (2) II **ROBINSON**

Continuation of 144. Emphasis on the working out of individual solutions to problems of sculptural form. Lectures and studio work. Prerequisite: Art 144. Studio fee $10.00.

150-151 DESIGN (2-2) Yr. **COX, NORRIS, KINGREY, STAFF**

Introduction to design fundamentals involving the elements and principles of visual organization. Lectures and studio problems. This course or its equivalent in experience is prerequisite to all advanced study in art. Studio fee $1.00 each semester.

154-155 DRAWING (2-2) Yr. **COX, NORRIS, TURNBULL, STAFF**

Basic principles of drawing in a variety of media. Lectures and studio work. Sections for Prearchitecture students. This course or its equivalent in experience is prerequisite to all advanced study in art. Studio fee $1.00 each semester.

156-158 LETTERING AND LAYOUT (2-2) Yr. **KIMURA, KINGREY**

Development of concepts of design in visual advertising, lettering for reproduction, typography and layout, preparation of creative design material employing graphic and photographic techniques for reproduction processes. Lectures and studio work. Studio fee $1.00.

160 CERAMICS (2) I, II **HORAN, McVAY**

Methods and principles of creating pottery by hand and on the potter's wheel. Lectures and studio work. Studio fee $10.00.

161 CERAMICS (2) I, II **HORAN, McVAY**

Continuation of 160. Emphasis on wheel throwing and experimentation with form and decorative techniques. Introductory study of glazes and operation of kilns. Lectures and studio work. Prerequisite: Art 160. Studio fee $10.00.

174 GRAPHIC COMMUNICATION (2) II **KINGREY**

Intensive and specialized experimental creative projects of graphic design in a variety of materials and varied spatial constructions, both two and three dimensional. Lectures and studio work. Prerequisite: Art 150–151, 154–155, and consent of instructor. Studio fee $1.00.

175 TEXTILE DESIGN (2) I **ROBINSON**

Execution of individual problems in design on fabrics, utilizing such media as the block print, stencil, and silk screen. Prerequisite: Art 150–151. Studio fee $7.00.

176 WEAVING A (2) I, II **ROBINSON**

Introduction to the creative processes of weaving. Warping and threading of simple hand looms, with some experience on the multiple harness loom. Lectures and studio work. Studio fee $7.50.

177 WEAVING B (2) II **ROBINSON**

Experimentation with various techniques, and some study of pattern drafting. Individual designing in relation to specific problems. Lectures and studio work. Prerequisite: Art 176. Studio fee $7.50.

180-181 PAINTING (2-2) Yr. **TURNBULL**

Problems of design and meaning in the creation of visual forms and images in painting. Prerequisite: Art 150–151 and 154–155, or consent of instructor. Lectures and studio work. Studio fee $6.00 second semester.

220 INDIAN AND FAR EASTERN ART (3) I **ECKE**

The development of architecture, sculpture, and painting in India, China, and Japan, and related cultures from prehistoric times to the present. Lectures with slides. Visits to the Honolulu Academy of Arts. Course fee $2.00. (Not offered 1956–57.)

225 EARLY CHINESE ART (3) II **ECKE**

Prehistoric and subsequent developments in pottery, jade, bronze, and other arts to the end of Han. Lectures with slides. Visits to the Honolulu Academy of Arts. Course fee $2.00.

229 CHINESE PAINTING (3) II **ECKE**

The development of Chinese painting from the earliest times to the present. Significance of brush work, ink and color, and of cultural and religious background. Lectures with slides. Visits to the Honolulu Academy of Arts. Prerequisite: Art 220 or consent of instructor. Course fee $2.00.

231 APPLIED ARTS OF CHINA (3) I **ECKE**

Ceramics, glyptic arts, metalwork, lacquer, textiles. Principles of architecture, furniture, interior design, landscaping. Lectures with slides. Demonstrations of techniques in ceramics and textiles. Visits to the Honolulu Academy of Arts. Course fee $2.00. (Not offered 1956–57.)

233 MUSEUM STUDIES IN FAR EASTERN ART (3) II **ECKE**

A course arranged in co-operation with the Honolulu Academy of Arts offering detailed critical consideration of the Far Eastern collections of the Academy. Classes meet at the Academy to study the material at first hand, supplemented by lectures with slides. Limited to small group. Prerequisite: consent of instructor. Course fee $2.00.

250-251 HISTORY OF WESTERN ART (3-3) Yr. **CHARLOT**

Origins and development of the European tradition in architecture, sculpture, and painting from prehistoric times to the present. Lectures with slides. Visits to the Honolulu Academy of Arts. Course fee $2.00 each semester.

252 HISTORY OF MODERN ART A (3) I **CHARLOT**

Development of nineteenth-century Western art. Lectures with slides. Visits to the Honolulu Academy of Arts. Course fee $2.00.

253 HISTORY OF MODERN ART B (3) II **CHARLOT**

Development of twentieth-century art. Lectures with slides. Demonstrations. Visits to the Honolulu Academy of Arts. Course fee $2.00.

256 ADVERTISING ART A (2) I **KIMURA**

Development of professional ideas creatively interpreted for a single graphic series through integration of design and technical experience in graphics, typography, photography, and reproduction. Lectures and studio work. Prerequisite: Art 150–151, 154–155, 156.

257 ADVERTISING ART B (2) II **KINGREY**

Continuation of Art 256. Design for basic media of visual communication: newspaper, magazine, direct mail. Lectures and studio work. Prerequisite: Art 256.

260 CERAMIC GLAZE CALCULATIONS (2) I **HORAN**

Elementary use of molecular formulae for glaze experimentation along with practical laboratory tests of raw materials. Care and operation of equipment. Prerequisite: Art 160 or consent of instructor. Studio fee $10.00.

261 ADVANCED CERAMICS (2) I, II **HORAN**

Ceramic design with respect to functional and production limitations. Continuation of exploratory work in field of student's choice. Prerequisite: Art 161 or consent of instructor. Studio fee $10.00.

264 WATER COLOR PAINTING A (2) I **COX**

The technique of water color. Studio and outdoor painting. Prerequisite: Art 150–151, 154–155. Desirable preparation: Art 180–181.

265 WATER COLOR PAINTING B (2) I **COX**

The imaginative expression of form and idea in water color. Studio and outdoor painting. Prerequisite: Art 264.

266 GRAPHIC ARTS (2) II **CHARLOT**

Printmaking in one or more of the following media: lithography, linoleum cut, wood cut, or silk screen. Emphasis on individual experimentation. Prerequisites: Art 150–151, 154–155, 269, and consent of instructor. Studio fee $3.00.

Courses in Fine Arts include the study of ceramics. Experiments in the use of Hawaiian materials such as clay and volcanic ash are conducted by advanced students.

268 LANDSCAPE PAINTING (2) II **NORRIS**

Principles and methods of landscape painting. Outdoor and studio work. Prerequisite: Art 180–181 or consent of instructor.

269 FIGURE DRAWING A (2) I, II **CHARLOT, KIMURA**

Basic principles of drawing the human figure, including study of anatomy and articulation as a foundation of knowledge and skill. Prerequisite: Art 154–155. Studio fee $4.00.

270 FIGURE DRAWING B (2) II **KIMURA**

Continuation of 269. Development of understanding in the drawing of the human figure to provide the foundation for its imaginative use. Prerequisite: Art 269. Studio fee $4.00.

272 ILLUSTRATION (2) II **KIMURA**

Problems of illustration with emphasis on individual experimentation. Use of various media, stressing the limitations and possibilities of the reproduction processes. Prerequisite: Art 180–181, 257, 269. Studio fee $2.00.

273 DESIGN MATERIALS (?) II **COX**

Introduction to three-dimensional design. The manipulation of design materials such as wood, metal, wire, fabric, or their combinations in spatial structures. Prerequisite: Art 150–151, 154–155. Studio fee $5.00.

276 ADVANCED WEAVING (2) I, II **ROBINSON**

Emphasis on individually designed problems, employing color, construction, yarns, and fibers as the technical means. Lectures and studio work. Prerequisite: Art 176 or consent of instructor. Studio fee $10.00.

280-281 ADVANCED PAINTING (2-2) Yr. **TURNBULL**

Continuation of 180–181. Studio fee $6.00 second semester.

299 DIRECTED WORK (Ar.) I, II **STAFF**

Criticism and guidance in work of the advanced student's own choosing in the following fields: (1) Drawing and Painting; (2) Applied Design; (3) Ceramics; (4) Commercial Art; (5) History of Western Art; (6) History of Far Eastern Art; (7) Mural Painting; (8) Weaving. Studio fee by arrangement for (2), (3), (7), and (8). Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Art.

300 DIRECTED WORK (Ar.) I, II **STAFF**

Directed work in: (1) Drawing and Painting; (3) Ceramics; (6) History of Far Eastern Art; (8) Weaving. Prerequisite: consent of department chairman and instructor. Studio fee by arrangement.

360 CERAMIC DESIGN AND RESEARCH (2) I, II **HORAN**

Individual problems in advanced ceramics. Prerequisite: consent of department chairman and instructor. Studio fee $10.00.

376 DESIGN AND RESEARCH IN WEAVING (2) I, II **ROBINSON**

Research into the utilization of native Hawaiian materials for weaving, or emphasis upon design for specific contemporary uses. Prerequisite: consent of department chairman and instructor. Studio fee $10.00.

380 PAINTING (2) I, II **CHARLOT, NORRIS, TURNBULL**

Individual problems in advanced painting. Prerequisite: consent of department chairman and instructor.

390 GENERAL SEMINAR (2) I, II **NORRIS, STAFF**

Study of historical and critical thought in the field of the visual arts most closely related to the creative work of the individual student. To be taken concurrently with Art 360, 376, or 380. Prerequisite: consent of department chairman and instructor.

395 SEMINAR IN ORIENTAL ART (1) I, II **ECKE**

Survey of the available literature and presentation of papers in fields of the student's choice. Prerequisite: consent of department chairman and instructor. (Not offered first semester 1956–57.)

ASIAN AND PACIFIC LANGUAGES

Professor UYEHARA; Associate Professors ELBERT, TAAM; Assistant Professor CHONG; Instructor FUJIOKA; Lecturers KEALA, T. LEE

CHINESE

100 ELEMENTARY CHINESE (3-3) Yr. **CHONG, TAAM**

Study of Chinese vocabularies for practical usage, with emphasis on conversation; grammar and sentence construction; reading of simple Chinese stories.

101 INTERMEDIATE CHINESE (3-3) Yr. **CHONG, TAAM**

Selected reading of Pai Hua essays; composition of stories.

200 THIRD-YEAR CHINESE (3-3) Yr. **CHONG**

Reading of newspapers and classics; composition and translation. (Not offered 1956–57.)

250-251 CHINESE LITERATURE IN ENGLISH (3-3) Yr. **CHONG**

Selections from classical and modern Chinese literature in English translation. (Second semester only.)

293-294 METHODS IN CHINESE STUDIES (3-3) Yr. **TAAM**

Study of the main fields of Chinese research, the special methods evolved, and the principal sources of bibliographical information. Prerequisite: junior standing. (Second semester only.)

299 DIRECTED READING (Ar.) I, II **STAFF**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Chinese.

300 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

Prerequisite: graduate standing.

HAWAIIAN

100 ELEMENTARY HAWAIIAN (3 3) Yr. **ELBERT, KEALA**

Elements of the language. Emphasis on conversation with some attention to Hawaiian songs.

101 INTERMEDIATE HAWAIIAN (3-3) Yr. **KEALA**

Reading of Hawaiian texts.

200 HAWAIIAN TRANSLATION (3-3) Yr. **ELBERT**

Translation of Hawaiian legends, chants, songs, and historical documents. Also translation from English to Hawaiian. Prerequisite: Hawaiian 101 or consent of instructor.

210 HAWAIIAN TRADITIONAL POETRY (3-3) Yr. **ELBERT**

Translation of traditional poetry, including the Pele and Hiiaka cycle, and the Kumu Lipo creation chants. Linguistic problems. Prerequisite: Hawaiian 101 or consent of instructor. (Not offered 1956–57.)

JAPANESE

100 ELEMENTARY JAPANESE (3-3) Yr. **STAFF**

Reading and translation of language readers. Study of *Katakana, Hiragana,* and simple Chinese characters; composition and oral exercises.

101 INTERMEDIATE JAPANESE (3-3) Yr. **FUJIOKA**

Reading and translation of language readers. Study of more Chinese characters; composition; advanced oral exercises.

203 JAPANESE TRANSLATION AND INTERPRETATION (3-3) Yr. **UYEHARA**

Lectures and exercises in Japanese-English translation and interpretation; English-Japanese translation and interpretation.

260 JAPANESE LITERATURE IN ENGLISH (2-2) Yr. **UYEHARA**

Historical analysis of Japanese thought through literature. Study of classics and contemporary works; drama; poetry; etc. No language background necessary.

299 DIRECTED READING (Ar.) I, II **UYEHARA**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Japanese.

300 DIRECTED READING OR RESEARCH (Ar.) I, II **UYEHARA**
Prerequisite: graduate standing.

KOREAN

100 ELEMENTARY KOREAN (3-3) Yr. **LEE**
Conversation, elements of grammar, reading.

101 INTERMEDIATE KOREAN (3-3) Yr. **LEE**
Conversation, reading, and writing. Some Chinese characters.

200 THIRD-YEAR KOREAN (3-3) Yr. **LEE**
Advanced conversation, composition, and translation. More Chinese characters.

BACTERIOLOGY

Professor CHU; Associate Professor BUSHNELL

140 APPLIED MICROBIOLOGY (2) I, II **CHU**
A survey of the principles and practical applications of microbiology. May not be used as prerequisite to other bacteriology courses. Not open to students who have had Bacteriology 151.

145 MICROBIOLOGY FOR NURSES (3) II **BUSHNELL**
A basic course in the principles and techniques of general and medical microbiology, designed especially for students in nursing. May be taken by students in other curricula who do not intend to take other courses in the department. Two lectures and one laboratory period. Laboratory fee $6.00.

151 GENERAL BACTERIOLOGY (4) I, II
The physiology, cultivation, and differentiation of bacteria, with emphasis upon fundamentals. Two lectures and two laboratory periods. Prerequisite: Botany 100 or Zoology 100; Chemistry 103. Desirable preparation: Chemistry 149 or 159. Laboratory fee $6.00. Certain qualified students may take the lectures only for 2 credits.

253 ECONOMIC MICROBIOLOGY (3-3) Yr.
Economic applications of microbiology. The first semester deals with agricultural microbiology (soil, sewage, water, milk, and dairy products), the second semester with marine microbiology and industrial microbiology (foods, fermentations, biologicals) and diseases of plants and animals of economic significance in Hawaii. Two lectures and one laboratory period. Prerequisite: Bacteriology 151; Chemistry 149 or 159. Laboratory fee $3.00 each semester. (Alternate years; not offered 1956–57.)

260 MEDICAL BACTERIOLOGY (3) I **BUSHNELL**
The role of microorganisms in the communicable diseases of man and animals, with emphasis upon modes of transmission and epidemiological aspects, and upon the function of the clinical bacteriologist in the diagnosis of these diseases. Prerequisite: Bacteriology 151; Chemistry 149 or 159.

262 LABORATORY IN MEDICAL BACTERIOLOGY (2) I **BUSHNELL**
A detailed study of the important bacteriological techniques concerned in the diagnosis of communicable diseases. Three laboratory periods. Prerequisite: credit or concurrent registration in Bacteriology 260. Laboratory fee $6.00.

264 IMMUNOLOGY (3) II **CHU**
Types of immunity, sera, vaccines, and antitoxins. Techniques of major diagnostic serological reactions. Two lectures and two laboratory periods. Prerequisite: Bacteriology 260. Laboratory fee $6.00.

299 MICROBIOLOGICAL PROBLEMS (Ar.) I, II **STAFF**
Directed reading and laboratory work on problems in microbiology. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Bacteriology. Laboratory fee $6.00.

300 DIRECTED RESEARCH (Ar.) I, II **STAFF**
Research on problems in microbiology. Prerequisite: graduate standing; consent of instructor. Laboratory fee $6.00.

312 SEMINAR (1) I, II **BUSHNELL**

Presentation of reports upon research or assigned subjects; reviews of current literature. Required of graduate students. May be repeated.

BOTANY

Senior Professor ST. JOHN; Professors COOIL, DOTY; Associate Professors AUSTIN, SHOJI; Assistant Professors BERNATOWICZ, GIROLAMI

100 GENERAL BOTANY (4) I, II **GIROLAMI, STAFF**

Basic principles of plant science, with emphasis upon structure in relation to function, function in relation to habitat, habitat and heredity in relation to evolution, attributes of plant life in relation to man. This course and Zoology 100 comprise an introduction to the biological sciences. Two lectures and two laboratory periods. Laboratory fee $5.00.

103 EVOLUTION (2) II

The concepts of evolution as applied to selected groups, and the sequence of development from the simple algae to representative families of complex flowering plants.

105 ECONOMIC PLANTS OF HAWAII (2) I, II **ST. JOHN**

The cultivated and wild plants used in ancient and modern times by the Hawaiians and Polynesians. Nature of these economic plants and their use for food, drink, fabric, dye, medicine, and utensils.

110 PLANTS AND MAN (2) II **GIROLAMI**

The influence of a dozen important plants upon man and man upon plants. The development of such plants as corn, wheat, rice, cotton, etc. The story of how plants have affected civilization. (Alternate years; offered 1956–57.)

160 FLOWER AND TREE IDENTIFICATION (2) II **ST. JOHN**

A nontechnical course in the identification of the common cultivated plants and weeds in the Territory.

161 PLANT GEOGRAPHY (2) I **ST. JOHN**

Plant distribution throughout the world; vegetation of forests, grasslands, deserts, tundra, mountains, and oceans; special attention to origin, development, ecology, and economic importance.

181 PLANTS AND THE SEA (3) I **BERNATOWICZ**

Marine algae, their ecology, and the taxonomy of local forms. Two lectures and one laboratory period. Laboratory fee $5.00.

201 SYSTEMATIC BOTANY OF FLOWERING PLANTS (3) I **ST. JOHN**

Native and exotic Hawaiian flowering plants, their classification, history, distribution, use; synopsis of monocotyledons; preparation of an herbarium. One lecture and two laboratory periods. Prerequisite: Botany 100. Laboratory fee $3.00.

202 TAXONOMY AND EXPLORATION (3) II **ST. JOHN**

Taxonomy of Hawaiian vascular plants, their occurrence and use; account of botanical exploration of Hawaii; literature of Pacific flora. One lecture and two laboratory periods. Prerequisite: Botany 201. Laboratory fee $3.00.

220 PRINCIPLES OF GENETICS (2) II **BERNATOWICZ**

Fundamentals of genetics; the physical basis of the inheritance of characters and variation in plants and animals. Prerequisite: 8 hours of biological science.

253 PLANT ECOLOGY (4) II **ST. JOHN**

Plants in relation to environment, the climatic and geographical factors; plant sociology, the origin, development, structure, and succession of plant societies. Two lectures and two laboratory periods. Prerequisite: Botany 201. Laboratory fee $3.00. (Alternate years; offered 1956–57.)

254 ADVANCED TAXONOMY (1) I **ST. JOHN**

Synopsis of lower dicotyledons from Piperaceae to Rosaceae, with study of important families; plant distribution and independent identification of collections. Prerequisite: Botany 201.

259 MYCOLOGY (3) II

The structure, food relations, and classification of fungi. Collection and identification of the more common Hawaiian fungi. Two lectures and one laboratory period. Prerequisite: Botany 100 or consent of instructor. Laboratory fee $4.00.

261 DISEASES OF ECONOMIC PLANTS (3) II **MURAKISHI**

Dissemination, environmental, and cultural factors influencing disease development. Emphasis upon diagnosis and control as they apply to Hawaiian crop plants. Prerequisite: 12 hours in Botany and Bacteriology or consent of instructor.

262 STRUCTURE OF ECONOMIC PLANTS (3) II **GIROLAMI**

A study of the anatomy of the important field and garden crop plants representative of Hawaiian agriculture. One lecture and two laboratory periods. Prerequisite: Botany 100. Laboratory fee $5.00. (Alternate years; not offered 1956–57.)

263 PRINCIPLES OF PATHOLOGY (3) II **MURAKISHI**

Disease in plants with emphasis upon infection and development in relation to environment, pathological anatomy, systems of classification, epidemiology, and methods of appraisal and control. Two lectures and one laboratory period. Prerequisite: Botany 100. Botany 259 recommended.

264 PHYTOPATHOLOGICAL METHODS (3) II

Experiments in the study of diseases; isolation and culture of pathogens; inoculation; practice in disease survey and interpretation of data. Two 3-hour lecture-laboratory periods. Prerequisite: Botany 263 or consent of instructor. Laboratory fee $5.00.

266 MEDICAL MYCOLOGY (2) II

Diagnostic morphology and cultural characteristics of groups of fungi pathogenic to man. Two lecture-laboratory periods. Prerequisite: Bacteriology 262 or Botany 259. Laboratory fee $3.00. (Alternate years; not offered 1956–57.)

268 PLANT MICROTECHNIQUE (3) II **GIROLAMI**

Principles and methods of preparing plant materials for histological and cytological study; paraffin and smear techniques; preparation of illustrations for publication. One lecture and two laboratory periods. Prerequisite: Botany 100. Laboratory fee $8.00. (Alternate years; not offered 1956–57.)

269 PLANT ANATOMY (3) I **GIROLAMI**

Structure of vascular plants; origin and differentiation of tissues; relation of structure to function. One lecture and two laboratory periods. Prerequisite: Botany 100. Laboratory fee $5.00.

273 ADVANCED PHYSIOLOGY (3) I **COOIL**

Intensive work on physical aspects of plant physiology; nature of protoplasm; water relations; mineral absorption and utilization. Prerequisite: Botany 283; Chemistry 149; Physics 102. (Alternate years; offered 1956–57.)

274 TECHNIQUES IN PHYSIOLOGY (2) I **COOIL**

Methods of studying nutrient element absorption and composition of plants, soil plant water relationships, osmotic relations. Two laboratory periods. Prerequisite: Botany 283; Chemistry 149; Physics 102; consent of instructor. Laboratory fee $5.00. (Alternate years; offered 1956–57.)

275 ADVANCED PHYSIOLOGY-BIOCHEMISTRY (3) II **COOIL**

Intensive study of chemical aspects of plant physiology; photosynthesis; nitrogen assimilation; fat metabolism, translocation, and storage; enzymes; respiration; hormones. Prerequisite: Botany 283; Chemistry 149; Physics 102. (Alternate years; offered 1956–57.)

276 TECHNIQUES IN PHYSIOLOGY (2) II **COOIL**

Methods of determining carbohydrates, nitrogen and phosphorus fractions, organic acids, auxins, and other substances of physiological significance in plant materials. Two laboratory periods. Prerequisite: Botany 274 and consent of instructor. Laboratory fee $5.00. (Alternate years; offered 1956–57.)

279 MORPHOLOGY OF CRYPTOGAMIC PLANTS (3) I **DOTY**

Comparative morphology and classification of the major groups of algae, byrophytes, and pteridophytes, and their biological relations. Two lectures and one laboratory period. Prerequisite: Botany 100. Laboratory fee $4.00. (Alternate years; offered 1956–57.)

281 CYTOLOGY (3) II **GIROLAMI**

The structure of the cell, its nucleus and cytoplasm. Two lectures and one laboratory period. Prerequisite: Botany 100. Laboratory fee $4.00. (Alternate years; offered 1956–57.)

283 ELEMENTARY PLANT PHYSIOLOGY (4) II **SHOJI**

Introduction to plant physiology; osmosis, absorption of water, transpiration, mineral utilization, photosynthesis, storage, digestion, respiration, growth, photoperiodism. Two lectures and two laboratory periods. Prerequisite: Botany 100; Chemistry 103. Botany 269 and Chemistry 149 recommended. Laboratory fee $6.00.

291 BIOLOGICAL PRODUCTIVITY OF THE SEA (3) II **AUSTIN, DOTY**

An analysis of the qualities and functions of the sea and their relationships to the organisms therein. Emphasis is placed upon the roles of the algae. Prerequisite: senior standing in botany or zoology or consent of instructor. Three lecture periods. (Alternate years; offered 1956–57.)

297 THE NATURE OF BOTANY (1) I **STAFF**

Discussion of topics so chosen that the student becomes aware of the scope, current trends, and tools of his prospective profession. Required the first autumn semester of registration as a major in the Department.

299 BOTANICAL PROBLEMS (Ar.) I, II **STAFF**

Pursuit of any advanced botanical problem; reading and laboratory work. May be repeated. Laboratory fee $2.00. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Botany.

300 DIRECTED RESEARCH (Ar.) I, II **STAFF**

Prerequisite: graduate standing; consent of instructor. Laboratory fee $2.00.

310 BOTANICAL SEMINAR (1) I, II **STAFF**

Presentation of reports upon research, or reviews of current botanical literature. Recommended for seniors and graduate students and may be repeated.

312 ADVANCED BOTANICAL PROBLEMS (Ar.) I, II **STAFF**

Investigation of any botanical problem; reading and laboratory work. May be repeated. Prerequisite: consent of instructor. Laboratory fee $2.00.

330 MOLDS, YEASTS, AND ACTINOMYCETES (3) II

The systematics and manipulation of selected forms, with emphasis on their physiology as applied to research or to medical and economic processes. Prerequisite: graduate standing or 12 credit hours in Botany or Bacteriology. One lecture and two laboratory periods. Laboratory fee $5.00. (Alternate years: not offered 1956–57.)

331 EXPERIMENTAL MARINE BOTANY (3) II **DOTY**

Current research areas and their related laboratory methods, with emphasis on the physiological aspects of marine phycology. One lecture and two laboratory periods. Prerequisite: graduate standing or 12 credit hours in Botany including Botany 230. Laboratory fee $5.00. (Alternate years; not offered 1956–57.)

332 PHYCOLOGY (3 3) Yr. **DOTY**

A four-semester cycle covering the morphological and systematic aspects of the algae. The different semesters emphasize: (a) Chlorophyta; (b) Phaeophyta and Myxophyta; (c) Rhodophyta; and (d) small groups. Prerequisite: consent of instructor.

351 PHYSIOLOGY SEMINAR (2) II **COOIL**

Discussion of topics of particular interest to the group. May be repeated. Prerequisite: consent of instructor.

353 ADVANCED MYCOLOGY (3) I

Details of morphology, requirements for growth and sporulation in synthetic culture, and comparative systematics of selected groups of fungi, particularly Ascomycetes and the genera of Fungi Imperfecti of importance in phytopathology. Independent collections and identification. Two lecture-laboratory periods. Prerequisite: Botany 259 or graduate standing and consent of instructor. Laboratory fee $3.00. (Alternate years; not offered 1956–57.)

365 TAXONOMY OF THE DICOTYLEDONS (1) II **ST. JOHN**

A synoptic treatment of the dicotyledons, from the Leguminosae to the Umbelliferae, with reference to their gross morphology, economic value, and distribution. Prerequisite: Botany 201. (Alternate years; not offered 1956–57.)

367 TAXONOMY OF THE HIGHER DICOTYLEDONS (1) II **ST. JOHN**

A synoptic treatment of the higher dicotyledons from the Ericaceae to the Compositae, with reference to their gross morphology, economic value, and distribution. Prerequisite: Botany 201. (Alternate years; offered 1956–57.)

377 MORPHOLOGY SEMINAR (2) II **GIROLAMI**

A survey and discussion of the recent developments in the fields of morphology, anatomy, and cytology. Prerequisite: consent of instructor. (Alternate years; offered 1956–57.)

378 NOMENCLATURE SEMINAR (2) I **ST. JOHN**

A study of the laws of botanical nomenclature and their application by the case method, leading to a determination of the correct scientific names of plants. Prerequisite: Botany 202. (Alternate years; not offered 1956–57.)

379 PHYTOPATHOLOGICAL LITERATURE (1) I

Reviews and presentation of reports treating recent advances in diseases of plants and their control. May be repeated. Prerequisite: advanced or graduate standing and consent of instructor.

380 CYTOGENETICS (3) I

The cytological basis of plant heredity. Prerequisite: Botany 100; credit or concurrent registration in Agriculture 254. Two lectures and one laboratory period. Laboratory fee $4.00. (Alternate years; not offered 1956–57.)

BUSINESS

Senior Professor ROBERTS; Associate Professors ADLER, FERGUSON, HOEBER, IGE, LEONG; Assistant Professors CONGDON, KIRKPATRICK, MARK, PIERSON; Instructors ATKINSON, LEE; Lecturer LUKE

100 BUSINESS CALCULATIONS (3) I, II **STAFF**

Consideration of basic arithmetical processes and calculations such as simple and compound interests, discounts, and annuities. Designed to meet the minimum business needs.

150 ELEMENTARY ACCOUNTING (3) I, II **LEE, PIERSON**

Fundamental principles of accounting for sole proprietorships, including use of journals and ledgers and preparation of statements. Two lectures and one laboratory period. Prerequisite: sophomore standing in the department or consent of instructor.

151 ELEMENTARY ACCOUNTING (3) II **LEE, PIERSON**

Continuation of Business 150, including the accounting problems of partnerships and corporations. Two lectures and one laboratory period. Prerequisite: Business 150.

160-161 ELEMENTARY BUSINESS LAW (3-3) Yr. **STAFF**

First semester: law as an agency of social control; nature, sources, and growth of the law; fundamental legal conceptions; law of contracts. Second semester: law of agency, negotiable instruments, and sales. Prerequisite: sophomore standing.

170 TECHNIQUE OF TYPEWRITING (2) I **ATKINSON**

An intensive course in advanced typewriting. Prerequisite: sophomore standing in Business or major in Education with a commercial work teaching field; consent of instructor; a placement examination.

