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VOLUME III

CATALOGUE
AND
ANNOUNCEMENT
OF COURSES
1924-1925

APRIL, 1924

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Honolulu

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EXAMINATION AND REGISTRATION DAYS

1924

Wednesday, September 3—Entrance Examinations.
   9 A.M. English.
   2 P.M. Elementary Algebra.

Thursday—
   9 A.M. Plane Geometry.
   2 P.M. Trigonometry and Solid Geometry.

Friday—
   9 A.M. Advanced Algebra.

Saturday—
   9 A.M. Psychological Examination, required of all first year regular students.

Monday, September 8— Registration of previously enrolled students.

Tuesday, September 9— Registration of new students.

Wednesday, September 10— 8 A.M. Regular class work begins.
   11:30 A.M. Address to new students by the President of the University.
CALENDAR
1924 - 1925

1924
June 2  Thirteenth Annual Commencement.
August 30  Last day for receiving applications for admission.
September 3-6  Entrance Examinations.
September 8-9  Registration, Seventeenth Annual Session.
September 10  Instruction begins.
October 1  Last day for receiving applications from candidates for advanced degrees.
November 11  Armistice Day.
Nov. 27-29  Thanksgiving Recess.
December 22  Christmas Recess begins.

1925
January 5  Work resumed.
January 19-24  Mid-year Examinations.
January 27  Registration, Second Semester
February 22  Washington's Birthday.
April 15  Last day for receiving requests for examinations for advanced degrees.
April 10-11  Good Friday Recess.
April 13  Last day for receiving orations in Berndt Oratorical Contest.
May 15  Third Annual Contest for Berndt Prize in Oratory.
May 25-30  Final Examinations.
June 1  Fourteenth Annual Commencement.
September 1  Last day for receiving applications for admission.
September 9-12  Entrance Examinations.
Sept. 14-15  Registration, Eighteenth Annual Session.
# The Board of Regents

<table>
<thead>
<tr>
<th>Name</th>
<th>Date of Appointment and Reappointment</th>
<th>Present Term Expires</th>
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<tr>
<td>Arthur G. Smith</td>
<td>Aug. 16, 1918 May 2, 1923</td>
<td>Apr. 30, 1928</td>
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<td>Mary Dillingham Frear</td>
<td>Oct. 19, 1920 Apr. 30, 1924</td>
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<td>Rev. Akaiko Akana</td>
<td>May 6, 1921 Apr. 30, 1924</td>
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<td>C. R. Hemenway</td>
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<td>Dr. Charles B. Cooper</td>
<td>Oct. 27, 1922 Apr. 30, 1927</td>
<td>Apr. 30, 1927</td>
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**Ex Officio**

A. L. C. Atkinson, President of the Board of Agriculture and Forestry.

Arthur L. Dean, President of the University.

**OFFICERS OF THE BOARD**

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Secretary: A. L. Dean
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2140 Lanihuli Drive.

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*Leave of absence.
FACULTY COMMITTEES
1923-1924.

DISCIPLINE:

ENTRANCE AND ADVANCED STANDING:
Professors Keller, A. L. Andrews, Dean and Symonds, and Miss MacNeil.

GRADUATE WORK:
Professors Dillingham, Adams and Edmondson.

PHYSICAL EDUCATION AND MILITARY SCIENCE:
Colonel Clarke and Professors Keller and Wrenshall.

PUBLICITY AND PUBLICATIONS:
Professors Crawford, Donaghho and Leebrock.

RESEARCH:
Professors Edmondson, Krauss and Kirkpatrick.

THE PSYCHOLOGICAL CLINIC

*STANLEY D. PORTEUS, Director.

STEVENSON SMITH, Director 1923-1924.

ANNA HILDEGARD ROSS.
Assistant Psychologist.

Assistant Psychologist.
1555 Wilder Ave.

Telephone 68173
THE WAIKAKEA EXPERIMENT STATION

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   Superintendent.
   P. O. Box 624, Hilo, T. H.

OTHER OFFICERS OF ADMINISTRATION

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   Bookkeeper.
   32 Hotel St.

ALLAN B. BUSH,
   Superintendent of Grounds.
   University Campus.

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   Assistant Mechanic.
   20th Avenue, Kaimuki.

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   Foreman in Poultry and Agronomy Department.
   University Farm.

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   Clerk.
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*Leave of absence 1923-1924.
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*Matron, University Dormitory for Girls and Manager of Cafeteria*  
69284

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5361

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*Mechanic.*  
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*Superintendent, University Farm.*  
University Farm.  
6182

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*Superintendent, Aquarium.*  
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7016

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*Office Assistant.*  
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*Y. M. C. A. Secretary.*  
Men's Dormitory.  
69268

RENA SOUZA,  
*Office Assistant.*  
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2175
THE UNIVERSITY OF HAWAII

HISTORY

By act of its 1907 Legislature the Territory of Hawaii created an institution of higher education under the name of The College of Agriculture and Mechanic Arts of the Territory of Hawaii. This name was changed by a subsequent Legislature to The College of Hawaii. As its original name indicated, this College was a Land Grant College benefiting financially by the Second Morrill Act of 1890 and the Nelson Amendment of 1907. Being a Territory, Hawaii had no grant of lands under the original Morrill Act of 1862. The College received from the Federal Government fifty thousand dollars annually, applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction.

In its first years the College was housed in temporary buildings on the grounds of the McKinley High School, where the first classes were organized in the spring of 1908. Beginning with the fall of 1912 the College occupied the new permanent building in Manoa Valley, where some ninety acres had been set aside by the Territory for use of the College.

The first baccalaureate degrees were awarded in 1912, the first advanced degree, Master of Science, in 1914, and the first honorary degrees in 1919.

The programs of study were largely scientific and adapted to fit young men and women for practical work in applied science. With this College firmly established it was deemed wise to lay the foundations for a wider range of collegiate work in Hawaii by establishing a University whose charter should be sufficiently inclusive to provide for all future needs. The 1919 Legislature of the Territory of Hawaii therefore granted the following charter:

ACT 203.

AN ACT TO ESTABLISH A UNIVERSITY OF HAWAII.

Be it Enacted by the Legislature of the Territory of Hawaii:

SECTION 1. There is hereby established a university of Hawaii which shall consist of the college of agriculture or mechanic arts heretofore known and designated as the College of Hawaii, hereafter to be designated as the college of applied science, a college of arts and sciences and such other departments as may from time to time be established.

SECTION 2. The affairs of the University of Hawaii shall be
under the general management and control of a board of regents consisting of seven members of which the president of the university, who shall act as secretary of the board, and the president of the board of agriculture and forestry shall be members ex-officio, and the other five members shall be appointed by the governor of the Territory of Hawaii as by law provided. The regents shall be residents of the Territory of Hawaii, and the appointed members shall be appointed for terms of five years or the unexpired periods thereof in such manner that the term of one regent shall expire at the close of the 30th day of April each year. Such terms shall begin on the first day of May in each year, and the terms of the regents of the College of Hawaii as of June 30, 1919, in the order of their appointments, shall continue as terms of appointments as regents of the University of Hawaii, to expire immediately preceding the first day of May in each of the five years beginning with 1921.

Section 3. The board of regents shall have general management and control of the affairs of the university. It shall have the power to appoint a treasurer and such other officers as it deems necessary, and to require them to give bonds in such amounts as it may prescribe and in the form prescribed by law for bonds of public officers. It shall have power to purchase or otherwise acquire lands, buildings, appliances and other property for the purposes of the university and expend such sums of money as may be from time to time placed at the disposal of the university from whatever source. All lands, buildings, appliances and other property so purchased or acquired shall be and remain the property of the Territory of Hawaii to be used in perpetuity for the benefit of the university.

The official name of the board of regents shall be board of regents, University of Hawaii, and the board shall adopt and use a common seal by which all official acts shall be authenticated.

Section 4. The grants of moneys and the purposes of said grants authorized by the Act of Congress approved August 30, 1890, known as the Second Morrill Act, providing for the endowment and maintenance of colleges for the benefit of agriculture and mechanic arts, and by the Acts of Congress approved March 2, 1887, and March 16, 1906, providing for agricultural experiment stations in connection with colleges of agriculture and mechanic arts, and by any other Act or Acts of Congress for similar purposes, heretofore assented to in behalf of the College of Hawaii, are hereby reassented to in behalf of the college of applied science as an integral part of the University of Hawaii.

Section 5. The purposes of the university are to give thorough instruction and conduct researches in, and disseminate knowledge of, agriculture, mechanic arts, mathematical, physical,
natural, economic, political and social sciences, languages, literature, history, philosophy and, such other branches of advanced learning as the board of regents may from time to time prescribe, and to give such military instruction as the board of regents may prescribe and the federal government require. The standard of instruction shall be equal to that given and required in similar universities on the mainland of the United States, and upon the successful completion of the prescribed courses the board of regents is authorized to confer a corresponding degree upon all students who shall become entitled thereto.

Section 6. No person shall, because of sex, color or nationality, be deprived of the privileges of this institution.

Section 7. The faculties of the university shall be under the direction of a president who shall be appointed by the board of regents of which he becomes ex-officio a member. The board of regents shall appoint such deans, directors, other members of the faculties, and employees as may be required to carry out the purposes of the institution, prescribe their salaries and terms of service, where such salaries and terms of service are not specifically fixed by legislative enactment, make and enforce rules governing sabbatical leaves, with or without pay, consistent with the practice of similar institutions on the mainland, and notwithstanding the laws of the Territory of Hawaii relating to vacations of the officers and employees of the territory.

Section 8. The board of regents shall have the authority to sue in its official name and shall be subject to be sued only in the manner provided for suits against the Territory of Hawaii.

Section 9. Moneys appropriated by the legislature for the University of Hawaii shall be payable by the territorial treasurer, upon warrants issued by the territorial auditor, upon vouchers approved by the board of regents. All moneys received by or in behalf of the board of regents of the university, other than those received from the United States government or other governments, shall be paid into the territorial treasury, and all such moneys are hereby appropriated for the use of the university. The board of regents shall cause to be kept suitable books of accounts, and shall annually submit to the governor, to be by him submitted to the legislature, a statement showing its receipts from all sources, and expenditures for all purposes.

Section 10. All obligations, rights, privileges, and property whatsoever belonging or appertaining to the board of regents of the College of Hawaii or the College of Hawaii are hereby transferred to the board of regents of the University of Hawaii and the University of Hawaii.
SECTION 11. Chapter 28, sections 330 to 336, inclusive, of the Revised Laws of Hawaii, 1915, are hereby repealed.

SECTION 12. This act shall take effect on July 1, 1920.
Approved this 30th day of April, A. D. 1919.

C. J. McCarthy,
Governor of the Territory of Hawaii.

Organization.

Pursuant to this act of the Legislature The University of Hawaii was organized on July 1, 1920, with two colleges. With some changes the programs of study of the College of Hawaii were continued in the College of Applied Science, and a College of Arts and Sciences was organized with programs of study leading to the Bachelor of Arts degree. The control passed to the Board of Regents of the University of Hawaii consisting of the Board of Regents of the College as of June 30, 1920, with the addition of two ex officio members, the President of the Board of Agriculture and Forestry and the President of the University.

Location and Buildings

The University, advantageously situated in Manoa Valley, one of the most attractive of Honolulu's residential districts, is about two and one-half miles from the business center, and but a short walk from the Manoa Valley car-line.

Of the ninety acres which comprise the University grounds, about thirty acres are used for campus purposes and sixty for the farm. Of the latter some twenty-two are planted to crops and several large fields are used for pasturage. At the rear of the grounds flows the Manoa Stream, which furnishes adequate water for irrigation and experimental studies in irrigation, and may be made to provide for work in hydraulics.

The J. P. Cooke athletic field provides facilities for football, baseball and track athletics. Four asphalt tennis courts have also been provided. Through the enterprise of the students in the Fall of 1920 a fund was raised for the construction of a swimming pool. A 25-yard pool, and locker buildings for men and women are available for students of the University.

Hawaii Hall, the first of the University buildings, is of reinforced concrete, three stories in height, and contains some sixty lecture rooms, class rooms, offices and laboratories. In this building are the administrative offices, the library, and the class rooms and laboratories of some of the departments. Gartley Hall, the new fireproof building for chemistry, physics, and sugar tech-
nology, contains the laboratories, classrooms, and offices for those departments. A smaller concrete building houses the laboratory for experimental engineering. A dormitory for men with rooms for twenty-eight students, a dormitory accommodating sixteen girls and a matron and a dining hall have been erected.

The Legislature of 1919 placed the Honolulu Aquarium under the care of the University of Hawaii. The Charles M. Cooke Estate provided funds for the erection of a laboratory for marine zoology in connection with the Aquarium. Laboratory classes in zoology are held in this seaside building, which is also equipped for research in marine biology.

On the farm are four buildings for dairy purposes, a piggery, poultry houses, horse stable, tool shed, and six employees' cottages. At Kaimuki there is a small, astronomical observatory. A more detailed account of the equipment of the buildings and laboratories is given under the head of Courses of Instruction.

By arrangement between the University and the Bishop Museum it is provided that there shall be reciprocity in the use of libraries, laboratories, collections and other facilities of research. Graduate students registered in the University of Hawaii will be allowed to carry on investigations under the guidance of members of the museum staff, and work done in this way may be credited toward advanced degrees by the University. Advanced students will be allowed the use of the museum facilities when working under proper direction, subject to such regulations as may be deemed expedient by the Director of the Museum.

**Library.**

The Library now contains about 35,000 volumes. In addition there are on the shelves about 79,000 pamphlets, many of them bulletins of agricultural experiment stations and of the various departments of the Federal Government. The Library is by law constituted a depository for all Government publications.

Reading rooms are maintained, wherein may be found local and mainland daily papers, the leading literary magazines and reviews, and a great number of technical and scientific periodicals.

Both the Library and the Reading Rooms are open to the public; and persons complying with the Library regulations may draw out books for home use.

A new library building is in process of construction.

**The Psychological and Psychopathic Clinic.**

Act 140 of the legislative session of 1921 provided for the
establishment of a psychological and psychopathic clinic under the management and control of the board of regents of the University. The purposes of the clinic are to make examinations of persons at the request of the courts, industrial schools, board of health, department of public instruction and other public institutions and organizations, and, under proper regulation, at the request of private institutions and organizations, parents or guardians. In addition the clinic is conducting investigations in the field of psychology.

**THE WAIAKEA EXPERIMENT STATION.**

Under the provisions of Act 191 of the 1921 session of the legislature, an experiment station has been established at Waiakea, Hawaii. A tract of over 90 acres was reserved for the purposes of an experiment station in the laying out of the homesteads at Waiakea. The greater part of the area is now in cane experiments. Diversified crops and farm animals also form an important part of the work of the station.

**GENERAL INFORMATION**

**PURPOSES AND STANDARDS.**

As required by Section 5 of the act of establishment the University is devoted both to instruction and research in the various fields of knowledge and is committed to the maintenance of the recognized standards of American universities.

That these standards may be maintained the requirements for admission of regular students to the University are set as high as those of similar institutions on the mainland. Special students must meet the same requirements except that those of mature age who have not the required preparatory school education may be accepted for limited work upon presenting satisfactory evidence of such previous training as manifestly fits them to pursue the desired courses.

No student with entrance conditions can be registered as a Sophomore, none with Freshman conditions as a Junior, and none with Sophomore conditions as a Senior.

**SEMESTERS AND CREDITS.**

The year's work is divided into two semesters of eighteen weeks each. Recognition of work done is given in terms of credits, a credit generally being the equivalent of three hours per week spent in the preparation and recitation of a lesson, or in the field or laboratory. The exact division of this time, however, is generally left to the professor in charge.
Grade Points, Tuition and Fees

Grade Points.

Beginning with the class entering in September, 1922, a record is kept of grade points, as well as of grades and semester hours.

Grade points will be determined as follows: For each semester hour 3 grade points will be granted when the grade is 90 or above; 2 grade points when the grade is 80-89; 1 grade point when the grade is 70-79. Grades of 60-69 will carry credit for semester hours, but not for grade points.

Grade points will be computed in all courses in which grades are reported, including Military Training and Physical Education.

A student shall not be entitled to grade points for grades received upon re-examination after being conditioned in any subject.

Students entering as undergraduates with advanced standing will not be given grade points upon work done elsewhere; but on work done here must gain grade points in the same proportion to credit hours required for graduation as is demanded of other students.

To graduate from the University of Hawaii, the student must have gained a minimum of 136 grade points, of which at least 69 must be gained in the last half of the course.

Classification of Students.

The University of Hawaii recognizes four classes of students:

1. Regular undergraduate students in either of the Colleges.
2. Special students in either of the Colleges.
3. Graduate students.
4. Extension students.

Regular students are those who having met the requirements for admission are pursuing a course of study leading to a bachelor's degree in conformity with the regulations of either of the Colleges.

Special students are those who are working for credits, but not following one of the programs of work leading to a degree.

Graduate students are those who have received a degree from one of the Colleges of this University or some other institution of equal standing and are registered for an advanced degree.

Extension students are those who are enrolled in extension classes.

Tuition and Fees

Tuition in the University is free to residents of the Territory. The term “resident” is defined as follows:
1. Any person who has resided continuously in the Territory of Hawaii for at least one year prior to the registration day of any semester, except that persons, other than those described in paragraphs 2 and 3 below, who come to Hawaii for the purpose of attending the University, may not acquire residence while they are in attendance at the University, unless they become voting citizens of the Territory of Hawaii.

2. Any person, one or both of whose parents is a citizen of the Territory of Hawaii.

3. Any person who is in the military or naval service of the United States, or whose father is in such service.

To others than residents of the Territory the tuition is $25.00 per semester for regular students, or $2.00 per credit per semester for part time students.

A registration fee of $5.00 per semester is charged for all regular students and special students registering for 10 or more credits; others are charged at the rate of 50 cents per credit. The use of the swimming tank is free to all students, and those registering for ten or more credits may have locker space assigned to them without charge. Persons registering as candidates for advanced degrees are charged a matriculation fee of $5.00. A charge of $5.00 per semester to cover cost of materials is required of those taking Courses 1, 2, 3, and 4 in Household Science, and Art and Design 8, 9, 10 and 12; laboratory fees of $2.00 per semester per credit of laboratory work are charged in the courses in inorganic chemistry and sugar analysis, $3.00 in organic chemistry, and $1.00 in physics, engineering laboratory, the biological sciences, and soils. Apparatus lost or destroyed is charged at market prices.

A Late Registration Fee of $1.00 is required of all students who register later than the announced registration days, and a Reinstatement Fee of $5.00 will be charged on registration of any student who shall have withdrawn without securing either an honorable dismissal or a leave of absence.

A fee of one dollar is charged students for each copy of transcript of record after the first such copy has been issued.

**Dormitories**

The dormitory for men accommodates twenty-eight students. There are four suites consisting of two bedrooms and a study, each accommodating four men, one double room, ten single rooms, a general living room, and lanais. Bookshelves and dressers are built in, and beds are provided. Other furniture will be supplied by the occupants. Each student must bring a pillow, four single bed sheets, two pillow cases, blankets, and counterpane.
marked with his name and room number. The bed linen will be deposited with the caretaker. The room rent includes the laundry of the bed linen and the care of the room. A rental of $36.00 per semester is charged.

The dormitory for women accommodates sixteen girls and a matron. There are eight single and four double rooms, all connected with bathrooms provided with hot and cold water. The arrangements as to furniture and bedding are the same as in the men's dormitory, but the women are required to take part care of their rooms. The rate for 1924-'25 is $40.00 per semester.

**Dining Hall and Cafeteria**

A dining and cafeteria service is conducted by the University. All meals at noon are on the cafeteria plan; the service at breakfast and dinner is table d'hote. The monthly rate for breakfast and dinner varies somewhat from year to year but approximates $25.00.

**Physical Education and Military Drill.**

*Women.* All regular students and all special students carrying eight or more credits are required to take physical education, unless excused on account of physical disability.

*Men.* All physically fit male Freshmen and Sophomores of American citizenship in regular standing in the University, and first and second year special students carrying eight or more credits, are required to take military training. A senior unit of the Reserve Officers' Training Corps is located at the University. The advanced course leading to a commission is elective.

**The University Y. M. C. A.**

The University Y. M. C. A. is an association of Christian students and faculty men who have organized in order to develop Christian character among the students and afford opportunity for expression of the spirit of brotherhood through the various student activities.

Fitting in naturally with the academic, social and athletic phases of the University, the Association definitely promotes the moral and spiritual aspect of student life, on and off the campus. Through the University of Hawaii Y.M.C.A. the students are affiliated with the North American Student Movement and the World Christian Student Federation with a membership of over 200,000.
REQUIREMENTS FOR ADMISSION

The requirements for admission in the two undergraduate Colleges are uniform.

ADMISSION OF REGULAR STUDENTS.

1. Time of application for admission:
   Applications for admission must be filed not later than September 1. Later applications will not be considered unless it can be shown to the satisfaction of the Entrance Committee that delay was unavoidable.

2. Applicants will be given matriculation permits:
   (a) On the presentation of a school record showing that the candidate has completed 15 units of high school work in approved subjects with an average grade of 80% or better. These 15 units must include 3 units in English in which the average grade is at least 80%, and to be admitted to an engineering course the candidate must present 3 1-2 units of mathematics with an average grade of 80% or over.
   (b) On the presentation of a school record showing that the candidate has passed in 15 units of high school work in approved subjects, and the passing of a comprehensive examination designed to test the candidate's intelligence.