177 TECHNIQUE OF SHORTHAND (2) I **ATKINSON**

Dictation and transcription; advanced shorthand and typewriting skills combined; continued development of a vocabulary. Prerequisite: sophomore standing in Business or major in Education with a commercial work teaching field; consent of instructor.

210 ELEMENTS OF INDUSTRIAL RELATIONS (3) I **IGE**

An examination of some of the basic problems in industrial relations, directed toward the needs of supervisory personnel. Special attention to grievance machinery and the handling of grievances at the foreman and upper levels. Prerequisite: consent of instructor.

212 PROPERTY INSURANCE (3) I **PIERSON**

Protection of personal and business property against damage by fire and related perils; consequential losses; and miscellaneous property lines such as boiler and machinery, and glass insurance.

217 MISCELLANEOUS CASUALTY INSURANCE (3) II **PIERSON**

Study of coverages of property losses by casualty companies, including burglary, theft; glass, power plants, etc. Consideration of multiple-line underwriting. Review of Territorial insurance laws, and agency and company operations.

219 LIFE INSURANCE (3) II **PIERSON**

Types of policies; program planning; premium and reserve computations; surrender values and settlement options. Consideration of life and annuity policies offered under standard, industrial, and wholesale insurance.

220 BUSINESS REPORTS AND CORRESPONDENCE (3) I **ATKINSON**

Study of and practice in writing various types of business letters and reports. Assignments based on current economic and business problems, with emphasis on analytical thinking as well as writing.

225 ADVERTISING COPY WRITING (3) II **CONGDON**

A study of the principles underlying the preparation of effective copy; analysis of specimens from various current mediums; practice in creative copy writing; appraisal of methods of effective copy testing. (Alternate years; offered 1956–57.)

230 INDUSTRIAL SAFETY AND HEALTH (2) II **CONGDON**

Methods of reducing losses arising from industrial accidents and health hazards. Principles of accident prevention; reporting, analyzing, and prescribing remedies for accident experience; staff organization, safety devices, and safety programs.

232 REAL ESTATE FUNDAMENTALS (3) I **BELL**

Survey of the real estate field. Essentials that concern the consumer. The significance of realty as a commodity and the fundamentals essential to successful home ownership. Background for further training in real estate law, brokerage, management, appraising, and real estate finance.

233 PROPERTY VALUATION (3) II **BELL**

Fundamentals of property values. Property value problems: appraisal practice, building costs, depreciation and absolescence, the mathematics of appraising, and the social, economic, and political influences affecting property values. Emphasis upon prevailing field techniques of property valuations and real estate appraising.

235 URBAN LAND UTILIZATION (3) II **BELL**

Land and population; economics of land utilization; urbanization, and urban land; manufacturing as an urbanizing factor; labor as a factor; transportation and commerce in city location and urbanization.

240 PRINCIPLES OF INSURANCE (3) I **PIERSON**

The uses of insurance in business, as protection against fire, theft, transportation risks, legal liability, and dishonesty and failure of others. Also forms of life and disability insurance.

241 BUSINESS AND SECRETARIAL MACHINES (3) II **ATKINSON**

Characteristics, function, and cost of operation of machines available for performing clerical, arithmetic, accounting, and statistical work, with emphasis on the punch card accounting machines of the International Business Machines Corporation.

245 TIME AND MOTION STUDY (3) II

The application of scientific management to industrial operations through analysis of time elements and study of motion economy. Includes job breakdown, time studies, work simplification, and standards of performance.

248 WAGE DETERMINATION (3) II **PENDLETON**

Principles and practice of rate setting, economic theories concerning wages, impact of unions on the process of wage determination. (Not offered 1956–57.)

249 BUDGETARY ACCOUNTING AND CONTROL (3) II **ADLER**

Principles of budgeting for effective management of industrial and merchandising firms. Step-by-step procedure for making a general budget. Illustrative problems in administration of purchase, sales, expense, and cash budgets. Prerequisite: credit or concurrent registration in Business 251.

250 INTERMEDIATE ACCOUNTING (3) I **ADLER, PIERSON**

Financial statements: form, content, and such related problems as depreciation, depletion, valuation of assets, and the capital structure of corporations. Two lectures and one laboratory period. Prerequisite: Business 151.

251 ADVANCED ACCOUNTING (3) II **ADLER, PIERSON**

Continuation of general accounting, including the more specialized phases, such as special reports, consolidated statements, accounting problems and procedures for installment sales, consignments, estates and trusts, receiverships, and branch agencies. Prerequisite: Business 250.

254 COST ACCOUNTING (3) I

Discussion of such aspects of cost accounting as sources of costs, cost units, cost gathering, and use of cost data. Prerequisite: credit or concurrent registration in Business 251 or consent of instructor.

255 ANALYSIS OF FINANCIAL STATEMENTS (3) II **ADLER**

Analysis of the balance sheet and profit and loss account from the standpoint of the data to be derived from them bearing on the financial standing of business units as investments and credit possibilities. Prerequisite: Business 151.

256 INCOME TAX PROBLEMS (3) I **ADLER**

Study of the federal and Territorial income tax laws and related accounting problems; individual, fiduciary, partnership, and corporation returns as prepared. Prerequisite: Business 151.

257 MERCHANDISE ACCOUNTING AND CONTROL (3) II

Principles and methods in accounting for the purchase and sale of commodities at retail and wholesale, with special emphasis on inventory control, collection and allocation of operating costs on a functional basis, and budgetary control. Prerequisite: Business 151.

258 AUDITING (3) I **ADLER**

The principles involved and the techniques employed in the conduct of a business audit. While the course embraces both theory and practice, the practical aspects of auditing are emphasized by means of problems and a practice case. Prerequisite: Business 251 or consent of instructor.

259 OFFICE ORGANIZATION AND MANAGEMENT (3) I **ATKINSON**

Office functions; personnel; distribution of authority and responsibility; employment; compensation; efficiency measurement; procedure and layout; indexing and filing.

260 PRINCIPLES OF SMALL BUSINESS (3) I **CONGDON**

The field of small business; organization, control, and expansion of units; financial difficulties and failures; relation to the economy. Emphasis placed upon practical aspects of operation by examination of specific cases. Prerequisite: Business 151.

261 COLLECTIVE BARGAINING (3) I **ROBERTS**

The underlying principles and concepts of collective bargaining and the collective bargaining agreement. Sample contracts examined and analysis made of the main provisions of agreements, including union status, general wage provisions, grievance machinery, seniority, contract enforcement, and other sections of the agreement. Prerequisite: Economics 281.

263 PERSONNEL MANAGEMENT (3) II

Characteristics of an efficient supervisory organization; employee maintenance and control; foremanship training and control; apprenticeship and training methods; pension, insurance, and thrift plans; working conditions; bonus, premium plans, and wage incentives.

265 CORPORATION FINANCE (3) I, II **LUKE**

Determination of capital requirements; sources and devices used to procure capital; marketing securities; control of capital disbursements; credit and income. Prerequisite: Business 151; credit or concurrent registration in Economics 256, or consent of instructor.

266 INVESTMENTS AND INVESTMENT BANKING (3) II **LUKE**

Economic theory and tests of investment; investment credit analysis; mathematics of investment; tools of investment; types of investment institutions and their functioning. Prerequisite: Business 151; Economics 256.

267 BUSINESS CYCLES AND BUSINESS FORECASTING (3) II **KIRKPATRICK**

Analysis of the business cycle and proposed remedies; assumptions, methods, and statistical data used in business forecasting; forecasting services; applicability of forecasts to specific cases. Prerequisite: Economics 256.

268 EMPLOYMENT INTERVIEWING (3) II **FERGUSON**

Interviewing as a tool of personnel management used by both supervisor and personnel department; advantages and limitations when used in hiring, promotion, transfer, discharge, and other personnel changes; counseling interviews. Emphasis on practical aspects, with practice in actual interview work. Prerequisite: senior standing or consent of instructor.

270 PRINCIPLES OF MARKETING (3) I

A study of consumption followed by a general survey of the marketing structure, emphasizing marketing functions and channels, market analysis and research, and marketing policies. Prerequisite: Economics 150-151.

272 ADVANCED SECRETARIAL TRAINING (2) II **ATKINSON**

A study of the work of the secretary, including letter forms and letter writing, business ethics, office procedures, filing, and transcription. Prerequisite: senior standing in Business or consent of instructor.

273 PRINCIPLES OF ADVERTISING (3) II **CONGDON**

A survey course. Among the topics considered are: advertising as a factor in the distributive process, agencies and campaigns, selection of mediums.

276 RETAIL MERCHANDISING (3) II **ATKINSON**

Buying habits of retail customers; history of retailing; store organization and management; sales promotion. Prerequisite: Economics 150–151 or consent of instructor.

277 SECRETARIAL PRACTICE (3) II **ATKINSON**

From 100 to 150 hours of laboratory work in a carefully selected business office, under supervision and for compensation, with co-ordinated class instruction and group sharing of experiences. Prerequisite: consent of instructor.

278 CREDIT MANAGEMENT (3) I **LUKE**

Nature and importance of credit in business; forms of credit instruments; sources of credit and of credit information; collection tools and their use; credit and collection control. Prerequisite: Business 151 or consent of instructor.

279 METHODS OF MARKET RESEARCH (3) I **CONGDON**

The requirements for scientific market research: selection of problem, data collection, tabulation, interpretations, presentation of findings, and application to business policy. Special emphasis on requirements of small business concerns. Prerequisite: Business 270 and 282, or consent of instructor.

280 PRINCIPLES OF SALESMANSHIP (3) I **CONGDON**

Principles of personal selling, types of selling jobs, qualifications of salesmen. Emphasis upon practical problems and techniques of salesmen. Provision for application of techniques to actual selling situations.

282 BUSINESS STATISTICS (3) I, II **STAFF**

A study of statistical techniques and their application to business and economics. Sources of data, tabulation, charting, averages, dispersion, sampling, index numbers, analysis of time series, and correlation. Prerequisite: Economics 150–151 or consent of instructor.

284 ACCOUNTING SYSTEMS (3) II

Principles and functions of an accounting system in providing useful information to the management of a business. Examination of records and statements for types of business and for specific business units. Prerequisite: credit or concurrent registration in Business 251.

286 NEGOTIABLE INSTRUMENTS (3) II **HOEBER**

A study of the history and nature of negotiable contracts, of the kinds of negotiable instruments in general use, and of the leading provisions of the uniform Negotiable Instruments Law from the viewpoint of the businessman. Prerequisite: Business 160–161 or consent of instructor.

287 BUSINESS ORGANIZATION AND MANAGEMENT (3) I, II

Choosing goods to handle, time to enter business, location, size, and form of organization; selecting, handling, and promoting executives; choosing selling policies; promoting good public relations. Designed to integrate work already taken, to provide a basis for further study, and to give a unified concept of business administration. Prerequisite: Economics 256.

296 GOVERNMENTAL ACCOUNTING (3) I

Essential principles and peculiarities of accounting as applied to municipalities and other governmental units: classification of accounts, budgetary procedure, fund accounting, assets, liabilities, cost accounting, and financial reporting. Prerequisite: Business 151. (Alternate years; offered 1956–57.)

299 DIRECTED READING (Ar.) I, II **STAFF**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Business.

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

Prerequisite: consent of department chairman.

307 SEMINAR IN PROBLEMS OF BUSINESS (3) II **LEONG**

Prerequisite: consent of department chairman.

CHEMISTRY

Senior Professor L. BILGER; Professors E. BILGER, RAKESTRAW; Associate Professors NAUGHTON, SCHEUER, E. G. SMITH, WAUGH; Assistant Professors FRODYMA, IHRIG, ZEITLIN

103 GENERAL CHEMISTRY (4-4) Yr. **SMITH, STAFF**

A comprehensive study of chemistry with emphasis upon fundamental laws, principles, and methods. Three lectures and one laboratory period. Laboratory fee $10 each semester. Prerequisite: a year of high school algebra and plane geometry.

104 SURVEY OF CHEMISTRY (4-4) Yr. **E. BILGER**

A course comprising fundamental laws, principles, and methods of inorganic and organic chemistry. Three lectures and one laboratory period. Laboratory fee $10 each semester. Prerequisite: one year of high school algebra and plane geometry.

149 ORGANIC CHEMISTRY (4-4) Yr. **L. BILGER**

The chemistry of the carbon compounds, their classification, structure, and nomenclature; electronic reactions; training in techniques of organic laboratory methods. Three lectures and one laboratory period. Prerequisite: Chemistry 103. Laboratory fee $12 each semester.

150 QUALITATIVE ANALYSIS (4) I **FRODYMA**

Systematic analysis covering the detection of common basic and acid ions by semi-micro methods; theory of analytical procedures. Two lectures and two 3-hour laboratory periods. Prerequisite: Chemistry 103. Laboratory fee $11.

159 ELEMENTS OF ORGANIC CHEMISTRY (4) II **ZEITLIN**

An intensive one-semester course covering the entire field of the chemistry of the compounds of carbon. Three lectures and one laboratory period. Laboratory fee $12. Prerequisite: Chemistry 103. This course satisfies the organic chemistry requirement of those curricula needing one semester only.

160 CHEMICAL CALCULATIONS (3) II

The solution of advanced problems based upon the fundamental laws and definitions of chemistry; computations and errors. Prerequisite: Chemistry 150; credit or concurrent registration in Mathematics 151. Mathematics 152 advised.

230 ELEMENTARY QUANTITATIVE ANALYSIS (4) II **NAUGHTON**

A beginning course in gravimetric and volumetric analysis. Two lectures and two laboratory periods. Prerequisite: Chemistry 150; Mathematics 151. Laboratory fee $11.

231 INTERMEDIATE QUANTITATIVE ANALYSIS (4) I **NAUGHTON**

Volumetric and gravimetric analysis of complex inorganic mixtures; elementary colorimetric and electrometric determinations. Two lectures and two laboratory periods. Prerequisite: Chemistry 230. Laboratory fee $11.

232 BIOCHEMISTRY (4) I **E. BILGER**

A study of the chemistry of biological systems; laboratory techniques of handling and studying biological materials. Three lectures and one laboratory period. Prerequisite: Chemistry 104, 149, or 159. Laboratory fee $9.

238 ADVANCED INORGANIC CHEMISTRY (3-3) Yr. **WAUGH**

An advanced study of inorganic compounds, the less familiar elements, the periodic classification, non-aqueous solvents, character of metals, co-ordination compounds, oxidation-reduction, acid-base systems, the crystalline state. Prerequisite: credit or concurrent registration in Chemistry 230. One or two semesters may be taken for credit. (Alternate years; not offered 1956–57.)

246 INTRODUCTION TO CHEMICAL ENGINEERING (3-3) Yr. **NAUGHTON**

A theoretical and practical study of the unit operations and unit processes used in chemical industrial practice. Two lectures and one laboratory period. Prerequisite: Chemistry 103; Mathematics 154. Laboratory fee $8. (Alternate years; offered 1956–57.)

249 ADVANCED ORGANIC CHEMISTRY (4) I **ZEITLIN**

A study of organic syntheses illustrated by laboratory preparations requiring special techniques. Two lectures and two laboratory periods. Prerequisite: Chemistry 149. Laboratory fee $12.

250 QUALITATIVE ORGANIC ANALYSIS (4) II

A study of the detection and characterization of mono- and polyfunctional organic compounds, theory and practice. Two lectures and two laboratory periods. Prerequisite: Chemistry 149. Laboratory fee $10.

The Chemistry Building, located in a recently developed area of the expanding campus, has modern lecture and laboratory facilities.

251 QUANTITATIVE ORGANIC ANALYSIS (3) II **FRODYMA**

The determination of organic compounds by semimicro and micro methods including elemental and functional group analyses. One lecture and two laboratory periods. Prerequisite: Chemistry 149 and 230. Laboratory fee $10. (Alternate years; offered 1956–57.)

255 PHYSICAL CHEMISTRY (4-4) Yr. **IHRIG**

An advanced course in theories and principles of chemistry; physico-chemical laboratory procedures. Three lectures and one laboratory period. Prerequisite: Chemistry 149, 230; credit or concurrent registration in Mathematics 154; Physics 102. Laboratory fee $8 each semester.

260 OCEANOGRAPHIC CHEMISTRY (3) II **RAKESTRAW**

A theoretical and descriptive study of the chemistry of the oceans, and practice in the standard analytical methods important to chemical oceanography. Two lectures and one laboratory period. Prerequisite: Chemistry 103 and 230 or consent of instructor. Laboratory fee $8. (Alternate years; offered 1956–57.)

266 CLINICAL CHEMISTRY (4) II **E. BILGER**

Theory and practice of quantitative methods of analysis of biological materials for purposes of clinical diagnosis and prognosis; chemical changes in the pathological human organism. Two lectures and two laboratory periods. Prerequisite: Chemistry 230, 232. Laboratory fee $9.

270 CHEMISTRY OF METABOLIC PROCESSES (2) II

The fundamentals of enzyme reactions, biological oxidations, and energy transfers; the dynamic aspect of proteins, fats, and carbohydrates. Two lectures. Prerequisite: Chemistry 149.

281 HISTORY OF CHEMISTRY (3) I **L. BILGER**

Evolution of the science of chemistry from the earliest times, through alchemy, to the present; emphasis upon achievements leading to new basic ideas; the personalities of the great chemists. Illustrated by slides, photographs, and models. Prerequisite: Chemistry 149, 150.

290 RECENT DEVELOPMENTS IN CHEMISTRY (2) **STAFF**

Recent advances in different fields of chemistry. The subjects treated will be varied from year to year. May be repeated for credit with change in content. Prerequisite: senior or graduate standing in chemistry or consent of instructor.

295 CHEMICAL LITERATURE (2) II **SMITH**

Systematic use of the journals, texts, handbooks, dictionaries, tables, abstracts, microfilms, and government literature of chemistry; special library problems. One lecture and one library period. Prerequisite: senior or graduate standing.

299 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Chemistry. Laboratory fee $5 per credit.

300 DIRECTED RESEARCH (Ar.) I, II **STAFF**

Research in pure and applied chemistry. Prerequisite: graduate standing; consent of department chairman. Laboratory fee $5 per credit.

338 ATOMIC STRUCTURE AND NUCLEAR CHEMISTRY (3-3) Yr. **WAUGH**

A study of atomic and nuclear structure from the quantum-mechanical viewpoint. Emphasis upon atomic spectra, X-rays, wave mechanics, isotopes, nuclear reactions, and tracer chemistry. Either or both semesters may be taken for credit. Prerequisite: credit or concurrent registration in Chemistry 255; Mathematics 154; Physics 102. (Alternate years; offered 1956–57.)

349 SPECIAL TOPICS IN ORGANIC CHEMISTRY (3-3) Yr.

A four-semester cycle covering such topics as stereochemistry, the relation of structure to reactivity, the formations and reactions of cyclic compounds, and the chemistry of natural products. May be taken one, two, three, or four semesters. Prerequisite for any semester: Chemistry 249.

350 SPECIAL TOPICS IN PHYSICAL CHEMISTRY (3-3) Yr. **IHRIG**

A four-semester cycle covering (a) reaction kinetics, (b) chemical thermodynamics, (c) molecular structure, and (d) colloid chemistry. May be taken one, two, three, or four semesters. Prerequisite for any semester: Chemistry 255.

352 INSTRUMENTAL METHODS OF ANALYSIS (2-2) Yr. **NAUGHTON**

A four-semester cycle covering the theory and applications of modern optical, electrical, and physical methods of analysis, including spectrophotometry, colorimetry, fluorimetry, X-ray, and electron diffraction, microscopy, polarimetry, polarography, magnetometry, and radiometry. One lecture and one laboratory period. May be taken one, two, three, or four semesters. Prerequisite: credit or concurrent registration in Chemistry 255. Laboratory fee $5.

355 THEORETICAL ORGANIC CHEMISTRY (3) II **L. BILGER**

Electronic and orbital theories of chemical bonding; bond types; resonance; physical techniques for investigating electronic structure; electronic formulas and reactions. Prerequisite: Chemistry 249; credit or concurrent registration in Chemistry 255; Physics 102.

360 SEMINAR (1-1) Yr. **NAUGHTON**

Papers and discussions on recent advances in Chemistry. Prerequisite: senior or graduate standing.

DENTAL HYGIENE

Instructor ISHIDA; Lecturers BELLANDO, CONNER, DAWE, GLYNN, MAJOSKA, SAMPLE, B. SHERMAN

Dental Hygiene 251, 252, 256, 258, 260, 262, 264, and 265 may be elected by students in other colleges and curricula.

200 TOOTH MORPHOLOGY (1) I **ISHIDA**

Designed to provide the student with an opportunity to carve models of anterior and posterior teeth, showing general form, cusps, planes, and angles. Open only to Dental Hygiene majors.

201 DENTAL HYGIENE EDUCATION (2) II **ISHIDA**

Methods, materials, and visual aids used in teaching dental health; relationship of the dental hygienist to the practice of dental hygiene and dentistry, and the ethics and economics involved.

235 DENTAL PROPHYLACTIC TECHNIQUE (2) II **ISHIDA**

Laboratory instruction and practice on manikin heads in the technique of instrumentation and polishing. Training in the operative technical procedures required to remove accretions, deposits, and stains.

254 CLINICAL PRACTICE (5 5) Yr. **ISHIDA**

Gross anatomy of the teeth; bones of the skull; muscles of mastication, tongue, face, pharynx; glands of the oral cavity; 5th, 7th cranial nerves; blood vessels of the head and neck.

252 DENTAL PROPHYLAXIS (1) I **SAMPLE**

Prophylactic treatment of the mouth, with special attention to measures which can prevent or arrest dental caries and adjacent-tissue degeneration.

254 CLINICAL PRACTICE (5-5) Yr. **ISHIDA**

Clinical prophylactic practice on patients under supervision.

256 DENTAL CARIES (2) II **CONNER**

The etiology, progress, and prevention of caries. Composition, location, and causes of accretions, deposits, and stains; their harmful results; preventive measures.

253 DENTAL HISTOLOGY (1) II **DAWE**

The fundamentals of dental embryology and histology. Formation, structure, and function of the enamel, dentin, cementum, pulp, periodontal membrane, alveolar process, and gingivae.

260 ORAL PATHOLOGY (1) I

Fundamentals of general pathology and its specific application to the diseases of the mouth. Mouth manifestations of systemic diseases, alveolar abscess, granuloma, pyorrhea, gingivitis; diagnosis and prognosis.

262 MATERIA MEDICA (2) I **MAJOSKA**

Derivation and effects of drugs most commonly used in dentistry. Relative values of germicides, antiseptics, and disinfectants; analysis of the formulae of dentifrices and mouth-washes.

264 ORTHODONTICS (1) II **GLYNN**

Basic principles, normal occlusion, malocclusion, case analysis for classification, etiology of malocclusion, growth of the cranium, facial bones, and tooth eruption.

265 DENTAL ROENTGENOGRAPHY (1) II **BELLANDO**

A lecture-laboratory course in the study, technique, and use of the roentgen ray in its application to dentistry.

354 DENTAL HYGIENE INTERNSHIP (14) I, II **ISHIDA**

Supervised intern practice in selected public schools; dental hygiene seminar.

DRAMA AND THEATRE

Professor ERNST; Associate Professor TRAPIDO; Assistant Professor BENTLEY

140 INTRODUCTION TO DRAMA AND THEATRE (3) II **ERNST**

A study of the theatre in its relation to contemporary life, with particular emphasis upon its role as a form of social and artistic expression.

150-151 DRAMATIC PRODUCTION (3-3) Yr. **TRAPIDO**

An introduction to the basic theories and practices of the theatre. Emphasis upon acting, direction, staging, and lighting, with some attention to other departments of the theatre and to problems of school production. Co-ordinated with the activities of the University Theatre. Students may enter the second semester.

200 THEATRE PRACTICE (2) I, II **STAFF**

Supervised work in the arts and crafts of the theatre, in conjunction with productions. Staging, lighting, costumes, and properties, of which the student will usually emphasize one. Intended for the general student rather than Drama majors. May be repeated once. Prerequisite: consent of instructor.

210 CREATIVE DRAMATICS (3) I, II **BENTLEY**

An intensive study of dramatic activities for children and young people. Activities include story-telling, pantomime, creative drama, etc. Designed for teachers, group workers, recreation majors, and others dealing with children. Aim is assisting growth and development of young people, not preparing public performances. Lectures, demonstrations, and projects.

220-221 ACTING (3-3) Yr. **BENTLEY**

Analysis and interpretative reading of dramatic prose and poetry; related principles of stage production; reports; individual exercises and group rehearsals. Co-ordinated with the productions of the University Theatre. Students may enter the second semester.

230-231 DIRECTION (3-3) Yr. **TRAPIDO**

First semester: readings, reports, discussion of the theory and practice of stage direction. Second semester: supervised practice in directing short scenes and plays.

240 STAGECRAFT AND THEATRE PLANNING (3) I **TRAPIDO**

The principles and practices of modern stagecraft: theories of stage production; planning of small theatres; stage arrangement; problems and practice in scene construction. Laboratory fee $5. (Alternate years; not offered 1956–57.)

245 STAGE LIGHTING (3) II **TRAPIDO**

Modern and historic methods of lighting the stage; elementary electrical theory as used on stage; stage lighting equipment; problems in stage lighting and practice in the use of equipment. (Alternate years; offered 1956–57.)

250 HISTORY OF THE THEATRE (3) I **ERNST**

A survey of the development of the theatre from the earliest times to the present. Readings, discussion, lectures. (Alternate years; offered 1956–57.)

260 MODERN THEORIES OF STAGE PRESENTATION (3) I **ERNST**

Recent and current theories of production critically analyzed and reviewed, with emphasis upon Craig, Appia, Fuchs, Stanislavsky, and the French Symbolists. (Alternate years; not offered 1956–57.)

265 AESTHETICS OF THE THEATRE (3) II **ERNST**

Consideration of the aesthetic bases of the theatre. Readings, discussion, reports. (Alternate years; offered 1956–57.)

299 DIRECTED WORK (Ar.) I, II **STAFF**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Drama and Theatre.

300 DIRECTED WORK (Ar.) I, II **STAFF**

Reading or research in theatre theory or history; reading and practice in particular areas of dramatic production. Prerequisite: graduate standing or the equivalent; consent of instructor.

320 SEMINAR IN DRAMA AND THEATRE (3) II **ERNST**

Review of special topics in drama and theatre; preparation of reports. Prerequisite: consent of instructor. (Alternate years; offered 1956–57.)

350 SEMINAR IN ORIENTAL THEATRE (3) II **ERNST**

Special topics in the drama and theatre of the Orient. Reading, discussion, reports. Prerequisite: consent of instructor. (Alternate years; not offered 1956–57.)

ECONOMICS

Senior Professor ROBERTS; Professors KAMINS, LEONG; Associate Professors FERGUSON, HOEBER, IGE, PENDLETON; Assistant Professors BELL, KIRKPATRICK, MARK

Economics 150–151 is prerequisite to all other courses in Economics except 140.

140 INTRODUCTION TO ECONOMICS (3) I, II **STAFF**

A descriptive analysis of basic economic institutions and a study of the elementary principles underlying consumption, production, exchange, and distribution. Not open to majors in Economics or Business. Credit cannot be obtained in both this course and 150–151.

150-151 PRINCIPLES OF ECONOMICS (3-3) Yr. **STAFF**

Principles underlying consumption, production, exchange, and distribution of wealth; analysis of important current economic problems.

252 ECONOMIC PROBLEMS OF THE FAR EAST (3) **MARK**

Historic development of the economic systems of Japan, Korea, and China; analysis of their economic problems. Special consideration of the economic effects of the war, and a critical evaluation of postwar economic policies.

254 COMPARATIVE ECONOMIC SYSTEMS (3) I **LEONG**

Types of economic systems as represented by the United States, Great Britain, the Soviet Union, Spain, and Argentina. Analysis of assumptions underlying operations, and appraisal of their effectiveness in solving economic problems.

256 MONEY AND BANKING (3) I, II **KIRKPATRICK**

Nature and history of money and of banking; characteristics of credit; monetary system of the United States; monetary standards; value of money; relation of money and credit to prices; banking system of the United States, including commercial banks, trust companies, savings banks, and related savings institutions.

258 ECONOMIC RESOURCES OF THE UNITED STATES (3) II **LEONG**

An analytical study of major economic resources in the United States and their historic development, with consideration given to related technological developments during peace and war times.

261 PUBLIC FINANCE (3) I, II **HOEBER**

Public expenditures: extent, purposes, determinants, effects. Public revenues: public domains and industries, fees, assessments, charges, taxation. Public credit and fiscal administration.

262 GOVERNMENT FINANCE IN HAWAII (3) I **KAMINS**

Territorial and county income and expenditures; fiscal administration; Territorial tax system appraised, theories of taxation; economic effects. Prerequisite: Economics 261 or consent of instructor.

264 INTERMEDIATE ECONOMIC THEORY (3) II **MARK**

An advanced study of price and distribution theory; comparison of price theory with actual industrial pricing practices. Analysis of Keynesian economic system. Prerequisite: Economics 256 or consent of instructor.

265 GOVERNMENT AND BUSINESS (3) I, II **IGE, MARK**

Ways in which business and economic life are affected by government: government aids to business, regulation of business organization and combination, conservation of natural resources, price control, and government ownership.

270 PUBLIC UTILITIES (3) I **HOEBER**

The economic nature and history of public utilities, excluding railroads, followed by a critical discussion of their control by governments.

281 LABOR PROBLEMS (3) I **PENDLETON**

A study of wages, hours, working conditions, employment, superannuation, substandard workers, and other important problems common to all labor. Special attention to an analysis of the fundamental factors affecting wage levels.

282 AMERICAN TRADE UNIONISM (3) II **FERGUSON**

Labor problems under unionism: types of unions; evolution of unions; membership; financing; methods used to obtain objectives; methods used by employers in dealing with them; theory and procedures of collective bargaining; economic effects of policies and practices.

283 LABOR LEGISLATION (3) I **IGE**

Historic development of labor legislation; its adjudication and administration with emphasis on economic implications. Special attention to current political and legal issues directly related to labor legislation.

285 INTERNATIONAL TRADE AND FINANCE (3) II **KIRKPATRICK**

Theory of international trade, foreign exchange rates, balance of payments equilibrium, and commercial policy, with emphasis on recent events. Attention to practical aspects of importing and exporting. Prerequisite: Economics 256 or consent of instructor.

287 PUBLIC RELATIONS (3) II

Basic principles of public relations as a function of modern business. Mediums and tools defined, and use studied.

289 ARBITRATION OF GRIEVANCES (3) II **ROBERTS**

Purpose and functions of grievance machinery; types of machinery and arbitration clauses; functions, duties, and responsibilities of arbitrators. Use of cases to illustrate preparation of a case, presentation at the hearing, decision, and bases for review and methods of enforcement. Prerequisite: Economics 281.

291 AGRICULTURAL ECONOMICS (3) I **BELL**

A survey of the economic principles and problems of agriculture; special attention to such aspects as resources, tenure, size of enterprise, farm credit, marketing, farm labor, prices, taxation, and farm incomes. Prerequisite: Economics 140 may be substituted for 150–151.

292 LAND ECONOMICS (3) I **BELL**

Fundamentals of regional planning organization and planning techniques; city development and redevelopment; land utilization; land subdivision; housing; zoning; real estate marketing, valuation, and finance; land tenure; and land classification. Prerequisite: Economics 140 may be substituted for 150–151.

294 RESEARCH IN INDUSTRIAL RELATIONS (3) I **FERGUSON**

An analytical survey of work done in the field of industrial relations since 1870 by leading writers and schools, combined with supervised group projects in current topics in the same field. Prerequisite: Economics 281 or consent of instructor.

296 HISTORY OF ECONOMIC THOUGHT (3) I **KIRKPATRICK**

A general survey of economic thought from Adam Smith to the present with special emphasis on the theory of value and distribution. Prerequisite: senior standing.

299 DIRECTED READING (Ar.) I, II **STAFF**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Economics.

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

Prerequisite: consent of department chairman.

310 SEMINAR IN LABOR PROBLEMS (3) II **ROBERTS, PENDLETON**

Prerequisite: consent of instructor.

315 SEMINAR IN ECONOMIC PROBLEMS (3) II **IGE**

Prerequisite: consent of department chairman.

EDUCATION

Professor CLOPTON; Associate Professors BEYERS, EVERLY, FICK, PORTER, TULL; Assistant Professors ALM, BALSBAUGH, FITZSIMMONS, FLETCHER, GARDNER, GUSTAFSON, HAYES, IN, INN, JENKINS, NELSON, REEDER, SHANNON, SUEOKA, TRAUT, WEBER; Instructors BENNETT, BRENEMAN, CROOKER, FOLEY, GEISER, GILLESPIE, H. JOHNSON, KAMELGARN, LUNSFORD, NAKAMOTO, REDDIN, ST. DENIS, STRADLEY

Enrollment in Education courses is restricted to students in Teachers College except by special permission of the chairman of the department.

100 ORIENTATION (1-1) Yr. **GUSTAFSON**

Survey of students' problems of adjustment in the University; the bases of the choice of teaching as a profession and the proposed choice of a major and a teaching field. Laboratory fee $1.00 first semester.

201 OCCUPATIONAL ANALYSIS (1-1) Yr.

Techniques of course construction based on occupational analysis; analyzing an occupation; tools and equipment; selecting jobs as vehicles of instruction; related information and reference material. (Not offered 1956–57.)

202 CURRICULUM CONSTRUCTION, VOCATIONAL (1-1) Yr.

Continuation of 201; organization of instructional material based on occupational analyses; type jobs, operations, and related information for specific units of instruction; assignments; sequence of units to meet training needs. (Not offered 1956–57.)

203 TECHNIQUES OF VOCATIONAL INSTRUCTION (2) II

The techniques and methods of individual and group instruction in shop and related classes; principles of learning; skills of instruction; demonstrations and evaluation of various methods of instruction; methods of measuring achievement. (Not offered 1956–57.)

204 SHOP ORGANIZATION AND MANAGEMENT (2) II **FLETCHER**

Organization and control of shop instruction; handling supplies; maintaining equipment and tools; purchasing materials; keeping records; making inventories and meeting other problems of setting up and operating shop instruction courses.

205 INSTRUCTIONAL MATERIALS, INDUSTRIAL (1-1) Yr.

The selection and effective use of instructional materials in trade and industrial classes; sources, values, limitations, and classification of instruction sheets and reference materials. (Not offered 1956–57.)

206 PRINCIPLES OF INDUSTRIAL EDUCATION (2) I

The development of vocational education; history and legislation affecting it; analysis of objectives of types of courses and programs; their place in the total program of education; the plan for vocational education in Hawaii. (Not offered 1956–57.)

210 AUDIO-VISUAL AIDS, INDUSTRIAL (1-1) Yr.

Types of instructional aids and methods of evaluating them; development, preparation, construction, and use of typical aids; methods of using instructional aids and the operation of audio-visual equipment by the teacher of industrial subjects. (Not offered 1956–57.)

211 CONFERENCE LEADER TRAINING (2) II

The techniques of leading group meetings in which problems are thoughtfully and freely discussed; pooling experiences and ideas for problem solving; developing teamwork on the supervisory level. (Not offered 1956–57.)

212 CURRICULUM ANALYSIS IN INDUSTRIAL ARTS (2) I **FLETCHER**

A survey of teachable content in the Industrial Arts field, technical skill and related information on the Industrial Arts level.

213 VOCATIONAL GUIDANCE, TRADE AND INDUSTRIAL (2) II

Principles and problems of guidance with special reference to vocational education; data relating to requirements and opportunities for employment in various trades. (Not offered 1956–57.)

214 SPECIAL PROBLEMS IN VOCATIONAL TEACHING (1-1) Yr.

Special problems in the instructional program resulting from changes in industry locally; shop organization; the development of new or different instructional material. May be repeated with the consent of the instructor and department chairman. (Not offered 1956–57.)

216 BOOKKEEPING AND OFFICE PRACTICE (2) II **NAKAMOTO**

Theories and methods of teaching bookkeeping, office practice, and other subjects in the secondary school commercial curriculum. Prerequisite: Business 150–151; credit or concurrent registration in Education 251.

217 VOCATIONAL EDUCATION AND COMMUNITY NEEDS (2) I

Community needs and resources in relation to the planning and conducting of vocational education; economic factors, government controls, organization of labor and management as influences on the need for and nature of vocational offerings. (Not offered 1956–57.)

234 CREATIVE ARTS, PRESCHOOL-PRIMARY (3) I, II **BALSBAUGH, JOHNSON**

The materials and procedures in art and construction activities, singing, simple work with instruments, rhythmic activities, dancing, and dramatic play for young children. Laboratory fee $2.00. Prerequisite: Art 142–143; credit or concurrent registration in Education 283–284.

236 BASIC SKILLS, PRESCHOOL-PRIMARY (2-2) Yr. **FOLEY, REDDIN**

Materials and procedures for teaching language arts and arithmetic to children three to seven. First semester: children's literature, creative dramatics, and writing. Second semester: language arts, beginning reading, number concepts. Prerequisite: credit or concurrent registration in Education 283–284.

239 SCIENCE, PRESCHOOL-PRIMARY (2) I, II **CROOKER, LUNSFORD**

The procedures and materials used in teaching natural, physical, and social sciences appropriate to young children. Prerequisite: credit or concurrent registration in Education 283–284.

240 SOCIAL STUDIES AND SCIENCE, ELEMENTARY (3) I, II **HAYES, INN, JENKINS**

The scope and organization of mathematics and science in the elementary school curriculum. Development of social and scientific knowledge and understanding in childhood experience. Prerequisite: credit or concurrent registration in Education 285–286.

241 MATHEMATICS, ELEMENTARY (2) I, II **FITZSIMMONS, REEDER**

The scope and organization of mathematics and science in the elementary school curriculum. Development of the subject matter of arithmethic in childhood experience. Prerequisite: credit or concurrent registration in Education 285–286.

242 HAWAIIAN NATURAL HISTORY (2-2) Yr. **TINKER**

Survey of the local physical and biological environment, with special reference to the needs of teachers in the schools of Hawaii. Students may enter the second semester.

243 LANGUAGE ARTS, ELEMENTARY (3) I, II **FITZSIMMONS, INN, REEDER**

Developing concepts of the modern approach to the teaching of language arts—reading, oral and written expression. An exploration of materials designed for grades one through six. Prerequisite: credit or concurrent registration in Education 285–286.

244 LITERATURE, ELEMENTARY (2) I, II **HAYES**

Designed to help prospective teachers become acquainted with a wide range of children's books and to develop criteria for judging literature on the basis of children's needs and interests. Prerequisite: credit or concurrent registration in Education 285–286.

245 SCIENCE, SECONDARY (2) II **WEBER**

Purposes and procedures. The development of scientific attitude. Review of the major generalizations of the biological and physical sciences. Prerequisite: credit or concurrent registration in Education 251.

246 MATHEMATICS, SECONDARY (2) II — **ST. DENIS**

Purposes and procedures. The development of basic mathematical concepts. Prerequisite: credit or concurrent registration in Education 251.

247 SOCIAL STUDIES, SECONDARY (2) I, II — **NELSON, SHANNON**

The scope and organization of social studies in the secondary school. The development of social knowledge and understanding. Prerequisite: credit or concurrent registration in Education 250.

249 TEACHING OF TYPEWRITING AND SHORTHAND (2) I — **NAKAMOTO**

Theory and methods of teaching typewriting and shorthand. Prerequisite: Business 170 and 177; credit or concurrent registration in Education 250.

250-251 SECONDARY EDUCATION (4-4) Yr. — **STAFF**

Basic course dealing with major problems of secondary education. Prerequisite: Psychology 186; also, Education 250 is prerequisite to 251.

252 TEACHING PHYSICAL EDUCATION ACTIVITIES (2) I — **BROWN**

Methods and materials in the conduct of the physical activities program. Techniques in leadership, including the selection of activities and program evaluation.

253 PRACTICE TEACHING IN HOME ECONOMICS (6) I, II — **TULL**

Observation, supervised teaching, and conferences. Prerequisite: senior standing; credit or concurrent registration in Home Economics 251.

254 PRACTICE TEACHING (14) I, II* — **STAFF**

Teaching experience supervised by staff members of the University Preschool, Elementary, and High Schools. Prerequisite: Education 283–284, or 285–286, or 250–251; consent of Curriculum Director and Dean of Teachers College.

255 SEMINAR FOR PRACTICE TEACHERS (2) I, II — **STAFF**

Study of problems arising from immediate experience as classroom teachers. To be taken concurrently with 254.

256 SEMINAR IN HOME ECONOMICS (2) I, II — **TULL**

Study of problems arising from immediate experience as practice teachers in Home Economics. To be taken concurrently with 253.

257 LANGUAGE ARTS, SECONDARY (3) II — **ALM**

The teaching of reading, literature, and language in the intermediate and high schools; special attention to problems of expression, usage, and vocabulary. Prerequisite: credit or concurrent registration in Education 251.

260 ENGLISH IN THE ELEMENTARY SCHOOL (2) II

Special problems in teaching spelling, language usage, grammar, and creative writing. This course for in-service teachers parallels 243 for prospective teachers; credit may not be earned in both courses. (Not offered 1956–57.)

261 TESTS AND MEASUREMENTS (3) I, II — **BEYERS, FICK**

Theory and techniques of evaluation in education; practice in the use of testing devices. Laboratory fee $8.00, including $7.00 for the National Teacher Examination.

262 CREATIVE ART, ELEMENTARY (2) I, II — **KAMELGARN**

Individual and group projects to promote understanding of the creative use of art materials, tools, ideas, and their sources. Work in paint, clay, wood, etc. Studio fee $5.00. Prerequisite: Art 142–143; credit or concurrent registration in Education 285–286.

263 CREATIVE ART, SECONDARY (2) II — **FLETCHER**

Similar to 262, but with emphasis on the problems of the secondary years. Studio fee $5.00. Prerequisite: Art 142–143; credit or concurrent registration in Education 251.

266 GUIDANCE MATERIALS AND RESOURCES — **FICK**

Sources of information; professional organizations and personnel; the material aids to counseling; the research function of the counselor.

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* Students registering for this course begin and complete work in accordance with the Laboratory School calendar.

267 OCCUPATIONAL INFORMATION IN GUIDANCE (2) I **FICK**

Occupational research and survey techniques; trends; sources of materials; use of occupational information in vocational guidance and placements; correlation with other school subjects. (Alternate years; not offered 1956–57.)

268 ELEMENTARY SCHOOL GUIDANCE (2) II **FICK**

Principles, techniques, and organization of guidance services, both preventive and adjustive, in the elementary school; applications in local schools. Prerequisite: Psychology 185; Education 286; credit or concurrent registration in Education 261; Psychology 292 or consent of instructor. (Alternate years; not offered 1956–57.)

269 PROBLEMS OF SCHOOL ADJUSTMENT (2) II **FICK**

Principles of behavior which affect human relationships in the school, with emphasis upon application to actual situations. Prerequisite: senior standing in Teachers College and consent of instructor. (Alternate years; offered 1956–57.)

279 SPEECH AND DRAMATICS IN THE SECONDARY SCHOOL (3) II **BRENEMAN**

Techniques for teaching types of speech and play analysis and direction; production and management problems.

282 LITERATURE FOR ADOLESCENTS (2) II **ALM**

Literature for the secondary school level; methods for helping students appreciate the significance and meaning of literature; selection of materials suitable to varying levels of ability and interests. (Alternate years; offered 1956–57.)

283-284 PRESCHOOL-PRIMARY EDUCATION (5-5) Yr. **GARDNER**

Basic course in major problems in the education of children of ages two to seven; observation and work with children; education of children in the home, and methods of home–school co-operation. Prerequisite: Psychology 185; also, 283 is prerequisite to 284.

285-286 ELEMENTARY EDUCATION (4-4) Yr. **INN, PORTER, SUEOKA**

Basic course in major problems in the education of children of ages seven to twelve; observation and work with children. Prerequisite: Psychology 185; also, 285 is prerequisite to 286.

287 AUDIO-VISUAL EDUCATION (3) I, II **STRADLEY**

Theory, preparation, and use on all school levels of sensory aids to learning. Laboratory fee $3.00.

290 TEACHING SLOW LEARNERS (2) I **REEDER**

The social, psychological, and procedural problems involved in the teaching of slow learners in the normal classroom. Prerequisite: teaching experience. (Not offered 1956–57.)

291 TEACHING GIFTED CHILDREN (2) I **REEDER**

Problems of motivating and evaluating learning experiences of gifted children in the normal classroom. Prerequisite: teaching experience.

293 THE TEACHING OF READING (2) I

Various techniques for teaching reading and for improving reading skills throughout the schools.

294 REMEDIAL READING (2) II

Techniques for motivating and helping children whose reading skills are below their capacity and needs.

299 DIRECTED READING (Ar.) I, II **STAFF**

Individual reading in (1) Preschool Education, (2) Elementary Education, (3) Secondary Education, (4) History of Education, (5) Audio-visual Education, (6) Philosophy of Education, (7) Administration and Supervision, (8) Adult Education, (9) Agricultural Education, (10) Curriculum, (11) Guidance and Counseling, (12) Music Education, (13) Educational Measurement, (14) Science Education, (15) Special Education, (16) Reading and Language, (17) Library Science, (18) Vocational Education. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Education.

Credit in Education 250–251, or 283–284, or 285–286, or the equivalent, is required for registration in any Education course numbered 300 or above.

300 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

Individual reading or research in the same fields as in 299. Prerequisite: graduate standing; consent of department chairman and instructor.

322 EXTRA-CLASS ACTIVITIES IN SECONDARY SCHOOLS (2) II **EVERLY**

Planning and supervising student government, dramatics, athletics, school journalism, campaigns, contests, and other activities.

326 ADMINISTRATION OF THE SECONDARY SCHOOL (2) I **EVERLY**

The major problems in the organization and administration of the modern intermediate and senior high schools; curriculum improvement, schedule making, pupil and staff personnel, school plant, business and finance, public relations. (Alternate years; not offered 1956–57.)

327 ADMINISTRATION OF THE ELEMENTARY SCHOOL (2) I **CLOPTON**

The major problems of the modern elementary school principal; curriculum improvement, program making, reports to parents, pupil and staff personnel, school plant, business and finance, community relations, special problems of the small school. (Alternate years; not offered 1956–57.)

328 SUPERVISION OF INSTRUCTION (2) II **EVERLY**

Principles underlying supervision, methods of supervision, in-service training of teachers, teacher evaluation, teachers' meetings, development of group leadership, skill in human relations. (Alternate years; not offered 1956–57.)

329 CURRICULUM CONSTRUCTION (3) I

Principles underlying curriculum construction at all levels, developing resource units, locating appropriate curriculum materials, methods of curriculum revision.

332 CLINICAL PROCEDURES IN READING (3) I **ALM**

Diagnosis and improvement of individual reading problems in elementary and secondary schools with special attention to severely retarded readers. Prerequisite: Education 294 and consent of instructor.

340 PHILOSOPHY OF EDUCATION (3) I, II **CLOPTON**

Philosophy and science in education; social, psychological, and ethical considerations essential to the development of a philosophy of education; implications of philosophical viewpoints for policy in education.

345 SEMINAR IN PHILOSOPHY OF EDUCATION (2) II **CLOPTON**

Social and psychological theory involved in controversial educational issues. Prerequisite: Education 340 or equivalent, and consent of instructor. May be repeated for credit by permission of instructor. (Alternate years; offered 1956–57.)

350 HISTORY OF EDUCATION (2) I, II **CLOPTON**

Survey of the history of educational thought and practice as a basis for the study of modern school problems.

354 INTERNSHIP (14) I, II* **STAFF**

Full-time teaching under special supervision in selected public schools. Restricted to fifth-year students.

356 GUIDANCE PRACTICUM (3) I, II **FICK**

Supervised experience in guidance activities in the schools. Open only to Guidance majors.

362 ORGANIZATION AND ADMINISTRATION OF GUIDANCE (2) II **FICK**

The organization and administration of guidance, as a part of student personnel services, so as to contribute most effectively to the school program, with special reference to the role of the administrator. Prerequisite: An introductory course in Guidance and consent of instructor. (Alternate years; not offered 1956–57.)

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* Students registering for this course the first semester begin work on the opening date of the public school calendar, September 3, 1956. Those registering for the second semester complete the course on the closing date of the public school calendar, June 7, 1957.

363 SEMINAR IN EDUCATIONAL ADMINISTRATION (2) I **EVERLY**

Organization for public education; taxation; equalization; internal problems of school administration; personnel; pupil classification; records and reports. Restricted to administrators and prospective administrators. Prerequisite: Education 326 or 327, and consent of instructor. (Alternate years; offered 1956–57.)

364 TESTS AND INVENTORIES IN GUIDANCE (2) II **BEYERS**

Tests and inventories for measuring aptitudes, interests, attitudes, and modes of behavior; uses and limitations in counseling and guidance; administering, scoring, and interpreting scores. Prerequisite: credit or concurrent registration in Education 261 or Psychology 264, or consent of instructor. (Alternate years; not offered 1956–57.)

365 SEMINAR IN SUPERVISION OF INSTRUCTION (2) II **EVERLY**

The supervisory work of the principal; the place of supervision; organization for supervisory service; techniques. Restricted to administrators and prospective administrators. Prerequisite: Education 328 and consent of instructor. (Alternate years; not offered 1956–57.)

376 SEMINAR IN VOCATIONAL EDUCATION (2) II

Individual study of special problems in vocational education. (Alternate years; not offered 1956–57.)

380 RESEARCH AND THESIS WRITING (3) I **CLOPTON**

Research techniques and thesis development; designed to assist students in thesis preparation. Prerequisite: Education 340; Psychology 351; consent of instructor.

390 PUBLIC SCHOOL ORGANIZATION (2) I, II **EVERLY**

The function of the teacher in school administration; state and territorial organization for administrative control of public education; rights and duties of teachers under Hawaiian school law and D.P.I. regulations; retirement system; teachers' organizations; financing public education.

395 SEMINAR FOR INTERN TEACHERS (2) I, II **STAFF**

Problems arising from the classroom experiences of intern teachers. Restricted to fifth-year students. To be taken concurrently with Education 354.

ENGINEERING

Professors DOWNS, HARLOE, MARTIN, TINNISWOOD, WACHTER; Associate Professors DANIEL, EVANS; Assistant Professors AVERY, CHIU, MATSUDA, MITSUDA; Instructor SERBOUSEK

CE 100 ENGINEERING ORIENTATION (1) I **AVERY**

Lectures to acquaint students with the nature of the engineering profession and the aims of engineering education. Slide rule instruction. Methods of solution of engineering problems.

CE 101 SURVEYING (4) I **AVERY, DANIEL, STAFF**

Use of tape, level, and transit; horizontal and vertical control surveys; computations. Two recitations and two field or drafting periods. Prerequisite: Mathematics 150; credit or concurrent registration in MD 101. Laboratory fee $2.00.

CE 102 SURVEYING (4) II **DANIEL, STAFF**

Topographic mapping; triangulation; simple, compound, spiral, and vertical curves; earthwork computations; construction, hydrographic, and city surveys; route problems. Two recitations and two field or drafting periods. Prerequisite: Mathematics 151, 152; MD 101; CE 101. Laboratory fee $2.00.

CE 227 SURVEYING (3) **STAFF**

Principally field work; curves, earthwork, grades, reconnaissance, preliminary surveys, route location, and design. Prerequisite: CE 102. Laboratory fee $2.00. Offered only in summer sessions.

CE 228 WATER SUPPLY (3) I **TINNISWOOD**

Hydrology; construction and maintenance of water works; water purification and control. Prerequisite: CE 255.

CE 229 SEWERAGE AND SEWAGE TREATMENT (3) II **TINNISWOOD**

Design, construction, and maintenance of sewage works; sewage and industrial waste treatment. Prerequisite: CE 228, 255.

CE 231 SOIL MECHANICS (3) II **EVANS**

Physical factors in earth pressure phenomena; soil phenomena in earthwork operations and foundation work. Prerequisite: CE 253.

CE 251 STATICS (3) II **STAFF**

Stresses in joint structures; effect of forces on bodies at rest. Prerequisite: one semester of Physics 104.

CE 252 DYNAMICS (3) I **STAFF**

Work, energy, and power; Newton's laws; effect of forces on bodies in motion. Prerequisite: CE 251.

CE 253 STRENGTH OF MATERIALS (4) I **MARTIN, MITSUDA**

Direct stress, shear, flexure, and torsion. Theory of beams and columns. Prerequisite: CE 251.

CE 255 FLUID MECHANICS (4) II **TINNISWOOD, STAFF**

Water pressure, strength of pipe, stability of gravity dams; water flow through orifices, nozzles, and weirs; manometers, Pitot tubes, and Venturi meters; steady flow in pipes and open channels, nonuniform flow, complex pipe; hydrodynamics. Three lectures and one 2-hour laboratory period. Prerequisite: CE 252.

CE 257 HIGHWAY ENGINEERING (3) I **EVANS**

Design, construction, and maintenance of streets and highways; planning, financing, etc. Prerequisite: CE 227, 231.

CE 276 STRUCTURAL THEORY (3) II **STAFF**

Reactions, shear and moment diagrams, bridge and roof trusses, graphis statics, moving loads and influence lines, three-hinged arch and space frameworks. Two discussion periods and one design period. Prerequisite: CE 253.

CE 277 STRUCTURAL DESIGN (3) II **CHIU, STAFF**

Design and detailing of buildings, plate girders, bridges, etc.; welded construction; timber structures. Two discussion periods and one design period. Prerequisite: CE 276, 278.

CE 278 INDETERMINATE STRUCTURES (3) I **CHIU, MATSUDA**

Stresses in indeterminate trusses, continuous structures, and rigid frames, using the classical methods of analysis followed by moment distribution, column analogy, etc. Prerequisite: CE 276.

CE 279 REINFORCED CONCRETE (3) I **CHIU, MITSUDA**

Theory and design of reinforced concrete beams, columns, combined stresses, footings, and retaining walls. Two discussion periods and one design period. Prerequisite: CE 253, 276.

CE 280 REINFORCED CONCRETE DESIGN (3) II **CHIU, STAFF**

Continuation of CE 279. Slabs, reinforced concrete bridges, rigid frames. Introduction to elementary concepts of plastic theory and prestressed concrete. Two discussion periods and one design period. Prerequisite: CE 278, 279.

CE 291 ENGINEERING ECONOMY (2) II **HARLOE**

The application of economic principles to engineering problems. Prerequisite: Economics 140; senior standing.

CE 292 CONTRACTS AND SPECIFICATIONS (2) II **HARLOE**

The business, legal, and ethical aspects of engineering; contracts and specifications with special reference to local requirements. Prerequisite: senior standing.

CE 293 PHOTOGRAMMETRY (3) I

Basic principles; flight methods; photographic equipment; stereoscopy; field identification; field control; radial line and template methods of compilation, map projections; mosaics. Prerequisite: CE 227. Laboratory fee $2.00. (Not offered 1956–57.)

CE 295 HYDROLOGY (3) I

Occurrence and movement of water by natural processes. Analysis of rainfall, runoff, evaporation, transpiration, and infiltration data. Prerequisite: CE 255. (Not offered 1956–57.)

CE 296 ADVANCED HYDRAULICS (3) I **STAFF**

Nonuniform flow, theory of hydraulic jump, water hammer, backwater curves; pipe networks; hydraulic machinery. Prerequisite: CE 255. (Not offered 1956–57.)

CE 297 HYDRAULIC STRUCTURES (3) II **STAFF**

Hydraulic and structural considerations in the design of dams, gates, canals, breakwaters, and piers. Prerequisite: CE 255, 278, 279. (Not offered 1956–57.)

CE 298 ADVANCED STRUCTURAL THEORY (3) II **MATSUDA**

Further application of column analogy, moment distribution, and classical methods to the study of haunched beams, continuous girders, rigid frames, and arches; secondary, temperature, and wind stresses. Prerequisite: CE 278, 279.

CE 299 SPECIAL PROBLEMS (Ar.) I, II **STAFF**

Individual investigation or studies of any phase of civil engineering selected by the student and approved by the instructor. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Engineering.

MD 101 ENGINEERING DRAWING (2) I **AVERY, STAFF**

Engineering drawing procedures, projections, ASA standards and technical sketching, pencil and ink drawings for printing. Two 3-hour laboratory periods. Laboratory fee $1.00.

MD 152 DESCRIPTIVE GEOMETRY (2) II **AVERY, STAFF**

Principles of descriptive geometry, basic point, line, intersections and development of surfaces; applications to engineering problems. Two 3-hour laboratory periods. Prerequisite: MD 101.

ME 202 MATERIALS OF ENGINEERING (2) I **EVANS, STAFF**

Properties of cements, limes, plasters, and plain and reinforced concrete; methods of manufacture and standard tests for quality; testing cements, concretes, reinforced concrete, asphalt, and aggregates used in making concrete. One lecture and one laboratory period. Prerequisite: credit or concurrent registration in CE 253. Laboratory fee $5.00.

ME 203 MATERIALS OF ENGINEERING (2) II **EVANS, STAFF**

Properties, tests, and specifications of iron, steel, other metals, and wood; tests of soils. Two lectures and one laboratory period. Prerequisite: credit or concurrent registration in CE 253, 231. Laboratory fee $5.00.

ME 210 KINEMATICS (3) II **AVERY**

A study of the motion of machine elements and the transmission of motion through mechanical devices. Prerequisite: MD 152; CE 252.

ME 254 ADVANCED MATERIALS TESTING (Ar.) II **EVANS**

Materials testing of more advanced or difficult nature than in ME 202 or 203. Application of tests to investigations of physical characteristics of local engineering materials. Prerequisite: ME 202, 203. Laboratory fee $5.00.

ME 282 ELEMENTS OF HEAT POWER (3) II **DOWNS**

Fundamental laws governing transformation of heat into work; steam machinery; use of steam tables; internal combustion engines; refrigeration. Prerequisite: Physics 104. Civil Engineering students may take ME 283, but cannot get credit for both 282 and 283.

ME 283 THERMODYNAMICS (3) I **DOWNS**

A study of the fundamentals of thermodynamics and their application to the efficient production and utilization of power. Prerequisite: Chemistry 103; Physics 104; Mathematics 154.

ME 284 STEAM POWER (3) I **DOWNS**

A study of the performance of steam generating and steam consuming equipment. The economics of the selection of industrial steam equipment. Prerequisite: Mechanical Engineering 283; concurrent registration in ME 285.

ME 285 HEAT POWER LABORATORY I (1) I **DOWNS**

Experiments in the use of mechanical, electrical, and electronic test equipment in the testing of mechanical and thermodynamic machinery. Emphasis on steam and refrigeration tests. Prerequisite: concurrent registration in ME 284. Laboratory fee $5.00.

ME 286 INTERNAL COMBUSTIONS ENGINES (3) I **DOWNS**

A study of the basic principles underlying the functioning of internal combustions engines. Emphasis upon fuels, combustions, heat transfer, lubrication. Prerequisite: ME 283.