   A statement issued by the College Entrance Examination Board, or by an officer of the University of Hawaii certifying that a candidate has passed an examination in any subject will be accepted as an equivalent to an 80% grade given by a preparatory school in the same subject.

   All first-year regular students are required to take a psychological examination for purposes of record. In the case of students whose high school general average is below 80 the psychological examination as well as the high school record is considered in granting admission to a candidate.

   A unit signifies the satisfactory completion of a course of study pursued for a full school year, with five recitations per week of not less than 45 minutes each, or the equivalent laboratory or shop exercises.

   The principal of the preparatory school attended by the student will be requested to submit for each applicant answers to a printed questionnaire. The questions asked will deal with the student's character, ability, preparatory school activities, and the principal's opinion of the probable success of the student in college.

3. Students may be admitted without examination by transfer from another college or university. Students thus transferring must present an official statement of the studies offered for admission, of the studies pursued in college and the grade re-
Persons of some maturity who have had experience that manifestly prepares them for college work may be given entrance credit for such work. Just what forms of work will be given credit and just how many credits will be granted cannot be stated in advance; but each case will be passed upon individually.

The University of Hawaii desires to make its requirements for admission as flexible as possible without lowering its standards. It does not wish to debar properly qualified students by setting up arbitrary requirements, nor does it wish to dictate to the secondary schools what shall be the precise nature of their courses. The only end which is kept in view is that the entering students shall be prepared to take up their more advanced courses successfully. Schools that certify pupils unqualified to do college work will not be regarded as accredited schools, and their certifications will not be accepted.

In general, the University does not stipulate what studies shall be offered in satisfying entrance requirements. To this general principle there are, however, two important exceptions.

No candidate will be admitted to regular standing in any course who does not offer the following: 3 units in English; 2 units in Mathematics.

Candidates desiring to study mathematics in the University must offer at least 2½ units in mathematics, and those desiring to enter the course in Engineering must offer 3½ units in mathematics.

In this connection, attention is called to the rule that no person will be admitted as a special student who is under the age of 21 years, unless that person shall fully satisfy the entrance requirements for regular standing. It will be seen that no person under the age of 21 will be admitted either as a regular or as a special student who does not offer at least 3 units in English and 2 units in mathematics.

Candidates expecting to study engineering are strongly urged to begin the study of both physics and mechanical drawing while in preparatory school. Candidates offering mechanical drawing as an entrance unit will be required to submit the plates drawn by them in the preparatory school. They will be placed in a special section in the class in mechanical drawing, and permitted to begin at once on the more advanced work.

Candidates offering freehand drawing and perspective must submit drawings made in the preparatory school.

On and after September, 1925, entrance credit for foreign languages will not be granted unless at least two units in some one language are offered.

Students wishing to enter an advanced course in one of the modern languages must offer at least 2 units in that language.
Students offering 2 or more units in a modern language will not be permitted to register in the elementary course in that language.

Students entering the College of Arts and Sciences should note that at the end of the Sophomore year each student in that college must give satisfactory evidence of possessing an adequate knowledge of at least one foreign language. Students who fail to meet this requirement will not be allowed credit toward graduation for a language course taken during the Junior or Senior years to make up this deficiency.

The maximum number of entrance units in commercial subjects that will be accepted is 5. Of these not more than 2 may be in bookkeeping, and not more than 1 in either stenography or typewriting.

Not more than 2 credits in music may be accepted, under conditions similar to those governing credits in music leading to degrees.

For the guidance of those who wish to enter by presenting 15 units, a list of the subjects regularly accepted is given:

<table>
<thead>
<tr>
<th>English</th>
<th>Physiology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin</td>
<td>Physical Geography</td>
</tr>
<tr>
<td>Greek</td>
<td>United States History</td>
</tr>
<tr>
<td>French</td>
<td>English History</td>
</tr>
<tr>
<td>German</td>
<td>Ancient History</td>
</tr>
<tr>
<td>Spanish</td>
<td>General History</td>
</tr>
<tr>
<td>Oriental Languages and Literature</td>
<td>Civil Government</td>
</tr>
<tr>
<td>Algebra</td>
<td>Commercial Law</td>
</tr>
<tr>
<td>Plane Geometry</td>
<td>Bookkeeping</td>
</tr>
<tr>
<td>Solid Geometry</td>
<td>Stenography</td>
</tr>
<tr>
<td>Plane Trigonometry</td>
<td>Drawing and Perspective</td>
</tr>
<tr>
<td>Physics</td>
<td>Mechanical Drawing</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Household Science</td>
</tr>
<tr>
<td>Botany</td>
<td>Manual Training</td>
</tr>
<tr>
<td>Zoology</td>
<td>Music</td>
</tr>
</tbody>
</table>

In all courses the work of the Freshman year has been planned so as to permit of an easy transition from school to college. The only prescribed studies that demand prerequisites are mathematics and English.

**Admission of Special Students.**

Candidates will be admitted as special students either (a) by fully satisfying the requirements for admission as a regular student, or (b) by filing with the Committee on Entrance satisfactory evidence of having attained the age of 21 years and of having sufficient training to carry on the work desired.

No person, however, shall be admitted as a special student
before his class in a secondary school has been graduated, except by special permission of the University Faculty.

ADMISSION OF GRADUATE STUDENTS.

The requirements for admission as a graduate student are stated in conjunction with the requirements for receiving an advanced degree (see page

DEGREES

BACCALAUREATE DEGREES.

On satisfactory completion of a regular course in the College of Applied Science a student is granted the degree of Bachelor of Science (B.S.), the diploma designating the course which has been pursued. The degree of Bachelor of Arts (B.A.) is granted upon the satisfactory completion of a regular course in the College of Arts and Sciences.

The University of Hawaii will permit the substitution of the first year in an approved professional school for the fourth year of the University course; and will, upon the satisfactory completion of three years of a University course and one year in an approved professional school, grant the degree of B.S. or B.A., according to the course pursued.

ADVANCED DEGREES.

Special attention is directed to the unusual advantages of Hawaii for research in botany, entomology, marine zoology, and certain phases of geology. The great variations of elevation, rainfall, and temperature to be found within short distances provide remarkable conditions for ecological studies. The presence of active and extinct volcanoes, lava flows of many ages, and unique conditions of erosion provide numerous interesting geological problems. The character of the population and the geographical situation of the Hawaiian Islands make this a field of exceptional interest for work in the social and economic sciences.

Advanced students from other institutions and investigators desiring to study special problems, are invited to make use of the facilities of the University of Hawaii for study and research.

The advanced degree of Master of Science (M.S.) or Master of Arts (M.A.) will be granted to Bachelors on the satisfactory completion of advanced work for which their previous education has laid the necessary foundation.

A full time graduate student must ordinarily work under the direction of a special committee for at least a year at
Advanced Degrees

the University, or for at least two years not in residence. As a general rule part time graduate students, teachers, etc., will be required to offer at least two years' work, together with full time work in one summer vacation (preferably the intervening one) under the direction of the University of Hawaii; or to offer not less than three years' work, not including work in the summer vacation, before receiving a master's degree. It is expected that the work done for the master's degree will require at least 1600 actual working hours. The student must also present an acceptable thesis and pass the required examinations.

The degree of Civil Engineer (C.E.) will be granted to Bachelors of Science who shall have completed the corresponding undergraduate course at this institution, upon the completion of two years of practical experience in their chosen profession, the presentation of a satisfactory paper upon some topic of interest connected with their work, the completion of assigned problems, and the passing of the required examinations.

To be accepted as a candidate for an advanced degree, the applicant must be a graduate of the University of Hawaii or of some other institution of equal standing. The application should be made in writing to the Committee on Graduate work not later than October 1 and should be accompanied by transcript of record issued by the institution from which the applicant has received his bachelor's degree. In case the amount of undergraduate work is deemed insufficient, the applicant, if accepted, may be required to take other undergraduate courses.

As a general rule, those courses taken by first and second year undergraduate students will not be accepted for credit toward the advanced degree.

The following undergraduate courses may be taken by graduate students for credit towards an advanced degree. Some count full credit, while others only half credit.
A matriculation fee of five dollars is required of all candidates for advanced degrees.

Candidates should signify their intention of continuing their candidacy by registration at the beginning of each semester.

The advanced work may be restricted to one subject only, or to a major and a minor, or to a major and two minors; but at least one-half of the work must be in the major, and the minors must be so correlated with the major as to satisfy the Committee on Graduate Work that the candidate is working with a definite purpose.

The general subject of the thesis, together with the written approval of the chairman of the committee in charge, must be furnished to the Committee on Graduate Work not later than December 1st of the collegiate year in which the degree is to be taken.

The completed thesis must be presented to the Committee on Graduate Work at least one week before the date set for the candidate's examination, and must win the Committee's approval as demonstrating the candidate's ability both to do original work and also to present the results of that work in creditable form. The thesis, accompanied by the written approval of the chairman of the candidate's committee, will be returned for use in the examination or for binding. Before the candidate is granted a degree, a typewritten copy of the thesis on pages 8x10½ inches in size, bearing the written approval of the pro-
fessor in charge of the candidacy, must be deposited in the Library as the permanent property of the University, together with a fee sufficient to pay for binding. The examination for the degree will be conducted by the committee in charge of the candidate's work, and may be either written or oral, or both written and oral. It shall be open to all members of the faculty. Requests for examinations should be made in writing to the Committee on Graduate Work not later than April 15, and the Committee will announce the time and place of examination not later than May 1.

Preparation for Professional Degrees

The prospective student of medicine may follow either of two lines of procedure. He may take a two years' course, taking only such studies as are required for admission to the medical school. Or he may remain here for three or four years, thereby obtaining a fuller preparation for his professional studies and at the same time satisfying the requirements for the degree of B.S. or B.A. It is thus possible to obtain both the degrees of B.S. or B.A. and M.D. in seven years. See pages 44, 49.

Students planning to spend but two years in preparation for medical school or desiring the degree of B.S. should register in the course in General Science in the College of Applied Science. Persons desiring the degree of B.A. should register in Group III in the College of Arts and Sciences.

The medical schools adopting the requirements prescribed by the American Medical Association demand a minimum of 15 high school units, of which at least 3 must be in English, 2 in some one foreign language, 2 in mathematics, and 1 in history.

They also require a minimum of 60 university credit hours, as shown by the following schedule:

**Required Subjects**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Semester Hours</th>
<th>University of Hawaii Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>20</td>
<td>Chem. 1 or 2, 4, 5, and 6</td>
</tr>
<tr>
<td>Physics</td>
<td>8</td>
<td>Physics 2b</td>
</tr>
<tr>
<td>Biology</td>
<td>8</td>
<td>Botany 1, Zool. 1 and 2</td>
</tr>
<tr>
<td>English Composition</td>
<td>6</td>
<td>English 1</td>
</tr>
<tr>
<td>Other non-science subjects:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History, language, econ.</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
Subjects Strongly Urged

<table>
<thead>
<tr>
<th>Subject</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A modern foreign language</td>
<td>6 to 12</td>
</tr>
<tr>
<td>Advanced botany or advanced zoology</td>
<td>3 to 6</td>
</tr>
<tr>
<td>Psychology</td>
<td>3 to 6</td>
</tr>
<tr>
<td>Advanced mathematics, including trigonometry</td>
<td>3 to 6</td>
</tr>
</tbody>
</table>

Other Suggested Electives

English (additional), economics, history, sociology, political science, logic, mathematics, drawing, Latin, Greek.

Students preparing for schools of law or theology may obtain the degree of B.A. by satisfactorily completing three years of work in the University of Hawaii, and one year in an approved school of law or theology.

SCHOLARSHIPS AND PRIZES

Honolulu Chamber of Commerce Freshman Scholarship.—A scholarship of $100, awarded to the needy graduate of a Honolulu preparatory school presenting the best entrance record.

Honolulu Chamber of Commerce Agricultural Scholarship.—An annual scholarship of $100, awarded to an upper classman taking the course in Agriculture or the agricultural division of the course in Sugar Technology.

Hilo Chamber of Commerce Scholarships.—Annual scholarships of $100, awarded by a committee of the Hilo Chamber of Commerce to residents of East Hawaii who desire to take a full regular course at the University of Hawaii.

Maui Women’s Club Scholarship.—An annual scholarship of $100 is awarded by the Maui Women’s Club to a graduate of the Maui High School.

University Club Sophomore Scholarship.—This scholarship of $100 is awarded for the Sophomore year to that needy student who makes the best record in the work of the Freshman year.

Honolulu Rotary Club Scholarships.—The Rotary Club of Honolulu offers two annual scholarships of $250.00, the award to be made by the Rotary Club on a basis of character, scholarship, and need.

Prince Fushimi Memorial Educational Fund.—The sum of $300 is available annually for the assistance of American citizens of Japanese ancestry of high scholastic and good moral standing who are unable to pay their educational expenses.

Pacific Guano and Fertilizer Co. Scholarship.—The Pacific Guano and Fertilizer Co. offers a scholarship of $250 for the
study of soil fertility under the direction of Professor F. G. Krauss.

**Hawaiian Pineapple Canners' Association Fellowship.**—A Fellowship of $1200, established by the Hawaiian Canners' Association for pineapple research work at the University of Hawaii.

**Berndt Prize in Oratory.**—A prize of $100 annually is offered by Mr. Emil A. Berndt, of Honolulu, for a contest in Oratory. This contest is open to all undergraduates, and in certain cases to special students who are registered for twelve or more semester hours.

**Daughters of American Revolution Scholarships.**—Aloha Chapter, D. A. R., offers two scholarships of $100 each to be used preferably for girls taking the Home Economics Course, one scholarship to be given, if possible, to a girl of Revolutionary or early American ancestry.

Applications for scholarships other than those of the Hilo Board of Trade, the Maui Women's Club and the Honolulu Rotary Club should be addressed to the President of the University not later than May 1.
COLLEGE OF APPLIED SCIENCE

PROGRAMS OF STUDY

The College of Applied Science offers the following courses of study leading to the degree of Bachelor of Science, the diploma to designate the course which has been pursued:

1. A course in AGRICULTURE.
2. A course in ENGINEERING.
3. Courses in SUGAR TECHNOLOGY.
   (a) Agricultural Division, with emphasis on field operations.
   (b) Chemistry Division, with emphasis on mill practice.
   (c) Sugar-house Engineering Division, with emphasis on construction and operation of sugar mills.
4. A course in HOME ECONOMICS.
5. A course in GENERAL SCIENCE, including:
   (a) Physical Sciences,—mathematics, physics, chemistry, and geology.
   (b) Biological Sciences,—botany, entomology, zoology, and nutrition.

AGRICULTURE

The Course in Agriculture is designed to give the student an intimate knowledge of the fundamental principles which underlie agriculture as a science and a profession, and thus equip him for effective service either in practical farming, agricultural education, or research work. Agricultural science comprehends a wide range of subjects, and includes something from nearly every department of human learning. The natural sciences of geology, chemistry, physics, botany, zoology, bacteriology, and physiology are directly and intimately related to it. Not in the sciences alone should the agricultural student be broadly educated, but also in mathematics, languages, history, and economics.

In outlining this course the object sought is first to teach the general laws governing the relationship of growing crops and living animals to soil, climate, and surroundings. The method is by lectures, supplemented by laboratory investigations and field experiments. This study of the fundamentals will be required of all students who intend to specialize in any advanced line of agricultural work.

Following this fundamental work the special applications and modifications appertaining to particular crops and problems are studied.
OUTLINE OF COURSE IN AGRICULTURE.

The course in Farm Practice, Agriculture 1, must be completed before the beginning of the Junior year. It may be taken in the vacation following either the Freshman or the Sophomore year.

FIRST YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>English 1</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Math. 1 and 2</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chem. 1 or 2</td>
<td>3</td>
</tr>
<tr>
<td>Botany</td>
<td>Bot. 1</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>5 or 6</td>
</tr>
<tr>
<td>Military or Physical Education</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

All electives throughout the course are to be chosen with the advice and consent of adviser.

Suggested Electives: Language (French or Spanish), History, American Institutions, Drawing (Freehand or Mechanical).

SECOND YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>English 2 or 3...</td>
<td>2 or 3</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chem. 4, 5 or 2..</td>
<td>3</td>
</tr>
<tr>
<td>Zoology</td>
<td>Zoology 1</td>
<td>3</td>
</tr>
<tr>
<td>Plant Physiology</td>
<td>Bot. 6</td>
<td>3</td>
</tr>
<tr>
<td>Plant Pathology or Bacteriology</td>
<td>Bot. 5 or 4</td>
<td>3</td>
</tr>
<tr>
<td>Physics</td>
<td>Phys. 2a</td>
<td>3</td>
</tr>
<tr>
<td>Geology</td>
<td>Geol. 2</td>
<td>3</td>
</tr>
<tr>
<td>Horticulture</td>
<td>Agr. 13</td>
<td>3</td>
</tr>
<tr>
<td>Military or Physical Education</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

THIRD YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entomology</td>
<td>Ent. 1 and 2 or 7</td>
<td>3</td>
</tr>
<tr>
<td>Biological Chemistry</td>
<td>Chem. 9</td>
<td>3</td>
</tr>
<tr>
<td>Agricultural Chemistry</td>
<td>Chem. 9a</td>
<td>4</td>
</tr>
<tr>
<td>Quantitative Analysis</td>
<td>Chem. 10</td>
<td>3</td>
</tr>
<tr>
<td>Soils</td>
<td>Agr. 2</td>
<td>5</td>
</tr>
<tr>
<td>Crops</td>
<td>Agr. 3</td>
<td>5</td>
</tr>
<tr>
<td>Bacteriology or Plant Pathology</td>
<td>Bot. 4 or 5</td>
<td>3</td>
</tr>
<tr>
<td>Forestry</td>
<td>Agr. 12</td>
<td>3</td>
</tr>
<tr>
<td>Genetics</td>
<td>Agr. 5</td>
<td>3</td>
</tr>
</tbody>
</table>

Students intending to enter pineapple work are advised to take Agriculture 16 in the summer after the Junior year.
FOURTH YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics</td>
<td>Econ. 5</td>
<td>3</td>
</tr>
<tr>
<td>Sugar Cane Production</td>
<td>Agr. 4</td>
<td>4</td>
</tr>
<tr>
<td>Animal Husbandry</td>
<td>Agr. 6</td>
<td></td>
</tr>
<tr>
<td>Dairying</td>
<td>Agr. 8</td>
<td></td>
</tr>
<tr>
<td>Poultry Husbandry</td>
<td>Agr. 9</td>
<td></td>
</tr>
<tr>
<td>Feeds and Feeding</td>
<td>Agr. 11</td>
<td></td>
</tr>
<tr>
<td>Pineapple Production</td>
<td>Agr. 17</td>
<td></td>
</tr>
<tr>
<td>Applied Genetics</td>
<td>Agr. 19</td>
<td></td>
</tr>
<tr>
<td>Thesis</td>
<td>Agr. 20</td>
<td></td>
</tr>
<tr>
<td>Pineapple Field Practice</td>
<td>Agr. 18</td>
<td></td>
</tr>
</tbody>
</table>

May be chosen during the second semester by seniors who desire to major in pineapple work. This will then take the place of courses as listed above. Credit 16 semester hours.

ENGINEERING

The Course in Engineering is designed to give thorough training in the fundamental principles upon which professional engineering practice is based, and to illustrate the application of these principles by the solution of numerous practical problems. Persons entering this course are expected to be well prepared in the physical sciences and in mathematics up to and including solid geometry and plane trigonometry. (See Entrance Requirements (page 21). It is desired to emphasize the necessity of thorough preparation in order that the more serious work of mastering technical subjects may not be hampered by lack of proper groundwork.

The general plan provides a broad foundation in English, mathematics, chemistry, physics, and drawing during the first two years. The work of the last two years is more technical and professional in its nature, embracing the study of the principles involved in power development by means of the various prime movers, including steam engines, water-wheels, gas and gasoline engines, and steam turbines; and also a study of the design of such machines, and of the materials entering into their construction, as well as practical tests to determine their working efficiency and economy of operation. It is aimed to fit graduates to assume gradually, as practical experience is acquired, those administrative responsibilities which are more and more devolving upon men of technical training, and to become ultimately skilful practical engineers. So far as possible, the importance of each subject covered is illustrated by the application to some work which is met with in actual practice. It is also intended that the course shall be valuable from an educational viewpoint;
therefore, while the student is learning each subject both theo-
retically and practically, the training of his mind is kept in view
as well as the needs of the profession.

OUTLINE OF COURSE IN CIVIL ENGINEERING.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem</th>
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<tbody>
<tr>
<td>English Composition</td>
<td>English 1</td>
<td>3</td>
<td>3</td>
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<tr>
<td>General Chemistry</td>
<td>Chem. 1 or 2</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Mechanical Drawing</td>
<td>M. D. 1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Analytic Geometry and Trig</td>
<td>Math. 3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Algebra and Calculus</td>
<td>Math. 4</td>
<td>5</td>
<td></td>
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<tr>
<td>Plane Surveying</td>
<td>C. E. 1</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Elective</td>
<td></td>
<td>3</td>
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<tr>
<td>Military or Physical Education</td>
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<table>
<thead>
<tr>
<th>SECOND YEAR</th>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem</th>
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<tbody>
<tr>
<td>Calculus</td>
<td>Math. 5 and 6</td>
<td>3</td>
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<tr>
<td>Descriptive Geometry</td>
<td>M. D. 3</td>
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<td>English</td>
<td>Eng. 2 or 3</td>
<td>2 or 3</td>
<td>2 or 3</td>
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<tr>
<td>Roads and Pavements</td>
<td>C. E. 15</td>
<td>2</td>
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<tr>
<td>General Physics</td>
<td>Phys. 2</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Office and Shop Methods</td>
<td>M. E. 9</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Elective</td>
<td></td>
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<th>THIRD YEAR</th>
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<th>Credits 1924-25</th>
<th>Credits 1925-26</th>
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<td>C. E. 2</td>
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<td>Astronomy</td>
<td>Math. 7</td>
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<td>Bacteriology</td>
<td>Bot. 4</td>
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<td>Chem. for Engineers</td>
<td>Chem. 23</td>
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<td>Elec. Measurements</td>
<td>Phys. 3</td>
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<tr>
<td>Geology</td>
<td>Geol. 23</td>
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<td>Hydraulics</td>
<td>C. E. 7</td>
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<td>Hydraulic Construction</td>
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<td>Materials</td>
<td>M. E. 2</td>
<td>2</td>
<td>2</td>
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<td>Materials Laboratory</td>
<td>X. E. 4</td>
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<td>Municipal Engr.</td>
<td>C. E. 9</td>
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<tr>
<td>Economics</td>
<td>Econ. 5</td>
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<td>3</td>
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<tr>
<td>Railroad Surveying</td>
<td>C. E. 10</td>
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<td>3</td>
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<tr>
<td>Steam Machinery</td>
<td>M. E. 1</td>
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<td>Structural Mechanics</td>
<td>C. E. 3</td>
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<tr>
<td>Topographical Survey’ g and Drawing</td>
<td>C. E. 4</td>
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<tr>
<td>Electrical Machinery</td>
<td>E. E. 1</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
The Courses in Sugar Technology are designed primarily for the student who, on leaving college intends to enter into active service in some branch of the sugar industry. Although these courses, since they prepare for one particular industry, might be termed highly specialized, the importance of a sound training in general science has not been overlooked, the first two years being devoted largely to English, mathematics, physics, and chemistry.

In the third and fourth years, enough special instruction in subjects pertaining directly to the sugar industry is given so that the man who completes this course should have sufficient technical understanding to prove of some immediate value in a subordinate position on a plantation, and yet not have his future progress hampered by an inadequate theoretical training.

The Hawaiian Sugar Planters' Association offers many very valuable opportunities for making more practical the instructional
work of the University. Advanced students serve as apprentices in their mills and plantations, and take part in their Experiment Station projects and activities.

The cane sugar industry, as carried on in the tropics, comprises in itself two quite distinct branches: the growing of cane, and its manufacture into sugar. Inasmuch as it would be extremely difficult, if not impossible, to acquire thorough knowledge in both these branches in four years, the courses in Sugar Technology are offered in three divisions.

**Agricultural Division.** The first two years are almost parallel with the Course in Agriculture. In the third year it is advisable to elect certain courses in chemistry in addition to strictly agricultural topics, for the reason that sugar production is probably more dependent on chemistry than is any other branch of agriculture. Sugar analysis is also required, as familiarity with this work is often required of a field chemist. The lectures on cane sugar manufacture are required in the fourth year, as it is desirable that the agriculturist have some knowledge of what happens to the cane after he has grown it.

**Sugar Chemistry Division.** The work of the first two years follows closely that of the Agricultural Division, but in the third and fourth years the course differs in offering more work in chemistry, with the purpose of giving such training in chemistry as shall prepare a student not only to become an efficient sugar chemist, but also to conduct investigations leading to better methods of control in the manufacture of sugar.

**Sugar House Engineering Division.** The first year is identical with the Course in Engineering, while the second year differs only in the substitution of qualitative analysis for advanced mechanical drawing. Chemistry is continued in the third year, together with the most essential of the engineering subjects. Students in this division take sugar analysis and sugar manufacture together with those of the Sugar Agricultural Division.

During the summer vacation between the third and fourth years a minimum of eight weeks' work on one of the plantations, or in connection with the work of the Experiment Station of the Hawaiian Sugar Planters' Association, is required of students in all divisions. To obtain credit for this, the student must submit a written report of the work performed.

The second semester of the fourth year is devoted almost entirely to practical work. Arrangements are made whereby students in the Sugar Agriculture Division serve as Student Assistants in the Experiment Station of the Hawaiian Sugar Planters' Association, and those in the Sugar-house Engineering Division serve as special apprentices in the factory of one of the plantations, where they actually perform the manual labor
required at the various stations of the mill and boilinghouse. Careful notes must be kept of this work and a report submitted at the end of the semester.

This also applies to students in the Sugar Chemistry Division, who may elect either field or factory practice.

**OUTLINE OF COURSES IN SUGAR TECHNOLOGY.**

**AGRICULTURAL DIVISION.**

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem.</th>
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<tbody>
<tr>
<td>English Composition</td>
<td>Eng. 1</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Math. 1 and 2</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chem. 1 or 2</td>
<td>3</td>
</tr>
<tr>
<td>Botany</td>
<td>Bot. 1</td>
<td>3</td>
</tr>
<tr>
<td>Drawing</td>
<td>2</td>
<td>2</td>
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<td>Elective</td>
<td>3</td>
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<tr>
<td>Military or Physical Education</td>
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</tbody>
</table>

*Suggested Electives: History, American Institutions, Modern Language (French or Spanish).*

Summer Farm Practice. Agriculture I. Summer vacation. (This may be taken at end of either freshman or sophomore year.)

**SECOND YEAR**

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem.</th>
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<tbody>
<tr>
<td>English</td>
<td>Eng. 2 or 3</td>
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<tr>
<td>Qualitative Analysis</td>
<td>Chem. 4 or 2</td>
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<tr>
<td>Physics</td>
<td>Phys. 2a</td>
<td>3</td>
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<tr>
<td>Surveying</td>
<td>C. E. 1</td>
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<tr>
<td>Elective</td>
<td>3 to 6</td>
<td>3 to 6</td>
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<tr>
<td>Military or Physical Education</td>
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*Suggested Electives: Plant Physiology (Bot. 6), Zoology 1, Geology 2, Bacteriology or Plant Pathology, Modern Language (French or Spanish), Chemistry 5 and 6, Forestry (Agr. 12), Horticulture (Agr. 13).*

**THIRD YEAR**

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem.</th>
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<tbody>
<tr>
<td>Sugar Analysis</td>
<td>S. T. 1</td>
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<tr>
<td>Soils</td>
<td>Agr. 2</td>
<td>5</td>
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<td>Crops</td>
<td>Agr. 3</td>
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<td>Genetics</td>
<td>Agr. 5</td>
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<td>Electives</td>
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<td>8</td>
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<tr>
<td>*Field Practice</td>
<td>S. T. 3</td>
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</tbody>
</table>

*Taken in the summer vacation following the Junior year.*
Suggested Electives:
Agricultural Chemistry (Chem. 9a).
Biological Chemistry (Chem. 9).
Quantitative Analysis (Chem. 10).
Bacteriology (Bot. 4).
Plant Pathology (Bot. 5).
Entomology 1 and 7.
Forestry (Agr. 12).
Horticulture (Agr. 13).

Fourth Year

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2nd Sem.</th>
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<tbody>
<tr>
<td>Sugar-house Calculations</td>
<td>S. T. 1a</td>
<td>1</td>
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<td>Sugar Manufacture</td>
<td>S. T. 2</td>
<td>3</td>
</tr>
<tr>
<td>Sugar Cane Production</td>
<td>Agr. 4</td>
<td>4</td>
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<tr>
<td>Economics</td>
<td>Econ. 5</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
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<td>5 or 6</td>
</tr>
<tr>
<td>Field Practice</td>
<td>S. T. 4</td>
<td>16</td>
</tr>
</tbody>
</table>

Suggested Electives:
Animal Husbandry (Agr. 6).
Farm Management (Agr. 15).

Sugar Chemistry Division.

First Year

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2nd Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>Eng. 1</td>
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<tr>
<td>Mathematics</td>
<td>Math. 1 &amp; 2</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chem. 1 or 2</td>
<td>3</td>
</tr>
<tr>
<td>Botany</td>
<td>Bot. 1</td>
<td>3</td>
</tr>
<tr>
<td>Drawing</td>
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<td>2</td>
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<td>Electives</td>
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<td>3</td>
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<tr>
<td>Military Drill</td>
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Suggested Elective: French.

Second Year

<table>
<thead>
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<th>Name of Course</th>
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<th>Credits 2nd Sem.</th>
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<tbody>
<tr>
<td>English</td>
<td>Eng. 2 or 3</td>
<td>2 or 3</td>
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<tr>
<td>Qualitative Analysis</td>
<td>Chem. 4</td>
<td>3</td>
</tr>
<tr>
<td>Physics</td>
<td>Phys. 2a</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
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<td>8</td>
</tr>
<tr>
<td>Military Drill</td>
<td></td>
<td>2</td>
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</tbody>
</table>
SUGGESTED ELECTIVES

Modern Language (French).
Geology 2.
Bacteriology (Bot. 4).
Plant Pathology (Bot. 5).
Surveying (C. E. 1).
Zoology 1.
Organic Chemistry (Chem. 5 and 6).

THIRD YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Soils</td>
<td>Agr. 2</td>
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<tr>
<td>Crops</td>
<td>Agr. 3</td>
<td>5</td>
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<td>Sugar Analysis</td>
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<td>Electives</td>
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<td>*Field or Mill Practice</td>
<td>Summer S. T. 3</td>
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SUGGESTED ELECTIVES:

Quantitative Chemistry (Chem. 10).
Agricultural Chemistry (Chem. 9a).
Biological Chemistry (Chem. 9).
Bacteriology or Pathology (Bot. 4 or 5).
Physical Chemistry (Chem. 11).
Physical Chemistry Laboratory (Chem. 12).

FOURTH YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
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<tbody>
<tr>
<td>Sugar Cane Production</td>
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<tr>
<td>Sugar Manufacture</td>
<td>S. T. 2</td>
<td>3</td>
</tr>
<tr>
<td>Sugar-house Calculations</td>
<td>S. T. 1a</td>
<td>1</td>
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<tr>
<td>Economics</td>
<td>Econ. 5</td>
<td>3</td>
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<tr>
<td>Electives</td>
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<tr>
<td>Field or Factory Practice</td>
<td>S. T. 4 or 5</td>
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</table>

SUGGESTED ELECTIVES:

Accounting.
Quantitative Analysis (Chem. 16).
Steam Tables (M. E. 3).
Physical Chemistry (Chem. 11).
Physical Chemistry Laboratory (Chem. 12).

*A required course taken in the summer vacation following the Junior year.
### SUGAR-HOUSE ENGINEERING DIVISION.

#### FIRST YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
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<tbody>
<tr>
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<td>Algebra and Calculus</td>
<td>Math. 4</td>
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<td>English Composition</td>
<td>Eng. 1</td>
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<td>Chemistry</td>
<td>Chem. 1 or 2</td>
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<tr>
<td>Mechanical Drawing</td>
<td>M. D. 1</td>
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<tr>
<td>Plane Surveying</td>
<td>C. E. 1</td>
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<td>Elective</td>
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Suggested Elective: French or Spanish.

#### SECOND YEAR

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<tr>
<td>Organic Chemistry</td>
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</tr>
<tr>
<td>Calculus</td>
<td>Math. 5 and 6</td>
<td>3</td>
</tr>
<tr>
<td>Shop and Office Methods</td>
<td>M. E. 9</td>
<td>2</td>
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<td>Military or Phys. Ed.</td>
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#### THIRD YEAR

<table>
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<th>Credits 2nd Sem.</th>
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<tbody>
<tr>
<td>Economics</td>
<td>Econ. 5 and 6</td>
<td>3</td>
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<tr>
<td>Quantitative Analysis</td>
<td>Chem. 10</td>
<td>3</td>
</tr>
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<td>Sugar Analysis</td>
<td>S. T. 1</td>
<td>3</td>
</tr>
<tr>
<td>Mechanics</td>
<td>C. E. 2 and 3</td>
<td>4</td>
</tr>
<tr>
<td>Steam Mach. or Hydraulics</td>
<td>M. E. 1 or C.E. 7</td>
<td>3</td>
</tr>
<tr>
<td>Electrical Machinery</td>
<td>E. E. 1</td>
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<tr>
<td>Electrical Measurements</td>
<td>Phys. 3</td>
<td>2</td>
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<tr>
<td>Engineering Laboratory</td>
<td>X. E. 4</td>
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#### FOURTH YEAR

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<tbody>
<tr>
<td>Sugar-house Calculations</td>
<td>S. T. 1a</td>
<td>1</td>
</tr>
<tr>
<td>Sugar Manufacture</td>
<td>S. T. 2</td>
<td>3</td>
</tr>
<tr>
<td>Hydraulics or Steam Mach.</td>
<td>C.E. 7 or M.E. 1</td>
<td>3</td>
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<tr>
<td>Engineering of Sugar Plants</td>
<td>M. E. 6</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
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<tr>
<td>Factory Practice</td>
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<td>16</td>
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</tbody>
</table>

*Taken in the summer vacation following the Junior year.*
The Course in Home Economics is designed to meet the needs of women students who wish to specialize either in the applications of art or science, or both, to the household. The work of the first two years is prescribed, that of the last two elective within the range of subjects belonging either to Household Science or Art, or closely related thereto. In selecting the elective subjects of Junior and Senior years the student will be assisted by her Faculty Adviser to arrange a program adapted to her special needs and capabilities.

### OUTLINE OF HOME ECONOMICS COURSE

#### FIRST YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits</th>
<th>1st Sem.</th>
<th>Credits</th>
<th>2nd Sem.</th>
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<tbody>
<tr>
<td>English Composition</td>
<td>Eng. 1</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chem. 1 or 2</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Drawing</td>
<td>A. &amp; D. 1</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Textiles and Elementary Garment Making</td>
<td>A. &amp; D. 8</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
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<td>6</td>
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<tr>
<td>Physical Education</td>
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</tbody>
</table>

*Suggested Elective* for students planning to major in home economics: Mathematics 1 and 2.

#### SECOND YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits</th>
<th>1st Sem.</th>
<th>Credits</th>
<th>2nd Sem.</th>
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<tbody>
<tr>
<td>English</td>
<td>Eng. 2 or 3</td>
<td>2 or 3</td>
<td>2 or 3</td>
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</tr>
<tr>
<td>Color and Design</td>
<td>A. &amp; D. 3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Dressmaking and Designing</td>
<td>A. &amp; D. 9</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Food Economics</td>
<td>H. S. 2</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>6</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Physical Education</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

*Suggested Elective* for students majoring in home economics: Physics 2a, Organic Chemistry (Chem. 5).
THIRD AND FOURTH YEARS

*Prescribed.* The following subjects must be taken in Junior and Senior Years:

- Art and Design 4
- Household Science 3
- Physiology 1
- Economics 5 and 6
- Physical Education

*Electives.* Courses to complete the minimum requirements of 132 credits for graduation must be selected from the following:

- Art and Design 5, 6, 7, 10, 12
- Household Science 4, 5, 8
- Botany 1, 4
- Zoology 1, 2
- Entomology 1, 10
- Chemistry 4, 9
- Sociology 1, 2
- Accounting (Com. 1, 2)
- History (not over 12 credits)
- Advanced English courses
- American Literature
- Education
- Foreign Language (not over 18 credits)

**GENERAL SCIENCE**

The General Science Course is designed for those students who do not wish to enter upon the strictly limited programs of study of the more professional courses of Engineering, Agriculture, Home Economics and Sugar Technology. It is intended that each student shall have a knowledge of the elements of a considerable range of subjects, and at the same time specialize in some field sufficiently to become acquainted with its more advanced phases and proficient in its methods of work. In order to accomplish this result the student is allowed considerable latitude in the selection of studies, and yet required to carry the major part of his elective work in some one group of sciences.

In order to graduate in the General Science Course the student must have passed the prescribed studies of the first and second years and have satisfactorily completed not less than a total of 136 credits. One of the two groups—Physical Sciences or Biological Sciences—must be selected, and not less than 60 per cent of the elective work of the course taken in this major group.

In the group of studies designated as Physical Sciences, the student has the opportunity of electing work in Chemistry, Physics, and Mathematics, thus becoming trained to take up work as a chemist or as an instructor in the physical sciences.

If the student prefers work in the group known as Biological Science he has the privilege of choosing such subjects as Botany, Zoology, Entomology and Household Science.

Students who plan to specialize in Chemistry, Zoology or Botany should have a working knowledge of French, since it is essential for advanced work in these subjects. Such students,
therefore, should elect French in the Freshman year. In every case, the student should consult for advice the head of that department in which he plans to take the major course.

Students who plan to meet the entrance requirements of medical schools by either two or three years of resident collegiate work, electing the major portion of their work in science, should enter this course. Electives chosen must, to a large extent, be governed by the standard admission requirements of medical schools (see page 29). Attention of entering students is particularly called to the prerequisite for course Physics 2b. Students who enter with four years of high school mathematics are not required to elect mathematics 1 and 2 in their Freshman year.

OUTLINE OF GENERAL SCIENCE COURSE

PRESCRIBED WORK

FIRST YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>Eng. 1</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chem. 1 or 2</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>9-11</td>
<td>9-11</td>
</tr>
<tr>
<td>†Military or Phys. Education</td>
<td>2 or 1</td>
<td>2 or 1</td>
</tr>
</tbody>
</table>

SECOND YEAR

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2d Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Eng. 2 or 3</td>
<td>2 or 3</td>
</tr>
<tr>
<td>Electives</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>†Military or Phys. Education</td>
<td>2 or 1</td>
<td>2 or 1</td>
</tr>
</tbody>
</table>

ELECTIVE WORK

GROUP A.

PHYSICAL SCIENCES

1st Year.

- ^2nd Year.
- ‡3rd and 4th Years.

| Math. 1, 2, 3, 4 | Math. 5, 6 | Math. 7, 8, 9, 10 |
| Geog. 1, 2 | Phys. 2, 2a, 2b | Chem. 9, 9a, 10, 11, 12, 15, 16, 18, 23 |
| Drawing | Chem. 4, 5, 6 | |
| Language or History | Geol. 2 or C. E. 1 | Sugar Tech. 1, 2, 1a, Phys. 3, 4, 5 |
| History | M. D. 3 or Language | C. E. 2, 3, 7 or M. E. 1, 2 |
| or History | | E. E. 1 or Geol. 4, 5, 6 |

*First year electives are open to Sophomores.
‡First year electives taken by Juniors and Seniors count half credit only. Second year electives are open to Juniors and Seniors.
‡Two credits for men; 1 credit for women.
**Group B.**

**BIOLOGICAL SCIENCES.**

<table>
<thead>
<tr>
<th>1st Year</th>
<th><em>2nd Year</em></th>
<th>†3rd and 4th Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bot. 1</td>
<td>Bot. 2, 6</td>
<td>Bot. 3, 4, 5, 8, 9, 17</td>
</tr>
<tr>
<td>Zool. 1, 2</td>
<td>Chem. 5, 6</td>
<td>Chem. 9, 9a</td>
</tr>
<tr>
<td>Geog. 1, 2</td>
<td>Zool. 3</td>
<td>Zool. 4, 7, 10</td>
</tr>
<tr>
<td>H. S. 1</td>
<td>Ent. 1, 2</td>
<td>Ent. 4, 5, 6, 10, 16</td>
</tr>
<tr>
<td>Drawing</td>
<td>Geol. 2, 3</td>
<td>Agr. 2, 3, 5, 6, 12, 13</td>
</tr>
<tr>
<td>Language</td>
<td>H. S. 2</td>
<td>Geol. 4, 5, 6</td>
</tr>
<tr>
<td>or History</td>
<td>Physics 2, 2a, 2b</td>
<td>H. S. 3, 4, 8</td>
</tr>
<tr>
<td>History</td>
<td>Physiol. 1</td>
<td>Econ. 5, 6</td>
</tr>
<tr>
<td></td>
<td>Psychology 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or History</td>
<td></td>
</tr>
</tbody>
</table>

*First year electives are open to Sophomores.
†First year electives taken by Juniors and Seniors count half credit only. Second year electives are open to Juniors and Seniors.
COLLEGE OF ARTS AND SCIENCES

ORGANIZATION.

The College of Arts and Sciences was created by the Act of the 1919 Legislature of the Territory of Hawaii which established the University of Hawaii. Officially it came into being on July 1, 1920.

The College of Arts and Sciences has a twofold purpose. Its first aim is to make possible a comprehensive and thorough acquaintance with those fields of thought and achievement, both in the humanities and the sciences, upon which our present civilization has been reared. It seeks also, through the operation of a system of group electives, commencing with the Sophomore year, to prepare the student for those activities which are professional rather than technical in their nature, such as law, medicine, teaching, journalism, commerce, and public and social service.