ME 287 HEAT POWER LABORATORY II (1) II **DOWNS**

Experiments in the use of mechanical, electrical, and electronic test equipment as applied to the testing of mechanical and thermodynamic machinery. Emphasis on internal combustion engine tests. Prerequisite: ME 285. Laboratory fee $5.00.

ME 293 AIR CONDITIONING AND REFRIGERATION (3) II **DOWNS**

Refrigeration and air conditioning apparatus and their application to industrial and residential use. Prerequisite: ME 283.

AE 101 HISTORY OF ARCHITECTURE (3-3) Yr. **STAFF**

A general survey of the architecture of all periods; reference reading, illustrated lectures, recitations, and discussions.

AE 103 ARCHITECTURAL DESIGN (3-3) Yr. **STAFF**

The design of simple buildings in relationship to their environment, supplemented by library research, discussion, field trips, and sketch problems. Three drafting periods. Prerequisite: AE 101; Art 150–151.

AE 153 ARCHITECTURAL GRAPHICS (2) I **STAFF**

Simple projections as applied to plans, sections, and elevations; shades and shadows; perspective drawing; rendering techniques. Three 2-hour periods. For students in Architecture.

ENGLISH

Senior Professor WILSON; Professors DAY, GREEN, STROVEN; Associate Professors BOUSLOG, KORN, LOWERS, STEMPEL; Assistant Professors D. BROWN, DAVENPORT, FRIERSON, FUJIMURA, GEORGE, LEIB; Instructors ABRUMS, CASTRO, DERSTINE, HUNTSBERRY, MANEY, V. MILLER, NEWTON, SCOTT, SINCLAIR, TOPHAM

100 COMPOSITION (3) I **STAFF**

A five-hour course required of all foreign students who fail to attain a standard in the entrance examination qualifying them for admission to English 101. Identical in content with 101 except for additional time given to remedial work.

101 COMPOSITION (3-3) Yr. **STAFF**

Principles and practice of composition.

109 BUSINESS ENGLISH (3) II **STAFF**

Theory and practice in forms of business communication: letters, reports, analyses, special studies, and records. Open only to students in Business Administration. Prerequisite: English 101C or the equivalent.

120-121 NEWS WRITING (3-3) Yr. **DAVENPORT**

Introduction to journalism, with emphasis on reporting and with practice in news writing. One third of the time in the course must be spent in work on *Ka Leo* or other student publications.

150 INTRODUCTION TO ENGLISH LITERATURE (3-3) Yr. **STAFF**

English literature from the beginnings to the present; attention given to the interrelationships of English and American literature. Prerequisite to all advanced courses in American, English, and comparative literature.

155 ENGLISH AND AMERICAN LITERATURE (3) I, II **STAFF**

Important writers and works in English and American literature. Open only to students in Applied Science, Business Administration, and Agriculture.

202 EXPOSITORY WRITING (3) I, II **STAFF**

Practice in expository and descriptive writing, with emphasis upon the development of idea and style. Prerequisite: grade C or better in English 101C or the equivalent and consent of instructor.

203 CREATIVE WRITING (3) I, II **STAFF**

Practice in the writing of the short story, and analysis of the form. Prerequisite: grade of C or better in English 101C or the equivalent, and consent of the instructor.

204 CURRENT ENGLISH (3) II

Present-day tendencies and usages in pronunciation and grammatical practice; word derivation; shifts in meaning; and American variants.

205 BACKGROUNDS OF ENGLISH LITERATURE (3) II **GREEN**

A study of the most important sources of English literary themes and allusions, including the King James Bible and Western European myth and legend.

208 INTRODUCTION TO POETRY (3) I **KORN**

Analysis of selected English and American poems of the past and present, emphasizing problems of communication and appreciation.

210 REPORT WRITING (3) I, II **STAFF**

Principles of technical exposition, with composition and analyses of reports, papers, and selected types of engineering and other professional writing. Supplemented by readings and discussions of selections from general literature. Prerequisite: English 101C or the equivalent.

216 PLAYWRITING (3) II **WILSON**

Study of one-act plays and practice in writing in the dramatic form, with a possibility of University Theatre Group workshop production. Prerequisite: consent of instructor.

218 FICTION WRITING (3) I **DAY**

Principles of narrative craftsmanship put into practice in original stories, through study of fiction technique, characterization, plot, style, mood, and emotional effect. Study of successful examples of the modern short story and novel. Prerequisite: consent of instructor. (Alternate years; not offered 1956–57.)

222 ELEMENTS OF EDITING AND PUBLISHING (3) I **DAVENPORT**

Copyreading, headline writing, news and advertising display, use of illustrations, responsibilities of the editor. Theory and practice of publishing; mechanical aspects of printing processes, type faces, typographical display, type calculations, illustrations.

240 HISTORY OF LITERARY CRITICISM (3) II **STEMPEL**

Chief theories of literary criticism, with readings (in English) from Plato to the present. (Alternate years; not offered 1956–57.)

260-261 AMERICAN LITERATURE (3-3) Yr. **STROVEN**

First semester: from the beginnings to the Civil War. Second semester: from the Civil War to the early twentieth century.

263 LITERATURE OF THE PACIFIC (3) II **STROVEN**

The literature of the Pacific islands and Australia: narratives of voyagers and travelers, translations of native folk literature, and short stories and novels by such writers as Melville, Stevenson, London, Becke, and Nordhoff and Hall.

270 CHAUCER (3) I **GREEN**

The life, times, and major works of Chaucer, with emphasis on *The Canterbury Tales.* (Alternate years; not offered 1956–57.)

272 HISTORY OF THE ENGLISH LANGUAGE (3) I **GREEN**

The growth and development of the English language; its sources, forms, mutations, and standards of usage. (Alternate years; offered 1956–57.)

273 SIXTEENTH-CENTURY ENGLISH LITERATURE (3) I **LOWERS**

Poetry and prose of the Tudor period, exclusive of the drama. (Alternate years; offered 1956–57.)

274 THE ENGLISH DRAMA TO 1642 (3) I **FUJIMURA**

Origins of the English drama; the medieval drama and theatre; the rise of professional drama; the contemporaries and successors of Shakespeare; the closing of the theatres. (Alternate years; not offered 1956–57.)

275 SEVENTEENTH-CENTURY ENGLISH LITERATURE (3) II **LOWERS**

Poetry and prose of the Jacobean, Commonwealth, and Restoration periods. (Alternate years; not offered 1956–57.)

276-277 SHAKESPEARE (3-3) Yr. **LOWERS**

First semester: Shakespeare's histories and comedies. Second semester: Shakespeare's tragedies.

278 ENGLISH DRAMA OF THE RESTORATION AND EIGHTEENTH CENTURY (3) I **FUJIMURA**

The drama from 1660 to 1780: the chief dramatic types, and the major dramatists from Dryden to Sheridan. (Alternate years; offered 1956–57.)

280 EIGHTEENTH-CENTURY ENGLISH LITERATURE (3) II **GEORGE**

Poetry and prose from 1688 to 1780, exclusive of the drama and novel. (Alternate years; offered 1956–57.)

282 THE ROMANTIC MOVEMENT IN ENGLAND (3) II **BOUSLOG**

Poetry and prose from 1780 to 1832, exclusive of the novel. (Alternate years; not offered 1956–57.)

284 VICTORIAN LITERATURE (3) II **BOUSLOG**

Poetry and prose from 1832 to 1900, exclusive of the novel. (Alternate years; offered 1956–57.)

285 THE ENGLISH NOVEL TO 1832 (3) I **KORN**

Principal English novels and novelists from the beginnings to 1832. (Alternate years; not offered 1956–57.)

286 THE ENGLISH NOVEL, 1832-1900 (3) II **KORN**

Principal English novels and novelists from 1832 to 1900. (Alternate years; not offered 1956–57.)

287 MODERN DRAMATIC LITERATURE (3-3) Yr. **WILSON**

First semester: British and continental drama from Ibsen's immediate predecessors to the present. Second semester: American drama. (Alternate years; not offered 1956–57.)

288 CONTEMPORARY BRITISH LITERATURE (3) I **DAY**

Representative works of the leading British novelists and poets since 1900.

289 CONTEMPORARY AMERICAN LITERATURE (3) II **DAY**

Representative works of the leading American novelists and poets since 1900.

299 DIRECTED READING (Ar.) I, II **STAFF**

Individual reading in (1) Medieval English Literature—GREEN; (2) Sixteenth-Century English Literature—LOWERS; (3) Seventeenth-Century English Literature—KORN; (4) Eighteenth-Century English Literature—GEORGE; (5) English Literature, Romantic Period—BOUSLOG; (6) English Literature, Victorian Period—FRIERSON, STEMPEL; (7) Contemporary English Literature—BOUSLOG, DAY; (8) American Literature—DAY. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in English. Prerequisite: consent of instructor.

300 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

Individual reading or research in the same periods as in 299. Prerequisite: graduate standing and consent of instructor.

310 SEMINAR IN AMERICAN LITERATURE (2) II **STAFF**

Special study of problems, authors, or periods in American literature. The particular topic is stated in the time schedule of courses each semester. Prerequisite: graduate standing or consent of instructor.

311 SEMINAR IN ENGLISH LITERATURE (2) II **STAFF**

Special study of problems, authors, or periods in English literature. The particular topic is stated in the time schedule of courses each semester. Prerequisite: graduate standing or consent of instructor.

312 SEMINAR IN TEACHING COMPOSITION (2) I **LEIB**

Theory and observation of the teaching of composition at the college level. Prerequisite: consent of instructor.

313 SEMINAR IN RESEARCH METHODS (1) I **BOUSLOG**

Materials of English studies; problems of bibliography; fundamentals of thesis writing. Required of all candidates for the M.A. degree in English. Prerequisite: graduate standing.

314 SEMINAR IN COMPARATIVE LITERATURE (1) II **GREEN**

Introduction to comparative literature; relationship of English to other European literatures; a study of sources and influences. Prerequisite: consent of instructor.

340 SEMINAR IN HISTORY AND LITERATURE (2) II **BOUSLOG**

Problems in contemporary American culture, with emphasis on the history of ideas, utilizing history and literature. An interdepartmental course offered as History 340 the first semester, and English 340 the second semester. Prerequisite: consent of instructor. (Alternate years; not offered 1956–57.)

EUROPEAN LANGUAGES

Associate Professors ASPINWALL, MUELLER; Assistant Professors JENSON, KNOWLTON, PAVLANTOS, WISWELL; Instructors BURKETT, ROTH, SINGER

FRENCH

100 ELEMENTARY FRENCH (3-3) Yr. **STAFF**

Reading, conversation with laboratory drill, introduction to grammar.

101 INTERMEDIATE FRENCH (3-3) Yr. **STAFF**

Reading, conversation with laboratory drill, and composition. Prerequisite: French 100 or the equivalent.

201 LITERATURE OF THE TWENTIETH CENTURY (3-3) Yr. **ASPINWALL**

Novels, plays, poetry. Course conducted in French as far as feasible. Prerequisite: French 101 or the equivalent.

250 LITERATURE OF THE GOLDEN AGE (2) I **ASPINWALL**

Emphasis on Molière, Racine, Corneille. Conducted in French. Prerequisite: French 280–281, 282–283, or the equivalent. (Not offered 1956–57.)

261 LITERATURE SINCE 1800 IN TRANSLATION (2) II **ASPINWALL**

Rapid reading in translation, lectures, discussion, and reports. Not open to French majors. Prerequisite: English 150. (Not offered 1956–57.)

273 HISTORY OF THE FRENCH LANGUAGE (2) II **KNOWLTON**

History of the French language, with emphasis on the literature of the Middle Ages and the Sixteenth Century. Reading and analysis of representative selections from the works of Villon, Rabelais, Montaigne, and including the *Chanson de Roland* and the Pleiade. Prerequisite: French 101 and Latin 100 or the equivalent. (Not offered 1956–57.)

280-281 THE EIGHTEENTH CENTURY (2-2) Yr. **BURKETT**

French thought: Voltaire, Rousseau, Marivaux, Montesquieu, Diderot, Prevost, Beaumarchais. Conducted in French. Prerequisite: French 201 or the equivalent. (Alternates with 282–283. Not offered 1956–57.)

282-283 LITERATURE OF THE NINETEENTH CENTURY (2-2) Yr. **ASPINWALL**

Novels, plays, and poetry representative of the schools of romanticism, realism, naturalism, and symbolism. Conducted in French. Prerequisite: French 201 or the equivalent. (Alternates with 280–281.)

299 DIRECTED READING (Ar.) Yr. **ASPINWALL**

Designed to round out a knowledge of French literature. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in French.

GERMAN

100 ELEMENTARY GERMAN (3-3) Yr. **STAFF**

Grammar development from reading material; analysis of German sentence structure; conversation drill in laboratory.

101 INTRODUCTION TO GERMAN LITERATURE (3-3) Yr. **STAFF**

Readings from modern and classical authors; grammar review; vocabulary building; composition and conversation. Prerequisite: German 100 or two years of high school German.

102 SCIENTIFIC GERMAN (3-3) Yr. **STAFF**

Accurate reading of scientific German over a wide range; emphasis on sentence construction and vocabulary building. Prerequisite: German 100.

200 THE CLASSICAL PERIOD (3-3) Yr. **JENSON**

Representative works of Lessing, Goethe, and Schiller, interpreted within the literary framework of their time. Conducted chiefly in German. Prerequisite: German 101 or the equivalent. (Alternate years: offered 1956–57.)

201 THE MODERN PERIOD (3-3) Yr. **MUELLER**

Representative works of the schools of romanticism, poetic realism, naturalism, impressionism, expressionism, and the new objectivity. Conducted chiefly in German. Prerequisite: German 101 or equivalent. (Alternate years; not offered 1956–57.)

202 ADVANCED SCIENTIFIC GERMAN (Ar.) Yr. **MUELLER**

Reading in student's field of scientific specialization. Required of German majors; reading to be done in field of literary history. May be repeated once. Prerequisite: Two years of college German; consent of instructor.

299 DIRECTED READING (Ar.) Yr. **JENSON, MUELLER**

Designed to round out student's knowledge of German literature, or allow him to read intensively in the field of greatest interest. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in German.

Greek

106 ELEMENTARY GREEK (3-3) Yr. **PAVLANTOS**

Vocabulary and grammar with reading of simple Greek.

107 INTERMEDIATE GREEK (3-3) Yr. **PAVLANTOS**

Review of grammar; reading from selected prose.

Latin

100 ELEMENTARY LATIN (3-3) Yr. **PAVLANTOS**

Vocabulary and grammar, with reading of simple Latin.

101 INTERMEDIATE LATIN (3-3) Yr. **PAVLANTOS**

Review of grammar; reading of selections from prose and poetry.

250-251 CLASSICAL CIVILIZATION (3-3) Yr. **PAVLANTOS**

A survey of the major aspects of Greek and Roman civilization, with special attention to their influences on Western culture. First semester devoted to Greek civilization; the second, to Roman. Students may enter the second semester. (Not offered 1956–57.)

260-261 CLASSICAL LITERATURE (3-3) Yr. **PAVLANTOS**

The major writers of Greece and Rome in English translation. First semester devoted to Greek literature; the second, to Roman. Students may enter the second semester.

299 DIRECTED READING (Ar.) I, II **PAVLANTOS**

Limited to seniors with a 2.7 grade point ratio, or a 3.0 grade point in Latin.

Russian

100 ELEMENTARY RUSSIAN (3-3) Yr. **WISWELL**

Introductory course in Russian. Conversation, laboratory drill, reading, writing, and grammar.

101 INTERMEDIATE RUSSIAN (3-3) Yr. **WISWELL**

Review of grammar; conversation, laboratory drill, reading from modern and classical authors. Prerequisite: Russian 100 or the equivalent.

261 NINETEENTH-CENTURY RUSSIAN NOVEL (2) II **WISWELL**

A survey of the more important novelists in English translation, particularly Gogol, Goncharov, Turgenev, Dostovsky, and Tolstoi.

299 DIRECTED READING (Ar.) Yr. **WISWELL**

Limited to seniors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Russian.

Spanish

100 ELEMENTARY SPANISH (3-3) Yr. **STAFF**

Reading, conversation, laboratory drill, introduction to grammar.

101 INTERMEDIATE SPANISH (3-3) Yr. **STAFF**

Reading, conversation, laboratory drill, some grammar and composition. Prerequisite: Spanish 100 or the equivalent.

254 INTRODUCTION TO SPANISH-AMERICAN LITERATURE (2) I **KNOWLTON**

Readings and reports in Spanish-American colonial literature, with some attention to Spanish literature of the Philippines. Representative South American novels of the nineteenth and twentieth centuries. Prerequisite: Spanish 101 or the equivalent. (Alternates with 256.)

255 MEXICAN LITERATURE (2) II **KNOWLTON**

The cultural history of Mexico and representative writers. Readings and reports, with emphasis on the novelists of the Mexican revolution of 1910. Conducted in Spanish. Prerequisite: Spanish 254 or equivalent. (Alternates with 257.)

256 SPANISH LITERATURE TO 1700 (2) I **ROTH**

Reading and interpretation of representative selections from Spanish literature of the Middle Ages and the Golden Age, with outlines of literary history. Special consideration of *Don Quixote* and the drama. Prerequisite: Spanish 101 or the equivalent. (Alternates with 254; not offered 1956–57.)

257 SPANISH LITERATURE FROM 1700 (2) II **ROTH**

Reading and interpretation of representative selections from Spanish literature of the eighteenth, nineteenth, and twentieth centuries, with outlines of literary history and special consideration of the drama and novel since 1800. Not open to students who have credit in Spanish 252 or 253 as previously given. Prerequisite: Spanish 101 or the equivalent. (Alternates with 255; not offered 1956–57.)

258 SPANISH CONVERSATION AND COMPOSITION (2) I **ROTH**

A course designed to develop skill and accuracy in composition and oral expression. Prerequisite: Spanish 101 or the equivalent. (Alternates with 260.)

259 ADVANCED CONVERSATION AND COMPOSITION (2) II **ROTH**

Further training in composition and oral expression. Prerequisite: Spanish 258 or the equivalent. (Alternates with 260.)

260 HISTORY OF THE SPANISH LANGUAGE (2) I **KNOWLTON**

Prerequisite: Spanish 101 or the equivalent, and one semester of college Latin or the equivalent. (Alternates with 258, 259; not offered 1956–57.)

299 DIRECTED READING (Ar.) Yr. **KNOWLTON, ROTH**

Designed to round out the student's knowledge of Spanish. (1) Spanish Peninsular Literature; (2) Spanish-American Literature; (3) Hispanic Linguistics. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Spanish.

GEOGRAPHY

Professor KISH; Associate Professor MANCHESTER; Lecturer PIIANAIA

150 ELEMENTS OF GEOGRAPHY (3) I, II **MANCHESTER**

Introduction to the principles of geography. Basic interrelations of human life and elements of the natural landscape. Course fee $1.00.

151 ECONOMIC GEOGRAPHY (3) I, II

Distribution of the principal commodities of world commerce. An analysis of the world's important agricultural, industrial, and commercial regions with their interconnecting trade routes. Course fee $1.00.

240 PHYSICAL GEOGRAPHY (3) II

Basic principles of the earth sciences selected to provide an understanding of man's physical environment on a global scale. Course fee $1.00. (Not offered 1956–57.)

250 CARTOGRAPHY (3) I **PIIANAIA**

A study of the history of map making, the construction of projections, and the techniques of drafting various types of maps for use in geographic investigations. Laboratory fee $5.00.

251 FIELD METHODS (2) II

Instruction in field and laboratory techniques involved in mapping physical and cultural features of the landscape. Prerequisite: Geography 250 or consent of instructor. Laboratory fee $5.00. (Not offered 1956–57.)

252 GEOGRAPHY OF NORTH AMERICA (3) I

Regional geography of the United States and Canada; geographic aspects of the historic and economic development of the continent and of contemporary problems. Course fee $1.00.

255 GEOGRAPHY OF ASIA (3) II **MANCHESTER**

The physical regions of Asia and their human occupance; interrelationships with other areas and the geographic background of current problems. Course fee $1.00.

256 GEOGRAPHY OF JAPAN (3) II **MANCHESTER**

The regional study of the geography of Japan. A detailed study of the people and resources of the land. Course fee $1.00.

257 GEOGRAPHY OF CHINA (3) II

The peoples and environment of China studied on a regional basis, with emphasis on the occupance and use of the land. Course fee $1.00. (Not offered 1956–57.)

258 GEOGRAPHY OF EUROPE (3) II **MANCHESTER**

The physical and human geography of Europe. Its geography as a background study for present problems. Course fee $1.00. (Not offered 1956–57.)

260 GEOGRAPHY OF HAWAII (3) II **PIIANAIA**

The regional, physical, and cultural geography of Hawaii. A detailed study of the people and the resources of the Islands. Course fee $1.00.

261 WORLD GEOGRAPHIC PATTERNS (3) I, II

A comparative study of the physical character and human use of the world's geographic regions, with discussion of teaching methods and materials. For prospective teachers. Course fee $1.00.

262 WEATHER AND CLIMATE (3) I

Study of the basic elements of meteorology and climatology. Two lectures and one laboratory period. Laboratory fee $1.00. (Not offered 1956–57.)

263 GEOGRAPHY OF THE PACIFIC ISLANDS (3) I **MANCHESTER**

Polynesia (except Hawaii), Melanesia, and Micronesia. Course fee $1.00.

264 GEOGRAPHY OF INDIA AND SOUTHEAST ASIA (3) II

Description of the major geographic regions of India and Southeast Asia, with study of the geographic factors functional in the history, politics, and economics of the area. Course fee $1.00. (Not offered 1956–57.)

265 GEOGRAPHY OF AUSTRALIA (2) II **PIIANAIA**

The geography of Australia with emphasis on the relationship of its people to resources and land usage. Course fee $1.00.

271 POLITICAL GEOGRAPHY (3) II **KISH**

Geographic background of international politics and national power; emphasis on areas currently in the news. Course fee $1.00.

272 NAVIGATION (3) II

Principles of navigation; position fixing by terrestial and celestial objects. Course fee $1.00. (Not offered 1956–57.)

280 MICRONESIA (3) I

Physical character of the islands of Micronesia and their occupance and use by man. Course fee $1.00. (Not offered 1956–57.)

281 GEOGRAPHY OF POLYNESIA (3) I **PIIANAIA**

A study of the physical, economic, and political geography of the Polynesian islands. Course fee $1.00.

299 DIRECTED READING (Ar.) I, II **STAFF**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Geography.

300 DIRECTED RESEARCH (Ar.) I, II **STAFF**

Prerequisite: consent of instructor.

308 SEMINAR IN GEOGRAPHY OF JAPAN (3) II

Prerequisite: consent of instructor. (Not offered 1956–57.)

309 HISTORY OF GEOGRAPHY (3) I **MANCHESTER**

Development of geographic ideas from early Greece to the present through Rome, the Moslem world, medieval Europe, and China. Special emphasis on the modern German, French, British, and American schools.

310 SEMINAR IN GEOGRAPHY (3) II **KISH**

Prerequisite: consent of instructor.

GEOLOGY AND GEOPHYSICS

Associate Professor ABBOTT

150 PHYSICAL GEOLOGY (3) I **ABBOTT**

Origin of the earth; geologic work of oceans, glaciers, streams, wind; introduction to rocks and minerals; discussions of ground water, volcanoes, earthquakes, mountain building. Recommended that Geology 152 be taken concurrently.

151 HISTORICAL GEOLOGY (3) II **ABBOTT**

Changes in the earth's surface during geologic time as recorded by fossil remains in the rocks. Development and destruction of ancient seas and continents. Recommended that Geology 153 be taken concurrently. Prerequisite: Geology 150.

152 LABORATORY GEOLOGY (1) I **ABBOTT**

Identification of common minerals and rocks. Reading of topographic and geologic maps. Prerequisite: credit or concurrent registration in Geology 150. Laboratory fee $1.00.

153 LABORATORY GEOLOGY (1) II **ABBOTT**

Identification of important fossil forms. Exercises in stratigraphy. Prerequisite: credit or concurrent registration in Geology 151. Laboratory fee $1.00.

210 MINERALOGY (3) II **ABBOTT**

The study and identification of minerals: origin, physical and chemical characteristics, economic value, and geographic location. Introduction to elementary crystallography. Two lectures and one 2-hour laboratory. Prerequisite: Geology 150; Chemistry 103 or 104.

254 ECONOMIC GEOLOGY (3) I **ABBOTT**

Distribution, nature, and origin of deposits of metallic and nonmetallic minerals. Prerequisite: Geology 150. (Alternate years; not offered 1956–57.)

255 GEOLOGY OF GROUND WATER (2) II **ABBOTT**

Origin, circulation, recovery, and quality of ground water, with emphasis on fresh water problems of the Hawaiian Islands. Prerequisite: Geology 150. (Not offered 1956–57.)

260 GEOMORPHOLOGY (3) I **ABBOTT**

Study of landforms and their relation to geologic structure. Prerequisite: Geology 151, or permission of instructor. (Alternate years; offered 1956–57.)

262 VOLCANOLOGY (3) II **ABBOTT**

Study of volcanoes and volcanic activity, with emphasis on those that comprise the Hawaiian Islands. Prerequisite: Geology 151, 210; Physics 102 or 104. (Not offered 1956–57.)

299 DIRECTED READING (Ar.) I, II **ABBOTT**

Limited to seniors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Geology.

300 DIRECTED READING (Ar.) I, II **ABBOTT**

Prerequisite: Graduate standing and consent of instructor.

GOVERNMENT

Professors MELLER, SAUNDERS, SPELLACY; Assistant Professors KOSAKI, STAUFFER, TUTTLE, VAN DER VEUR

Government 150, or the equivalent, is prerequisite to all other courses in Government, except 155.

150 INTRODUCTION TO GOVERNMENT (3) I, II **MELLER, STAFF**

The role of government in modern society. Types and practices of government: American and European. The processes of political change and integration. The rights of and channels of participation by the citizen.

155 AMERICAN GOVERNMENT (3) I

The development, organization, and functioning of American national, state, and local government. Not open to students who have taken 150

238 ELEMENTS OF POLITICS AND GOVERNMENT (2) I

An introduction to the terms and principles of political science. The meaning of law, liberty, constitutionalism, democracy, etc. The impact of other social sciences upon political science. (Not offered 1956–57.)

240 DEMOCRACY AND COMMUNISM (3) I **SAUNDERS**

Survey of the ideological development of the present rivals for man's political allegiance.

248 STATE GOVERNMENT AND ADMINISTRATION (3) II **SPELLACY**

State constitutions; historical evolution of state government; its structure with reference to judicial, legislative, and executive branches; limitations on state authority. (Not offered 1956–57.)

252 INTRODUCTION TO CONSTITUTIONAL LAW (3) I **SPELLACY**

Examination of principal cases concerned with state relations, due process of law, interstate commerce, and related subjects.

254 MUNICIPAL GOVERNMENT AND ADMINISTRATION (3) II **SPELLACY**

The city as a political subdivision and as a municipal corporation; powers and liabilities; forms of government; the metropolitan problem; and related matters.

256 AMERICAN POLITICAL PARTIES (3) II **TUTTLE**

The organization, methods, and functions of political parties, with special attention to the electoral and organizational aspects of party behavior.

257 CAMPAIGNS AND ELECTIONS (2) I **KOSAKI**

The management and conduct of primary and general elections, with special attention to the techniques employed by candidates for public office. Field investigations are a part of the course.

259 PROPAGANDA AND PUBLIC OPINION (3) II **TUTTLE**

Nature of public opinion; methods of influencing it; techniques for measuring political opinions and attitudes. The organization, characteristics, and political activities of pressure groups. Characteristics, methods, and results of propaganda.

260 INTRODUCTION TO INTERNATIONAL RELATIONS (2) I **van der VEUR**

A study of the factors which condition the foreign policy of states: nationalism, imperialism, and power politics. Outstanding problems of world politics.

261 UNITED NATIONS (2) II **van der VEUR**

A study of the problems involved in the development and structure of international organizations with special emphasis on the United Nations.

262 GOVERNMENT AND POLITICS OF CHINA AND JAPAN (3) I **STAUFFER**

An historical analysis of the changing patterns of government in China and Japan, with emphasis on problems faced and the institutional, ideological, and political answers created through time.

263 INTERNATIONAL RELATIONS OF THE FAR EAST (3) I **van der VEUR**

The position of eastern Asia in the postwar world and the problems of adjustment that face China, Japan, and other nations of this region.

264 PROBLEMS IN INTERNATIONAL RELATIONS (3) II

Special topics in the field of international relations studying change in the nation-state system; emergent regionalism; military blocs; impact of neutralism; new dimensions of co-operation through international organizations, etc. (Not offered 1956–57.)

265 COMPARATIVE POLITICS: POLITICAL PARTIES (3) I **STAUFFER**

Nature and morphology of political parties; party systems; relation to electoral systems.

266 COMPARATIVE POLITICS: INSTITUTIONS AND PROCESSES (3) II **van der VEUR**

Classification of major structural types; levels, range and "universe" of decision-making; patterns in executive-legislative relations.

267 FORMULATION AND ADMINISTRATION OF AMERICAN FOREIGN POLICY (3) I

A study of the historical, institutional, political, and economic influences on the formation and execution of American foreign policy. (Not offered 1956–57.)

270 GOVERNMENT OF HAWAII (3) I **MELLER**

Territorial and local government, with consideration of the proposed state constitution of 1950; formative political factors in Hawaii.

271 COMPARATIVE COLONIAL GOVERNMENT (3) I **STAUFFER**

A comparative survey of various national solutions to certain basic problems arising from rule of subject peoples; clash of legal systems; indigenous political elites; lack of indigenous political structures; rise of nationalism.