In the main, therefore, the courses of study offered in this College are those generally recognized as forming the basis of a liberal education. In one important particular there has been a deviation, and that because of Hawaii's unique geographical position. Standing midway between continental America and the Orient, Hawaii must understand the Orient as well as the Occident. More than usual attention is therefore given to the languages, literature, philosophy, and history of the lands bordering upon the Pacific. Especial emphasis will also be given to the study of still other aspects of the Orient in their bearing upon the development of commerce between East and West.

Graduates from the College of Arts and Sciences will be granted the degree of Bachelor of Arts.

Requirements for graduation—affecting candidates registered before September, 1922. To be entitled to the degree of Bachelor of Arts, the candidate must have passed in all the prescribed studies, and have received credit for a minimum of 136 semester hours.

Requirements for graduation—affecting candidates registering in September, 1922, and thereafter. To be entitled to the degree of Bachelor of Arts, the candidate must

(a) have passed all the prescribed studies (see p. 43).
(b) have received credit for a minimum of 128 semester hours, and
(c) have gained a minimum of 136 grade points,* of which at least 69 must have been gained during the last half of the course.

*For an explanation of the grade point see page 20.
Choice of Requirements for Graduation. Students who were registered as candidates for the degree of Bachelor of Arts before September, 1922, may elect whether they will meet the old or the new requirements.

Number of semester hours a semester. Except as provided below, no student in the College of Arts and Sciences shall be permitted to register for more than 16 semester hours in any semester, in addition to the prescribed courses in Military Drill and Physical Education. Students who have, however, during the preceding semester, gained a minimum of 30 grade points may register for 18 credit hours, in addition to Military Drill and Physical Education; as may freshmen during their first semester, provided their grades in the subjects offered for entrance average 85% or more.

Although the greater part of the work is elective, the student is expected to select his studies in conformance with a well-defined program. To this end he registers in one of the five groups of allied subjects indicated below, and is given a Faculty Adviser who will assist him in his choice of studies. No credit will be given for any course not regularly entered, with the adviser's approval, upon the registration card.

Group I. History, Economics, and Social Science.
Group II. Languages, Literature, and Art.
Group III. Natural and Physical Sciences.
Group IV. Education.
Group V. Commerce.

By the end of the Sophomore year each student must have completed some one of the following courses, or its equivalent: French 3, Spanish 3, Hawaiian 3, Japanese 3, Chinese 5. Courses taken after the Sophomore year for the purpose of meeting this foreign language requirement will not carry credit hours.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

128 semester hours to graduate; 43 prescribed, 85 elective.

PRESCRIBED STUDIES.

FRESHMAN YEAR.

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>Eng. 1</td>
<td>3</td>
</tr>
<tr>
<td>*A Science</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>American Institutions</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>**Elective</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>†Military or Physical Education</td>
<td></td>
<td>2 or 1</td>
</tr>
</tbody>
</table>

*May be taken in Sophomore year.
**See above.
†One credit for women; 2 credits for men.
**Arts and Sciences**

**Sophomore Year.**

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2nd Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Literature</td>
<td>Eng. 3</td>
<td>3</td>
</tr>
<tr>
<td>Logic</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Psychology</td>
<td>Psych. 1</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>†Military or Physical Education</td>
<td></td>
<td>2 or 1</td>
</tr>
</tbody>
</table>

**Junior Year.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argumentation</td>
<td>2</td>
</tr>
<tr>
<td>Community and Personal Hygiene</td>
<td>1</td>
</tr>
<tr>
<td>‡Physical Education</td>
<td>1</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
</tr>
</tbody>
</table>

**Senior Year.**

All electives, except Physical Education for women.

**Group Electives.**

In addition to the courses listed above as required of all students in the College of Arts and Sciences, certain elective courses must be chosen to meet the Group Requirements stated below. Other electives may be chosen as the student desires, provided the prerequisites of the courses are satisfied. The student is expected, however, to map out a plan of study with the aid of the Faculty Adviser. The Group Electives are listed under the heads of the respective groups, together with the year in which they can ordinarily be most advantageously taken.

**Group I—History, Economics, and Social Science.**

Students preparing for the study of law or for public or social service will select this group. Of the 85 elective semester hours, at least 42 are to be chosen from courses in History and Social Sciences, Political Science, Sociology, and Economics.

- **First Year:** History 2, 4, 5.
- **Second Year:** History 8, 17, 18; Political Science 3; Economics 5 and 6.
- **Third Year:** History 12, 15, 19, 21; Political Science 2; Sociology 1 and 2; Economics 7, 9, 12.
- **Fourth Year**: History 9, 10, 20; Political Science 11; Sociology 3 and 4, 5 and 6; Economics 13, 14, 15.

**Group II—Languages, Literature, and Art.**

Students preparing for Journalism should select either this Group or Group 1.

Art and Design 5 and 6 is a required course in this Group.

*Junior courses are open to Seniors.
†One credit for women; 2 credits for men.
‡Physical education is required of women during the four years.
Of the elective courses, a minimum of 36 semester hours must be chosen from the courses in English, French, Spanish, Hawaiian, Chinese, Japanese, and Art and Design 1, 4 and 7.

Group III—Natural and Physical Sciences

Students preparing for medicine or dentistry will select this Group, provided they are candidates for the degree of Bachelor of Arts. See page 29.

Of the 85 elective semester hours, at least 48 must be chosen from some group of related sciences. A statement of the minimum requirements of medical schools and of subjects strongly urged appears on pages 29, 30.

First year: Chemistry 1 or 2; Botany 1; Zoology 1 and 2; Mathematics 1 and 2, 3 and 4.
Second year: Chemistry 4, 5 and 6; Zoology 7; Physics 2b; Botany 2, 9.
Third year: Chemistry 9, 10, 12, 13, 14; Botany 3, 6; Zoology 3, 4; Entomology 1 and 2.
Fourth Year* Chemistry 15, 16, 18; Botany 4, 8, 17; Zoology 10; Entomology 4, 10, 16.

Group IV—Education

The number of semester hours to be chosen within this Group will vary with the subject or subjects the student is preparing to teach. In addition to a specified number of courses dealing with the subjects to be taught (see pp. 47, 48) the student will select the courses in Psychology and Education aggregating at least 19 semester hours.

Second year: Education 1.
Third year: Education 4; Educational Psychology 3.
Fourth Year*: Education 5 and 6, 7; Psychology 4 and 5, 10 and 11.

Group V—Commerce

Students desiring training for Commerce will register in this Group. Of the 85 elective semester hours at least 46 must be chosen from courses in Economics and Commerce. Students in Commerce may advantageously follow such an outline as the following, which looks forward both to local and international trade.

Honolulu by its very location affords unsurpassed advantages to young men wishing to equip themselves for the business of commerce. There is a constant and close touch here with the commerce of all Pacific countries, and some or many of their nationals are in residence here. This is not an "outpost," but a center of trade.

*Junior courses are open to Seniors.
**OUTLINE OF COURSE IN COMMERCE.**

**FIRST YEAR.**

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2nd Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>Eng. 1</td>
<td>3</td>
</tr>
<tr>
<td>American Institutions</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>A modern language (French, Spanish, Japanese, or Chinese)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Geography 1, 2</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Elective (Mathematics or History advised)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Military or Physical Education</td>
<td></td>
<td>2 or 1</td>
</tr>
</tbody>
</table>

**SECOND YEAR.**

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2nd Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Literature</td>
<td>Eng. 3</td>
<td>3</td>
</tr>
<tr>
<td>A modern language (cont.)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Elements of Economics</td>
<td>Econ. 5, 6</td>
<td>3</td>
</tr>
<tr>
<td>Accounting</td>
<td>Com. 1, 2</td>
<td>3</td>
</tr>
<tr>
<td>Logic</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Psychology 1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Military or Physical Education</td>
<td></td>
<td>2 or 1</td>
</tr>
</tbody>
</table>

**THIRD YEAR.**

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2nd Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argumentation</td>
<td>Eng. 6</td>
<td>2</td>
</tr>
<tr>
<td>Hygiene</td>
<td>Physiol. &amp; Hy.</td>
<td>1</td>
</tr>
<tr>
<td>Money and Banking</td>
<td>Econ. 7</td>
<td>3</td>
</tr>
<tr>
<td>Business Law</td>
<td>Com. 7, 8</td>
<td>2</td>
</tr>
<tr>
<td>Business Organization and Administration</td>
<td>Com. 9, 10</td>
<td>3</td>
</tr>
<tr>
<td>Marketing</td>
<td>Com. 13, 14</td>
<td>3</td>
</tr>
<tr>
<td>Elective in Commerce or Economics</td>
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<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

**FOURTH YEAR.**

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Credits 1st Sem.</th>
<th>Credits 2nd Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Accounting Seminar</td>
<td>Com. 5, 6</td>
<td>2</td>
</tr>
<tr>
<td>or Foreign Trade</td>
<td>Com. 17, 18</td>
<td>3</td>
</tr>
<tr>
<td>Elective in Commerce</td>
<td>Com. 3, 4; 15, 16; 19, 20</td>
<td>6</td>
</tr>
<tr>
<td>Elective in Economics or Commerce</td>
<td>Econ. 9, 12, 15</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>3 or 4</td>
</tr>
</tbody>
</table>

†One credit for women; 2 credits for men.
‡May be taken in senior year.
DETAILED STATEMENT OF
SUBJECTS OF INSTRUCTION

LANGUAGES AND LITERATURE

ENGLISH.

1. COMPOSITION. The principles of exposition, description, and narration; analysis of illustrative specimens; frequent written exercises, and personal conferences with instructor; occasional exercises in oral composition; collateral reading. Designed to lead not only to correctness of expression, but also to a knowledge of constructive principles. Required of all Freshmen. Prerequisite: the successful completion of at least three years of high school English or the equivalent. First and second semesters, 3 credits each. 

   Assistant Professor Neil, Miss Schwartz and Mr. Blue.

2. TECHNICAL AND BUSINESS ENGLISH. The preparation of scientific and technical data for presentation in written form. May be taken in place of English 3 by Sophomores in the College of Applied Science. First and second semesters, 2 credits each. 

   Assistant Professor Hunt.

3. ENGLISH LITERATURE. A survey of the development of English literature, from Beowulf to Stevenson. Texts: Neilson and Thorndike's "History of English Literature," the "Century Readings in English Literature," Marvin's "History of European Philosophy," and selected novels and plays. Required of all Sophomores in the College of Arts and Sciences, and may be elected by all other Sophomores in place of English 2. First and second semesters, 3 credits each. 

   Professor A. L. Andrews.

4. AMERICAN LITERATURE SINCE 1870. The study of representative poems, essays, and fiction. Prerequisite: English 3. First semester, 3 credits. 

   Professor A. L. Andrews.

5. PUBLIC SPEAKING. A study of the principles underlying oral expression and practice in public speaking. Open to all Juniors and Seniors. First and second semesters, 2 credits each. 

   Professor A. L. Andrews.

6. ARGUMENTATION. The theory of argumentation; the analysis of representative arguments; practice in the writing of briefs and forensics. Required of all Juniors in Arts and Sciences. First and second semesters, 2 credits each. 

   Assistant Professor Hunt.
7. The Novel. The history of the novel in England. Particular attention will be given to social and literary tendencies as reflected in representative novels from De Foe to Meredith. Prerequisite English 3. First and second semesters, 3 credits each.

Assistant Professor Neil.

8. The Short Story. The principles of the short story, analysis of representative stories; collateral reading; practice in short story writing; conferences with instructor. Prerequisites: English 3 and 4. Second semester, 3 credits.

Professor A. L. Andrews.

30. Recent Literature. Designed primarily for Seniors in Arts and Sciences. The point of departure will be F. S. Marvin's "Recent Development in European Thought." Translations of Russian, French, Belgian, and Norwegian literature will be read, as well as some of the more significant books of England and America. First and second semesters, 3 credits each.

Professor A. L. Andrews.


Assistant Professor Neil.

32. Victorian Poetry. A study of the more considerable poets of the period with special emphasis upon Tennyson and Browning. Prerequisite: English 3. Second semester, 3 credits. Second semester, 3 credits each.

Mr. Kinner.

33. Shakespeare. A study of four of the more important plays, with collateral reading. Prerequisite: English 3. First semester, 3 credits. (Will not be given in 1924-25).

Assistant Professor Neil.

34. Recent British Drama. A study of the more important playwrights from Wilde to Barrie. Certain plays of Ibsen will be read in connection with the study of technique. Collateral reading. Prerequisite: English 3. Second semester, 3 credits. (Will not be given in 1924-25).

Assistant Professor Hunt.

35. Free Reading. Eight hours of reading weekly with informal class reports and discussions. Designed to lead to an acquaintance with some important books which are not read in connection with other courses. Prerequisites: English 3 and the approval of the Instructor. First and second semesters, 2 credits each.

Miss Schwartz.
1. **Elementary Course.** Phonetics, dictation, conversation reading of easy prose and poetry. Texts: Fraser and Squair's French Grammar; Talbot's "La France Nouvelle"; selected readings from Merimee, Halevy, Loti, and others; Fournon and Broussard's "Pour Parler Français." First and second semesters, 3 credits each. *Professor Pecker.*

3. **Nineteenth Century French Novel.** Reading of selected masterpieces of Hugo, Daudet, Balzac, Sand and others. Conversation, essays, and lectures. Comfort's "Exercises in French Composition." Prerequisite: one year of French in college or two years in preparatory school. First and second semesters, 3 credits each. *Professor Pecker.*

5. **Contemporary French Literature.** (This course and all to follow are conducted entirely in French.) Critical study of the most modern movement in French prose, with especial attention to war literature. Texts for use in class are imported directly from Paris. Essays, lectures, and discussion on contemporary topics. Prerequisite: Two years of College French or equivalent. First and second semesters, 3 credits each. *Professor Pecker.*

7. **Classic Drama.** Masterpieces of Corneille, Racine and Molière. Lectures in French upon the literary history of the period. Additional outside reading and research will be assigned. Prerequisite: three years of college French or equivalent. First semester, 2 credits. *Professor Pecker.*

8. **Romantic School.** Readings from Lamartine, de Musset, Hugo, etc. Lectures in French upon the significance and influence of the Romantic movement. Individual research and reports on assigned topics. Prerequisite: French 7. Second semester, 2 credits. *Professor Pecker.*

9. **Modern French Drama.** This course alternates with French 7. Selected plays of Brieux, Hervieu, Rostand, Maeterlinck, Bernard, Becque, Bernstein, and others. Rapid reading with essays, lectures, and discussions. Individual research and reports. Prerequisite: Same as for French 7. First semester, 2 credits. (Not offered in 1924-25). *Professor Pecker.*

10. **Advanced French Seminar.** This course alternates with French 8. Continuation of study as outlined for French 9, or similar work on any phase or period of French literature in which students may be interested. Prerequisite: French 9. Second semester, 2 credits. (Not offered in 1924-25). *Professor Pecker.*

13. **Phonetics.** A study of French sounds. Texts: Geddes,
Spanish

"French Pronunciation"; Passy, "Lectures variés mises en transcription phonétique"; Ballard's Phonetic Reader; Passy-Rambeau, "Chrestomathie française." Phonetic transcription of newspaper editorials and original anecdotes. Conversation. Required of those majoring in Romance languages. Prerequisite: two years of college French. First and second semesters, 1 credit each.

Professor Pecker.


Professor Pecker.


Professor Pecker.


Professor Pecker.

7. Modern Spanish Novel. Rapid reading course with advanced work in composition and conversation. Review of grammar. This course alternates with Spanish 5. Prerequisite: Two years of college Spanish. First semester, 2 credits.

Professor Pecker.


Professor Pecker.
HAWAIIAN

1. Elementary Course for Beginners in the Hawaiian Language. Pronunciation, vocabulary, dictation, reading of easy prose, elementary grammar and common present-day Hawaiian phrases. First and second semesters, 3 credits each. 

   Mr. Beckley.

2. Intermediate Hawaiian. Conjugation, translation of short native editorials, Hawaiian proverbs, and native versions of religious history; declamation and composition. Comments on current topics. First and second semesters 3 credits each. 

   Mr. Beckley.

3. Advanced Hawaiian. Reading and translating of legends, meles, and old blue laws into English, and local laws on land tenure and selected prose into Hawaiian. Andrews on Syntax; comparison of Hawaiian and European classics; composition, literal and figurative, of Hawaiian songs. First and second semesters, 3 credits each. 

   Mr. Beckley.

4. Hawaiian Literature and Arts. Comparison of Hawaiian meles with those of other Polynesian groups; study of ancient traditions, arts and crafts of old Hawaii; composition of meles and songs, both literal and figurative. First and second semesters, 2 credits each. 

   Mr. Beckley.

JAPANESE.


   Professor Harada.

2. Intermediate Course. “How to Read and Write Japanese Correctly.” Reading, conversation, and writing. First and second semesters, 3 credits each. 

   Professor Harada.

3. Advanced Course. Reading and translation of modern Japanese literature. First and second semesters, 2 credits each. 

   Professor Harada.


   Professor Harada.

CHINESE

1. Beginner’s Course. The new phonetic system, construction of characters; grammar, conversation, and composition. Text: Lee’s “Every Day Chinese.” First and second semesters, 3 credits each. 

   Professor Lee.
3. **Second Year Chinese.** Mastering of more characters; learning how to read and write letters and articles; translation and composition; reading of modern prose and poems. Text to be selected. First and second semesters, 3 credits each.

   *Professor Lee.*

5. **Third Year Chinese.** Study of selected works of Confucius and Mencius and of the masterpieces of modern writers. Translation and essay-writing. Texts: “The Confucian Analects and Works of Mencius” with original texts by James Legge. “Specimens of Pai Hua Style” by Ho Chun Ying. Prerequisite: two years of college Chinese or its equivalent. First and second semesters, 3 credits.

   *Professor Lee.*

7. **Chinese Literature.** A brief survey of the development of Chinese literary work from 10th century B.C. to the end of the Tsing Dynasty (A.D. 1911). Selected readings from representative authors and analysis of some of the masterpieces. Texts: Giles’ “History of Chinese Literature” and “Development of Chinese Literature” by Wang Mon Tsang. Prerequisite: 3 years of college Chinese or its equivalent. First and second semesters, 3 credits each.

   *Professor Lee.*

   *(Not to be given 1924-25).*

9. **Historical Novels.** Study of several of the best written novels, particularly the “Shui Hui Churn” or The Story of the Men of the Water Marshes” and the “Tsin Han Yen Yi” or “The Story of the Fall of Tsin and the Rise of Han.” Prerequisite: 3 years of college Chinese or its equivalent. First and second semesters, 3 credits each.

   *Professor Lee.*

10. **Chinese Institutions.** A Lecture Course with reference readings. Study of the development of the various Chinese institutions—domestic, religious, political, educational, etc. Second semester, 2 credits.

   *Professor Lee.*

**HISTORY AND SOCIAL SCIENCES**

1. **Mediaeval History.** The problems of the Middle Ages, between the years 378-1250. Texts: Emerton’s “Introduction to the Middle Ages,” and Emerton’s “Mediaeval Europe.” First and second semesters, 3 credits each. Prerequisite: History 2.

   *(Not offered 1924-1925).*

   *Miss Yoder.*

2. **General European History.** A general history of European civilization. A study of the development and expansion of European civilization from the earliest times to the beginning of the World War. First and second semesters, 3 credits each.

   *Professor Leebrick.*

3. **Economic History.** The history of mediaeval guilds.
and industrial problems through the establishment of the factory system will be treated in the first semester. The history of invention, of socialism, of labor unions, of capital and of the question of state control with especial emphasis on these events in the United States, in the second semester. Prerequisite: History 2 or 5. First and second semesters, 3 credits each.

(Not offered 1924-25).

4. Ancient History. A survey of the growth of civilization in the Mediterranean region with emphasis on Greek and Roman civilizations to the sixth century A.D. No prerequisites. First and second semesters, 3 credits each. 

Miss Yoder.

5. American History. A general course in American history. The first semester deals with the discovery and settlement of all nations in North America, with the growth of the Colonies and to the achieving of independence. The second semester deals with the development of the United States and its growth since 1790, considerable attention being devoted to the period since the Civil War. First and second semesters, 3 credits each.

Mr. Blue.

6. History of Europe since 1800. The history of diplomacy and international developments in Europe in the Nineteenth and Twentieth Centuries. Attention is called to the influence of international movements in their world aspects. No one text is used, but the student is advised to buy one of several recommended texts. Prerequisite: History 2. First and second semesters, 2 credits each. (Not offered in 1924-1925).

Professor Leebrick.

7. United States History. A study of the early history of the United States. The first semester covers the separation from Great Britain and the period of the American Revolution. The second semester deals with the organizations of the States into the United States under the "Constitution" and subsequent developments to about the year 1800. Text to be selected; assigned reference readings. Prerequisite: American Institutions or History 5. First and second semesters, 3 credits each.

Miss Yoder.

8. English History. A general course in English History with emphasis on the development of English political institutions. Conducted as a reading course with one regular recitation a week and frequent consultations. Given especially for pre-legal students. First and second semesters, 3 credits each.

Mr. Blue.

9. European Expansion in the Pacific Area. A study of the expansion of European peoples and civilization in the lands in and bordering the Pacific Ocean. A course for advanced stu-
History and Social Sciences

dents conducted as a reading seminar course. Admission only by the consent of the instructor. First and second semesters, 2 credits each. Hours arranged with instructor.

Professor Leebriick and Mr. Blue.

10. History of the Pacific Coast of North America. Spanish exploration and colonization by sea and land; approaches of the French, English, Russians, and Americans; official and trading expeditions; the contest for control of the Northwest Coast. A reading and discussion course designed to develop points of contact with the Hawaiian Islands. Each member of the class will be required to write a paper, which may, with the approval of the department, be expanded into a thesis, with additional credit. Admission only by consent of the instructor. Not open to Freshmen and Sophomores. First and second semesters, 2 credits each (Not offered 1924-1925).

Mr. Kuykendall.

12. CONTEMPORARY UNITED STATES HISTORY (1868-1924). A survey of the political and economic expansion of the United States since the Civil War. The second semester will emphasize the foreign relations of the United States in this period. Prerequisites: American Institutions or History 3 or 5. First and second semesters, 3 credits each.

Mr. Blue.

15. HISTORY OF JAPAN. Readings of standard works on the history and development of the Japanese people, with supplementary lectures. Special attention is given to the development of feudalism and of modern Japan; the development of political, social, intellectual, and religious movements from the time of the arrival of Commodore Perry, in 1852, to the present time. First and second semesters, 2 credits each.

Professor Harada.

17. UNITED STATES MILITARY HISTORY AND POLICY. A brief study of the important military events in the history of the United States and their relation to a proper military policy for the nation. Open to all students of the University. Texts: The Senior R.O.T.C. Manual and Upton's "Military Policy of the United States." Second semester, 1 credit.

Professor Clarke.

18. THE WORLD WAR. With special reference to the participation by the United States. First semester, 1 credit.

Professor Clarke.

19. HISTORY OF THE CHINESE PEOPLE. A study of their origin; the development of their political institutions and of their diplomatic relations with foreign countries; their awakening, and their present-day problems. Texts: Li Ung
Bing's "Outlines of Chinese History," and Ban's "The Foreign Relations of China." Assigned reference readings and supplementary lectures. This course is conducted entirely in English. First and second semesters, 2 credits each. Professor Lee.

20. HAWAIIAN HISTORY. A seminar course, open only to Seniors and graduate students by permission of the instructor. Each member of the class will be assigned a special subject for investigation throughout the year, and will be required to present a paper embodying the results of the investigation. No credit will be given for the first semester's work unless the course is also taken during the second semester. First and second semesters, 2 credits each. Mr. Kuykendall.

21. HISTORY OF THE HAWAIIAN ISLANDS. A general course, covering the entire history of the group from the earliest times to the present day. Lectures, assigned readings, and quizzes, both oral and written. Second semester, 3 credits. Professor Leebrick, Mr. Kuykendall and Mr. Blue, assisted by special lecturers from among local authorities on various phases of Hawaiian history.

POLITICAL SCIENCE.

1. AMERICAN INSTITUTIONS. The aim is to teach citizenship by familiarizing students with the various institutions of American government and to gain a clear insight with new working principles. Training is given in reading newspapers, magazines and books; discussions of current events, local, national and international, are frequent. The discussion-recitation method is followed. Text: Munro's "The Government of the United States." The library has several copies of supplementary texts. First and second semesters, 3 credits each. Professor Leebrick and Mr. Blue.

2. COMPARATIVE GOVERNMENT. A comparison of the government of the United States with other governments, especially that of Great Britain, France, Switzerland, Imperial Germany. Attention will be given to the principles of Political Science, and the end of the second semester will be devoted to a brief examination of current political ideas. Text: Bryce, "Modern Democracies." (Not offered 1924-1925). First and second semesters, 2 credits each. Professor Leebrick.

3. POLITICAL SCIENCE. Introduction to Political Science, Political Theory. Texts: R. G. Gettell's "Introduction to Political Science" and "Readings," and other assigned texts. First and second semesters, 3 credits each. Professor Leebrick.
11. A course in history or political science for teachers and others. Course to be arranged with those interested at first session of class. An afternoon time will be arranged. First and second semesters, 2 credits each. 

Professor Leebriick.

EDUCATION AND PSYCHOLOGY

In view of the complex social situation, the peculiar vocational, economic, and political conditions, and the comparative isolation of this Territory, the importance of public education can hardly be over-estimated. The purpose of the courses in education and psychology is to furnish a background of theory and practice which shall prepare the student for effective service in the educational, social, or economic field as teacher, welfare worker, or employment manager. Specifically it is intended to provide professional training for departmental teachers for junior and high schools, and administrators for elementary and secondary schools.

At the present time the Department of Education is equipped to handle only the preparation of teachers for junior and senior high schools.

High schools are beginning to demand that their teachers have a professional training for their work besides a general education. Students looking forward to teaching are advised of the necessity of fitting themselves for this work. Each prospective teacher will be expected to earn at least six units of credit in psychology and thirteen in education, including the principles and practice of teaching and the principles of secondary education. Students must pass an examination in public speaking to be given by the Department of English before the end of the junior year. If this examination is not passed by that time students will be required to take English 5 in the senior year. Every student should be equipped to teach two subjects in the secondary school. This demands concentration on these subjects during the college course. In general students preparing to teach the following subjects should have credits in each during his college course according to the table:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
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<tbody>
<tr>
<td>English</td>
<td>18</td>
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<td>French</td>
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<td>Spanish</td>
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<td>Mathematics</td>
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<td>Biology</td>
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<td>History</td>
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Each student shall submit to and have accepted by the head of the Department of Education before the end of his Sophomore year a written plan of his college course indicating
his subjects of concentration. Deviation from this plan will be allowed in subsequent years only when an equally satisfactory plan can be submitted, or in case changes are made in the courses offered.

The University is desirous of correlating its work with that of the public and private schools as far as possible and will endeavor to arrange a suitable meeting time for some of the more advanced courses when there is sufficient demand from properly qualified teachers-in-service.

EDUCATION.

1. **INTRODUCTION TO EDUCATION.** A treatment of the aims, means, methods and results of education, of the conditions set by the laws of human nature, and of the part that school education plays in the American life. The work is principally readings selected from the University Library. A series of visits to typical educational institutions in Honolulu, illustrating various aspects of the educative process and written reports of these visits are required. Not open to first year students. First semester, 3 credits.

   *Professor Symonds.*

4. **PRINCIPLES OF SECONDARY EDUCATION.** This course deals with the sociological and psychological factors which are the basis of the organization, administration and selection of subject matter of the secondary school. The nature of the adolescent, a history of the development of secondary education, secondary education in other countries, the values in secondary school subjects and the organization of curricula are topics considered. That the secondary school must reorganize to meet the physical, social, vocational and intellectual needs of the pupil and the civic and economic demands of society is the point of view in the course. Reading and individual reports on recent literature. Prerequisite: Education 1 and Educational Psychology. Second semester, 3 credits.

   *Professor Symonds.*

5. **PRINCIPLES OF TEACHING IN SECONDARY SCHOOLS.** This course is an application of the principles laid down by psychology to the conduct of the classroom. The course will open with a review of the principles of learning. This is followed by a discussion of such topics as—diagnosis of the pupils, the aims of instruction, the assignment, supervised study and teaching how to study, the recitation, questioning, reflective thinking, the lesson in appreciation, drill, review, testing, the socialized recitation, the problem of conduct. Readings and reports. Systematic visits to secondary schools will be a part of the course and before the end of the course the student will concentrate his visiting on the class which he intends to take for practice teaching in the second semester. A course for seniors and graduate students who have
earned twelve approved units of credit in education and psychology. First semester, 3 credits. 

Professor Symonds.

6. Practice Teaching in Secondary Schools. Practice teaching in secondary schools in Honolulu. An arrangement exists between the Department of Education and the Department of Public Instruction whereby qualified students may have opportunity to undertake practice teaching in the McKinley High School. Certain private secondary schools in Honolulu also make opportunity for practice teaching. Usually practice teaching involves the responsibility of a class or group for the remainder of the year. Daily lesson plans are required. Conferences will be held frequently at the opening of the semester, but the student is also required to take Psychology 11 parallel with this work in practice teaching. During the semester when practice teaching is carried no student shall take more than 13 semester hours, exclusive of Public Speaking.

Credit for this course is not granted if the student has previously held a responsible teaching position for pay, nor is credit for practice teaching granted in transfer from other institutions. Open only to those who have had Education 5 in the first semester of the same year. Second semester, 5 credits.

Professor Symonds.

LOGIC

Logic, Deductive and Inductive. Required of all sophomores in the College of Arts and Sciences. First semester, 3 credits.

Asst. Professor Hunt.

PSYCHOLOGY.

1. Introduction to Psychology. A general course in psychology offering a survey of the various aspects of the mental life. Readings, discussions, and class experiments. An outline of the textbook used will be required. Not open to first year students. Required of Sophomores in Arts and Sciences. Second semester. 3 credits.

Professor Symonds

3. Educational Psychology. Human psychology with special emphasis on the learning process which will take up half of the course. Other topics for consideration will be the original nature of man and individual differences. Prerequisite: Psychology 1 or its equivalent. First semester, 3 credits.

Professor Symonds.

4. Normal and Exceptional Intelligence. A course of lectures and discussions on the development and distribution of human intelligence, the relationship of physical and mental
growth, the methods and aims of psychological examinations, in­cluding personality studies and mental tests. The general aim and direction of the course will be towards the study of individual differences in school children and the methods of discovering and classifying the abnormal, sub-normal, and supernormal. There will be a survey of literature dealing with mental testing, together with assigned readings. Open only to advanced students and experienced teachers after consultation. Prerequisite: Educational Psychology. First semester, credit to be arranged.

5. MEASUREMENT OF INTELLIGENCE. This is a continuation of Psychology 4 and is a practical course in the method of giving standardized individual and group tests. Each student will be expected to make a study involving the use of tests with the tabulation and interpretation of results. A knowledge of elementary statistical methods will be necessary and will be included as part of the semester assignment. In this and the above course a series of case demonstrations will be given at the laboratory of the Psychological and Psychopathic Clinic. Students will be required to attend these demonstrations and to present case histories and test records based on the demonstrations. Second semester, credit to be arranged.

8. DIRECTED READING IN PSYCHOLOGY. Open only to those qualified to do independent work and show results. Either semester, credit to be arranged. Roughly one point of credit is the equivalent of 54 hours of satisfactory work.

Professor Symonds.

9. RESEARCH IN PSYCHOLOGY. An opportunity is offered for graduate students, and others properly qualified, to carry on special investigations. A thesis will be required. Either semester, credit to be arranged. Roughly one point of credit is the equivalent of 54 hours of satisfactory work.

Professors Porteus and Symonds.

11. PSYCHOLOGY OF THE SECONDARY SCHOOL SUBJECTS. A consideration of the psychological aspects of the arrangement and teaching of high school studies. The particular studies to be considered depend on the interests of the class. Applications from psychology to the problems of curriculum construction, drill, measurement, thinking, motivation, and individual differences. Special attention will be given to the construction of practice exercises. Required of all who are taking Education 6. Prerequisite: Psychology 3 or its equivalent. Second semester, 2 credits.

Professor Symonds.
PSYCHOLOGICAL AND PSYCHOPATHIC CLINIC

A Psychological Clinic is now established in connection with the University. Its activities may be comprised under three heads—mental examinations, research, and training in certain fields of applied psychology.

Mental examinations will be conducted of cases referred to the Clinic by juvenile courts, industrial schools and other social welfare agencies. If requested mental surveys of schools and institutions will also be carried out.

Research activities will be concerned mainly with the development and adaptation of mental tests for use in the Territory. Data on various problems in racial psychology will at the same time be gathered and analyzed.

The Psychological Clinic will also provide facilities for properly qualified students to obtain practical training in methods of mental testing and psychological research. This training will be particularly applicable to students wishing to qualify themselves for work in the fields of psychology, sociology and special education. Ordinarily credit will be given for this work under Psychology 9.

SOCIOLOGY

1. INTRODUCTION TO SOCIOLOGY. The social nature of man; the nature of society; social institutions; social evolution. Prerequisite: Two years of college work. First semester, 3 credits.

   Professor Adams.

2. SOCIAL PROBLEMS. Problems of today viewed in relation to each other and to recent progress. Prerequisite: Sociology 1. Second semester, 3 credits.

   Professor Adams.

3-4. A reading course in the literature of some field of social service to accompany Sociology 5-6. Consultations and reports monthly. Semester papers based on reading and practical work. Open only to students believed to be able to do successful work with but little direction. Credit not to exceed 3 units for each semester, to be given according to work accomplished.

   Professor Adams.

5-6. A practical course in social service offered by the University in cooperation with some approved social service agency in Honolulu. The student will devote such time as may be determined upon to actual work under the direction of the head worker of the selected social service agency, and shall be responsible to such head worker. Course to be accompanied by Sociology 3-4. Open only to regular students who have made appropriate arrangements for service. Credit will be based on success.
in the work and the number of units shall be according to the amount of work done, but in no case shall it exceed five for any one semester.

Professor Adams.

ECONOMICS

5-6. ELEMENTS OF ECONOMICS. An introductory course. Organization of production, price, distribution. Economic problems. First and second semesters, 3 credits each. Professor Adams.

7. MONEY AND BANKING. A study of the problems centering around the use of money and credit. Prerequisite: Economics 5, 6. First semester, 3 credits. Professor Adams.

9. TRANSPORTATION. Ocean, rail, and inland water transportation. Prerequisites: Economics 5, 6. First semester, 3 credits. (Not given in 1924-1925). Professor Adams.


13-14. PRACTICAL BANKING. A course in actual work in the Bank of Hawaii and under the direction of the officers of the bank. Students will be given an opportunity to learn the varied sorts of banking procedure, receiving promotion to new kinds of work as their practical efficiency and other conditions may warrant. Students will work two afternoons of each week from one o'clock till the books are balanced. Open only to students who have credit in or are registered in Economics 7 and who are recommended by the professor of economics and accepted by the bank. Reports of progress will be required monthly. Two credits each semester. Professor Adams.


COMMERCE

1-2. ELEMENTARY ACCOUNTING. The proprietorship equation. Principles of debit and credit and application to the balance sheet and the profit and loss statement. Accounting for sole proprietorship and partnership. Three credits each semester. Mr. Van Winkle.

3-4. INTERMEDIATE ACCOUNTING. Accounting for corporations. Voucher systems, valuation of fixed and intangible assets, merchandise, stock-in-trade, mercantile credits, depreciation, fixed liabilities, surplus, reserves, dividends, liquidation, branch house accounting, consolidated balance sheet, accounts and reports of
receivers and trustees. Prerequisites: Commerce 1, 2. Three credits each semester.  

5-6. ADVANCED ACCOUNTING SEMINAR. The fundamental principles of accounting applied to specific lines of business such as that of a factory, a wholesale store, a plantation, or a public utility. Each student will study some one type of business, devise a suitable system of accounts for its use, and incorporate the results of the investigation in the form of a thesis to be presented orally before the class and a copy to be retained by the department. Prerequisites: Commerce 1, 2, 3, 4. Two credits each semester.  

Mr. Van Winkle.

7-8. BUSINESS LAW. Lectures and Reading. Two credits each semester. (Not given in 1924-1925).  

Mr. Steadman.

9-10. BUSINESS ORGANIZATION AND ADMINISTRATION. The various forms of organization, structure, legal aspects, financing, factory location, administration, labor, scientific management, finance, statistical control, the use of the budget, forecasting. Prerequisites: Commerce 1, 2. Three credits each semester.  

Mr. Van Winkle.

13-14. MARKETING. A survey of our distributive system; tendencies toward integration; market surveys; channels of distribution (general, specialty, department, and chain stores; mail order houses, wholesalers, brokers, sales agents, commission merchants and auctions); their advantages and disadvantages and competitive status; merchandising costs; financing distribution; price adjustments and control; transportation, warehousing; commercial grading; organized exchanges; hedging; business policies and social control. Distribution of farm products and manufactured products treated separately. First and second semesters, 3 credits each.  

Mr. Kinnear.

15. SALES MANAGEMENT. A course devoted to analyzing the essentials of a good sales organization, and dealing with the sales manager, his relation to factory, product and market; price-making and price protection; selection of salesmen; training, equipment; territory; compensation; contests; conventions and conferences; meeting competition; types of sales strategy; principles of selling service; selling cost and expense; sales budgeting; interlocking selling and advertising effort. Practical illustrative problems. First semester, 2 credits.  

Mr. Kinnear.

16. ADVERTISING. Special emphasis is devoted to the nature, purpose, and structure of advertising copy; psychological problems involved; mediums; principles of size and position; display; form; border; color; illustration; type principles; arrangement; methods of testing; outdoor and foreign advertising. Second semester, 3 credits.  

Mr. Kinnear.
17-18. FOREIGN TRADE. Theories of foreign trade; foreign investments; colonies; preparing and making shipment; paper technique; handling the risk element; foreign exchange; foreign credits; ocean shipping; marine insurance; export policies; location and types of export departments; direct and indirect methods of exporting; developing markets; types of correspondence and publicity; export salesmen and their control; contracts; collections abroad; fraudulent export schemes. Particular attention will be devoted to trade with the Far East. First and second semesters, 3 credits each.

Mr. Kinne

19. RETAIL MERCHANDIZING. Consideration is given to retail selling methods and store management, with particular reference to local conditions. Attention will be given to store personnel problems; employee turnover; wages and education of salespeople; store location and rent factors; merchandise classification and control; layout and arrangement of displays; stock-turn; advertising; branded and trade-marked goods; determination of most profitable lines; costs of distribution; price policies; credit; financial features; returned goods; delivery; general administrative problems. First semester, 2 credits.

Mr. Kinnear

20. STATISTICS. Statistical indices of business conditions; averages and means of determination; graphic presentation; methods of eliminating seasonal variation and secular trend; moving averages; dispersion; skewness; correlation; internal and external financial and business statistics; index numbers. Second semester, 2 credits.

Mr. Kinnear

MATHEMATICAL AND PHYSICAL SCIENCES

CHEMISTRY.

The chemical laboratories are well equipped with apparatus and supplies for work in general chemistry, qualitative analysis, elementary and advanced quantitative analysis, organic chemistry, sugar technology, and for chemical research. To specify somewhat in detail, the laboratories are supplied with platinum ware, volumetric apparatus, chemical balances, apparatus for gas and oil testing and for food analysis, a bomb calorimeter, polariscopes, spectroscopes, refractometers, and apparatus for work in physical chemistry. Gas, water, and electricity are all at hand, and the equipment of desks and hoods is well adapted to present needs.

1. GENERAL CHEMISTRY. An elementary course in general chemistry, for students without previous training in the subject, designed to serve either as a foundation for further work
in chemistry or as a brief survey of the science for those who do not intend to take further work in chemistry. To be accepted as a prerequisite for advanced courses in chemistry, a grade of 75% or above is required. Students who receive entrance credit in chemistry will not be given University credit in this course. Two hours class room and one period laboratory a week. First and second semesters, 3 credits each.

2. ELEMENTS OF ORGANIC, ANALYTICAL, AND PHYSICAL CHEMISTRY. Designed to qualify students who have had chemistry in preparatory school for advanced courses in the subject, or to serve as a comprehensive survey of the science for students who do not intend to take further work in it. Lectures, recitations, and laboratory work in the three subjects mentioned, devoting approximately one-third of the school year to each. No text-books are used. Lecture notes are required and graded. Two hours class room and one laboratory period a week. First and second semesters, 3 credits each.

Professor Wrenshall.

4. QUALITATIVE ANALYSIS. A course covering the characteristic reactions of the common basic and acidic ions, and group separations of the same. Methods for the solution and analysis of solid unknowns, about fifteen in number, are also included. In the lecture period methods are given and the principles involved in the separation are studied. Text: "Qualitative Chemical Analysis," by Noyes. Prerequisite: Chemistry 1 or 2. Two periods laboratory and one hour class room a week. First and second semesters, 3 credits each.

Professor Wrenshall and Mr. Kirschman.

5. ORGANIC CHEMISTRY. The Aliphatic and Aromatic Series. Lectures, collateral reading, discussions, and frequent quizzes. For those who specialize in chemistry and sugar technology this is accompanied by the laboratory course. Text: Perkin and Kipping's "Organic Chemistry." Prerequisite: Chemistry 1 or 2. Three hours classroom a week. First and second semesters, 3 credits each.

Professor Wrenshall.

6. ORGANIC CHEMISTRY LABORATORY. To be taken in conjunction with Chemistry 5. A study of the preparation, separation and analysis of a number of organic compounds. One period laboratory a week. Text: West's "Experimental Organic Chemistry." First and second semesters, 1 credit each.

Professor Wrenshall.

9. BIOLOGICAL CHEMISTRY. A course consisting of lectures, recitations, supplementary reading, and laboratory periods dealing with the chemistry of air, food constituents, plant and animal life, and nutrition. Prerequisite: Chemistry 1 and 5, or 2.
Two hours classroom and one laboratory period a week. First semester, 3 credits.  

Professor Dillingham.

9a. Agricultural Chemistry. A course consisting of recitations, supplementary reading and laboratory periods dealing with the chemistry of soils, fertilizers, and insecticides. Prerequisites: Chemistry 1 and 5, or 2; and 9. Two hours classroom and two laboratory periods a week. Second semester, 4 credits.  

Professor Dillingham.