273 GOVERNMENT AND POLITICS OF SOUTH AND SOUTHEAST ASIA (3) I **van der VEUR**

An analysis of relevent colonial patterns that have conditioned the new governmental structures created; party systems; administrative problems; government as an instrument of change.

274 INTERNATIONAL RELATIONS OF SOUTH AND SOUTHEAST ASIA (3) II **van der VEUR**

A study of the main changes brought to the nation-state system with the emergence from colonialism of these new nations. Intra-regional struggles; intra-regional economic co-operation; the Afro-Asian bloc; activities in the United Nations.

276 THE LEGISLATIVE PROCESS (3) II **MELLER**

A survey of the law-making process in the United States. The role of representative assemblies, of the executive and administrative branches, and of interest groups and the public.

281 PRINCIPLES OF MANAGEMENT (3) I **MELLER**

Basic principles of management and techniques of application; human relations in management.

282 INTRODUCTION TO PUBLIC ADMINISTRATION (3) I **SPELLACY**

Relationship of administration to policy-forming agencies and to the courts; the structure of administration; devices for integration; and related materials.

283 PERSONNEL ADMINISTRATION (3) II **TUTTLE**

The organization and administration of civil service systems; the recruitment, classification, discipline, and status of civil servants; related matters. Prerequisite: Government 282.

284 INTRODUCTION TO ADMINISTRATIVE LAW (3) II **SPELLACY**

Laws relating to public officers, their status, rights, and obligations; laws governing relations between the government and the public, e.g., rights to notice and hearing, due process.

287 PROBLEMS IN AMERICAN GOVERNMENT (3) I **TUTTLE**

Special topics in the field of American government and politics. Varied from year to year. Intended to provide training in research methods. Prerequisite: consent of instructor. (Not offered 1956–57.)

288 PROBLEMS IN PUBLIC ADMINISTRATION (3) II **MELLER**

Introduction to materials and research methods used in the public service. Individual and group research projects. Enrollment restricted to students of the Public Administration Program who are within two semesters of graduation.

289 POLITICAL THEORY: MAJOR CONCEPTS (3) I **KOSAKI**

The statement and analysis of the outstanding problems of political theory; their universality in time and space; major solutions proposed.

290 POLITICAL THEORY: PROBLEMS (3) II **KOSAKI**

The restatement and intensive analysis of one or two political theory problems.

298 FIELD OF POLITICAL SCIENCE (2) II **SAUNDERS**

The postulates and methods of political science and its several fields, with some attention to the interrelations of the social sciences.

299 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

Individual problems in the field of government. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Government.

300 DIRECTED READING AND RESEARCH (Ar.) I, II — **STAFF**
Individual problems in the field of government. Prerequisite: consent of instructor.

302 SEMINAR IN INTERNATIONAL RELATIONS (3) I — **STAUFFER**
Prerequisite: consent of instructor.

303 SEMINAR IN FAR EASTERN POLITICS (3) I
Prerequisite: consent of instructor. (Not offered 1956–57.)

304 SEMINAR IN PUBLIC LAW (2) I — **SPELLACY**
Prerequisite: consent of instructor. (Not offered 1956–57.)

305 SEMINAR IN POLITICS (2) II — **TUTTLE**
Prerequisite: consent of instructor.

307 SEMINAR IN POLITICAL THEORY (2) I — **KOSAKI**
Prerequisite: consent of instructor.

309 SEMINAR IN SOUTH AND SOUTHEAST ASIA (2) II — **van der VEUR**
Prerequisite: consent of instructor. (Not offered 1956–57.)

310 SEMINAR IN PUBLIC ADMINISTRATION (2) II
Prerequisite: consent of instructor.

HEALTH AND PHYSICAL EDUCATION

Professor H. BROWN; Associate Professors BUCKLIN, SAAKE; Assistant Professors GAY, GUSTUSON, F. LEWIS, SAKAMOTO, VASCONCELLOS; Instructors BEAMER, GIBSON, RATHBURN; Assistant HASHIMOTO

101 INDIVIDUAL AND TEAM SPORTS (MEN) (1) I — **STAFF**
Volleyball and basketball. Freshmen. Two class periods. Activities and locker fee $3.00.

102 INDIVIDUAL AND TEAM SPORTS (MEN) (1) II — **STAFF**
Swimming and tennis. Freshmen. Two class periods. Activities and locker fee $3.00.

103 INDIVIDUAL AND TEAM SPORTS (MEN) (1) I, II — **STAFF**
Dancing and golf. Two class periods. Sophomores. Activities and locker fee $3.00.

105 INDIVIDUAL AND TEAM SPORTS (WOMEN) (1) I — **STAFF**
Swimming and tennis. Freshmen. Two class periods. Activities and locker fee $3.00.

106 INDIVIDUAL AND TEAM SPORTS (WOMEN) (1) II — **STAFF**
Volleyball and basketball. Freshmen. Two class periods. Activities and locker fee $3.00.

107 INDIVIDUAL AND TEAM SPORTS (WOMEN) (1) I, II — **STAFF**
Dancing and golf. Two class periods. Sophomores. Activities and locker fee $3.00.

109 RESTRICTED ACTIVITIES (1) I, II — **STAFF**
For students who are physically handicapped and unable to take the regular courses. Admittance only upon recommendation of University physician. Two class periods. Activities and locker fee $3.00.

111 INTERMEDIATE SWIMMING (1) I — **SAKAMOTO**
For students who have met the basic requirements in swimming and desire to develop additional skills in swimming and diving. Activities and locker fee $3.00. (Not offered 1956–57.)

113 ADVANCED TENNIS (1) II — **SAAKE**
For those interested in developing advanced skills and strategy in tennis. Two class periods. Activities and locker fee $3.00.

114 DEVELOPMENTAL ACTIVITIES (1-1) Yr. — **GUSTUSON**
For those interested in body development and physical fitness. Exercises with and without apparatus will be selected to meet personal needs, and the various forms and systems of exercise will be surveyed. Two class periods. Activities and locker fee $3.00.

115 TUMBLING (1) I — **GUSTUSON**
Exercises on mats suitable for use with child and adult groups. Activities and locker fee $3.00.

116 HEAVY APPARATUS (1) II **GUSTUSON**

Heavy apparatus, including trampoline, for the development of balance, strength, and skills. Two class periods. Activities and locker fee $3.00.

120 MUSIC AND RHYTHMS IN PHYSICAL EDUCATION (2) II **GAY**

Designed to acquaint teachers and activity leaders with the use of music in the activity program. Includes a brief survey of the various rhythmic patterns and their application. Three class periods. Activities and locker fee $3.00.

123 FOLK AND NATIONAL DANCES (1) I **GAY**

This course presents selected dances of various national groups now in popular use. Square dances will be included. Two class periods.

124 DANCES OF HAWAII (1) I **GAY**

An introduction to the hula. The background and fundamentals of the dance will be presented, and selected dances will be given. Two class periods.

130 PERSONAL HYGIENE (1) I, II **STAFF**

Scientific health information as a basis for hygienic living. Personal health problems. One lecture and one personal conference.

132 PERSONAL HEALTH (2) I **RATHBURN**

Basic information on the proper care of the body and the development of desirable health habits and attitudes. Intended primarily for students specializing in physical education and recreation.

140 NATURE AND FUNCTION OF PLAY (2) II **SAAKE**

The place of play in community and school life and its application to the various age groups.

170 INTRODUCTION TO PHYSICAL EDUCATION (2) II **BROWN**

Designed for prospective teachers and leaders in physical education and recreation; the objectives, needs, procedures, and outcomes in physical education activities.

215 ATHLETIC COACHING, FOOTBALL AND BASKETBALL (2) I **STAFF**

The fundamentals, position play, team play, and strategy in football and basketball. Nine weeks to each sport. Three class periods.

217 ATHLETIC COACHING, BASEBALL AND TRACK (2) II **STAFF**

The fundamentals, team play, and strategy in baseball; basic skills, analysis of form, and conditioning in track. Nine weeks to each sport. Three class periods.

219 COACHING OF SWIMMING (2) II **SAKAMOTO**

Designed for those interested in the development of swimming teams in schools and other agencies. Content and method will be emphasized.

221 PHYSICAL EDUCATION, ELEMENTARY (2) I, II **BEAMER**

Content and method for programs on the elementary school level. Adaptations to meet situations with like age groups outside of school will also be discussed. Three class periods. Activities and locker fee $3.00.

222 PHYSICAL EDUCATION, SECONDARY (2) II **GUSTUSON**

Activities and methods in programs for the junior and senior high school levels. Three class periods. Activities and locker fee $3.00.

225 THE TEACHING OF INDIVIDUAL SPORTS (2) I **GAY**

Organization and teaching techniques for such athletic activities for girls as tennis, archery, badminton, golf, etc., on the secondary level. Three class periods.

227 THE TEACHING OF TEAM SPORTS (2) II **GAY**

Techniques of teaching fundamentals and strategy of team games for girls and women. Three class periods.

230 SCHOOL HEALTH PROBLEMS (2) I, II **BUCKLIN, RATHBURN**

Health needs of the school child and principles, methods, and materials applicable to the school health program.

231 HEALTH TEACHING IN SCHOOLS (2) I **BUCKLIN**

Deals with the methods used in teaching for health in elementary and secondary schools.

233 PUBLIC HEALTH IN THE COMMUNITY (2) I **BUCKLIN**

A study of community health problems and the function of official and voluntary agencies in meeting the needs in Hawaii. (Not offered 1956–57.)

234 SAFETY PROCEDURES IN PHYSICAL EDUCATION (2) I **SAAKE**

Prevention and emergency treatment of injuries, with special emphasis upon school, playground, and athletic situations. Practical work in first aid included. Red Cross Certificate may be earned.

235 THE HEALTH CURRICULUM (2) II **BUCKLIN**

Procedures for the development and construction of a health education program, including criteria for selection and evaluation of content. (Not offered 1956–57.)

236 EVALUATION IN HEALTH EDUCATION (2) II **BUCKLIN**

Study of the processes involved in appraising the effectiveness of the health education program. Practice in the use and development of various evaluation instruments. (Not offered 1956–57.)

237 PRINCIPLES OF HEALTH EDUCATION (2) I **BUCKLIN**

The historical development and present status of the health education program. Emphasis upon current trends and basic principles involved. (Not offered 1956–57.)

239 HEALTH OF THE SCHOOL CHILD (2) **BUCKLIN**

Deals with various problems in child health and the role of the school in meeting them. Summer session only.

241 SOCIAL RECREATION (2) II **GIBSON**

Activities and leadership techniques for parties, socials, etc.

246 OFFICIATING IN ATHLETICS (2-2) Yr. **LEWIS**

The techniques used by officials in the various sports. Practice in officiating is included.

247 FESTIVALS AND PAGEANTS (2) I **GAY**

The development of mass productions of a dramatic nature suitable for school and community recreation organizations. (Not offered 1956–57.)

248 HOBBIES IN RECREATION (2) I **GIBSON**

The development of procedures and skills in various hobbies for Recreation majors. Others by permission of instructor only. Three class periods.

249 CAMP LEADERSHIP (2) II **BROWN**

Program development and procedures used in the modern camping movement. Relationships with educational and other agencies.

250 RECREATION LEADERSHIP (2-2) Yr. **BROWN, STAFF**

Students are assigned to recreational agencies for orientation. One hour per week is devoted to discussion of individual and group problems.

252 FIELD WORK IN RECREATION (5-5) Yr. **BROWN, STAFF**

Students are assigned to recreational agencies for work experience. One hour each week is devoted to discussion of problems. Prerequisite: consent of instructor. For Recreation majors only.

263 INTRAMURAL ATHLETICS (2) I **LEWIS**

Organization, program, and procedures used in conducting the sports program for students outside of regular class hours.

276 CURRENT TRENDS IN HEALTH (2-2) Yr. **BUCKLIN**

An analysis of the health situation and functions of various health agencies in Hawaii dealing with specific diseases and problems. Primarily for teachers and school administrators. (Not offered 1956–57.)

280 ANATOMY IN PHYSICAL EDUCATION (3) I **BROWN**

The purpose of this course is to develop an understanding of muscle action during activity. Designed primarily for leaders in physical education and recreation but open to others.

285 PHYSIOLOGY IN PHYSICAL EDUCATION (3) II **SAAKE**

The basic essentials in physiology and physiology of activity necessary in teaching desirable health practices; selection of activities to meet individual and group needs. Designed primarily for leaders in physical education and recreation but open to others.

299 DIRECTED READING (Ar.) I, II **STAFF**

Individual problems in the fields of health education, physical education, or recreation. Limited to seniors in the Recreation Leadership Curriculum with a 2.7 grade point ratio, or a 3.0 grade point ratio in Health and Physical Education courses.

330 SEMINAR IN HEALTH EDUCATION (2) I, II **BUCKLIN**

Study and discussion of selected problems in health education as determined by individual and group interests and needs. (Not offered 1956–57.)

HISTORY

Professors HUNTER, MARDER, MORRIS, MURPHY, SAKAMAKI, J. WHITE; Associate Professor D. JOHNSON; Assistant Professors BURKE, GELFAND, SHINODA

100 WORLD CIVILIZATION (3-3) Yr. **STAFF**

A survey of the more significant political, social, economic, and intellectual factors in the development of civilization from the ancient Orient and classical Greece and Rome to the present day, with emphasis on the Western civilizations. Prerequisite for advanced courses in history.

110 INTRODUCTION TO AMERICAN HISTORY (3) I, II **STAFF**

The religious, cultural, and social backgrounds of the American people. Prerequisite for advanced courses in American history.

201 HISTORY OF THE FAR EAST (3-3) Yr. **GELFAND**

Survey of the political, social, and economic history of the Far East as a unit.

208 EXPANSION OF EUROPEAN CIVILIZATION (3) I

Survey of cultural changes and developments in Europe, the Western Hemisphere, and Asia resulting from European expansion. (Not offered 1956–57.)

209 HISTORY OF ENGLAND TO 1688 (3) I **MURPHY**

Major trends in the development of English civilization from the origins to the Glorious Revolution.

210 HISTORY OF ENGLAND FROM 1688 (3) II **MURPHY**

Major trends in modern English history with emphasis on the origins of twentieth-century developments.

211 CONSTITUTIONAL HISTORY OF ENGLAND (3) I **HUNTER**

A study of Anglo-Saxon institutions, Norman innovations; the legal, administrative, and parliamentary development under the Angevins; the limitation of royal power; and the rise of the cabinet system. (Alternate years; not offered 1956–57.)

213 HISTORY OF MODERN RUSSIA (3) I **MARDER**

A survey of all aspects of Russian history and civilization from the beginning to the Bolshevik Revolution. (Alternate years; not offered 1956–57.)

214 HISTORY OF SOVIET RUSSIA (3) II **MARDER**

A political, economic, social, and cultural study of Russia since the Bolshevik Revolution. History 213 is desirable, though not required, preparation. (Alternate years; not offered 1956–57.)

221 BRITISH EMPIRE AND COMMONWEALTH FROM 1815 (3) II **MURPHY**

The Empire; transformation of colonies and dependencies into member nations of the Commonwealth; present problems and relationships. (Alternate years; not offered 1956–57.)

225 HISTORY OF CHINA (3-3) Yr. **WHITE**

General survey of Chinese history; development of institutions; impact of Western culture upon Chinese civilization.

226 HISTORY OF JAPAN (3-3) Yr. **SAKAMAKI**

Historical survey of Japanese culture, government, economics, and institutions.

227 SOUTHEAST ASIA (3) I **WHITE**

General survey of Burma, Siam, Indo-China, Malaya, Indonesia, and the Philippine Republic; history of these states; relations with European nations and the United States. (Alternate years; offered 1956–57.)

229 AMERICAN-CHINESE RELATIONS (3) II **WHITE**

Diplomatic, economic, and cultural relations of the United States and China, with emphasis on American Far Eastern policy. (Alternate years; offered 1956–57.)

230 INDIA, PAKISTAN, AND CEYLON (3) II **SHINODA**

General historical survey of South Asia from earliest times to the present.

240-241 HISTORY OF THE UNITED STATES TO 1876 (3-3) Yr. **GELFAND**

Expansion of Europe into the Western Hemisphere; establishment of American Independence; the Federal Union to the close of the Reconstruction Period.

242-243 HISTORY OF THE UNITED STATES (3-3) Yr. **BURKE**

A detailed political, economic, and social survey of the history of the American people, 1877 to the present.

244-245 DIPLOMATIC HISTORY OF THE UNITED STATES (3-3) Yr. **GELFAND**

History of American foreign policy, with emphasis upon recent developments.

246 AMERICAN THOUGHT AND CULTURE (3) I **HUNTER**

An advanced course in American social customs, institutions, and intellectual pursuits. (Alternate years; offered 1956–57.)

248 AMERICAN ECONOMIC HISTORY (3) II **BURKE**

Emphasis on the role of techniques, agricultural developments, the entrepreneur and the rise of the labor movement. Economics 150–151 is recommended as desirable preparation.

249 REPRESENTATIVE AMERICANS (3) II

A series of biographical sketches of leading characters in American history from the Revolution to the present. (Not offered 1956–57.)

250 EARLY CIVILIZATION IN THE FAR EAST (3) I

Study of the origins of the peoples and cultures in Eastern Asia. (Not offered 1956–57.)

251 HISTORY OF THOUGHT IN JAPAN (3) II **SHINODA**

Major schools of thought and important thinkers, social reformers, economists, statesmen, and educators of Japan.

252 CONSTITUTIONAL HISTORY OF THE UNITED STATES (3) II **BURKE**

The genesis, drafting, ratification, and development of the federal Constitution.

253-254 HISTORY OF HISPANIC AMERICA (3-3) Yr. **JOHNSON**

The political, economic, and social development of the Hispanic-American Republics from colonial times to the present; emphasis on the ABC powers and international relations of the Western Hemisphere. (Alternate years; not offered 1956–57.)

255 THE UNITED STATES AND HISPANIC AMERICA (3) II **JOHNSON**

Development of political and economic problems and policies in inter-American relations.

257 EUROPE IN THE NINETEENTH CENTURY (3) I **MARDER**

A topical group discussion approach to the major political, social, economic, and intellectual trends in the evolution of Europe from Napoleon to the end of World War I. (Alternate years; offered 1956–57.)

258 EUROPE SINCE VERSAILLES (3) II **MARDER**

A continuation of 257. Problems of contemporary Europe and their historical background. History 257 is highly desirable, though not required, preparation. (Alternate years; offered 1956–57.)

259 THE WEST IN AMERICAN HISTORY (3) I **JOHNSON**

Western expansion forces in the development of the economic, cultural, and political trends of the nation.

260 AMERICAN SOCIAL REFORM MOVEMENTS SINCE 1865 (3) II **BURKE**

A detailed survey of America's quest for social justice.

263 THE AMERICAN REVOLUTION (3) II **MORRIS**

Social and political implications of the War for Independence.

273 THE UNITED STATES IN THE PACIFIC (3) I **JOHNSON**

Growth of economic and political interests and policies in the Pacific area. (Alternate years; not offered 1956–57.)

276 HISTORY OF THE HAWAIIAN ISLANDS (3) II **HUNTER**

A general course with some detail. Emphasis on the period of the monarchy.

277 PACIFIC EXPLORATION AND DISCOVERY TO 1799 (3) I **MURPHY**

Europe in the Pacific; first contacts through Cook's voyages. Emphasis on island areas. (Alternate years; offered 1956–57.)

278 PACIFIC ISLANDS FROM 1779 (3) I **MURPHY**

Expansion of European commerce, missionary activity, settlement; effects on native peoples in Australasia, Melanesia, Micronesia, Polynesia. (Alternate years; not offered 1956–57.)

279 AUSTRALIA AND NEW ZEALAND (3) II **MURPHY**

Major historical developments from colonization to independent nationhood; present problems and policies. (Alternate years; offered 1956–57.)

285 RUSSIA IN ASIA (3 3) Yr. **WHITE**

The growth and expansion of the Russian Empire and the Soviet Union into the Near East, Middle East, and Far East; relationships with its Asiatic neighbors in those areas. (Alternate years; offered 1956–57.)

299 DIRECTED READING (Ar.) I, II **STAFF**

Individual reading in (1) American History—BURKE; (2) Pacific History—MURPHY; (3) Japanese History—SHINODA; (4) European History—MARDER; (5) English History—MURPHY; (6) Hispanic-American History—JOHNSON; (7) Chinese History—WHITE; (8) Hawaiian History—HUNTER. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in History.

300 DIRECTED RESEARCH (Ar.) I, II **STAFF**

Individual research in the same fields as in *299*.

310 SEMINAR IN HISTORICAL METHOD (3) I **HUNTER**

Training in the evaluation of sources and the preparation of theses.

311 SEMINAR IN AMERICAN DIPLOMATIC HISTORY (3) II **JOHNSON**

313 SEMINAR IN HISTORIOGRAPHY (3) II **HUNTER**

The history of history and historians.

325 SEMINAR ON ALEXANDER HAMILTON (3) II **MORRIS**

340 SEMINAR IN HISTORY AND LITERATURE (2) I

Problems in contemporary American culture, with emphasis on the history of ideas, utilizing history and literature. An interdepartmental course offered as History 340 the first semester and English 340 the second semester. Prerequisite: consent of instructor. (Alternate years; not offered 1956–57.)

HOME ECONOMICS

Professor C. MILLER; Associate Professors BOATMAN, GRUELLE, V. JONES, TULL, UMBEL; Assistant Professors DOUTY, MURAI; Instructors BARTOW, BENNETT, HENDERSON, A. JONES, SATO

The following courses have no prerequisites, except for year level, and are open to students in any college or curriculum: Home Economics 100, 101, 250, 262; Household Art 150, 152; and Household Science 152, 156.

GENERAL (HE)

HE 100 ORIENTATION IN HOME ECONOMICS (2) I **GRUELLE**

Factors contributing to success in college and development of habits for effective living. Assistance in self-evaluation and relationships involving other persons. Home economics in education; an introduction to the curriculum; vocational study and planning.

HE 101 HOME NURSING (2) I, II **V. JONES, SATO**

Principles and practice of simple nursing procedures for home care and emergencies. Prevention of disease; physiological aspects of reproduction and the prenatal period; care of mother and infant. The homemaker's responsibility for home and community health. One lecture and one laboratory period.

HE 201 CONSUMER EDUCATION (2) I **DOUTY**

General purchasing problems of the consumer. Consideration of the marketing system, securing information on goods and their quality, buying habits and consumer protection. Prerequisite: Economics 140 or 150.

HE 250 HOUSEHOLD MANAGEMENT (3-2) Yr. **GRUELLE, HENDERSON**

Contribution of homemaker and family members to better home living; management of time, energy, and money; selection, arrangement, and care of equipment. (First semester two lectures and one laboratory period; second semester one lecture and one laboratory period.) Prerequisite: junior standing.

HE 251 HOME ECONOMICS EDUCATION (3) II **TULL**

Curriculum content, teaching procedures, and current educational philosophies and practices as they apply to home economics education at the elementary, secondary, and adult levels. Prerequisite: Psychology 150 or 156; junior standing.

HE 252 CHILD CARE AND TRAINING (3) II **BENNETT**

Importance of the preschool years in the development of the individual; a constructive program for the normal child in the home. Planned especially for Home Economics students. Two lectures and one laboratory period. Prerequisite: credit or concurrent registration in Psychology 150 or 156.

HE 254 FAMILY HOUSING (2) I **UMBEL**

Interpretation and evaluation of housing from the standpoint of needs, convenience, economy, aesthetic qualities, safety, health, and other values influencing the family. Two laboratory periods. Prerequisite: Art 142–143 or 150–151, or consent of instructor. Limited to 20 students. Laboratory fee $2.00.

HE 256 HOME FURNISHINGS (2) II **UMBEL**

Development of discrimination in the selection and arrangement of furnishings and accessories in relation to individual and family living. Practical applications for the consumer and homemaker. Two laboratory periods. Prerequisite: Home Economics 254. Limited to 20 students. Laboratory fee $2.00.

HE 262 EDUCATION FOR FAMILY LIFE (3) I **HENDERSON**

Relationship problems within the family; special emphasis upon the solution of individual problems as a basis for other satisfactory relations. Premarital instruction, husband-wife relationships, parent-child relationships. Open to both men and women.

HE 291 HOME-MANAGEMENT LABORATORY (4) I, II **HENDERSON**

Living with a group of four to six students in a supervised residence for six weeks; practical application of training in home economics, meal preparation, time and money management, human relationships. Students share subsistence cost. Prerequisite: Home Economics 250, Household Science 272, and senior standing.

HE 299 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

(1) Agricultural Extension; (4) Home Economics Education; (5) Home Management; (8) Child Development; (9) Consumer Problems. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in General Home Economics courses.

HE 300 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

(1) Agricultural Extension; (2) Clothing and Textiles; (3) Foods and Nutrition; (4) Home Economics Education; (5) Home Management; (6) Institutional Management. Prerequisite: consent of department chairman and instructor concerned.

HE 360 SPECIAL PROBLEMS IN HOME ECONOMICS (2) I, II **TULL**

Development of teaching and illustrative material. Class and individual problems selected according to the needs of the fifth-year students in the Vocational Home Economics Program.

Household Art (HA)

HA 110 CLOTHING AND TEXTILES (3) I **UMBEL**

Principles of pattern selection and clothing construction. Study and use of commercial patterns; principles of fitting; fundamentals of textiles; use and care of sewing equipment. One lecture and two laboratory periods. Prerequisite: Household Art 150. Laboratory fee $2.00.

HA 111 FAMILY CLOTHING PROBLEMS (3) II **UMBEL**

Planning, care, and conservation of family clothing. Speed methods in clothing construction. Consideration of children's clothing. Selection of sewing machines. Continuation of textile study. One lecture and two laboratory periods. Prerequisite: Household Art 110, 150. Laboratory fee $2.00.

HA 150 CLOTHING SELECTION (3) I, II **DOUTY**

Analysis of physical characteristics and application of principles of color, design, good grooming, wardrobe planning, and selection of appropriate dress. Open to the general student. Two lectures and one laboratory period. Laboratory fee $3.00.

HA 152 HISTORIC COSTUME (2) II **UMBEL**

A survey of historic costume, showing how fashion has reflected the life of the people. Historic costume as inspiration for modern dress.

HA 214 CLOTHING DESIGN AND CONSTRUCTION (2-2) Yr. **DOUTY**

Blocking of patterns from foundation pattern and draping on individualized dress forms. Emphasis on fitting techniques and selection of designs for individual students. Two laboratory periods. Prerequisite: Household Arts 110, 111, 150, or consent of instructor. Laboratory fee $4.00 each semester.

HA 255 ADVANCED CLOTHING (3) II **DOUTY**

Consideration of fabrics, designs, and techniques in advanced problems of clothing construction; study and use of commercial patterns. Two laboratory periods. Prerequisite: Household Art 111, or consent of instructor. Laboratory fee $2.00.

HA 299 PROBLEMS IN CLOTHING AND TEXTILES (Ar.) I, II **STAFF**

Independent investigation of a problem selected from the following areas: (1) clothing selection or construction; (2) textiles; (3) historic costume or design; (4) consumer problems; (5) related art. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Household Art courses.

Household Science (HS)

HS 102 ADVANCED FOOD PREPARATION (3-3) Yr. **GRUELLE, HENDERSON**

Economics of food selection; experimental food preparation; meal planning and serving. One lecture and two laboratory periods. Prerequisite: Household Science 150; Chemistry 103 or 104. Laboratory fee $8.00 each semester. Sections limited to 16 students each.

HS 150 ELEMENTARY FOOD PREPARATION (3) I, II **BARTOW**

Fundamental processes of food preparation; practical application in meal planning to provide good nutrition and promote good food habits. For Home Economics majors only. One lecture and two laboratory periods. Laboratory fee $8.00. Sections limited to 16 students.

HS 152 FOOD PREPARATION (3) I, II **BARTOW**

Fundamental problems in the preparation of food for adequate meals; practical experience in meal planning, preparation, and table service. Not open to students majoring in Home Economics. Two 3-hour laboratory periods weekly. Prerequisite: junior standing. Laboratory fee $8.00. Sections limited to 16 students.

HS 156 SURVEY OF NUTRITION (2) I, II **MURAI**

A study of the factors involved in the selection of a diet to promote good health, with emphasis on foods used in Hawaii. For general students, both men and women. Not open to students majoring in Home Economics.

HS 157 DIET THERAPY (3) II **MURAI**

Intended to give nursing students a knowledge of the necessary modifications of normal nutrition to meet the special dietary needs in abnormal conditions. Two lectures and one laboratory period. Prerequisite: Household Science 156. Laboratory fee $5.00.

HS 250 DIET AND DISEASE (3) II **MURAI**

Diet therapy under abnormal conditions. Two lectures and one laboratory period. Prerequisite: credit or concurrent registration in Household Science 277. Laboratory fee $5.00.

HS 260 QUANTITY COOKERY (3) I

Food problems of institutions; preparation and serving of food in large quantities, menu planning, and food costs. One lecture and two laboratory periods. Prerequisite: Household Science 102.

HS 261 INSTITUTIONAL MANAGEMENT (3) II **A. JONES**

Organization and administration of food departments of institutions such as college cafeterias, college residence halls, and hospitals. Prerequisite: Household Science 260.

HS 263 INSTITUTIONAL BUYING (3) I **A. JONES**

Selection and purchase of foods and equipment for an institution. Prerequisite: credit or concurrent registration in Household Science 260.

HS 264 PROBLEMS IN HOSPITAL MANAGEMENT (4) I, II **BOATMAN**

Field practice for senior and graduate student dietitians in an approved institution. Prerequisite: Household Science 250, 260, 277; consent of instructor.