10. Quantitative Analysis. The principles of gravimetric and volumetric analysis, including laboratory practice in calibration of glassware, determination of the constants of the balance, and the analysis of pure substances and commercial products. Text: “Quantitative Chemical Analysis,” by Talbot. Prerequisites: Chemistry 4. One hour classroom and two periods laboratory a week. First and second semesters, 3 credits each.  

Mr. Kirschman.

11. Physical Chemistry. An introductory, non-mathematical course in the general principles of chemistry, including the study of pressure-volume relations of gases, properties of solutions, thermo-chemistry, colloids, and laws of energy. Text: Noyes and Sherrill’s “Principles of Chemistry.” Two hours classroom a week. First and second semesters, 2 credits each. Prerequisites: Chemistry 4. (Alternate years; offered 1924-1925).  

Mr. Kirschman.

12. Physical Chemistry Laboratory. A series of laboratory exercises to accompany Chemistry 11. One period a week. First and second semesters, 1 credit each. (Alternate years. Offered 1924-1925).  

Mr. Kirschman.

15. Chemical Literature. A library course in which articles appearing in current chemical periodicals are studied. Prerequisites: Chemistry 1 or 2, 4, and 10. To be taken in conjunction with Chemistry 16. One hour classroom a week. First and second semesters, 1 credit each.  

Professors Dillingham and Wrenshall.

16. Advanced Quantitative Analysis. Analysis of special substances, such as foodstuffs, soils, fertilizers, ores, iron, steel, water, etc. Prerequisites: Chemistry 1 or 2, 4, and 10. Three periods laboratory a week. First and second semesters, 3 credits each.  

Professors Dillingham and Wrenshall.

18. Chemistry Research. The preparation of a thesis on some subject in pure or applied chemistry. Elective course, particularly for graduate students. Hours and credits to be arranged.  

Professors Dean, Dillingham and Wrenshall.

23. Chemistry for Engineers. A course of lectures and recitations covering the chemistry of fuels, water, lubricants, and
materials used in engineering. Text: Benson’s “Industrial Chemistry for Engineering Students.” Required of Juniors or Seniors in Engineering. Prerequisite: Chemistry 1 or 2. Two exercises a week. First and second semesters, 2 credits each. (Alternate years. Not offered 1924-1925).

Professors Dean and Wrenshall.

GEOGRAPHY

1. Physical Geography. The suitability of the earth as the abode of man, with special reference to his dependence on climate, relief, continental exposure to oceans, and on plant and animal life. (This course was formerly designated as Geology 1). First semester, 3 credits. Professor Palmer.

2. Economic Geography. A study of the principles governing the production of the chief raw materials and manufactures of the world and of the commerce in these commodities. Prerequisite: Geography 1. (This course was formerly designated as Economics 4). Second semester, 3 credits. Professor Palmer.

GEOLOGY

2. Physical Geology. The work of the atmosphere, streams, ground water, lakes and oceans, snow and ice, earthquakes and volcanoes. The nature of these agents and the results they accomplish. Text is Pirsson and Schuchert's “Textbook of Geology,” part I, Physical Geology. Prerequisite: Either Chemistry 1 or 2, Botany 1, Zoology 1, or Physics 2, 2a, or 2b. Two recitations and one laboratory period a week. First semester, 3 credits. Professor Palmer.

3. Historical Geology. The history of the earth, of its continents and ocean basins, and of its plant and animal inhabitants. Text is W. J. Miller’s “Introduction to Historical Geology.” Prerequisites: Geology 2. Two recitations and one laboratory period a week. Second semester, 3 credits. Professor Palmer.

4. Geology of Ground Waters. The origin, amount, distribution, circulation, recovery and quality of ground water. Special reference is made to Hawaiian ground water. Prerequisite: Geology 2. Two recitations a week. Second semester, 2 credits. Professor Palmer.

5. Mineralogy. A study of the crystal systems, of the physical, chemical, and morphological criteria for the determination of minerals, leading up to the sight identification of the more common rock-forming and economic minerals. Text
is Ford's "Dana's Manual of Mineralogy." Prerequisites: Chemistry 1 or 2, and 4. One lecture and two laboratory periods a week. First semester 3 credits.  

7. GEOLoGY SEMINAR. Special work in geology may be arranged for students capable of more advanced work. Hours and credits to be arranged  

Professor Palmer.  

23. GEOLoGY FOR ENGINEERS. The work of the various geologic agencies, with especial reference to the structures they produce and the significance of these structures to engineers. Ries and Watson's "Elements of Engineering Geology." Required of Juniors and Seniors in Civil Engineering. Two recitations and one laboratory period a week. First semester, 3 credits. (Alternate years, offered 1924-'25).  

Professor Palmer.  

MATHMATICS.  

1. PLANE TRIGoNOMETRY. Prerequisites: Algebra and Plane Geometry. First semester, 3 credits.  

Professor Donaghho.  

2. ALGEBRA AND ANALYTIC GEOMETRY. Prerequisite: Same as for Course 1. Second semester, 3 credits.  

Professor Donaghho.  

3. ANALYTIC GEOMETRY AND TRIGoNOMETRY. (a) Analytic geometry, plane and solid. (b) Spherical trigonometry. Required of Freshmen in Engineering. Prerequisites: Elementary Algebra, Plane and Solid Geometry, Plane Trigonometry. First semester, 5 credits  

Professor Donaghho.  

4. ALGEBRA AND INTroDUCTORY CALCULUS. (a) A short course in Advanced Algebra, including symmetric functions, partial fractions, irrational functions, simultaneous quadratic equations, binomial theorem, theory of equations, infinite series, logarithms. (b) A short course in differentiation. Required of Freshmen in Engineering. Prerequisite: Course 3. Second semester, 5 credits  

Professor Donaghho.  

5. CALCULUS. Differential and integral calculus. Required of Sophomores in Engineering. Prerequisite: Course 4. First semester, 3 credits.  

Professor Donaghho.  

6. CALCULUS. Continuation of Course 5. Required of Sophomores in Engineering. Second semester, 3 credits.  

Professor Donaghho.  

7. ASTRoNOMY. A brief course in practical astronomy, adapted to the needs of engineering students. Required of students in Engineering. Prerequisites: Courses 3, 4. First semester, 3 credits. Alternates with M. E. 1. (Not offered in 1924-25.)  

Professor Donaghho.  

9. CALCULUS. (a) A list of comparatively simple problems giving a rapid review of many applications of the calculus. (b) Differential Equations. Prerequisites: Courses 5 and 6. First semester, 1 or 2 credits.  

Professor Donaghho.
10. CALCULUS. Continuation of Course 9. Second semester, 1 or 2 credits.  
*Professor Donagho.*

**PHYSICS**

The physical laboratory is equipped in mechanics and heat with substantially the material used in Millikan's *College Course* in those subjects (Mechanics, Molecular Physics, and Heat, Millikan). In light and electricity the following may be mentioned as giving an idea of the grade of apparatus: a Browning spectrometer, gratings, a Lummer-Brodhun photometer, a Kelvin balance, a Carey Foster bridge and standard resistances, a Leeds and Northrup potentiometer, a variable standard of self and mutual inductance, an x-ray outfit, and a wireless receiving set with 'antenna. In addition to the ordinary laboratories the department is furnished with a dark room, seismograph room, and a wood- and metal-working shop with motor-driven equipment.

2. **GENERAL PHYSICS.** Designed especially for engineering students. Pure and applied mechanics, heat, sound, light, magnetism and electricity. Prerequisites: Mathematics 3 and 4. Parallel courses: Mathematics 5 and 6. Two lecture-recitation periods and two laboratory periods weekly. First and second semesters, 4 credits each.  
*Professor Kirkpatrick.*

2a. **GENERAL PHYSICS.** Mechanics, heat, light, electricity and magnetism, and modern atomic physics. Prerequisites: Mathematics 1 and 2. Two lecture-recitation periods and one laboratory period weekly. Text: “General Physics for Colleges,” Webster, Farwell and Drew. First and second semesters, 3 credits each.  
*Professor Kirkpatrick.*

2b. **GENERAL PHYSICS.** Designed especially for pre-medical students. This course differs from Physics 2a only in the amount of laboratory work required, and the number of credits allotted. Two lecture-recitation periods and two laboratory periods weekly. First and second semesters, 4 credits each.  
*Professor Kirkpatrick.*

3. **ELECTRICAL MEASUREMENTS.** Designed especially for engineering students. A laboratory course comprising measurements of current, voltage, resistance, inductance, capacity, magnetic properties, etc. Prerequisite: Physics 2. Two laboratory periods weekly. First semester, 2 credits.  
*Professor Kirkpatrick.*

4. **ELECTRONIC PHYSICS.** Selected readings from recent books and journals. A survey of modern physics with particular reference to sub-atomic phenomena and inferences derivable therefrom. Prerequisites: Physics 2, 2a, or 2b, and a working
knowledge of the calculus. One discussion period weekly. One semester, credit as arranged.  
Professor Kirkpatrick.

5. OPTICS. A survey of geometrical optics, physical optics, spectroscopy in all regions, and optical theories both classical and recent. Two lecture-recitation periods weekly. One semester, 2 credits.  
Professor Kirkpatrick.

BIOLOGICAL SCIENCES

BOTANY.

The University of Hawaii offers remarkable advantages for the study of botany in all its branches. There is no dormant season, so that specimens may be collected and experimental work in the field may be performed at any time. This enables the student to observe and study plants under natural conditions, thus increasing the interest in and adding to the value of the work.

The laboratories are fully equipped with microscopes and accessories, apparatus, chemicals, stains and other supplies necessary to botanical work. Water, gas and electricity are all at hand. Attention is especially directed to the opportunities presented for work along special lines and for research. The accessibility of the coral reefs facilitates the collection of marine algae for systematic work and presents a great opportunity for the study of marine ecology.

The continuity of the growing season permits work to be carried on throughout the year. Conditions peculiar to the Islands introduce a number of special problems in tropical agriculture and horticulture, in addition to general problems, thus making plant physiology a particularly inviting field for study. The physiological equipment includes apparatus for the study of respiration, oxidase and catalase activity, hydrogen-ion concentration by electrometric or colorimetric methods, electrical conductivity and cryoscopic determinations, so that physiological investigations may be carried on by the most exact methods.

The great diversity of environmental conditions within a range of a few miles offers excellent advantages for the study of ecology or for ecological research, particularly in plant succession.

The unusually high percentage of endemic plants in the Hawaiian flora makes the study of systematic botany very attractive. The University offers an exceptional opportunity in this line of work, because of its excellent herbarium and the extensive collection of systematic works in the library.

The Herbarium of the University of Hawaii, in the custody of the Bishop Museum, contains the most nearly complete collection of Hawaiian plants in existence, including specimens of
species which have already become extinct. The portions of the
types and the co-types of plants described by Dr. W. Hillebrand,
together with the types of new species, form the most valuable
part of the herbarium. The former are part of an assortment of
about a thousand sheets of Hawaiian plants secured by Professor
Rock from the Berlin Botanical Museum, where the Hillebrand
collection is deposited. In addition, portions of the types of
Hawaiian plants described by Dr. Asa Gray were also secured
from the Harvard Herbarium, and photographs of other
Hawaiian specimens in the Harvard, Berlin, Vienna, and Paris
museums were taken. Recently the herbarium has obtained
duplicates of the plants collected in Hawaii by the Galatea
Expedition in 1842; also of Hawaiian plants collected by A. A.
Heller in 1895. Besides the Hawaiian collection the herbarium
possesses a set of plants collected on the Galapagos Islands by
the California Academy of Science Expedition; also specimens
from Australia, the Philippines, Java, Ceylon, Cuba, Mauritius,
South and Central America, and New Zealand.

The library of systematic botany contains nearly all the
atlases and texts of early voyages, and is practically complete as
far as the original descriptions of Hawaiian plants are concerned.
This, with the completeness of the herbarium, makes possible the
preparation of monographs on various groups of Hawaiian plants.
The library further includes such works as Martius' Natural
History of Palms, the Flora Brasiliensis, many works on
continental as well as insular floras, Das Pflanzenreich and
several periodicals.

1. GENERAL BOTANY. A study of the organization of the
plant body of seed-bearing plants. The structure of the members
of the plant body, the relation of form to function and adjust-
ment to external conditions are given special attention during the
first semester. This is followed in the second semester by a brief
survey of the principal groups from algae to seed-bearing plants
with a study of the life history of representative forms. The
evolution of the vegetative and reproductive organs of the plant
as related to the habitat is given special attention. Two periods
laboratory and one hour lecture or recitation a week. First and
second semesters, 3 credits each. Professor Bergman.

2. ELEMENTARY SYSTEMATIC BOTANY. A study of native
and introduced plants, especially with reference to characters
which are useful in determining their identity. Practice in the
use of keys for identification and in the recognition of the more
common forms and families on sight is emphasized. Two or more
periods laboratory or field and one hour lecture or recitation a
week, with assigned reading. Prerequisite: Botany 1. First
and second semesters, 3 or more credits each. Professor Bergman.
3. **Plant Ecology.** A study of plants in relation to the environment. The use of exact methods in the measurement of factors of the environment and of the effect of these factors on the plant. Studies in migration, invasion, competition and dominance in relation to plant succession, and the use of exact methods of determining the composition of the plant community. Prerequisites: Botany 1, 2, 6 and 9. Two or three periods field or laboratory with one hour lecture or recitation a week and assigned reading. First and second semesters, 2 or 3 credits each. (Offered in alternate years. Not given 1924-1925).

Professor Bergman.

4. **General Bacteriology.** An introductory course on the morphology and physiology of bacteria and the relation of these organisms to household and industrial processes and to sanitation. The preparation of culture media, methods of isolation and the study of cultural characteristics. Texts: Buchanan, "Household Bacteriology." One hour recitation or lecture and two laboratory periods a week. Second semester, 3 credits. (Offered in alternate years. To be given in 1924-1925). Professor Bergman.

5. **Elementary Plant Pathology.** A systematic study of plant diseases. The morphologic characters, life history and methods of control. Text: Duggar's "Diseases of Plants." Prerequisite: Botany 1. Two periods laboratory and one hour lecture or recitation a week. Second semester, 3 credits. (Offered in alternate years. Not given in 1924-25). Professor Bergman.

6. **Plant Physiology.** A study of the physiological activities of the plant, such as absorption, translocation, synthesis of food materials, respiration, growth, and reproduction. Text: Duggar's "Plant Physiology." Two periods laboratory and one hour lecture or recitation a week. First and second semesters, 3 credits each. Professor Bergman.

7. **Histological Technique.** A course in the preparation of permanent microscopic mounts of plant tissues. Includes methods of killing, fixing, embedding, sectioning, staining and mounting of tissues of various kinds. Supplements Courses 5 and 9. Valuable to students in plant breeding who are interested in the study of physical basis of heredity. Prerequisite: Botany 1. Six to twelve hours laboratory per week. First semester, 2 to 4 hours credit. Professor Bergman.

8. **Advanced Plant Physiology.** An experimental study of the processes of nutrition and growth of plants, with collateral reading and conference. Text: Palladin, "Physiology of Plants." Prerequisites: Botany 1 and 6 and organic chemistry. Two or three laboratory periods per week. First and second semesters, 2 or 3 credits each. Professor Bergman.
9. **Plant Anatomy.** A study of the structure of vascular plants. The origin and differentiation of tissues and the relation of structure to function are emphasized. Text: Stevens', "Plant Anatomy." Prerequisite: Botany 1; Botany 7 desirable but not required. Two laboratory periods and one hour recitation a week with assigned reading. First and second semesters, 3 credits each.

Professor Bergman.

17. **Botanical Research.** Open to students who show sufficient preparation and ability to carry on studies of an investigational nature. Hours and credits to be arranged.

Professor Bergman.

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**ENTOMOLOGY.**

The entomological collection, systematically arranged in standard cabinets, is particularly rich in economic material, and although the greater part represents Hawaiian forms, it is also well supplied with specimens from the South Seas and North America.

The laboratories are equipped with Zeiss compound and binocular microscopes, dissecting lenses, and other necessary apparatus. A photographic room, used in common with other departments, is thoroughly equipped with cameras and other needed accessories.

Not only is the modern equipment of the University at the service of students engaged in research work, but also the entomological collections and libraries of several other research institutions in Honolulu are available for the use of advanced students, and add to the attractions of this location for research in entomology.

1. **General Entomology.** A study of the general morphology, physiology, and classification of insects. Laboratory work includes a study of the structures of insects and practice in their classification. The making of a collection by each student offers practical experience in field work. One hour classroom, two periods laboratory. First semester, 3 credits.

Professor Crawford.

2. **Economic Entomology.** Deals primarily with insects of economic importance. Lectures on the more important insect pests and methods of controlling them. Laboratory work includes a study of the several stages in the life history of our common insects, and the making of a collection showing these. Field observation is emphasized. Prerequisite: Entomology 1. One hour classroom and two periods laboratory. Second semester, 3 credits.

Professor Crawford.
4. MORPHOLOGY OF INSECTS. A laboratory course in comparative anatomy of insects. Required of all students for advanced work in entomology. Prerequisite: Entomology 1. Two periods laboratory. Second semester, 2 credits.  

Professor Crawford.

5, 6. TAXONOMY OF INSECTS. A laboratory course in the identification of insects, applying the study of wing venation. Special groups may be studied and original work done by the students. At least one semester required of students for advanced work in entomology. Prerequisites: Entomology 1 and 4. Two periods laboratory. First and second semester, 2 credits each.  

Professor Crawford.

7. ECONOMIC ENTOMOLOGY OF SUGAR CANE. A general study of the chief insects affecting sugar cane, with laboratory work upon the life-histories of the more common local species. Special attention will be given to the very important work accomplished by insect parasites in Hawaii. Prerequisite: Entomology 1. One lecture and two periods laboratory. Second semester, 3 credits.  

Professor Crawford.

10. MEDICAL ENTOMOLOGY. Insects affecting man's person, with suggestions for their control. Lectures and assigned readings on disease-transmitting insects. Laboratory work on life-histories of available species. Prerequisite: Entomology 1. Two periods laboratory. Second semester, 2 credits.  

Professor Crawford.

16. RESEARCH IN ECONOMIC ENTOMOLOGY. Primarily a post-graduate course. Opportunities for research work in this field are especially attractive, since the problem can be developed throughout the year without interruption. Open only to students who have shown marked ability in the study of entomology. Prerequisites: Entomology 1, 2, 4, and 5. Throughout the year, 3 or more credits a semester.  

Professor Crawford.

ZOLOGY

The courses in zoology are intended to meet the demands both of elementary and advanced students, and are arranged to take advantage of the wealth of illustrative and research material available in the Island fauna throughout the year.

The establishment of a biological laboratory for research at Waikiki, adjacent to the aquarium, offers an excellent opportunity for the investigation of marine biological problems. An extensive tropical fauna in the waters about the Hawaiian Islands makes possible an unlimited field for research in zoology. Coral reefs are easily accessible, provision will be made for plankton work, and dredging may be done in moderate depths outside the reefs.
In addition to the general laboratory the building provides private research rooms, aquaria tables with running salt and fresh water, gas, electricity, a photographic room, and other conveniences. Advanced students and special investigators will be given every possible accommodation for the pursuance of research.

1. **General Zoology.** An introductory course covering in a general way the field of animal life. Biological principles are presented and a study of the structure, development, relationship, distribution, and economic importance of animals is made. Text: Galloway's "Text Book of Zoology." Required of pre-medical students and Sophomores in Agriculture. Two lectures and one laboratory period a week. First semester, 3 credits.  

   *Professor Edmondson.*

2. **Comparative Anatomy of Vertebrates.** A continuation of Course 1, including a comparative study of the systems of organs of typical vertebrates. Structural relationships of the various groups are emphasized and the progressive development from the lower to higher forms pointed out. Text: Kingsley's "Comparative Anatomy of Vertebrates," and other reference works. Prerequisite: Zoology 1. Required of pre-medical students. Two lectures and one laboratory period a week. Second semester, 3 credits.  

   *Professor Edmondson.*

3. **Elementary Marine Problems.** A course in ecological studies of marine organisms. Observations of animals in their natural surroundings will be made in so far as possible. Collections on shore and reef and laboratory studies of our common marine animals are included in the course. Each student will follow an independent line of investigation under the direction of the instructor. Prerequisites: Zoology 1 and 2. Two laboratory periods a week. Either semester, 2 credits.  

   *Professor Edmondson.*

4. **Histological Technique.** A laboratory course involving methods of fixing, staining and mounting animal tissues. Studies will be made of the tissues prepared. Prerequisite: Zoology 1. Two laboratory periods a week. First semester, 2 credits. (Not given in 1924-25).  

   *Professor Edmondson.*

7. **Mammalian Anatomy.** A laboratory course primarily for pre-medical students involving the careful dissection of a typical mammal. Prerequisites: Zoology 1 and 2. Two laboratory periods a week. First semester, 2 credits.  

   *Professor Edmondson.*

10. **Research.** Students with sufficient preparation are encouraged to undertake the investigation of special zoological problems with reference to land, fresh water, or marine animals. Hours and credits to be arranged.  