HS 265 INSTITUTIONAL ACCOUNTS (3) II

Principles of accounting applied to management of school cafeterias, tearooms, residence halls, and other food-service units. One lecture and two laboratory periods. Prerequisite: Household Science 260.

HS 266 RESIDENCE HALL MANAGEMENT (Ar.) I, II **BOATMAN**

Planning and directing preparation of meals in a university women's residence hall; directing of housekeeping in a residence hall. Prerequisite: Household Science 260, 261, 263, 265, 277.

HS 270 NUTRITION FOR PUBLIC HEALTH NURSES (3) I **GRUELLE, MURAI**

The dietary needs of individuals and families; emphasis on nutritive values of local foods and racial diets. Two lectures and one laboratory period. Laboratory fee $5.00.

HS 272 ELEMENTARY NUTRITION (4) I **MURAI**

Basic principles of nutrition as related to the understanding of individual food needs. Planning of adequate diets with foods available in Hawaii. Two lectures and two laboratory periods. Prerequisite: Household Science 102 or consent of instructor. Laboratory fee $8.00.

HS 273 FOOD HABITS IN HAWAII (3) II **GRUELLE**

The planning and preparation of meals for various racial groups at different income levels; emphasis on adequate diets at minimum cost. One lecture and two laboratory periods. Prerequisite: Household Science 272. Laboratory fee $8.00.

HS 277 ADVANCED NUTRITION (3) II **MILLER**

Energy, protein, and mineral metabolism; chemical and physical properties and nutritional significance of the vitamins. Dental health. Simple animal feeding experiments. Two lectures and one laboratory period. Prerequisite: Household Science 272; Chemistry 232. Laboratory fee $5.00.

HS 299 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

(1) Consumer Problems; (2) Dietary Problems; (3) Experimental Cookery; (4) Food Investigation; (5) Home Management Problems; (6) Nutrition. Laboratory fee $3.00 per credit hour. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Household Science courses.

HS 300 DIRECTED RESEARCH IN NUTRITION (Ar.) I, II **MILLER**

Problems according to preparation of each student. (1) Nutritional Investigations; (2) Animal and Human Feeding Experiments. Prerequisite: Household Science 277 and consent of instructor. Laboratory fee $3.00 per credit hour each semester.

HS 301 DIETARY STUDIES (Ar.) I, II **STAFF**

Individual, group, family, and/or institutional studies of food habits and the nutritive value of diets. Prerequisite: Household Science 277 and consent of instructor. Open to qualified seniors.

HS 305 LABORATORY METHODS IN NUTRITION (3) I, II **MILLER**

Growth experiments with laboratory animals; vitamin determinations by chemical, biological, and microbiological methods; food analyses; basal metabolism; balance experiments with animals or humans. Prerequisite: Household Science 277; Chemistry 230, 232. Laboratory fee $10.

HS 351 SEMINAR IN NUTRITION (1) II **MILLER**

Review of current literature; preparation of reports; reviews of articles on assigned topics. Prerequisite: consent of instructor.

INTERDEPARTMENTAL COURSES

120-121 INTRODUCTION TO SCIENCE (4-4) Yr. **DOTY, STAFF**

Nature and objectives of science; development of man's understanding of nature; the relationships of science and society. Not open to students who have received credit for either Survey 100 or Survey 150–151. 120 is a prerequisite for 121.

175 PROBLEMS IN WORLD CIVILIZATION (2-2) Yr. **MARDER, STAFF**

An interdepartmental study of selected problems in world history through group discussion. Enrollment limited to 20 sophomores. Prerequisite: a full year of History 100 and the consent of the instructor.

330 PACIFIC ISLANDS RESEARCH SEMINAR (2-2) Yr. **STAFF**

Interdepartmental seminar dealing with scientific hypotheses about social and cultural change in the Pacific islands area. May be repeated. Prerequisite: consent of instructor.

340 SEMINAR IN HISTORY AND LITERATURE (2-2) Yr. **BOUSLOG, STALKER**

See English 340 and History 340. (Not offered 1956–57.)

LIBRARY SCIENCE

Students may enroll in Library Science courses only after consultation with instructors concerned.

260 LIBRARY PARTICIPATION (1-1) Yr. **CRAWFORD, GEISER**

An orientation to library routine conducted as a means of determining the student's aptitude for school library work. Laboratory periods arranged in Teachers College libraries. Students expecting to specialize in Library Science must register concurrently for Education 244 the first semester, and Library Science 262 the second semester. Students may enter second semester.

262 ADMINISTRATION OF SCHOOL LIBRARIES (3) II **CRAWFORD**

Methods of organizing various types of library materials and keeping essential records. Objectives and contributions of the school library to the educational program.

268 CATALOGUING AND CLASSIFICATION (3) II **CRAWFORD**

Introduction to the principles of dictionary cataloguing, classifying according to the Dewey Decimal Classification system, assigning subject headings, and filing. Emphasis upon cataloguing and classifying children's books. Prerequisite: typing ability.

269 ADVANCED CATALOGUING (2) I **CRAWFORD**

Practice in more detailed cataloguing problems for students planning to work in secondary school libraries, or for in-service students with some previous training or experience. Prerequisite: Library Science 268; typing ability. (Not offered 1956–57.)

284 BOOK SELECTION AND READING GUIDANCE (3) II **GEISER**

Principles and criteria of book selection; evaluation and selection of books in relation to reading interests of children and needs of the school curriculum. Ways of promoting the use of books for both informational and recreational reading. Prerequisite: Education 244 or equivalent.

286 PROMOTING LIBRARY USE (2) II **CRAWFORD**

Methods of developing skills and interest in the use of books and libraries by means of library instruction, the use of puppets, dramatization, book talks, storytelling, displays and exhibits, club groups, and other publicity techniques. Prerequisite: Library Science 284. (Alternates with 290; offered 1956–57.)

290 SCHOOL LIBRARY PROBLEMS (2) II **CRAWFORD**

Emphasis upon problems of the teacher-librarian in relation to selection, organization, and circulation of books, pamphlets, pictures, periodicals, and recordings. Prerequisite: Library Science 262 or equivalent. (Alternates with 286; not offered 1956–57.)

354 LIBRARY INTERNSHIP (14) I, II **CRAWFORD, GEISER**

Full-time service in laboratory or public school libraries under special supervision. Restricted to fifth-year students. Prerequisite: Library Science 260, 262, 268, 284; Education 244, 254, 282.

MATHEMATICS

Senior Professor HOLMES; Professor GREGORY; Associate Professor TOWNES; Assistant Professors COMBA, DAVIS, YAMAUCHI; Instructors CLARK, SIU, G. WHITE

149 INTERMEDIATE ALGEBRA (3) I **STAFF**

150 PLANE TRIGONOMETRY (3) I, II **STAFF**

Prerequisite: two years of high school algebra or Mathematics 149; one year of plane geometry. No credit if taken after 152.

151 COLLEGE ALGEBRA (3) I, II — **STAFF**

Prerequisite: two years of high school algebra or Mathematics 149; one year of plane geometry.

152 PLANE ANALYTICAL GEOMETRY (3) I, II — **STAFF**

Prerequisite: Mathematics 150; credit or concurrent registration in Mathematics 151.

153 DIFFERENTIAL CALCULUS (3) I, II — **STAFF**

Prerequisite: Mathematics 152.

154 INTEGRAL CALCULUS (3) I, II — **STAFF**

Prerequisite: Mathematics 153.

155 CALCULUS APPLICATIONS (3) I, II — **GREGORY, TOWNES**

Includes partial differentiation, multiple integration, and elementary differential equations. Prerequisite: Mathematics 154.

252-253 DIFFERENTIAL EQUATIONS (3-3) Yr. — **GREGORY**

Theory and application of ordinary, total, and partial differential equations. Fourier and other series. Prerequisite: Mathematics 155 or the equivalent. (Not offered 1956–57.)

254-255 ADVANCED CALCULUS (3-3) Yr. — **COMBA**

Power and Fourier series, special integrals, vectors and tensors, complex variables. Laplace transforms, calculus of variation, matrix algebra. Prerequisite. Mathematics 155 or the equivalent.

275 THEORY OF EQUATIONS (3) II — **TOWNES**

Elementary theorems in roots of equations, solution of numerical equations, determinants. Prerequisite: Mathematics 153.

276 VECTOR ANALYSIS (3) II — **YAMAUCHI**

Vector operations and their applications. Vector differential operators. Line and surface integrals. Prerequisite: Mathematics 155.

278 THEORY OF FUNCTIONS OF A COMPLEX VARIABLE (3) II — **YAMAUCHI**

Residue theory, contour integration, and other topics of analysis. Prerequisite: Mathematics 155.

280 STATISTICAL METHODS (3) I — **CLARK**

Correlation, introduction to theory of sampling, and analysis of variance. Probability distribution of various statistics. Prerequisite: Mathematics 154.

281 ADVANCED STATISTICAL METHODS (3) II — **CLARK**

Probability distribution of variances. Nonparametric methods. Tchebycheff's inequality. Statistical hypotheses and introduction to sequential analysis. Prerequisite: Mathematics 280.

299 DIRECTED READING (Ar.) I, II — **STAFF**

Individual reading in *Modern Synthetic Geometry, Real Variable Theory,* and *Theory of Tensors.* Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Mathematics.

300 DIRECTED READING OR RESEARCH (Ar.) I, II — **STAFF**

Prerequisite: Graduate standing in Mathematics and consent of department chairman.

360 SEMINAR (2-2) Yr. — **STAFF**

Prerequisite: Graduate standing in Mathematics.

MEDICAL TECHNOLOGY

In order to meet the technical requirements for the Registry of Medical Technologists of the American Society of Clinical Pathologists, this sequence of courses continues for twelve calendar months commencing with the official date of opening of summer sessions.

266 MEDICAL TECHNOLOGY (4) — **OISHI**

Student technician training in a co-operating laboratory under the supervision of a qualified director. Prerequisite: Bacteriology 262, 264. Offered only in summer sessions.

267-268 MEDICAL TECHNOLOGY (12-12) Yr. **OISHI**

Student technician training in a co-operating laboratory under the supervision of a qualified director. Prerequisite: Medical Technology 266.

MILITARY SCIENCE

Professor SPANGLER; Associate Professor BLACK; Assistant Professors EAGERS, JR., LINDOW, SPROUL; Instructors ALLEN, CAESER, CROWELL, FLYNN, NICK

100 FIRST YEAR MILITARY SCIENCE (1-1) Yr. **STAFF**

American military history, organization of the Army and ROTC, individual weapons and marksmanship, school of the soldier and exercise of command. Three hours per week. Special uniform and awards fee 50 cents (not refundable).

150 FOURTH YEAR MILITARY SCIENCE (3-3) Yr. **STAFF**

Crew-served weapons and gunnery, map and aerial photograph reading, school of the soldier and exercise of command. Three hours per week. Special uniform and awards fee 50 cents (not refundable).

200 THIRD YEAR MILITARY SCIENCE (3-3) Yr. **STAFF**

Small-unit tactics and communications; organization, function, and mission of the arms and services; military teaching methods, leadership, school of the soldier, and exercise of command. Five hours a week. Open to selected students. Prerequisite: Military Science 150 or equivalent. Special uniform and awards fee 50 cents (not refundable).

250 FOURTH YEAR MILITARY SCIENCE (3-3) Yr. **STAFF**

Logistics, operations, military administration and personnel management, service orientation, school of the soldier and exercise of command. Five hours a week. Open to selected students. Prerequisite: Military Science 200. Special uniform and awards fee 50 cents (not refundable).

255 SUMMER CAMP (2) **STAFF**

A camp training period to supplement the instruction previously received by students in MS 100, 150, and 200. Applicatory training in military subjects to include weapons firing, field combat problems, physical training, and other general military subjects which are necessary to qualify the student for appointment in the Army Reserve or the Regular Army. Camp attendance required between Military Science 200 and 250 unless deferment is authorized.

MUSIC

Professor RIAN; Associate Professors VINE, B. SMITH; Assistant Professor STUBBS, VAUGHT; Instructors KAHANANUI, MUNDY; Lecturers BACON, KERR, LUM, THAANUM, YAP

106 GROUP VOICE INSTRUCTION (1) I, II **VINE**

Basic principles of voice production and elementary music skills in classes of twenty. No additional fee.

110 MUSIC APPRECIATION (3) I, II **STAFF**

An introduction to music from the listener's point of view, with emphasis on orchestral literature from the classical through the modern period. Emphasis on listening to recorded music. Course fee $2.00.

111 MUSIC APPRECIATION (3) II **VAUGHT**

A study of music from the listener's point of view with emphasis on opera, ensemble music, and modern trends. Prerequisite: Music 110. Course fee $2.00. (Not offered 1956–57.)

140 RECREATIONAL MUSIC (2) I **RIAN**

Intended for recreation majors but open to others. Stress on skills necessary for leaders of recreational activities: methods, materials, and organization of recreational activities for home, school, church, and community.

150 ELEMENTARY MUSICIANSHIP (3) I, II **RIAN, STUBBS**

The elements of musicianship covering terminology, notation, sight singing, and rhythmic and melodic dictation. A basic course for all prospective teachers. May be required of music majors who lack experience and training.

159 INSTRUMENTAL MUSIC (2-2) Yr. **STUBBS, VAUGHT**

Intended for students preparing to teach instrumental music. Designed to give a basic knowledge of the instruments of the band and orchestra. First semester, woodwind; second semester, strings.

160-161 THEORY (4-4) Yr. **SMITH**

A course designed to give understanding of the basic rhythmic, melodic, harmonic, and formal elements of eighteenth- and nineteenth-century music, and drill in their performance, recognition, and notation.

170-171 HISTORY AND LITERATURE OF MUSIC (3-3) Yr. **VAUGHT**

A complete study of the development of music from the beginning of history up to the present time. Nationalities, schools, and composers in detail. Course fee $2.00.

209 UNIVERSITY CHORUS (1) I, II **VINE**

Three hours a week. May be repeated. No auditions.

210 UNIVERSITY A CAPPELLA CHOIR (1-1) Yr. **RIAN**

Three hours a week. May be repeated with consent of instructor.

211 ENSEMBLE MUSIC (1) I, II **STAFF**

Vocal, string, woodwind, brass, and keyboard instrumental ensembles. May be repeated. Prerequisite: consent of instructor.

251-252 MUSIC, ELEMENTARY CURRICULUM (2-2) Yr. **KAHANANUI**

Organization and direction of music in childhood experience. A survey of materials and procedures. Prerequisite: Music 150.

253 MUSIC-ELEMENTARY CURRICULUM (2) I **RIAN**

A combination of 251-252 for the Auxiliary Teacher Training Program only.

260-261 ADVANCED THEORY (3-3) Yr.

A continuation of Music 160-161. Bach chorale style emphasized the first semester. Survey of contemporary techniques of composition second semester. Prerequisite: Music 160-161.

265 COUNTERPOINT (2) I **SMITH**

A survey of the contrapuntal elements of music and their use in composition from the fourteenth century to the present. Prerequisite: Music 160-161, 260-261. (Not offered 1956–57.)

266 BAND (1) I, II **STUBBS**

Three hours a week. May be repeated.

268 COMPOSITION (2) II

An introductory course in composition, including the study of selected masterpieces and creative writing in the smaller forms. Admission only upon recommendation of the department. Prerequisite: Music 160-161, 260-261. (Not offered 1956–57.)

270-271 CONDUCTING (2-2) Yr. **RIAN**

Designed to prepare conductors for school, community, and church music. Training and organizing choral and instrumental groups, ensemble singing and playing, conducting technique, and choral and instrumental literature. Prerequisite: Music 160-161, 170-171, 210, 266, or consent of instructor.

280-281 ORCHESTRATION (2-2) Yr.

A course in arranging and composing for band, orchestra, and chamber groups. Prerequisite: Music 159, 160-161, or consent of instructor.

285-286 SCHOOL MUSIC (3-3) Yr. **MUNDY**

The objectives, materials, and procedures from preschool through high school. Intended for students in Teachers College who are concentrating on music. Others may register with approval of the department chairman. Prerequisite: Music 159, 160-161.

287 PIANO METHODS (2) II **SMITH**

Methods and materials for class and private instruction in piano. Prerequisite: Music 161 or consent of instructor.

Applied Music

Instruction is given in piano, organ, voice, and orchestral instruments in individual half-hour lessons either once or twice a week. Lessons are not made up unless the instructor is notified a reasonable time in advance of the absence. Lessons occurring on holidays are not made up.

Registration for lessons and choice of teachers must be approved by the department chairman.

One public appearance in both the junior and senior levels is required of all students majoring in music. This requirement is satisfied by successful participation in University student recitals.

Assignment to Applied Music courses is based on tests and auditions given by the department during the Freshman Orientation Period. In order to receive credit in Applied Music courses 149 and above, the following minimum requirements must be met:

Satisfactory work in Music 160-161, or the equivalent.

Piano—Play any major or minor scale in octaves, at a moderate tempo; Bach Two-Part Invention or a dance from one of the suites; a sonata by Haydn or Mozart; a modern composition as difficult as the sonata.

Voice—Sing on pitch, with correct phrasing and musical intelligence, standard songs in good English. Demonstrate ability to read a simple song at sight and have a knowledge of the rudiments of music. Have a promising voice. (Some knowledge of piano is strongly recommended.)

Violin—Play major and minor scales, arpeggios, simple Kreutzer études, a sonata by Handel, Haydn, Mozart, or Schubert; a more modern work displaying special technique peculiar to the violin.

Organ—Same as piano.

Orchestral instruments other than violin—Entrance requirements may be had by writing the Music Department.

FEES PER SEMESTER

One class lesson each week	$20
One lesson each week (half hour)	$55
Two lessons each week (half hour each)	$90

101-102 CLASS INSTRUCTION (1-1) Yr. **STAFF**

Class instruction at the beginning level in piano and voice, orchestra and band instruments.

103-104 CLASS INSTRUCTION (1-1) Yr. **STAFF**

Class instruction at the intermediate level in piano and voice, orchestra and band instruments.

105 INDIVIDUAL INSTRUCTION (Ar.) Yr. **STAFF**

Piano, organ, voice, or orchestral instruments. For nonmusic majors, or music majors who intend it as a secondary medium of performance. May be repeated.

149 INDIVIDUAL INSTRUCTION (Ar.) Yr. **STAFF**

Piano, organ, voice, or orchestral instruments at the freshman level. For prospective music majors. Prerequisite: Music 105 or consent of instructor.

169 INDIVIDUAL INSTRUCTION (Ar.) Yr. **STAFF**

Piano, organ, voice, or orchestral instruments at the sophomore level. For prospective music majors. Prerequisite: Music 149 or consent of instructor.

249 INDIVIDUAL INSTRUCTION (Ar.) Yr. **STAFF**

Piano, voice, organ, or orchestral instruments at the junior level. Recital required. For music majors. Prerequisite: Music 169 or consent of instructor.

269 INDIVIDUAL INSTRUCTION (Ar.) Yr. **STAFF**

Piano, voice, organ, or orchestral instruments at the senior level. Recital required for graduation. For music majors. Prerequisite: Music 249 or consent of instructor.

349 INDIVIDUAL INSTRUCTION (Ar.) Yr. **STAFF**

Piano, voice, organ, or orchestral instruments at the graduate level. For music majors. Prerequisite: Music 269 or consent of instructor.

NURSING

Professor V. JONES; Assistant Professors ADAM, CANFIELD, FROJEN, E. R. SMITH, WOLFE; Instructors OZAKI, WAKAYAMA; Lecturers BERK, CAMARA, CHERRY, CONNOR, R. LEE, LYNN

Registration in Nursing courses is restricted to students in the School of Nursing except by special permission.

100-101 INTRODUCTION TO NURSING (2-2) Yr. **WOLFE**

Designed to develop skill in simple nursing procedures. Emphasis on needs of the family in promotion of health, prevention of illness, and care of the sick. Consideration of hygiene of pregnancy, care of babies, and care of the aged and convalescent. Study of community health facilities.

102 NURSING ARTS (2) **STAFF**

Introduction to the comprehensive care of the hospitalized patient. Nutritional, postural, emotional, and health education needs of patients and the performance of nursing functions to meet these needs. Practice in simple nursing care situations in hospitals, homes, and institutions. Prerequisite: Nursing 100-101; Chemistry 104.

105 PROFESSIONAL ADJUSTMENTS (1) I **WOLFE**

The function of the nurse in the community; obligations and ethical responsibilities; the evolution of nursing through history; present-day opportunities and needs.

110-111 MEDICAL AND SURGICAL NURSING (8-8) Yr. **SMITH, STAFF**

Study of etiology, pathology, symptoms, transmission, complications, treatment, prevention and rehabilitation as related to common medical and surgical conditions. Practice in planning and executing comprehensive patient care in wards and out-patient departments. Theory and practice in operating room technique and in medical and surgical asepsis. Prerequisite: Nursing 102; Bacteriology 145; Household Science 156; Zoology 191, 192.

115 PHARMACOLOGY (3) I **WOLFE**

The study of drugs and solutions. Fundamentals of metrology and terminology associated with drug therapy, and the expected action, uses, characteristics, therapeutic effects, toxic effects, and their treatment. Methods of administration. Prerequisite: credit or concurrent registration in Nursing 110-111.

200 PSYCHIATRIC NURSING (8) I, II

Study of the causes, manifestations, treatment, and nursing needs of the mentally ill. Consideration of psychological factors in other types of illness and the close relationship between mental and physical factors. Supervised practice in the nursing care of persons with mental illness. Prerequisite: Nursing 110-111.

210 TUBERCULOSIS NURSING (8) **CAMARA, STAFF**

The study of tuberculosis as a communicable disease and methods of prevention, early detection, treatment, patient education, nursing care, and rehabilitation. Practice in comprehensive care of patients, including out-patient and home follow-up. Prerequisite: Nursing 110-111.

220 OBSTETRIC NURSING (8) I, II **OZAKI, STAFF**

Anatomy and physiology of the female reproductive system. Adjustments required of the expectant mother. Care of mother and baby throughout the reproductive process. Prenatal clinic work, labor and delivery room experience, post partum nursing care, and care of the newborn infant. Prerequisite: Nursing 110-111.

230 PEDIATRIC NURSING (8) I, II **WAKAYAMA, STAFF**

Social, psychological, and physical needs of children in sickness and health. Emphasis upon nursing responsibilities in meeting these needs on an individual basis. Supervised nursing care of children in hospitals. Observation and participation in preschool and in child health conferences. Prerequisite: Nursing 110-111.

231 NURSE-PATIENT-FAMILY RELATIONSHIPS (2) I **CANFIELD**

The interpersonal process in nursing, with emphasis upon skills and attitudes effective in enlisting participation of patients and families in solution of health problems and use of community facilities.

240 COMMUNITY NURSING (5) I, II **ADAM**

Seminar and guided experience in community nursing centered around rural community hospital. Experience in home visiting for bedside and instructive care, school health work. Group teaching, clinics and conferences.

241 TRENDS IN NURSING (1) I, II **FROJEN**

Legal and ethical relationships in nursing. Needs and trends in nursing and nursing education. Opportunities and responsibilities of the graduate nurse.

245 ADVANCED NURSING (10) I, II **FROJEN, STAFF**

Guidance and practice in planning, executing and evaluating comprehensive individual patient care. Experience in working as a member of a nursing team. Seminar in problems of nursing care.

255 COMPREHENSIVE NURSING CARE (4-3) Yr. **WOLFE**

A course designed to provide opportunity for participation in planning, practice, study, and evaluation of comprehensive nursing care, and the solution of nursing problems through the use of scientific principles.

280 PUBLIC HEALTH NURSING (4) I, II **JONES, STAFF**

The development, functions, methods, techniques, and relationships of public health nursing; emphasis on the social, preventive, and teaching aspects of service to the family and the community. Field observation and participation.

281 HEALTH TEACHING IN NURSING (2) I, II **JONES, CANFIELD**

Basic principles underlying teaching and learning; selection and organization of materials used in health teaching; methods used with groups and individuals.

282 MATERNAL AND CHILD HEALTH (3) I **JONES, OZAKI**

Needs and facilities for care of mothers through the maternity cycle, and of children from birth through school age, including handicapped and exceptional children. Emphasis on children's needs in the various stages of growth and development.

283 PUBLIC HEALTH (3) II **ADAM, JONES**

Principles of public health and preventive medicine, and their application in protecting and promoting the health and welfare of the citizen through organized community effort.

290 FIELD PROGRAM (6) I, II **JONES, STAFF**

Instruction and guided experience in home visiting for bedside and instructive care, in maternal and child health conferences, and in chest and other clinics.

291 INTERVIEWING IN PUBLIC HEALTH NURSING (3) I, II **CANFIELD**

Principles and methods of interviewing as demonstrated through the use of actual case material from public health nursing records selected to illustrate dynamics of behavior and the interpersonal process in nursing services.

293 DYNAMICS OF DEVELOPMENT (3) II **LYNN**

The various aspects and successive stages of emotional and social development of the child. Normal sequences of parent-child relations are considered first, followed by a study of the abnormal arrestments and disturbances which the public health nurse can detect and help correct.

299 DIRECTED READING (Ar.) I, II **STAFF**

Individual reading in (1) Public Health Nursing, (2) Nursing Service, (3) Nursing Education. Limited to seniors in the Nursing Curriculum with a 2.7 grade point ratio, or a 3.0 grade point ratio in Nursing courses.

PHILOSOPHY

Senior Professor MOORE; Associate Professors McCARTHY, NAGLEY

100 INTRODUCTION TO PHILOSOPHY (3) I, II **STAFF**

The problems, methods, and fields of philosophy.

110 BUSINESS ETHICS (3) I **MOORE**

A consideration of basic ethical concepts as applied to business enterprise and the professions.

150 HISTORY OF PHILOSOPHY (3) I **MOORE**

Western philosophy from the era of great Greek thinkers to the Renaissance. Prerequisite: sophomore standing.

151 MODERN PHILOSOPHY (3) II **MOORE**

Western philosophy from the Renaissance to the present day. Desirable preparation: Philosophy 150. (Not offered 1956–57.)

200 ETHICS (3) I, II **NAGLEY**

Relevance of the major theories of the good life to the process of decision making.

210 CONTEMPORARY PHILOSOPHY (3) II **NAGLEY**

A survey of recent developments in Western philosophy. Special attention to Logical Empiricism. Prerequisite: one of the following; Philosophy 100, 150, 151.

240 PHILOSOPHY IN LITERATURE (3) II **McCARTHY**

Literary expression of philosophical ideas. Consideration of such writers as Beauvoir, Bernanos, Camus, Hemingway, Kafka, Rilke, Sartre, and T. S. Eliot.

253 PROBLEMS OF PHILOSOPHY (3) II **McCARTHY**

Persistent specific problems of philosophy, primarily those concerning nature, man, God, etc.

262 PHILOSOPHY OF ART (3) I **McCARTHY**

A systematic study of the nature and function of art from the points of view of creation, appreciation, and criticism. Particular attention to the arts of painting, sculpture, music, and poetry.

265 PHILOSOPHY, EAST AND WEST (2) I **MOORE**

An introductory survey of the basic systems and methods of Eastern and Western philosophy, with special attention to similarities and contrasts. (Not offered 1956–57.)

268 AMERICAN PHILOSOPHY (3) I **NAGLEY**

Major trends in the development of American philosophy. An analysis of philosophical ideas in relation to their socio-political background and influence.

270 INDIAN PHILOSOPHY (2) I **MOORE**

Fundamental philosophical systems and movements in India, including the Vedas, Upanishads, and Six Systems of Hinduism and the unorthodox philosophies, Charvaka, Jainism, and Buddhism.

271 CHINESE PHILOSOPHY (2) I **MOORE**

A historical survey of the important philosophical schools and tendencies in China, ancient and modern. (Not offered 1956–57.)

275 PHILOSOPHY OF RELIGION (3) I **NAGLEY**

A survey of the major types of Western religious philosophy: Thomism, Mysticism, Reformationism, Deism, Agnosticism, Moral Idealism, Romanticism, Humanism, Liberal Theism, and Existentialism.

276 PHILOSOPHICAL INTERPRETATIONS OF HISTORY (3) I **NAGLEY**

The analyses and prescriptions of Augustine, Hegel, Marx-Engels, Burckhardt, Nietzsche, Spengler, Sorokin, and Toynbee for their respective ages of crisis. (Not offered 1956–57.)

277 KIERKEGAARD AND EXISTENTIAL PHILOSOPHY (3) II **NAGLEY**

An analysis of the writings of Kierkegaard, and a survey of his influence upon philosophical and theological existentialism.

280 ELEMENTARY LOGIC (3) I, II **McCARTHY**

An introduction to deductive and inductive logic. Problems of clear thinking in science, argumentation, and ordinary discourse. Special attention to the techniques of propaganda analysis.

285 PHILOSOPHICAL FOUNDATIONS OF SCIENCE (3) I **McCARTHY**

Philosophical foundations and implications of modern physical science. Particular reference to Copernicus, Galileo, Newton, and Einstein.

286 PHILOSOPHY IN CONTEMPORARY SCIENCE (3) I **McCARTHY**

The philosophical implications of recent trends in physical science. Particular attention to the development of operationalism. (Not offered 1956–57.)

287 SCIENTIFIC METHOD (3) II **McCARTHY**

A systematic study of the methods and procedures of reliable knowledge in the formal, natural, and social sciences. (Not offered 1956–57.)

288 SYMBOLIC LOGIC (3) II **McCARTHY**

A survey of the methods and forms of modern logic, with attention to the nature of the deductive system and the relationship between logic and mathematics. Prerequisite: Philosophy 280 or 12 credits in mathematics. (Not offered 1956–57.)

299 DIRECTED READING (Ar.) I, II **STAFF**

Reading, consultations, and written or oral reports in the following fields: (1) Metaphysics, (2) Methodology, (3) Ethics, (4) Indian Philosophy, (5) Chinese Philosophy, (6) Buddhist Philosophy, (7) East-West Philosophy. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Philosophy.

300 READING AND RESEARCH (Ar.) I, II **STAFF**

Reading and research in the same fields as in 299. Prerequisite: graduate standing; consent of instructor.

PHYSICS

Professors ELLER, WATANABE; Associate Professor I. MIYAKE; Assistant Professor STEIGER

102 COLLEGE PHYSICS (4-4) Yr. **STEIGER**

Three lectures and one laboratory period. Prerequisite: Mathematics 150 and credit or concurrent registration in Mathematics 151. Laboratory fee $6.00 each semester.

104 ENGINEERING PHYSICS (5-5) Yr. **MIYAKE**

Three lectures, one laboratory period, and one problem working period. Prerequisite: Mathematics 153; credit or concurrent registration in Mathematics 154. Laboratory fee $6.00 each semester.

151 FUNDAMENTALS OF COMMUNICATION (3) I **MIYAKE**

A general electricity course covering both DC and AC theory and applications, with emphasis on communication circuits. Two lectures and one laboratory period. Prerequisite: Mathematics 150. Laboratory fee $6.00.

153 PRINCIPLES OF RADIO (3) II **MIYAKE**

Fundamentals of radio theory and design, and construction of radio receiving and amplifying equipment. Two lectures and one laboratory period. Prerequisite: Physics 151. Laboratory fee $6.00.

202 ELECTRICAL ENGINEERING (3-2) Yr. **ELLER**

Electric power circuits and machinery, and the application of thermionic devices in power equipment. Two lectures and one laboratory period. Prerequisite: senior standing in Engineering. Desirable preparation: Physics 275. Laboratory fee $6.00 each semester.

253 ELECTRICAL MEASUREMENTS (3) II **ELLER**

The study and application of the methods of measurement of the fundamental electric and magnetic quantities. One lecture and two laboratory periods. Prerequisite: Physics 102 or 104; Mathematics 154. Laboratory fee $6.00.

255 LIGHT (3) II **STEIGER**

Principles of geometric and physical optics. Prerequisite: Physics 102 or 104; Mathematics 154. (Alternate years; not offered 1956–57.)

256 OPTICS LABORATORY (1) II **STEIGER**

Experiments in geometric and physical optics. One laboratory period. Prerequisite: credit or concurrent registration in Physics 255. Laboratory fee $6.00. (Alternate years; not offered 1956–57.)

258 ELECTRONICS (3) II **MIYAKE**

The theory and applications of electronic phenomena and electronic devices. Prerequisite: Physics 275.

262 SOUND (3) I **MIYAKE**

Theory of sound and its applications. Prerequisite: Physics 102 or 104; Mathematics 154. (Alternate years; not offered 1956–57.)

263 THEORETICAL MECHANICS (3) I **ELLER**

Principles of statics and dynamics. Prerequisite: Physics 102; Mathematics 154. (Alternate years; offered 1956–57.)

270 HEAT (3) I **MIYAKE**

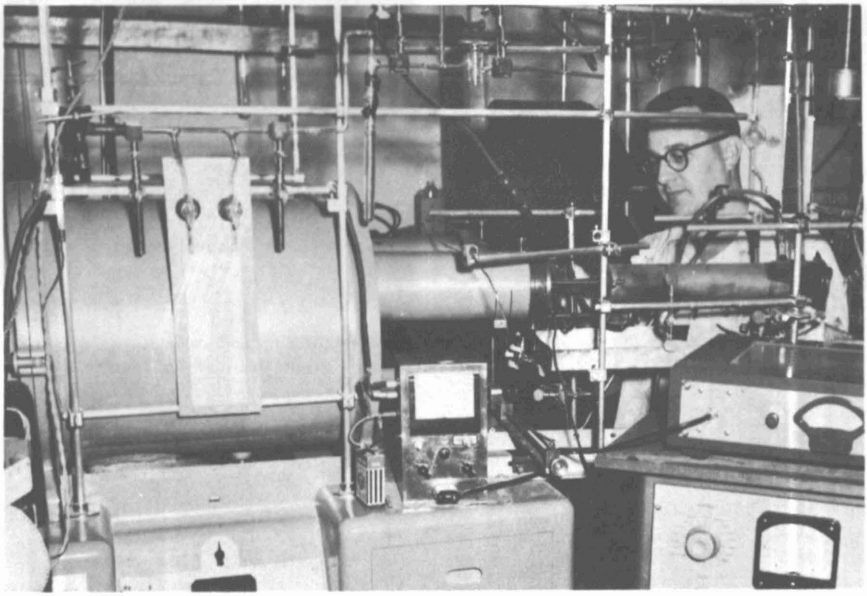
A study of radiation, kinetic theory of gases, heat measurements, and the laws of thermodynamics. Prerequisite: Physics 102; Mathematics 154. (Alternate years; offered 1956–57.)

275 ELECTRICITY AND MAGNETISM (3) I **ELLER**

Electric and magnetic phenomena. Prerequisite: Physics 102 or 104; Mathematics 154.

276 ELECTRICITY AND MAGNETISM LABORATORY (1) I **ELLER**

Methods of electric and magnetic measurements. One laboratory period. Prerequisite: credit or concurrent registration in Physics 275. Laboratory fee $6.00.



Conditions of the outer atmosphere are simulated with this equipment in the physics laboratory, and atmospheric gases are analyzed—a matter of vital interest to our Air Force.

279 CIRCUIT ANALYSIS (3) II **ELLER**

Network theorems, filters, polyphase circuits, and method of symmetrical components.

280 A SURVEY OF MODERN PHYSICS (3) I **WATANABE**

An introductory treatment of some phenomena depending on the quantization of energy and the atomicity of matter. Prerequisite: Physics 102 or 104; Mathematics 154.

281 ATOMIC AND NUCLEAR PHYSICS (3) II **WATANABE**

A study of the structure of the atom and its nucleus, radioactivity, and the energy relationships involved. Prerequisite: Physics 280.

299 INDIVIDUAL WORK IN ADVANCED PHYSICS (Ar.) I, II **STAFF**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Physics.

300 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

Prerequisite: graduate standing in physics; consent of instructor.

301 THEORETICAL PHYSICS-ANALYTICAL DYNAMICS (3) I **STEIGER**

The dynamics of rigid bodies and fluids. Theory of vibrations. Lagrangian and Hamiltonian methods. Prerequisite: Physics 263; Mathematics 253 or 255. (Alternate years; offered 1956–57.)

302 THEORETICAL PHYSICS-ELECTRODYNAMICS (3) II **STEIGER**

Maxwell's Field Equation and applications. Prerequisite: Physics 255, 275; Mathematics 253 or 255. (Alternate years; offered 1956–57.)

303 INTRODUCTION TO QUANTUM MECHANICS (3) I **WATANABE**

Formulation of quantum mechanics. Solutions of Schrodinger's equation. Perturbation theory, approximation methods and applications. Prerequisite: Physics 280; Mathematics 155.

304 ATOMIC AND MOLECULAR SPECTRA (3) II **WATANABE**

A study of atomic and molecular structure by quantum mechanical interpretation of line, band, and continuous spectra. Prerequisite: Physics 303.

350 SEMINAR (1-1) Yr. **STAFF**

Discussions and papers on physical theory and recent developments in physics. Prerequisite: graduate standing or consent of department chairman.

PSYCHOLOGY

Senior Professors LIVESAY, B. WHITE; Professors BITNER, HERRICK, WEAVER; Associate Professors CROWELL, FICK, VINACKE; Assistant Professors ARKOFF, DIGMAN, DOLE; Instructor KALISH

Psychology 150 (or the equivalent) is prerequisite to all other courses in Psychology, with the exception of 100 and 156.

100 PSYCHOLOGY OF EFFECTIVE STUDY (3) I, II **KALISH**

The application of psychological principles to effective study. Problems in self-management and college adjustment. Open to freshmen and sophomores only.

150 GENERAL PSYCHOLOGY (4) I, II **STAFF**

A survey of the facts and principles fundamental to human behavior. Individual differences, personality, motivation, emotion, sensing, perceiving, learning, and thinking. Three lectures and one laboratory period. Laboratory fee $1.00. (Not open to those who have had 156.)

156 INTRODUCTION TO PSYCHOLOGY (3) I **STAFF**

Similar to 150. Not open to Arts and Sciences students, or those who have had 150.

185 PSYCHOLOGY OF INFANCY AND CHILDHOOD (2) I, II **CROWELL**

Principles basic to the normal development of the infant and child; emphasis upon physical, emotional, intellectual, and social development.

186 PSYCHOLOGY OF ADOLESCENCE AND MATURITY (2) I, II **BITNER, HERRICK**

Developmental characteristics during preadolescent, adolescent, and adult years; emphasis upon physical, emotional, intellectual, and social factors and changes.

209 PSYCHOLOGY FOR INDUSTRIAL EDUCATION TEACHERS (1-1) Yr.

Principles of psychology applied to the acquisition of manipulative skills and related technical information, including the learning process, factors in emotional control, and development of attitudes and abilities. Prerequisite: consent of instructor.

250 APPLIED PSYCHOLOGY (3) II **LIVESAY**

Application of psychological principles to problems of personal efficiency and to the fields of commerce, highway traffic, law, and medicine.

254 PRINCIPLES OF GUIDANCE (3) I **BITNER**

Psychological bases; methods and scope of educational, vocational, and personal guidance. Prerequisite: Psychology 260, 264.

256 INDUSTRIAL AND BUSINESS PSYCHOLOGY (3) I **WEAVER**

Psychological principles in job analysis, rating methods, selection and classification of workers, fatigue and efficiency, human engineering, safety, training, motivation of workers, and social factors in industry.

257 PRINCIPLES OF COUNSELING (3) II **FICK**

Counseling as a technique in individual guidance. Needs; objectives; psychological bases of counseling; procedure; available services. Prerequisite: Psychology 254.

258 GROUP TECHNIQUES OF GUIDANCE (2) II **FICK**

The structure and behavior of social groups; the group as an instrument for studying and modifying individual behavior. Prerequisite: Psychology 254.

260 STATISTICAL TECHNIQUES (3) I, II **WEAVER**

Use of statistical techniques in psychological problems: measures of central tendency and variability; graphic methods; correlation; reliability of measures; tests of significance. Prerequisite: two years of high school algebra or Mathematics 149 or the equivalent.

264 PSYCHOLOGICAL MEASUREMENTS (3) II **WEAVER**

Principles in the construction, validation, and administration of psychological tests; interpretation and application of scores; familiarization with various types of group tests. Prerequisite: Psychology 260.

267 EXPERIMENTAL PSYCHOLOGY (3) I, II **DIGMAN**

Training in laboratory techniques. Experiments in cutaneous and kinesthetic sensation, reaction time, vision, audition, and motor and verbal learning processes. Prerequisite: Psychology 260 or the equivalent. Laboratory fee $2.00.

270 PHYSIOLOGICAL PSYCHOLOGY (3) II **DIGMAN**

A study of the physiological processes as related to an understanding of such activities as vision, hearing, learning, emotion, memory, and thinking. Prerequisite: Zoology 100 or 110 or 191 or the equivalent.

272 PSYCHOLOGY OF LEARNING (3) I **VINACKE**

A study of the major conditions influencing learning and forgetting; the role of motivation, rewards, and practice; theoretical interpretations of the learning process.

274 PSYCHOLOGY OF THINKING (3) II **VINACKE**

The psychological factors and methods involved in thinking. Concept formation, problem solving, creative imagination, artistic thinking, attitudes, and opinions.

275 SYSTEMATIC PSYCHOLOGY (3) II **DIGMAN**

The various systems of psychology: structuralism, functionalism, behaviorism, purposivism, Gestalt, and the dynamic psychologies. Primarily for senior majors.

280 SOCIAL PSYCHOLOGY (3) II **VINACKE**

The psychology of human relations; psychological factors that determine the behavior of an individual in his social relationships. Two lectures and one laboratory period.

283 PSYCHOLOGY OF PERSONALITY (3) I **VINACKE**

The development of personality; components of personality; critical evaluation of research on various aspects of personality. Two lectures and one laboratory period.

286 POLITICAL PSYCHOLOGY (3) I **VINACKE**

A study of political behavior of individuals and groups; the voter, the politician, political parties; psychological problems which arise in the conduct of the government.

290 CLINICAL PSYCHOLOGY (3) I **CROWELL**

Methods and scope of clinical psychology; available individual tests and other instruments used in measuring intelligence and personality factors; the use and meaning of scores in child and adult cases; applications to psychological diagnosis. Prerequisite: Psychology 260 and 264.

292 MENTAL HYGIENE (3) I, II — **ARKOFF, LIVESAY**

Basic needs. Frustrations, conflicts, and fears. Ways of adjustment. Prevention of maladjustment. Applications to problems of the school and home. Intended primarily for Teachers College seniors.

295 ABNORMAL PSYCHOLOGY (3) I, II — **KALISH**

The nature and causes of psychoneuroses and psychoses; abnormalities of intelligence; incipient abnormal traits manifested in everyday life; psychotherapy.

298 SENIOR SEMINAR (1) II

Required of all seniors majoring in psychology. Not open to others.

299 DIRECTED READING (Ar.) I, II — **STAFF**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Psychology.

300 DIRECTED READING OR RESEARCH (Ar.) I, II — **STAFF**

Prerequisite: graduate standing and consent of instructor.

320 SEMINAR IN METHODS OF RESEARCH (2) I — **VINACKE**

The fundamentals of research and thesis preparation. Applications to specific problems. Prerequisite: consent of instructor.

321 GENERAL SEMINAR (2) II — **STAFF**

Selected topics as determined by the needs and interests of the group. May be repeated. Prerequisite: consent of instructor.

351 ADVANCED EDUCATIONAL PSYCHOLOGY (3) I, II — **WHITE**

Application of experimental evidence in psychology to major educational problems; the bearing of recent psychological theories upon education.

356 PROBLEMS IN CLINICAL PSYCHOLOGY (3) II — **CROWELL**

Clinical case studies: histories; selection of tests; interview methods; interpretations; recommendations and follow-up. Participation in clinic staff conferences. Prerequisite: consent of instructor.

360 ADVANCED STATISTICAL TECHNIQUES (3) I — **DIGMAN**

Statistical treatment and interpretation of psychological data: sampling procedures, elementary probability theory, tests of significance of statistical hypotheses, analysis of variance, correlational techniques, factor analysis.

362 INDIVIDUAL INTELLIGENCE TEST TECHNIQUES (3) I, II — **ARKOFF**

Practice in the administration and interpretation of individual tests such as the Stanford-Binet, Wechsler-Bellevue, Preschool Scales, Detroit, etc. May be repeated. Prerequisite: consent of instructor. Laboratory fee $5.00.

364 PROJECTIVE TECHNIQUES (3) II — **CROWELL**

Theory and application of projective techniques, with emphasis on the Rorschach and Thematic Apperception Tests.

382 HISTORY OF PSYCHOLOGY (3) I — **DIGMAN**

The development of psychology from ancient to modern times, with particular attention to the origins of the various theories.

RELIGION

Professor ZEIGLER; Lecturers DEVER, LEGG, YOUNG

150 INTRODUCTION TO THE STUDY OF RELIGION (3) I — **ZEIGLER**

The nature of religion and its relationship to other areas of life and thought.

151 LIFE PROBLEMS AND RELIGIOUS THOUGHT (3) II — **ZEIGLER**

The ways in which religious faith has been undergirded by rational thought; emphasis upon modern developments.

200 OLD TESTAMENT SURVEY (3) I — **YOUNG**

The Old Testament from the literary and philosophical points of view; emphasis on practical values of the book for life today.

201 NEW TESTAMENT SURVEY (3) II **YOUNG**

The New Testament from the literary and philosophical points of view; emphasis on practical values of the book for life today.

208 THE LIFE OF JESUS AND ITS SIGNIFICANCE TODAY (2) I **ZEIGLER**

A study of the known life of Jesus; emphasis on the great central issues.

209 THE TEACHINGS OF JESUS (2) II **ZEIGLER**

A study of the known teachings of Jesus; their philosophical and practical implications.

215 HISTORICAL DEVELOPMENT OF THE BIBLE (2) II

Survey of the present knowledge of the origin and development of the English Bible in the light of historical, archaeological, and literary research. (Not offered 1956–57.)

221 GREAT PERSONALITIES IN CHRISTIANITY (2) II **ZEIGLER**

The lives and contributions of a number of outstanding persons. A biographical approach to the role of religion in life and the development of Christian faith. (Not offered 1956–57.)

226 RELIGION IN AMERICAN CULTURE (2) I **LEGG**

Influence of religion in the founding of the colonies and the growth of the nation. Special attention to "revivals," the development of the major churches, the emergence of groups like the "I Am" cult and the Kingdoms of Father Divine, and the rise of the national Council.

234-235 THE MAIN POINTS OF CATHOLIC DOCTRINE (2-2) **DEVER**

What the Catholic Church teaches on religion and sacrifice, grace and freedom, the church and salvation.

237 FOUNDATIONS OF PROTESTANT CHRISTIANITY (2) II **STAFF**

The Christian view of God, man, the Bible, sin, the church, etc., according to Protestantism, and an inquiry into the main currents of contemporary religious thought.

240 THE BEGINNINGS OF CHRISTIANITY (3) I **ZEIGLER**

Rise of the Early Church. Development of Hebrew-Christian thought and the formulation of Christian beliefs.

241 THE CHRISTIAN CHURCH SINCE THE REFORMATION (3) II **ZEIGLER**

Brief survey of the Middle Ages and the Reformation. Study of the history of the church in modern times.

250-251 COMPARATIVE STUDY OF LIVING RELIGIONS (3-3) Yr. **ZEIGLER**

Origin, development, literature, practices, and major ideas of the great religions. Reading in the sacred literature of the great religions.

282-283 THE HISTORY OF LIVING RELIGIONS (3-3) Yr. **ZEIGLER**

The problem of the origin of religion and its development from primitive animism to the present. Attention to the historical origins of the different religious system. (Not offered 1956–57.)

286 CHRISTIAN ETHICS (2) II **ZEIGLER**

The nature of Christian ethics; its relation to other major ethical systems and to metaphysical theories. (Not offered 1956-57.)

300 DIRECTED READING (Ar.) I, II **ZEIGLER, STAFF**

Prerequisite: graduate standing.

SOCIAL WORK

Professor HANDLEY; Associate Professors JAMBOR, MERRITT, WALSH, ZALOHA; Lecturer KIMMICH

200 THE FIELD OF SOCIAL WORK (3) I, II **JAMBOR**

A nonprofessional orientation course intended to acquaint the student with the philosophy, scope, and aims of social work. Prerequisite: junior standing.

275 INTRODUCTION TO SOCIAL GROUP WORK (3) II **ZALOHA**

Introduction to the philosophy and aims underlying social group work. Understanding of media, tools, and skills utilized. Relation of activities to various age groups and the role of the leader.

305 SOCIAL CASEWORK (2) I **WALSH**

An introduction to the basic principles and processes of social casework.

306 SOCIAL CASEWORK (2) II **WALSH**

A continuation of 305, with special emphasis upon social diagnosis and skill in the treatment of casework problems. To be taken concurrently with 360-361. Prerequisite: Social Work 305.

308 SOCIAL GROUP WORK (2) I **ZALOHA**

An introduction to the basic principles and processes of group work.

309 SOCIAL GROUP WORK (2) II **ZALOHA**

A continuation of 308, with emphasis upon understanding the individual in groups, and skill in the use of the helping process. To be taken concurrently with 360–361. Prerequisite: Social Work 308.

310-311 HUMAN GROWTH AND DEVELOPMENT (3-3) Yr. **WALSH**

This course is designed to provide a synthesized understanding of physical, mental, and emotional growth, with due regard to social and cultural influences on individual development.

312 GROUP WORK PROGRAM ACTIVITIES (1) I, II **ZALOHA**

The program as a tool in meeting individual and group needs. The process of program development; basic program activities; differentials in age and types of groups. To be taken concurrently with 360–361.

315 COMMUNITY ORGANIZATION (2) II **JAMBOR**

An introduction to the basic principles and processes of community organization in social work.

324 HISTORY OF SOCIAL WORK (2) I **HANDLEY**

Survey of the major trends in the development of social work thought and action in England and America as a basis for modern social work practice.

325 CHILD WELFARE (2) I **MERRITT**

Survey of the development of specialized services for children in both public and private fields, including the consideration of current practice. Illustrative material from the various fields of child welfare service.

326 TREATMENT OF JUVENILE DELINQUENCY (2) II

Social work practice in relation to problems of juvenile delinquency.

350 PUBLIC WELFARE IN THE UNITED STATES (2) II

The development of public welfare in the United States with emphasis upon the public assistance programs. Open to seniors who have had SW 200.

352 SOCIAL STATISTICS AND RESEARCH (2) II

Problems and procedures in social research that are part of social work administration and planning. Application of elementary statistical techniques to the particular problems of describing the social needs and social services of the community.

353 LEGAL ASPECTS OF SOCIAL WORK (2) I **JAMBOR**

The principles of law with which the social worker should be familiar. Problems in judicial administration and substantive law that affect individuals in relation to social problems.

356 SOCIAL WELFARE—ITS ORGANIZATION AND ADMINISTRATION (2) I **HANDLEY**

Principles and problems of public and private social agencies with respect to structure, management, and financing. Emphasis upon the effect of setting in relation to specialized practice.

360-361 SUPERVISED FIELD WORK (3-3) Yr. **STAFF**

University field work units are maintained in public and private welfare agencies. The minimum time requirement in field work is 15 hours a week. To be taken concurrently with a social work method course (casework, group work, or community organization). Limited to full-time students.

362-363 ADVANCED SUPERVISED FIELD WORK (4-4) Yr. **STAFF**

Field work placement in a social agency selected with reference to aptitudes, choice, or needs of the student. To be taken concurrently with an advanced course in social work method (casework, group work, or community organization). Limited to full-time students.

365 ADVANCED SOCIAL CASEWORK (2) I **MERRITT**

Case discussion of generic casework concepts as they apply in work with emotionally disturbed individuals; evaluation of treatment processes and factors which affect the caseworker's function. To be taken concurrently with 362.

366 SEMINAR IN SOCIAL CASEWORK (2) II **MERRITT**

The analysis and evaluation of case material contributed from the student's experience and from selected records.

367 CASEWORK WITH CHILDREN (2) I

Casework concepts in the care of children. Emphasis on methods of diagnosis and treatment for emotionally disturbed children and children who indicate serious behavior problems. Prerequisite: 365; consent of instructor.

370 ADVANCED SOCIAL GROUP WORK (2) I **ZALOHA**

Analysis of the use of volunteers in group work; their recruitment, selection, placement, training, and supervision. To be taken concurrently with 362.

371 SEMINAR IN SOCIAL GROUP WORK (2) I **ZALOHA**

Analysis and evaluation of case material contributed from the student's experience and from selected records.

375 ADVANCED SOCIAL PSYCHIATRY (2) I **KIMMICH**

Dynamics of behavior in the neuroses and in functional and organic psychoses, with emphasis on current treatment processes.

381 SEMINAR IN SOCIAL WELFARE POLICY (2) II **HANDLEY**

Basic problems and policies in the major fields of social welfare: family and child welfare, corrections, health, income maintenance, social insurance, and international social welfare.

383 ADMINISTRATION OF SOCIAL WORK AGENCIES (2) I **JAMBOR**

Administration of social work agencies with emphasis upon the relationship between structure and function. Problems of internal administration such as personnel management, program direction, research and planning, budget control, and public relations.

385 METHODS OF SUPERVISION IN SOCIAL CASEWORK (2) II **WALSH**

The supervisory process in social work as it relates to the field of social casework. Open to agency workers who are potential or actual supervisors.

386 METHODS OF SUPERVISION IN SOCIAL GROUP WORK (2) II **ZALOHA**

The principles, methods, and problems of supervision in social agencies as they relate to the field of social group work. Open to agency workers who are potential or actual supervisors.

387 CURRENT PRACTICE IN COMMUNITY ORGANIZATION (2) II **JAMBOR**

A seminar primarily for students specializing in community organization, including those taking field work in that area. Neighborhood organizations, recent trends toward citizens' councils, health committees, and regional councils in both public and private welfare fields.

390 CULTURAL FACTORS IN SOCIAL WORK PRACTICE (2) II **HANDLEY**

The significance of psychocultural factors in the development of personality and behavior. Use of records which illustrate cultural diversity and conflicts as they relate to social work practice. Prerequisite: Social Work 310 and Sociology 262.

399 SEMINAR IN RESEARCH (2) I **HANDLEY, STAFF**

Principles of objective fact-finding, primary and secondary sources of social data, sampling, organization of material, relationship to an advisory committee or expert technical consultant, and preparation of a report or thesis.

SOCIOLOGY

Senior Professor LIND; Professor GLICK; Associate Professors CHENG, HORMANN, YAMAMURA; Assistant Professor BARTOS; Instructors J. MIYAKE, YAMAMOTO

Sociology 151 or the equivalent is prerequisite to all advanced courses in Sociology.

100 ORIENTATION FOR FOREIGN STUDENTS (1) I **MIYAKE**

Introduction to the American Community and the American University. Lectures, field trips, exercises, reports, conferences. Required of all foreign students during the first semester of residence at the University.

151 INTRODUCTION TO THE STUDY OF SOCIETY (3) I, II **STAFF**

An orientation course. The basic social relationships and the corresponding social structures.

250 COMMUNITY FORCES IN HAWAII (3) I, II **LIND, HORMANN, YAMAMOTO**

The basic factors and forces operating in contemporary society, with special attention to Hawaii. An orientation course designed for students planning careers in teaching, vocational home economics, recreation, public health, medicine, and other professions. Not open to students majoring in Sociology except by consent of instructor.

251 FOLK AND PEASANT COMMUNITY (3) I **HORMANN**

A study of the social organization and culture of preliterate and peasant peoples in contrast to those of urban peoples; special reference to the villages of China and Japan.

253 RURAL SOCIOLOGY (3) I **BARTOS**

Organization of life in the rural environment. A comparative study of rural community types, with special reference to Hawaii.

254 THE URBAN COMMUNITY (3) II **YAMAMOTO**

Sociological principles applied to the modern city. Structure, growth, social and personal life organization in an urban setting, with special reference to Honolulu.

255 SOCIAL DISORGANIZATION (3) II **HORMANN**

The factors in society which condition the disorganization of communities, institutions, groups, and personalities. An integrated approach to such social problems as conflict, delinquency, dependency, and degeneracy. Desirable preparation for courses in juvenile delinquency and criminology.

256 RACE AND CULTURE CONTACTS IN HAWAII (3) I **LIND**

The dominant conceptions of race and race relations in Hawaii, and an analysis of the principal factors affecting them. Problems of culture contacts in a commercial and plantation frontier.

257 RACE RELATIONS IN THE PACIFIC (3) I **GLICK**

A survey of typical situations of race and culture contacts in the Pacific area.

258 RACE RELATIONS (3) II **GLICK**

The sociological significance of race and race relations; typical situations and processes; conflict and accommodations; caste; race prejudice; miscegenation; effects of race relations upon personality.

259 PEOPLES AND INSTITUTIONS OF JAPAN (3) II **YAMAMOTO**

Social change in the institutional patterns and attitudes of different social classes in Japan, with special attention to the accelerated change since World War II.

262 SOCIAL CONTROL (3) I **LIND**

A survey of the devices for subjecting the individual and the group to broader social definitions. The role of tradition, ceremonial, and dogma in the socialization and discipline of the individual.

263 PUBLIC OPINION AND THE COMMUNITY (3) I **BARTOS**

Analysis of the nature and functions of public opinion in the contemporary world. Formation and polling of public opinion. Problems of interviewing and sampling.

264 JUVENILE DELINQUENCY (3) II **YAMAMURA**

The nature, extent, and causes of juvenile delinquency. The study of the delinquent as a person. Methods of control.

265 CRIMINOLOGY (3) II **CHENG**

Nature, causes and treatment of crime. Philosophies of correction and rehabilitation. Apprehension, probation, prosecution, prison administration, and parole.

266 SOCIAL INSTITUTIONS (3) I **CHENG**

Culture as a conceptual tool. Origin, structure, functions, and growth of institutions. Interrelations and integration.

267 THE FAMILY (3) I, II **CHENG, YAMAMURA**

Culturally distinctive family types as background for analysis and interpretation of American family life in its societal contexts.

268 HUMAN MIGRATION (3) I **CHENG**

Types, causes, and effects of migration. Migration focuses. Development and administration of United States immigration policy. Displaced persons and problems of world migration.

269 PERSONALITY AND CULTURE (3) I, II **YAMAMOTO**

The origin and development of personality as the subjective aspect of culture; the function of communication; human nature and the mores; personal life organization.

270 POPULATION AND SOCIETY (3) II **YAMAMURA**

Society analyzed in terms of the quantitative and qualitative aspects of population. Sociological aspects of birth and death rates, natural increase, and mobility.

271 HUMAN ECOLOGY (3) I **YAMAMURA**

Basic concepts, principles, and techniques of human ecology. Factors affecting distribution and movement of population, utilities, and social institutions. (Not offered 1956–57.)