   *Professor Edmondson.*
AGRICULTURE

Agriculture

PHYSIOLOGY AND HYGIENE

1. **Physiology.** A course in physiology for the general student as well as those preparing for medicine. The functions characteristic of the various systems of organs of the human body are considered in detail. Not open to freshmen. Three lectures a week. Second semester, 3 credits. (Not given in 1924-25). *Professor Edmondson.*

2. **Personal and Community Hygiene.** Lectures and collateral reading. Required of all Juniors in the College of Arts and Sciences. First and second semesters, 1 credit each.

**AGRICULTURE**

The University of Hawaii is advantageously situated for agricultural experiments and demonstrations. The climate permits of plant growth throughout the year. The alternation of wet and dry seasons affords opportunities for work under conditions both of rainfall and irrigation. To the facilities of the University are added those of the Territorial Board of Agriculture and Forestry, the Federal Experiment Station, Experiment Stations of the Hawaiian Sugar Planters' Association and of the Association of Hawaiian Pineapple Canners and the Kamehameha Schools, the latter having placed an acre of pineapple land at Kapalama at the disposal of the Agronomy Division.

**Lands.**—The University farm comprises some sixty acres lying between the University buildings and the Manoa Stream. Any portion of it can be reached by a five minutes' walk from the classrooms. About twenty-two acres, laid off in a permanent and definite system of one-acre fields, are under cultivation. The remainder is in pasture and unimproved fields. Though some of the latter are too rocky to plow, they may be utilized for experiments in forestry. The pasture lands are well fenced.

**Roads.**—A permanent graded road constitutes the axis of the farm, and branches from this give access to all cultivated fields.

**Irrigation.**—A twelve-inch irrigation line from the Manoa Stream, with five-inch laterals, provides water for the cultivated fields.

**Laboratories.**—The agricultural laboratories are well equipped with the necessary apparatus for carrying on experiments in connection either with class work or research work, and also contain collections of typical Hawaiian soils, seeds, dried and preserved plant specimens, feed stuffs, fertilizers and animal models.
Buildings—The buildings consist of a piggery, poultry houses, milking shed, dairy, horse barn, feeding shed for cattle, sheds for farm machinery and implements, tool shed, and six cottages for laborers. Two new dairy barns are now being constructed.

Library.—An extensive collection of books dealing with agricultural subjects is found in the University Library. There is also a rather extensive file of U. S. Department of Agriculture publications and bulletins, as well as those of the various state experiment stations. The leading agricultural magazines are received regularly.

Livestock.—The University possesses a herd of fine dairy animals of both the Holstein and Guernsey breeds, Berkshire swine, and the necessary horses to do farm work.

Poultry.—A well equipped poultry plant covering an acre of ground and stocked with approximately a thousand fowls afford students an opportunity to gain a good practical experience in poultry production. The breed that predominates and is used for the various breeding, feeding, and general management experiments is the S. C. White Leghorn. Some interesting crossbred fowl are also included in this department.

COURSES IN AGRICULTURE

1. Summer Farm Practice. A period of at least eight weeks must be spent in practical farm work, either on the University farm or some other approved farm where diversified agriculture is practiced. The purpose in this course is to gain familiarity with the fundamental agricultural operations, the care of farm animals, and the care and use of implements. Required of all students in Agriculture and Agricultural division of Sugar Technology before the beginning of the Junior year. Those who can present satisfactory evidence of sufficient practical experience may be excused from this requirement.

Professors Henke and Krauss


Professor Henke.

3. Crops. A study of the history, botany and culture of the leading tropical and temperate zone crops with special emphasis on the former. Required of Juniors in Agriculture and Sugar Technology, Agriculture and Chemistry Divisions. Pre-
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requisite, Agriculture 2. Three lectures or recitations, two laboratory periods each week. Second semester, 5 credits.

Professor Krauss.

4. SUGAR CANE PRODUCTION. A study of the varieties of cane, their planting, irrigation, fertilization, and harvesting. Four lectures on irrigation by Professor Palmer. Includes visits to various experimental fields and plantations. Students are required to keep Fridays as free from other work as possible for field trips. Required of Seniors in Agriculture and Sugar Technology, Agriculture and Chemistry Divisions. Prerequisite: Agriculture 2 and 3. Lectures, recitations, and laboratory periods. First semester, 4 credits. Professor Henke.

5. GENETICS. A study of the underlying principles and their practical application in the improvement of plants and animals. Opportunity is offered to qualified students to undertake original investigations in the breeding of sugar cane, pineapples and other crops. The development of new varieties of legumes, tomatoes and other crop plants, as well as of a new variety of poultry is now under way. Required of Juniors in Agriculture and Sugar Technology, Agriculture division. Lectures, recitations and laboratory work. First semester, 3 credits. (Not given in 1924-1925).

Professor Krauss.

6. ANIMAL HUSBANDRY. A general study of the important breeds of horses, cattle, sheep and swine, their feeding, care and management. Required of Seniors in Agriculture. Lectures, recitations and laboratory work. First semester, 3 credits. (Not given in 1924-1925).

Professor Henke.

8. DAIRYING. A study of dairy cows, the production, handling, and marketing of milk and milk products, milk testing and separation, butter-making, etc. Required of Seniors in Agriculture. Two lectures or recitations, and one laboratory period a week. Second semester, 3 credits. Professor Henke.

9. POULTRY HUSBANDRY. A study of poultry types and breeds; their feeding, housing, marketing, and general care; the operation and care of incubators and brooders. Required of Seniors in Agriculture. Two lectures or recitations and one laboratory period a week. Second semester, 3 credits. Professor Krauss.

10. RESEARCH WORK. Situated in a climate where outdoor experimental work can be carried on the year round, Hawaii affords ideal opportunities for research in tropical agriculture. First and second semesters. Credit by arrangement. Professors Henke and Krauss.

11. FEEDS AND FEEDING. A detailed study of the feeding of all kinds of farm and plantation animals. Required of Seniors in Agriculture. Lectures and recitations. Second semester, 3 credits. Professor Henke.
Agriculture

12. **FORESTRY.** A study of general forestry problems, with special reference to those of the Hawaiian Islands. The course is given every other year, alternating with Horticulture. Required of Sophomores or Juniors in Agriculture. (Given in 1924-1925). Second semester, 3 credits. *Mr. Judd.*

13. **HORTICULTURE.** A general study of horticulture with special reference to the fruits and vegetables of the Hawaiian Islands. The course is given every other year, alternating with Forestry. Required of Sophomores or Juniors in Agriculture and elective for Sophomores or Juniors in Sugar Technology, Agricultural division. Second semester, 3 credits. (Not given in 1924-1925). *Professor Krauss.*

16. **SUMMER PINEAPPLE FIELD PRACTICE.** Properly qualified students will be recommended for 8 weeks of summer practice work as student assistants at the Experiment Station of the Hawaiian Pineapple Canners’ Association at Wahiawa. The student assistants will be under the direction of the Director of the Station and will be detailed to various activities of the Station with a view to becoming acquainted with as many aspects as possible of pineapple culture. Advised as prerequisite for Agriculture 17. 6 credits. *Professor Krauss.*

17. **PINEAPPLE PRODUCTION.** A study of pineapple production in all its phases, paralleling the course in Sugar Production. Advised prerequisite: Agriculture 16. Required of Seniors in Agriculture. First semester, 4 credits. *Professor Krauss.*

18. **SENIOR FIELD PRACTICE IN PINEAPPLE PRODUCTION.** During the second semester of the Senior year students majoring in Pineapple Production will be required to work in the capacity of student assistants at the Experiment Station of the Hawaiian Pineapple Canners’ Association at Wahiawa, under the supervision of the Director of the Station, or be sent out as assistants to the field men in charge of experimental and other work on various plantations. A full report of the work in duplicate must be submitted at the end of the semester. 16 credits. *Professor Krauss.*

19. **APPLIED GENETICS AND BREEDING.** Practical plant and animal improvement by breeding. Application of the laws and principles of genetics in their relation to crop plants and live stock, including poultry. Required of Seniors in Agriculture. First semester, 3 credits. *Professor Krauss.*
20. **Agricultural Thesis.** Advanced individual work in field and laboratory, with accompanying library work. Required of Seniors in Agriculture. Second semester, 6 to 10 credits.  

*Professors Henke and Krauss.*

**ENGINEERING**

**Drawing.** The drafting-room equipment includes a number of first-class adjustable tables and desks, fitted with all accessories, complete for work; also an extensive outfit for blue printing, and many special instruments, such as parallel attachments for tables, railroad curves, splines, protractors, planimeters, special scales, drafting machines, and computing instruments.

**Testing Laboratory.**—The University maintains a laboratory for testing materials of construction, including wood, iron, steel, and cement, and also provides facilities for fuel testing. The equipment of the testing laboratory includes a 150,000 lb. capacity Riehle universal testing machine, with automatic and autographic attachments, and cold-bending attachment, for tension, compression, and transverse tests of large specimens; a small 10,000 lb. capacity Riehle machine for testing specimens in transverse strain; an Olsen torsion machine for torsion tests up to 50,000 in.-lbs.; an Olsen apparatus for making the Brinell hardness test; a special Olsen machine of 40,000 lbs. capacity for compression tests of cement and concrete cubes; and a standard Riehle 2,000 lb. machine for briquettes. These machines are provided with a complete assortment of the necessary special instruments, such as extensometers, compressometers, deflectometers, and gages, thus making possible the accurate measurement of deformation over a wide range of tests. In addition to the above, the testing laboratory also includes an extensive equipment of molds, sieves, Vicat needles, moist closets, drying ovens, and other minor accessories necessary to carry out practical tests of cements and concrete in any of the usual forms.

A section of the laboratory is fitted with the essential apparatus for the physical testing of road materials. This equipment includes a Page impact machine, Dorry hardness machine, Deval abrasion machine, Page briquette-forming machine, together with core drills, sieves and miscellaneous asphalt-testing apparatus.
Library.—Students in engineering are encouraged and required to make frequent use of the library in connection with the regular courses of instruction. The library contains a large and well selected collection of standard technical books, besides many periodicals pertaining especially to engineering. The collection includes sets of Transactions and Proceedings of the four National Engineering Societies, together with bound volumes of the Engineering News back to and including the year 1876, which, taken together, constitute an excellent working library of current practice in each of the main branches of engineering.

DRAWING AND MACHINE DESIGN (M.D.)

M.D. 1. Mechanical and Freehand Drawing. Elementary drafting, which includes freehand sketching, freehand lettering, use of instruments, conventional sections, drawing from copies and models (using parts of machines from the mechanical laboratory as models), the making of shop drawings, shading, tracing and blue-printing; in which particular attention is given to lettering, general neatness, and accuracy. Text: French’s “Engineering Drawing.” The cost of materials and instruments required is about $50.00. First and second semesters, 2 credits each. Professor C. Andrews.

M.D. 3. Descriptive Geometry. Descriptive geometry, with special reference to its application to practical work in the drafting office, embracing lectures and drafting-room practice in which a large number of problems of a practical nature are worked out. Text: Wm. G. Smith’s “Practical Descriptive Geometry.” Prerequisites: M.D. 1, and Mathematics 3 and 4. Sophomores in Engineering and Sugar Technology, Sugar-house Engineering division. First and second semesters, 2 credits each. Professor Keller.

MECHANICAL ENGINEERING (M.E.).

M. E. 1. Steam Machinery. The fundamental laws governing the transformation of heat into work, embracing the properties of gases, laws of expansion, heat measurement, the mechanical equivalent of heat, properties of steam, construction and study of steam tables, and heat analysis as applied to steam and internal combustion engines. The solution of a large number of problems of a practical nature is required. Lectures and recitations. Prerequisites: Mathematics 5 and 6, M.D. 3. Senior Civil Engineers and Juniors in Sugar Technology, Sugar-house Engineering division. First semester, 3 credits. (Alternates with C. E. 7. Given in 1924-1925). Professor Young.
M. E. 2. MATERIALS OF ENGINEERING. Lectures and recitations on the properties and requirements for materials used in engineering construction, including wood, iron, steel and concrete. Methods of manufacture as affecting quality of material, standard tests employed to secure the proper grade of material, and standard specifications. Prerequisites: Mathematics 5 and 6, M. D. 3. Juniors in Civil Engineering. First and second semesters, 2 credits each. (Alternates with Chem. 23. (Given in 1924-1925).

Professor Keller.

M. E. 6. ENGINEERING OF SUGAR PLANTS. Lectures and drafting-room exercises involving the application of the fundamental principles of engineering practice to modern sugar works, including grinding and evaporating machinery, boiler and engine plant, conveying machinery, industrial railways, arrangement of buildings, layout of plant, and other general and special engineering considerations affecting the making and refining of sugar. Prerequisite: M. E. 1. Seniors in Sugar Technology, Sugar-house Engineering division. First semester, 4 credits. (not given in 1924-1925).

M. E. 8. CONTRACTS AND SPECIFICATIONS. Lectures on contracts, touching upon points likely to be of value to engineers, together with such principles of law as should be understood by the engineer who is entrusted with the drawing of contracts, followed by a detailed study of typical contracts and specifications for engineering work of various kinds. Text: Tucker's "Contracts in Engineering." Prerequisite: M. E. 1, or C. E. 9. Seniors in Civil Engineering. Second semester, 2 credits.

Professor Keller.

M. E. 9. OFFICE AND SHOP METHODS. Lectures, drafting and shop inspections. Lectures familiarizing the students with the type and use of machines and tools used in pattern, wood-working, forge and machine shops. The laboratory work consists of inspections of typical local shops and practice in estimating. The elements of Graphical Statics are taken up in the second semester. Prerequisite: M. D. 1. Sophomores in Civil Engineering and Sugar Technology, Sugar-house Engineering division. First and second semesters, 2 credits each.

Professor C. Andrews.

ENGINEERING LABORATORY (X. E.)

X. E. 4. MATERIALS LABORATORY... Laboratory practice in testing the materials of construction, involving complete tests of specimens of wood, iron, steel, and concrete in their various forms. Special attention is given to the preparation and testing
of specimens of concrete, both plain and reinforced, in the form of cubes, columns, beams, and girders. The facilities available for such work are ample, and the instruction given covers a large number of practical tests, thus affording the student valuable means of familiarizing himself with the behavior of such materials under stress. Prerequisite: C. E. 2. Juniors in Civil Engineering and Sugar Technology, Sugar-house Engineering division. Second semester, 3 credits for students in Civil Engineering and 2 credits for students in Sugar-house Engineering division of Sugar Technology.  

Professor Keller

CIVIL ENGINEERING

C. E. 1. SURVEYING. Plane surveying, supplemented by lectures and drafting-room exercises. The use of the chain, tape, transit and level, and practice in the manipulation of these instruments in the field. The drafting-room work includes practice in the computations that the surveyor is called upon to make, and plotting from original notes. Text: Breed and Hosmer's "Principles and Practice of Surveying," Vol. 1. Prerequisites: M. D. 1, Mathematics 1 and 2, or 3 and 4. Required of Freshmen in Civil Engineering and Sugar Technology, Sugar-house Engineering division; Sophomores in Sugar Technology, Agricultural division. Elective by Sophomores in Agriculture, General Science and Sugar Technology, Chemistry division. First and second semesters, 2 credits each.  

Professor C. Andrews

C. E. 2. ANALYTICAL AND APPLIED MECHANICS. The fundamental principles of the various branches of applied mechanics, and the use of higher mathematics in the solution of problems relating to engineering work. Includes the study of analytical statics, composition and resolution of forces, application to rigid bodies, centers of gravity, centers of mass, friction, work, flexible cords, funicular polygon, and the catenary, together with a large number of problems to illustrate special and general methods of solution. The analytical theory of kinetics is developed and special attention is given to the laws of motion, variable forces, constrained motion, central forces, impact, energy, dynamics of prime movers, moments of inertia, rotary motion, and the simple and compound pendulum. Text: Poorman's "Mechanics." Prerequisites: Mathematics 5 and 6. Juniors in Civil Engineering and Sugar Technology, Sugar-house Engineering division. First semester, 4 credits.  

Professor C. Andrews.

C. E. 3. STRUCTURAL MECHANICS. The resistance and elasticity of materials in tension, compression, and shearing stress, and the study and calculation of riveted joints, simple beams, cantilevers, restrained and continuous beams, safe loads, elastic


C. E. 5. Structural Design. Lectures and drafting exercises, in which the student computes the stresses and designs the members of a plate girder bridge and a steel building truss. Includes the making of complete detail drawings and specifications, done under close supervision and carefully checked. The important general points are covered by lectures, minor points being taken up with individual students during the progress of the work. Text: Merriam and Jacoby's "Roofs and Bridges," Parts I and II. Seniors in Civil Engineering. First semester, 3 credits.

C. E. 6. Bridge Design. Lectures and drafting exercises following C. E. 5 and covering the complete design of a single track through bridge for a given conventional loading, and including all computation, the making of complete engineer's drawings, and the specifications. Text: Merriam and Jacoby's "Roofs and Bridges," Parts II and III. Seniors in Civil Engineering. Second semester, 3 credits.

C. E. 7. Hydraulics. Lectures and recitations covering the more important principles of hydraulics which govern and treat of fluids at rest, hydrostatic pressure, manometers, and Pitot tube, Venturi meter, strength of pipes, pressure of water against walls and dams, earth pressure, barometric leveling, flow of liquids through pipes and over weirs, fluid friction, loss of head, flow of water in open channels, Kutter's formula, impulse and resistance of fluids, the Pelton water wheel, overshot, breast and undershot wheels; turbines and reaction wheels, and the general practice of turbine testing. The laboratory practice in-
Civil Engineering

cludes the gauging and measurement of flow in channels and over weirs, tests of water motors of various types, tests of hydraulic rams, and pumping machinery of various kinds. Text: Daugherty's "Hydraulics." Prerequisites: C. E. 2 and 3. Seniors in Civil Engineering and Sugar Technology, Sugar-house Engineering division. First semester, 3 credits. (Alternates with C.E. 9; not given in 1924-1925.)  

Professor Keller.

C. E. 8. HYDRAULIC CONSTRUCTION. Lectures, recitations and reports covering the more important hydraulic constructions. The work is divided into three parts, as follows: water storage, including reservoir capacity, available sources of supply, the design of spillways and flood channels; irrigation engineering, including methods of distribution, construction of flumes, tunnels, and ditches, and also touching upon the agricultural problems involved; harbor engineering, including a study of various types of wharves, methods of dredging, and harbor improvement. Prerequisites: C. E. 2, 3 and 7. Seniors in Civil Engineering. Second semester, 3 credits. (Alternates with C. E. 9. Not given in 1924-1925).

Professor Keller.

C. E. 9. MUNICIPAL ENGINEERING. Lectures and recitations, including the general principles and methods of construction and cost; city water supply; waterworks, and fire protection; the methods of sewage and garbage disposal; the hydraulics of sewers; the relation of rainfall to storm flow. Part of the course is devoted to municipal transportation problems now handled by the various public service commissions. Texts: Turneaure & Russell's "Public Water Supply"; Metcalf & Eddy, "Sewerage and Sewage Disposal, a Textbook"; Robinson's "Civic Art"; Lewis' "Planning of the Modern City"; Engineering Periodicals and U.S. Government Reports. Juniors in Civil Engineering. First and second semesters, 3 credits each. (Alternates with C. E. 7, and C. E. 8; given in 1924-1925).

Professor Keller.

C. E. 10. SURVEYING. Railroad surveying, construction, and economics. Field work and recitations, covering the methods of establishing grade lines, laying out circular and transition curves, the reconnaissance, preliminary and location surveys for a railroad; earth work computation, maps, profiles; plans of structures and estimates. Texts: Willard's "Maintenance of Way and Structures"; Cain's "Earth Pressure, Walls and Bins"; Webb's "Railroad Construction." Prerequisites: C. E. 1, Mathematics 5 and 6. Seniors in Civil Engineering. First and second semesters, 3 credits each. (Alternates with C. E. 4; given in 1924-1925).

Professor C. Andrews.

C. E. 12. CONCRETE AND MASONRY STRUCTURES. The properties of stone, brick, and concrete, and their uses in engineering
Sugar Technology

structures, such as foundations, retaining walls, piers, abutments, and dams; including the design of arches and dams in stone, and the design of reinforced concrete structures, such as beams, girders, columns, floor slabs, and highway bridges. Lectures and drawing-room work, supplemented by library reference. Texts; Hool's "Concrete Construction," Vols. I, II, III. Prerequisites: C. E. 2, 3 and 4. Seniors in Civil Engineering. Second semester, 3 credits.

Professor Young.

C. E. 15. Roads and Pavements. Lectures, laboratory, practice in testing materials of road construction, and inspection of local types of pavements. The lecture work covers the construction and maintenance of various types of roads and city pavements, special reference being made to local types. Prior to inspection trips, the specifications under which the road to be visited was built are studied. In the laboratory the student becomes familiar with the type machines used in testing road materials and the methods of performing such tests. Text: Blanchard and Drowne's "Textbook on Highway Engineering" and Besson's "City Pavements." Prerequisites: C. E. 1 and M. D. 1. Sophomores in Civil Engineering. First and second, 2 credits each.

Professor Keller.


Professor C. Andrews.

ELECTRICAL ENGINEERING (E. E.).

E. E. 1. Electrical Machinery. The fundamental principles governing the design and operation of dynamo-electrical machinery and the theory and construction of armatures, field magnets, and commutators of direct current generators, motors, motor-generators, boosters, and regulators, followed by a brief treatment of alternating-current machines, transformers, and transmission systems. Prerequisites: Mathematics 5 and 6, Physics 2 and 3, M. E. 1. Juniors in Engineering and in Sugar Technology, Sugar-house Engineering division. Second semester, 3 credits.