272 COLLECTIVE BEHAVIOR (3) I **GLICK**

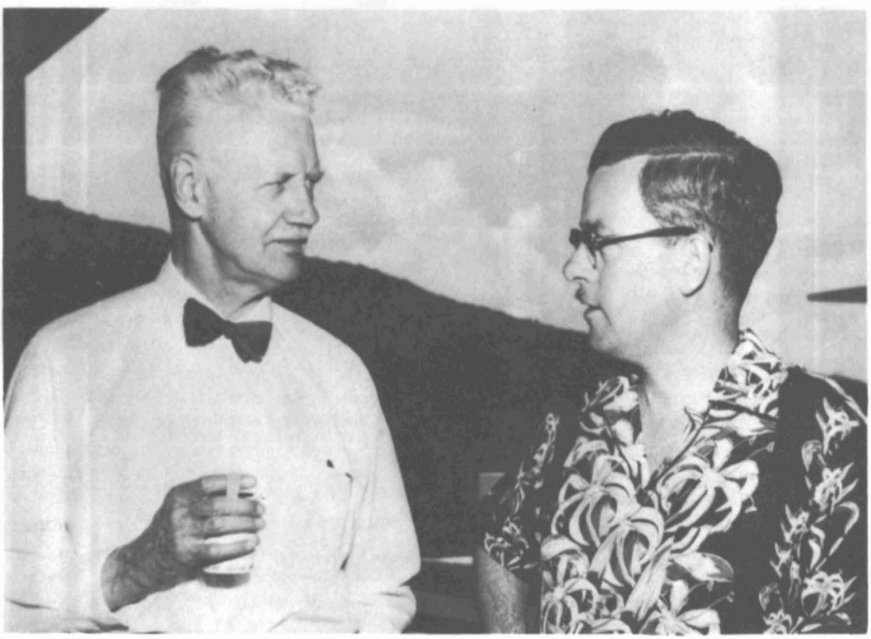
Elementary and spontaneous forms of group behavior; social unrest; the crowd and the public; mass behavior and mass movements; the operation of publics in democratic societies.

273 SOCIAL MOVEMENTS (3) II **GLICK**

A study of the development of social movements and their relation to social change. Sociology of reform movements, countermovements, and revolution. Case studies of contemporary social movements.

274 SOCIAL CHANGE (3) II **CHENG**

Structural-functional organization. Impact of technology on institutions, value orientation, power structures, system of role and stratification. Strains and repercussions as inherent parts of social change.



Hawaii is a natural laboratory for the study of race relations. Pictured above are professors from the University of Leiden and Howard University who attended the recent conference on Race Relations in World Perspective.

275 AMERICAN SOCIETY IN TRANSITION (3) I **BARTOS**

The major trends in American society, particularly as reflected in the war and postwar periods.

276 DEVELOPMENT OF SOCIAL THOUGHT (3) I **BARTOS**

The history of sociology and anthropology as phases in the total development of social forces and action. Historical and contemporary trends against a background of social forces.

277 PEOPLE AND INSTITUTIONS OF CHINA (3) II **CHENG**

Analysis of social philosophies and their influence on basic institutions and traits of the people. Impacts of Western culture and Communism.

280 SOCIAL STATISTICS (3) II **YAMAMURA**

An introduction to statistical methods and resources as applied to social research data.

282 METHODS OF SOCIAL RESEARCH (3) I, II **GLICK**

The values and limitations of the common methods of social research for various types of studies. Laboratory and field work. Prerequisite: 9 credits in sociology or consent of instructor.

285 INDUSTRIAL SOCIOLOGY (3) II **HORMANN**

Status system in industry. Problems of group adjustment. Factors affecting industrial morale. Sociology of industrial conflict.

299 DIRECTED READING (Ar.) I, II **STAFF**

Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Sociology.

300 DIRECTED READING OR RESEARCH (Ar.) I, II **STAFF**

Prerequisite: graduate standing; consent of instructor.

351 GRADUATE SEMINAR (2-2) Yr. **LIND**

Current problems of research in Sociology. Prerequisite: consent of instructor.

SPEECH

Professors ANSBERRY, SMITH; Associate Professors CARR, HOSHOR; Assistant Professors BENTLEY, KENTZLER, LEFFORGE, NEWCOMER, WONG; Instructors BRENEMAN, FARR, FOX, GORDON, LARSON, LEWIS, LINN, STEED

100 FUNDAMENTALS OF SPEECH (1) I, II **STAFF**

Speech as communication for social interaction. Information concerning speech production with emphasis on organization of ideas; training for mastery of speech standards. Conferences required. Course fee $1.00.

101 SOUNDS AND RHYTHMS OF SPOKEN ENGLISH (1) I, II **STAFF**

Intensive training in the sounds and rhythms of General American speech with emphasis on the effective communication of ideas. Use of the International Phonetic Alphabet. Conferences required. Course fee $2.00.

102 DEVELOPMENT OF ORAL SKILL (1) I, II **STAFF**

Effective use of speech sounds and rhythms in practical speaking situations. Idiom and grammar. Concentration on individual problems, using modern laboratory equipment. Conferences required. Course fee $2.00.

105 SOUNDS OF ENGLISH FOR PROSPECTIVE TEACHERS (1) I, II **STAFF**

The basic principles of sounds and rhythms of General American speecn. Techniques for the correction of pronunciation and the improvement of rhythm. Use of the International Phonetic Alphabet. Conferences required. Prerequisite: Speech 100. Course fee $1.00.

106 PRONUNCIATION AND GRAMMAR FOR PROSPECTIVE TEACHERS (1) I, II **STAFF**

Continued work on sounds and rhythms with major emphasis on projection, vocal variety, and facility in the use of idiom and grammar. Conferences required. Prerequisite: Speech 100, 105. Course fee $1.00.

107 LANGUAGE SKILLS FOR PROSPECTIVE TEACHERS (1) I, II **STAFF**

A practice course to give further experience in speaking. Concentration on individual problems of poise, voice, vocabulary, and organization. Conferences required. Prerequisite: Speech 100, 105. Course fee $1.00.

150 PUBLIC SPEAKING (3) I, II **STAFF**

Basic principles of speech composition and delivery; preparation and delivery of speeches with attention to principles studied; special attention to individual problems.

201 EFFECTIVE INTERPRETATIVE READING (3) I **STAFF**

Study of relationship between silent and oral reading, with intensive practice in getting and giving meaning from the printed page.

204 VOICE TRAINING FOR SPEECH (2) I, II **KENTZLER**

A study of the physical and physiological bases of voice production, with emphasis on the vocal problems of nasality, inaudibility, and monotony. Prerequisite: Speech 100 and permission of the instructor, or recommendation of the department.

220 PHONETICS (3) I, II **CARR**

Analysis of English pronunciation with attention to Hawaii's linguistic background. Phonetics as applied to articulation, standards of pronunciation, speech correction, dialect study, and the teaching of speech.

221 FUNDAMENTALS OF SPEECH CORRECTION (3-3) Yr. **ANSBERRY**

First semester: survey of the field; observation of diagnosis and therapy. Second semester: principles and methods of therapy used in treatment of functional and organic speech disorders; observation and clinical practice required.

222 SPEECH PATHOLOGY (3) I **ANSBERRY**

Study of diagnostic and therapeutic procedures involved in speech rehabilitation.

223 PRACTICUM IN SPEECH CORRECTION (3) II **ANSBERRY**

Clinical experience in the use of rehabilitation techniques with a variety of defects and disorders at various age levels.

224 FUNDAMENTALS OF AUDIOLOGY (3) I **ANSBERRY**

The nature of hearing and its effects on speech. Problems of the deaf and hard-of-hearing with emphasis on educational techniques. Training in the use of audiometric equipment.

228 SEMANTICS (3) II **SMITH**

The role of language in understanding. A study of verbal meaning and implication, and of the role of assumption in interrelationships. Practice in the use of language for clarity, accuracy, and proper evaluation.

230 ORAL READING FOR PROSPECTIVE TEACHERS (3) I, II **STAFF**

The oral interpretation of literature; getting and giving the meaning of the printed word. Conferences required. Prerequisite: Speech 100, 105. Course fee $1.00.

232 ADVANCED INTERPRETATIVE READING (3) II **SMITH**

Study of literary forms, with intensive practice in reading poetry and dialogue. Prerequisite: Speech 201; two semesters of literature.

250 GROUP LEADERSHIP AND DISCUSSION (3) I, II **HOSHOR**

Principles and techniques of effective group leadership with special consideration of the semantic and psychological barriers to communication in group situations. Analysis and discussion of social problems.

251 PUBLIC DISCUSSION AND DEBATE (1) I, II **STAFF**

Training in debate and discussion techniques including analysis of social, political, and economic problems. Public discussion and debate before campus and community groups required. May be repeated for a total of six credits.

255 ADVANCED PUBLIC ADDRESS (3) I **LEFFORGE**

Speech composition and delivery; analysis of speech models from American Public Address; types of deliberative and ceremonial speeches by students. Prerequisite: Speech 150 or consent of instructor.

265 SPEECH FOR THE CLASSROOM TEACHER (3) I, II **STAFF**

Speech pedagogy; principles and methods for the classroom teacher. Integration of speech improvement with all activities in the curriculum, emphasizing speech problems of Hawaii. Prerequisite: Speech 100, 105.

272 RADIO WORKSHOP (3) I, II **STEED**

Basic course in announcing and control board operation. Practice in studio and field recording and study of FCC regulation and operating procedure for Third Class Operator's license. Primarily for men. Prerequisite: consent of instructor.

295 PERSUASION: A STUDY IN RHETORIC (3) I **HOSHOR**

The factors involved in influencing the attitudes, beliefs, and actions of audiences; analysis of oral propaganda. Classical and contemporary theories and examples are examined.

298 SPECIAL PROBLEMS (Ar.) I, II **STAFF**

(1) General Speech Education, (2) Speech Correction, (3) Phonetics and Speech Science, (4) Interpretation, (5) Forensics and Public Address, (7) Radio, (8) Pedagogy, (9) Audiology. Prerequisite: consent of instructor or recommendation of department chairman.

299 DIRECTED READING (Ar.) I, II **STAFF**

Individual reading in the same fields as in 298. Limited to senior majors with a 2.7 grade point ratio, or a 3.0 grade point ratio in Speech.

300 RESEARCH (Ar.) I, II **STAFF**

Individual research in the same fields as in 298 and 299. A total of 4 credits may be earned. Prerequisite: undergraduate major in Speech or the equivalent; consent of adviser or recommendation of department chairman.

310 SEMINAR IN RESEARCH METHODS (3) I, II **HOSHOR**

Research methods, analysis and reporting of data, bibliography; examination and analysis of contemporary research in the field.

320 SEMINAR IN SPEECH CORRECTION (3) II **ANSBERRY**

Extensive reading and research problems in the etiology and therapy of speech deviations.

330 SEMINAR IN INTERPRETATION (3) I, II **SMITH**

Review of current literature in interpretation; preparation of reports and presentation of lecture recitals. Prerequisite: consent of instructor.

ZOOLOGY AND ENTOMOLOGY

Senior Professor Bess; Professors Blackburn, Carter, Chu, Gosline, Hardy, Hiatt, Matthews, Prosser, Tester, Tuthill, van Weel; Associate Professors Banner, Boroughs, Hsiao, M. Sherman, Tanada; Assistant Professors Namba, Townsley

100 GENERAL ZOOLOGY (4) I, II **BANNER, MATTHEWS, STAFF**

Zoological principles; studies of structure, development, relationships, and distribution of animals. This course and Botany 100 comprise an introduction to the biological sciences. Two lectures, one conference hour, and two laboratory periods. Laboratory fee $6.00.

110 PRINCIPLES OF HUMAN BIOLOGY (3) I **MATTHEWS**

Biological principles relating to man: man's place in nature, the structure and function of the organ systems, human diseases, how and what we inherit, human evolution and eugenics, and the biological aspects of human behavior. Lectures and demonstrations. Not open to students who have had Zoology 100.

151 COMPARATIVE ANATOMY OF THE VERTEBRATES (4) II **HSIAO, STAFF**

Study of the structure and relationship of the vertebrate groups and dissection of typical vertebrates. Two lectures and two laboratory periods. Prerequisite: Zoology 100. Laboratory fee $9.00.

170 GENERAL ENTOMOLOGY (4) I, II **HARDY, TUTHILL**

Structure, habits, biology, and classification of insects. Emphasis on insects characteristic of Hawaii. Studies of insects in the field, and laboratory studies with living insects. Two lectures and two laboratory periods. Prerequisite: Zoology 100 or Botany 100; both recommended. Laboratory fee $3.00.

191 ELEMENTARY HUMAN ANATOMY AND PHYSIOLOGY (3) I **HSIAO**

A general survey of the gross anatomy and physiology of the human body. Two lectures and one lecture-demonstration period. Laboratory fee $3.00. Not open to students who have had Zoology 291.

192 ELEMENTARY HUMAN ANATOMY AND PHYSIOLOGY (1) **STAFF**

Laboratory to accompany Zoology 191. Laboratory fee $5.00. Offered only in summer sessions.

200 SCIENCE OF THE SEA (3) I **HIATT**

A nontechnical account of the seas; their origin, water movements, and life, with special attention to oceanographic exploration, fertility, and the world's great fisheries. Frequent field trips to the coral reef and oceanographic laboratories on Oahu and on oceanographic vessels offshore. Prerequisite: one year of science courses.

240 INTRODUCTION TO ECOLOGY (2) I **HIATT**

Animals in relation to their biotic and physical environment; animal communities in the sea, on the shore, and on the land. Prerequisite: Zoology 100.

245 ZOOGEOGRAPHY (2) I **GOSLINE**

Marine and terrestrial animal distributions and the physiographic, climatic, and historic factors affecting them. Prerequisite: Zoology 100. Desirable preparation: Zoology 240; Geology 151. (Alternate years; offered 1956–57.)

250 INSECT LIFE (3) II **TUTHILL**

A general study of insects and related arthropods emphasizing the natural history of local forms. Two 2-hour lecture-laboratory periods. (Alternate years; not offered 1956–57.)

253 PARASITOLOGY (3) II **CHU**

The general field of parasitology with reference to the parasites and parasitic diseases affecting man and domestic animals; emphasis on classification, comparative morphology, life history, and control. Two lectures and two laboratory periods. Prerequisite: Zoology 100. Laboratory fee $5.00.

254 INSECT MORPHOLOGY (3) I **NAMBA**

Comparative and gross morphology of insects, with attention to structures emphasized in systematic and economic entomology. Homologies of structures in the various groups of insects; anatomy; development in representative groups. Two lecture-laboratory periods. Prerequisite: Zoology 170. Laboratory fee $1.00.

255 SYSTEMATIC ENTOMOLOGY (3) II **TUTHILL**

Classification of insects; orders and families. Use of taxonomic tools. Two lecture-laboratory periods. Prerequisite: Zoology 254. Laboratory fee $2.00.

256 MEDICAL AND VETERINARY ENTOMOLOGY (3) I **HARDY**

A study of insects and other arthropods in relation to the spread and causation of human and animal diseases; emphasis on the Pacific, the Orient, and the United States. Two lectures and two laboratory periods. Prerequisite: Zoology 170. Laboratory fee $6.00. (Alternate years; not offered 1956–57.)

257 SCALE INSECTS (3) I **HARDY**

The scale insects of Hawaii with emphasis on taxonomy, field and laboratory techniques, economic importance, and control. Two lecture-laboratory periods. Prerequisite: Zoology 170. Desirable preparation: Botany 102. Laboratory fee $5.00. (Alternate years; offered 1956–57.)

260 HISTOLOGY (3) II **HSIAO**

Studies of tissues, principles of histology, and microscopic anatomy of a limited number of vertebrate animals. Two lectures and two laboratory periods. Prerequisite: Zoology 151. Laboratory fee $6.00.

261 VERTEBRATE EMBRYOLOGY (3) I **HSIAO**

Principles of embryology illustrated by a detailed study of the development of the frog, chick, and pig. Two lectures and two laboratory periods. Prerequisite: Zoology 151. Laboratory fee $8.00.

262 MICROTECHNIQUE (3) I, II **MATTHEWS**

The fixing, staining, and mounting of tissues and entire animals and organs. Two lecture-laboratory periods. Prerequisite: Zoology 151. Laboratory fee $15.00.

273 ECONOMIC ENTOMOLOGY (3) II **SHERMAN**

A general consideration of insect pests; chemical, biological, and cultural control. Laboratory exercises on Hawaiian insects of economic importance. Field trips and reports. Two lectures and two laboratory periods. Prerequisite: Zoology 170. Laboratory fee $3.00.

275 GENERAL ICHTHYOLOGY (3-3) Yr. **GOSLINE**

First semester: anatomy, physiology, life history, ecology, and distribution of fishes. Second semester: the classification of fishes with particular reference to Hawaiian species. Laboratory fee $8.00.

276 BIOMETRY (3) I **BLACKBURN**

Elementary statistical methods and their application to biological data. Two lecture-laboratory periods. Prerequisite: Mathematics 151. Desirable preparation: Mathematics 152.

277 BIOMETRICAL ANALYSIS (3) II **BLACKBURN**

A continuation of 276. Regression, correlation, association, analysis of variance, design of experiments, and graphic analysis. Two lecture-laboratory periods. Prerequisite: Zoology 276 or equivalent. Desirable preparation: Mathematics 153.

280 COMPARATIVE ANATOMY OF INVERTEBRATES (3) I **BANNER**

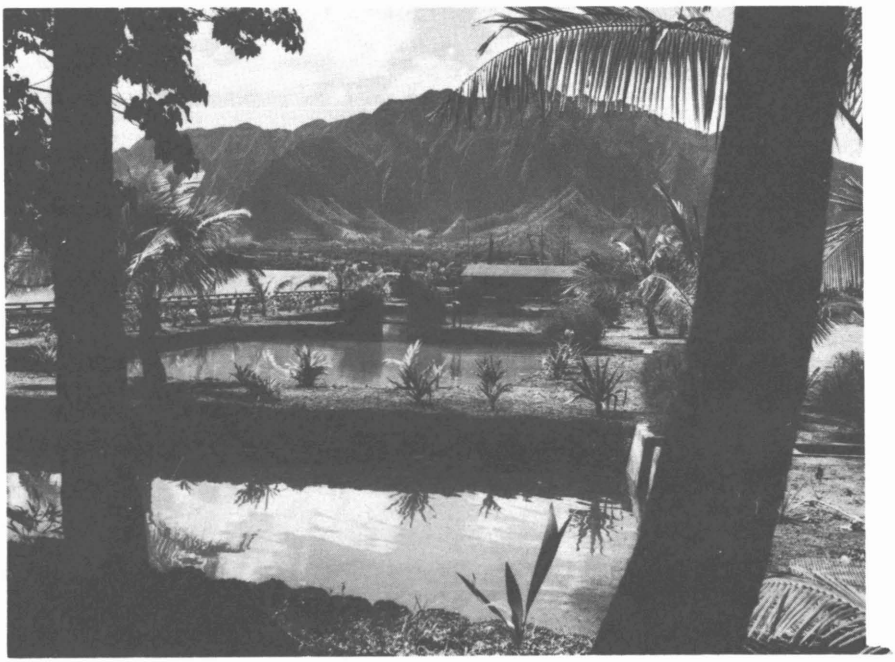
Comparative anatomy, development, and phylogeny of the invertebrate animals. Two lectures and two laboratory periods. Prerequisite: Zoology 100. Laboratory fee $6.00.

281 TAXONOMY OF MARINE INVERTEBRATES (3) II **TOWNSLEY**

Identification and classification of reef and shore fauna. Students select a particular group for concentrated study of taxonomic methods. Two lectures and two laboratory periods. Prerequisite: Zoology 100. Desirable preparation: Zoology 280. Laboratory fee $6.00. (Alternate years; not offered 1956–57.)

282 MARINE ECOLOGY (3) II **TOWNSLEY**

Natural history, behavior, and relation of invertebrates and fishes to their complete environment, with emphasis on marine communities found in Hawaii. Two lectures and two laboratory periods. Prerequisite: Zoology 100. Desirable preparation: Zoology 281. Laboratory fee $6.00. (Alternate years; offered 1956–57.)



The Hawaii Marine Laboratory, which offers facilities for graduate research, is located on the edge of a vast area rich in tropical plant and animal life.

275 GENERAL ICHTHYOLOGY (3-3) Yr. **GOSLINE**

First semester: anatomy, physiology, life history, ecology, and distribution of fishes. Second semester: the classification of fishes with particular reference to Hawaiian species. Laboratory fee $8.00.

276 BIOMETRY (3) I **BLACKBURN**

Elementary statistical methods and their application to biological data. Two lecture-laboratory periods. Prerequisite: Mathematics 151. Desirable preparation: Mathematics 152.

277 BIOMETRICAL ANALYSIS (3) II **BLACKBURN**

A continuation of 276. Regression, correlation, association, analysis of variance, design of experiments, and graphic analysis. Two lecture-laboratory periods. Prerequisite: Zoology 276 or equivalent. Desirable preparation: Mathematics 153.

280 COMPARATIVE ANATOMY OF INVERTEBRATES (3) I **BANNER**

Comparative anatomy, development, and phylogeny of the invertebrate animals. Two lectures and two laboratory periods. Prerequisite: Zoology 100. Laboratory fee $6.00.

281 TAXONOMY OF MARINE INVERTEBRATES (3) II **TOWNSLEY**

Identification and classification of reef and shore fauna. Students select a particular group for concentrated study of taxonomic methods. Two lectures and two laboratory periods. Prerequisite: Zoology 100. Desirable preparation: Zoology 280. Laboratory fee $6.00. (Alternate years; not offered 1956–57.)

282 MARINE ECOLOGY (3) II **TOWNSLEY**

Natural history, behavior, and relation of invertebrates and fishes to their complete environment, with emphasis on marine communities found in Hawaii. Two lectures and two laboratory periods. Prerequisite: Zoology 100. Desirable preparation: Zoology 281. Laboratory fee $6.00. (Alternate years; offered 1956–57.)

The Hawaii Marine Laboratory, which offers facilities for graduate research, is located on the edge of a vast area rich in tropical plant and animal life.

316 PREPARATION OF SCIENTIFIC MANUSCRIPTS (1) II **TUTHILL**

Consideration of styles and methods of preparing scientific manuscripts for publication; proofreading and editing. Prerequisite: graduate standing. Required of all candidates for advanced degrees in zoology or entomology.

350 ADVANCED SYSTEMATIC ENTOMOLOGY (3) II **TUTHILL**

Problems in systematic entomology. Classification of special groups. Nomenclatorial problems; the international code. Two lecture-laboratory periods. Prerequisite: Zoology 255 or consent of instructor. Laboratory fee $1.00. (Alternate years; not offered 1956–57.)

352 INSECT ECOLOGY (3) I **BESS**

Insects as living units in an environment of physical and biotic factors. Habitats, populations, autecology, and synecology. Two lectures and one laboratory period. Prerequisite: Zoology 255 or the equivalent, or advanced standing in entomology. (Alternate years; not offered 1956–57.)

353 BIOLOGICAL CONTROL OF PESTS (3) I **BESS**

Fundamental concepts of biological control. Problems involved in the introduction of beneficial enemies of insect and weed pests, and a critical study of major biological control projects throughout the world. Two lectures and one laboratory period. Prerequisite: Zoology 255 or the equivalent. (Alternate years; offered 1956–57.)

354 INSECT TOXICOLOGY (4) II **SHERMAN**

Principles and problems involved in the chemical control of insect pests. Studies in insect toxicology and insect physiology from the standpoint of how they affect the use of insecticides in the control of insect pests. Two lectures and two laboratory periods. Prerequisite: Chemistry 149; Zoology 273 or the equivalent. (Alternate years; not offered 1956–57.)

355 INSECT-TRANSMITTED DISEASES OF PLANTS (3) II **CARTER**

Lectures and laboratory studies in the problems of insect transmission of plant diseases. Prerequisite: graduate standing.

358 PRINCIPLES OF INSECT PATHOLOGY (3) I **TANADA**

The study of the diseases of insects; histopathology; microbial agents and biological control. Two lectures and one laboratory period. Prerequisite: Zoology 170 and either mycology, bacteriology, or protozoology. (Alternate years; offered 1956–57.)

370 PRINCIPLES OF SYSTEMATIC ZOOLOGY (3) I **GOSLINE**

Taxonomic categories and the processes of evolution involved in their development; presentation of taxonomic data; rules of zoological nomenclature. Prerequisite: graduate standing or consent of instructor. (Alternate years; not offered 1956–57.)

387 POPULATION DYNAMICS (3) II **BLACKBURN**

Laws of increase and decrease in populations with special reference to fish; theory of fisheries management; methods of estimating vital statistics of fish populations. Prerequisite: Zoology 287 or the equivalent. (Alternate years; not offered 1956–57.)

388 FISHERIES MANAGEMENT (3) II **BLACKBURN**

Survey of outstanding programs of fisheries investigation: problems, methods of attack, and results; prediction of fluctuation in abundance and control of fishing effort to produce maximum sustained yield. Prerequisite: Zoology 287 or the equivalent. Desirable preparation: Zoology 387. (Alternate years; offered 1956–57.)

391 ADVANCED GENERAL PHYSIOLOGY (3) II **van WEEL**

Some of the major problems in general physiology and the methods available for their study. Two lecture-laboratory periods. Prerequisite: Zoology 291. Laboratory fee $8.00. (Alternate years; offered 1956–57.)

392 PHYSIOLOGICAL ECOLOGY (3) II **van WEEL**

The physiological aspects of adaptation to the physical and biotic features in the environment. Feeding, digestion, respiration, osmo-regulation, sense organs, behavior, and other factors in relation to the environment; special attention to marine species. Two lecture-laboratory periods. Prerequisite: Zoology 281, 291. Desirable preparation: Zoology 240. Laboratory fee $8.00. (Alternate years; not offered 1956–57.)

395 ISOTOPIC TRACERS IN BIOLOGY (3) I **BOROUGHS**

A survey of atomic structure, stable and radioactive isotopes, equipment, and the application of isotopes to the problems of physiology, metabolism, genetics, and other biological fields. Two lectures and one laboratory period. Prerequisite: consent of the instructor. Laboratory fee $5.00.

Hilo Branch

Associate Professor INOUYE (Director); Assistant Professors EASLEY, FORBES, MOSELEY; Instructors BONK, DEANE, KANG, LAVY, MINN, NAKAMURA, RITTER, TEEVAN; Lecturer SAIGO*

COURSES.† Anthropology 150; Art 140, 142–143, 160–161; Business 100, 150–151, 160–161; Chemistry 103; Economics 150–151‡; Education 100; English 101, 109, 120–121, 150‡; Geography 150, 151; Government 150; Health and Physical Education 101, 102, 103, 105, 106, 107, 130; History 100, 110; Japanese 100, 101; Mathematics 150, 151, 152; Music 110, 150, 209, 210; Philosophy 100; Psychology 100, 150‡, 185, 186; Sociology 151; Spanish 100, 101; Speech 100, 101, 102, 105, 106, 107, 150, 151, 251; Science 120–121; Zoology 100.

SCHOLARSHIPS. American Association of University Women, Hilo Chapter, tuition; Beta Sigma Phi, Eta Chapter, $60; Buddhist Friendship Society of Hilo (2), $200 each; Dragon's Club of Hilo, $50; Hilo High School Class of 1943, $150; Hilo Women's Club (2), $150 each; Hui Hanalike (2), $200 each; Maharlikan Club of Hawaii (2), $100 each; Ruddle Sales and Service, $190; Tanabe's Used Cars, $170; Territory of Hawaii, $190; University of Hawaii Alumni Association, Hilo Chapter, $100; University of Hawaii, Hilo Branch, ASUH HB Scholarship, $95; Chester Wentworth Science Scholarship, $100; Zonta Club of Hilo, tuition, fees, and books.

LOAN FUNDS. Hawaiian Civic Club; Waiakea Social Settlement Fund; Buddhist Friendship Society Fund.

* Degrees listed under Instruction. (See p. 6.)
† Courses descriptions given under the corresponding departments.
‡ Courses accepted for comparable required courses on the Manoa Campus.

SUMMARY OF ENROLLMENT FOR 1955-56

Candidates for Degrees and Diplomas	1st Semester	2nd Semester	Year
In Credit Courses			
Graduate School			
Advanced Degrees	91	146	
Five-Year Diplomas	140	100	
	231	246	
College of Arts and Sciences			
Seniors	232	191	
Juniors	274	291	
Sophomores	359	364	
Freshmen	647	606	
	1,512	1,452	
College of Applied Science			
Seniors	117	95	
Juniors	145	165	
Sophomores	205	182	
Freshmen	264	249	
	731	691	
Teachers College			
Seniors	187	153	
Juniors	233	241	
Sophomores	184	184	
Freshmen	327	319	
	931	897	
College of Agriculture			
Seniors	57	48	
Juniors	61	58	
Sophomores	67	64	
Freshmen	79	80	
	264	250	
College of Business Administration			
Seniors	130	99	
Juniors	144	150	
Sophomores	182	190	
Freshmen	231	244	
	687	683	
TOTAL DEGREE CANDIDATES	4,216	4,119	
TOTAL DIPLOMA CANDIDATES	140	100	
TOTAL CLASSIFIED STUDENTS	4,356	4,219	
Not Candidates for Degrees or Diplomas			
Graduates	368	360	
Accelerated Teacher Training Program	74	68	
Professional Teaching Certificate	69	107	
Undergraduates	245	231	
Auditors	68	64	
	824	830	
TOTAL STUDENTS HONOLULU CAMPUS	5,180	5,049	5,785*
TOTAL STUDENTS EXTENSION CENTERS	933	882	1,318*
TOTAL STUDENTS HILO BRANCH	228	208	241*
Correspondence Courses			368*
Duplications			—107
Grand Total			7,237*
In Noncredit Courses			
Honolulu Campus	1,252	1,606	2,859
Other Centers	211	229	440

*Although the majority of students register for both semesters, some drop out at the end of the first semester and others enter at the beginning of the second semester. Therefore, the figures used in this column represent the total number of individuals registered for the year rather than the sum of the first and second semester registrations.

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