Professor Kirkpatrick.

SUGAR TECHNOLOGY

The sugar laboratory contains a recent model Schmidt and Haensch saccharimeter, a Landolt-Lippich polariscope, for monochromatic light, a Stammer colorimeter, an Abbe-Zeiss and an immersion refractometer, a standardized comparator for measur-
Sugar Technology

ing tube lengths, a small hand mill, and practically all the miscellaneous apparatus needed in a sugar factory laboratory. A number of old model polariscopes of different types have been donated by plantations, and are of value in demonstrating the theory and construction of the modern instrument.

1. Sugar Analysis. Laboratory and lecture course intended to fit the student for the position of chemist in a sugar-house laboratory, or to give him a good working knowledge of chemistry as applied to the manufacture of raw and refined sugar. Among the topics taken up are the theory and construction of the polariscope and the refractometer, the calibration and testing of these and other laboratory apparatus, general laboratory routine, and the fitting out of a sugar laboratory, the methods of sampling and of analysis of the various products met with in a cane sugar factory.

In order to take this course the student must have a working knowledge of general chemistry and laboratory manipulations. Prerequisites or parallel, Chemistry 1 or 2 or 4. Required of Juniors in Sugar Technology. One lecture and two laboratory periods a week. First and second semesters, 3 credits each.

Professor Dillingham.

1a. Sugar-House Calculations. A lecture and recitation period in which instruction is given in sugar-house calculations, in working out problems involving the yield and losses ordinarily encountered in actual factory work, and in making out typical laboratory reports such as are required by plantations in the Hawaiian Islands. Prerequisite: S.T. 1 and 3. Seniors in Sugar Technology. First semester, 1 credit.

Professor Dillingham.

2. Sugar Manufacture. A series of lectures and recitations on the manufacture of sugar, taking up in detail a discussion of the various types of machinery and apparatus employed in the best modern factories and the principles involved in their use, embodying such topics as multiple milling, the effect of various types of roller grooving, pressure and maceration on extraction, clarification of juices, multiple effect evaporation, the economical use of steam, sugar boiling, crystallization in motion, and the curing, drying, and preparation of sugars for the market. Though this is primarily a course for cane sugar men, a brief description of the methods employed in beet sugar manufacture and refinery practice is also given, together with a discussion of the various processes for making white sugar direct from the cane. Required of Seniors in Sugar Technology. Prerequisite: S.T. 1 and 3. Three hours a week class room. First semester, 3 credits.

Mr. McAllep.
3. **Summer Practice.** During the summer vacation between the Junior and senior years, students in Sugar Technology will be required to spend at least 8 weeks in practical field or mill work. Those taking field work become Student Assistants in the Experiment Station of the Hawaiian Sugar Planters' Association. Those taking factory work enter one of the mills, where they are under the direction of the manager and work at various stations under regular factory conditions. Academic credit for this will be granted on the presentation of a satisfactory report in duplicate. Prerequisite; S. T. 1. 6 credits.

*Professor Dillingham.*

4. **Field Practice.** During the second semester of the Senior year in the Agricultural Division the student does his work in the capacity of a Student Assistant in the Experiment Station of the Hawaiian Sugar Planters' Association. He may serve a part or all of the time at the Waipio Substation, or he may be sent out as an assistant to the field men in charge of experimental work on the various plantations. A written report in duplicate must be submitted at the end of the semester. 16 credits.

*Professor Dillingham.*

5. **Factory Practice.** Seniors in the Sugar-house Engineering division spend the second semester of Senior year as apprentices in the factory of one of the plantations. They are under the regular discipline of the factory and are given different stations in the mill, boiling-house and laboratory so that they may become familiar with the various pieces of equipment and their operation. A written report in duplicate covering the lay-out of the mill and its operation must be submitted at the close of the work. 16 credits.

*Professor Dillingham.*

N. B. Seniors in the chemistry division of Sugar Technology may elect either Sug. Tech. 4 or Sug. Tech. 5, after consultation with their adviser.

**HOME ECONOMICS**

The Division of Art and Design is provided with three well-lighted rooms in the main building, a small kiln-room equipped for firing purposes, offices, a sewing laboratory, and a store-room for supplies. The Ceramic and Drawing studios are equipped with casts, drawing models, color charts, Maxwell wheel and disks, pottery, Oriental brasses, illustrative designs, photographs and stereopticon slides on architectural and allied subjects. The sewing laboratory is equipped with cutting tables, machines, dress forms, fitting-room, lockers, electric iron, pressing table, charts and illustrative material sufficient for a class of twelve students at one time.
The Division of Household Science has a well-equipped cookery laboratory with desks and utensils for individual work for sixteen students. Equipment for meal service and for nutrition courses is also available. There is an animal laboratory for experimental feeding and research.

**ART AND DESIGN.**

1. **FREEHAND DRAWING.** Study of type models; freehand perspective; drawing in outline and in light and shade from ornamental forms, natural objects, and casts; memory sketching; charcoal composition. Open to regular and special students. Required of students in Home Economics. Students who have received entrance credits in freehand drawing and perspective, or have otherwise presented satisfactory evidence of preparation, are given more advanced work. Two periods laboratory. First and second semesters, 2 credits each. **Professor Chipman.**

3. **COLOR AND DESIGN.** Theory of color, study of color values and harmonies, making of color scales and charts; instruction in the principles and practice of design as expressed in art line, dark and light, and color. Costume design based on the foregoing principles and including analysis of individual types. Brief survey of the history of costume. Lectures and laboratory work. Prerequisite: Course 1. First and second semesters, 3 credits each. **Professor Chipman.**

4. **INTERIOR DECORATION.** Theory and practice in the application of principles of design and color to interior decoration in relation to architecture; technical rendering of problems in line and color; study of historic styles in furniture; designing of wall hangings and other decorative objects; interpretation of designs in suitable materials. Lectures and laboratory. Prerequisite: Course 3. First and second semesters, 3 credits each. (Alternates with Course 7. Offered in 1924-1925). **Professor Chipman.**

5. **HISTORY OF ARCHITECTURE.** Study of the development of architectural styles of the ancient Egyptians, Chaldeans, Greeks, and Romans, and of the Mediaeval (Byzantine, Romanesque, Gothic) and Renaissance periods. Consideration of conditions, materials, etc., in their effect upon architecture. First semester, 3 credits. **Professor Chipman.**

6. **HISTORY OF SCULPTURE AND PAINTING.** Historical and appreciative study of ancient and mediaeval sculpture and of the great schools of painting. Discussion of principles of art structure and composition in relation to the masterpieces. Prerequisite: Course 5. Second semester, 3 credits. **Professor Chipman.**
7. Ceramic Design and Porcelain Decoration. Study of the principles of proportion and subordination which govern line and area composition and their application to specific problems in original design; discussion of the methods of pottery and porcelain manufacture and of the composition of ceramic colors, glazes, lustres, and metals; study of historic ceramics; consideration of good shapes in porcelain; application of original design to suitable porcelain forms in mediums adapted to the ware used; practice in the firing of ceramic ware. Lectures and laboratory. Prerequisite: Course 3. First and second semesters, 3 credits each. (Alternates with course 4. Not given in 1924-1925.) Professor Chipman.

N. B.—All work of students in Courses 1, 3, 4, and 7 remains in the department during the college year. The University reserves the right to retain for a period of two years such work as it may select, and to keep permanently one piece of each student’s work. Credit will be given for extra work above that required in the outlined courses.

8. Textiles and Garment-Making. A study of fabrics, processes of manufacture, and economic value and uses; the use of commercial patterns, scientific fitting, and garment-making. Lectures, discussions and laboratory work. Required of students in Home Economics. Open to regular and special students. First and second semesters, 3 credits each. Assistant Professor Dahl.

9. Dressmaking and Designing. The principles of dressmaking; the taking of accurate measurements; drafting of patterns, the choice and economical cutting of material; crinoline modeling, study of color values and harmony, making of color chart; the designing and making of gowns, decorative needlework and trimmings. Lectures, discussions and laboratory work. Prerequisites: A. & D. 1 and 8; prerequisite or parallel; A. & D. 3. A. & D. 1 and 3 may be waived in case of regular upperclassmen on consent of the Dean and Instructor). Two semesters, 3 credits each. Assistant Professor Dahl.

10. Millinery. The construction and trimming of hats, beginning with the use of foundation materials; making of wire and buckram frames from given dimensions; copying from models and pictures; original designs; making of bows, flowers, and fancies. Prerequisites: A. & D. 8 and 9. Two semesters, 3 credits each. (Given in alternate years; not offered in 1924-1925). Assistant Professor Dahl.

12. Advanced Dressmaking. Making of gowns from original designs, drafting and making of suits, coats, and capes. Prerequisites: A. & D. 8 and 9. Two semesters, 2 credits each. (Given in alternate years; offered in 1924-1925). Assistant Professor Dahl.
13. **Art Needlework.** This course consists of a study of the technique of stitches and of their combinations and arrangements so as to make a definite pattern. The suitability of different stitches to different surface effects is considered. Designs are interpreted and expressed through the medium of stitchery. A study of color schemes and color effects is very important. The aim of this course is to place a beautiful interpretative piece of needlework on the same standard as the best expression of art in other lines. First and second semesters, 3 credits each.  

*Miss Kerns.*

**HOUSEHOLD SCIENCE.**

1. **Elementary Food Preparation and Nutrition.** Study of the fundamental principles governing the selection and preparation of foods with regard to the nutritive value and place in the diet. Lectures and laboratory. Not open to students majoring in Home Economics. First and second semesters, 3 credits each.  

*Assistant Professor Miller.*

2. **Food Economics.** Selection, preparation, and serving of food with regard to composition, cost, season, and occasion. The effects of economic conditions and production, transportation, and marketing upon the cost and availability of foods will be considered. Prerequisite: Chemistry 1. First and second semesters, 3 credits each. (To be given in 1924-1925).  

*Assistant Professor Miller.*

3. **Nutrition.** A study of the nutritive requirement of man; the function of food in the body; the nutritive value of foods and their place in the diet. Prerequisite: Chemistry 1 and Chemistry 9 or 5. Lecture and laboratory. First and second semesters, 3 credits each. (Given in 1925-1926).  

*Assistant Professor Miller.*

4. **Food Investigation.** Special problems relating to cost, preparation, and utilization of food. Studies may be of a general nature or with reference to Hawaiian conditions. Laboratory and conferences. Prerequisite; H.S. 2. Second semester, 3 credits.  

*Assistant Professor Miller.*

5. **Household Management.** Study of efficient management of the home, including budgeting of the income and distribution of time in the daily routine. Labor-saving devices; kitchen, diningroom and laundry arrangements and equipment. Lectures, outside readings, and reports. First semester, 2 credits. (Given in 1924-1925).  

*Assistant Professor Miller.*

6. **Research.** Problems according to preparation. Investigation of nutritional problems; animal and human feeding experiments. For seniors and graduates. Hours and credits to be arranged.  

*Assistant Professor Miller.*
Methods and practice teaching of cookery can be arranged in cooperation with educational courses. Those planning to teach should consult the courses prerequisite for practice teaching in the Education Department.

**MUSIC**

Courses in music taken in the Punahou School of Music may be credited towards graduation from the University of Hawaii, provided that the courses taken are of a nature to justify the granting of credits. The courses that may be credited and the number of credits each will carry will be left to the judgment of the University of Hawaii.

Students desiring credit for work done in the Punahou School of Music should register for such work on their University Registration Card, and at the same time make a written request for credit, stating fully the nature of the course and the amount of time the course will demand.

**PHYSICAL EDUCATION**

**MEN.**

During the first two years of the course, regular students and special students who are registered for eight or more hours of work are required to take a minimum of two hours per week of military drill. Students having physical disability may be given special forms of exercise.

**WOMEN**

All women students under twenty-five years of age and registered as regular students or as special students taking eight or more credit hours a semester are required to take a minimum of one credit hour per week of physical education. Exemption from this requirement may be obtained only by permission of the Faculty Committee.

First and Second year students are required to take two periods per week of supervised exercise, and one hour unsupervised.

Third and Fourth year students are required to take one period per week of supervised exercise, and two hours of unsupervised.

The supervised work shall take the form of drill and athletics, the athletics conforming, in so far as possible, with the kind of exercise that the schools with whom we compete
are undertaking. The character of the work shall therefore change during the four quarters of the academic year.

The following is a tentative schedule:

1st quarter: Track
   Baseball

2nd quarter: Basketball
   Swimming

3rd quarter: Hockey
   Swimming

4th quarter: Tennis
   Swimming

Reports on forms furnished by the University showing the amount and character of the unsupervised exercise taken are required to be signed by every student each week. A student who, at the end of the term, lacks an average of the required number of unsupervised hours of exercise a week shall not pass the term's work nor receive her credit. First and second semesters, 1 credit each.

MILITARY SCIENCE AND TACTICS.

All male students who are citizens of the United States and physically fit are required to enroll during their first two years in the Reserve Officers' Training Corps, and to devote three periods a week of not less than one hour each to military science and training. Two of the three periods are devoted to drill practice and one period to theoretical training, during the first year basic course; one period is devoted to drill and two periods are devoted to theoretical training during the second year basic course. Students who wish may attend a summer camp.

At the end of the basic course a student who so elects and who is selected by the President of the University and the Professor of Military Science and Tactics, and who signs a form of written agreement prescribed by the Secretary of War, may be enrolled for two more years of service in the Reserve Officers' Training Corps. Such students are required to devote five hours a week to an advanced course in military science and training throughout two years, and the completion of this work becomes for them a prerequisite for graduation. They are required also to attend one summer camp of six weeks' duration. While enrolled in the Advanced Course, except the time at camp, they receive commutation of rations, at the authorized rate; at camp, the ration itself is furnished and they are paid at the rate of one dollar per day.
THE COURSE OF INSTRUCTION.

THE BASIC COURSE, INFANTRY UNIT.

Military Science 1 & 2

(Freshman Year)

Basis for calculation of time available for instruction:
1. Minimum hours of instruction per week required by law 3
2. Estimated number of weeks per academic year 36
3. Estimated total available academic hours 108
4. Probable number of classroom periods for recitation on prepared subjects 36
5. Probable number of periods for practical instruction 72
6. Credits for each semester 2

SUBJECTS AND SCOPE.

I. Infantry Drill Regulations.
   1. Theoretical Instruction.
      (a) Principles and methods of instruction in close and extended order to include the schools of the soldier, squad, platoon and company.
   2. Practical Instruction.
      (a) Close and extended order drills.
      (b) Participation in military ceremonies.

II. Rifle Marksmanship.
   1. Theoretical Instruction.
      (a) Lectures and talks explanatory of the general scheme and principles of rifle marksmanship.
   2. Practical Instruction.
      (a) The first, second, third, fourth, and fifth steps in rifle marksmanship.
      (b) Nomenclature and care of the rifle.
      (c) Effect of weather conditions—sight changes—score book.
      (d) Gallery practice.
      (e) Range practice.
      (f) Method of coaching.
      (g) General rules and definitions.

III. Scouting and Patrolling.
   1. Theoretical Instruction.
      (a) Principles governing the composition, formation, and operations of reconnoitering patrols by day and at night. Differences in methods of operating in open warfare and warfare of position.
   2. Practical Instruction.
(a) Problems and exercises in scouting and patrolling on sand table and terrain.

IV. Physical Training.
1. Practical Instruction.
   (a) Recruit instruction in the setting-up exercises.
   (b) Talks on the need for and object of physical training.
   (c) Mass games and athletics.
   (d) College athletics.

V. Military Courtesy.
1. Theoretical Instruction.
   (a) Lectures on fundamental principles of military discipline.
   (b) Relation of courtesy to discipline and efficiency.
   (c) The military courtesies of the Army of the United States.
   (d) Demonstration of correct and incorrect manner of rendering courtesies.

THE BASIC COURSE, INFANTRY UNIT.

MILITARY SCIENCE 3 & 4
(Sophomore Year)

Basis for calculation of time available for instruction:
1. Minimum hours of instruction per week required by law 3
2. Estimated number of weeks per academic year.................. 36
3. Estimated total available academic hours.......................... 108
4. Probable number of classroom periods for recitation on prepared subjects ........................................ 72
5. Probable number of periods for practical instruction........ 36
6. Credits for each semester ........................................... 2

I. Map Reading and Military Sketching.
1. Theoretical Instruction.
   (a) The instruction necessary to enable students to read military maps with facility and to make road, outpost and position sketches.

2. Practical Instruction.
   (a) Problems in map reading. Visibility of points, areas, etc.
   (b) Practice in making road, outpost and position sketches.
   (c) Combined sketching.
II. Infantry Weapons.

1. Theoretical Instruction.
   (a) The Bayonet.—Lessons on the bayonet as an offensive weapon. The spirit of the bayonet. Teamwork.
   (b) The Automatic Rifle.—Lessons on the history, characteristics, marksmanship of the weapon and the organization and equipment of auto-riflemen.
   (c) Hand and Rifle Grenades.—Lessons on the construction and handling of the weapons, including explosives.

Practical Instruction.
   (a) The Bayonet.—Bayonet training to include the assault course.
   (b) Automatic Rifle.—Mechanics (stripping, assembling, functioning). Immediate action. Marksmanship to include instruction up to range practice.
   (c) Hand and Rifle Grenades.—Individual instruction with dummy and improvised grenades.

III. Musketry.

1. Theoretical Instruction.
   (a) Weapons of the infantry squad. Theory of fire.
   (b) Range estimation, target designation, fire distribution.
   (c) Fire discipline (use of cover, individual movement, transmission of firing data, signals, replacement of casualties, individual conduct, etc.).
   (d) Fire control (application, observation and adjustment of fires).
   (e) Control of movement (rushes and infiltration, squad and section).
   (f) Conduct of fire in the attack. Duties of leaders to include the section.
   (g) Conduct of fire in the defense. Duties of leaders to include the section.
   (h) Combat practice (use of landscape targets, preparation and methods of conducting and criticizing practical exercises).

2. Practical Instruction.
   (a) Exercises, demonstrations, and tests, using sand table, landscape, target and terrain.

IV. Command and Leadership.

1. Practical Instruction and Experience.
   (a) In order to carry out the spirit of the General In-
structions governing this course, it is essential that students in the second year of the Basic Course be given the greatest practical opportunity to exercise the functions of command appropriate to N.C.O.s and to acquire practical experience in leadership.

A provision of time is made for this purpose and professors of military science and tactics will arrange in the most practical manner to give the individual student definite assignments to duties in connection with the instruction and training of students in the first year of the Basic Course which will, in the course of a year, demonstrate the aptitude of the individual student.

V. Military Hygiene, Sanitation, and First Aid.

1. Theoretical Instruction.
   
   (a) Personal Hygiene.
   
   (b) Foods, their preparation. Hygiene of the Kitchen, the Barracks and Camp.
   
   (c) Selection and protection of drinking water.
   
   (d) Hygiene of moving troops.
   
   (e) The causes of disease. The prevention and control of epidemics. The prevention of mental and nervous diseases.
   
   (f) Sanitation of localities, selection and drainage of camp sites.
   
   (g) Disposal of refuse.
   
   (h) First aid to the injured. Resuscitations.
   
   (i) As much as is necessary for an intelligent understanding of the fundamental importance of physical, mental and moral soundness in the soldier. Physical requirements for military service.
   
   (j) Comparative statistics of physical fitness of American citizens for military service in the World War.

2. Practical Instruction.

   (a) Sand table demonstrations and problems in camp sanitation.
   
   (b) Construction of miniature models of sanitary appliances, camp sites, expedients, etc.
   
   (c) Demonstrations and exercises in First Aid to the injured.

THE ADVANCED COURSE, INFANTRY UNIT

Military Science 5 & 6
(Junior Year)

Basis for calculation of time available:
1. Minimum hours of instruction per week required by law... 5
2. Estimated number of weeks per academic year............. 36
3. Estimated total available academic hours................... 180
4. Probable number of classroom periods for recitation on prepared subjects........................................ 36
5. Probable number of periods for practical instruction....... 144
6. Credits for each semester..................................... 4

Subjects and Scope

I. Field Engineering.
   1. Theoretical Instruction.
      (a) Elements of field engineering. Instruction to include the principles and methods of military field engineering in the various types of trenches, obstacles, shelters, machine-gun emplacements, observation posts, etc. Organization of working parties and tasks. Selection of location for works of defense. Concealment and camouflage.

   2. Practical Instruction.
      (a) Solution of military engineering problems based on 1 (a) above. Demonstrations on sand table. Construction on sand table, miniature models of types of trenches, obstacles and other defensive works. Reconnaissance, location and laying out of works on the ground. (Where practicable, a trench system should be constructed. Each class, from year to year enlarging, improving and repairing the initial works.)

II. Accompanying Weapons.
   1. Theoretical Instruction.
      (a) The Machine Gun.—Development of machine gun. The theory of fire. Targets and ranges. Direct, indirect and overhead fire, and night firing.

      (b) The 37-mm. Gun (one Pounder),—History of the weapon. Direct, indirect and overhead fire. Observation and adjustment of fire.

      (c) The Light Mortar.—History of the Weapon. Laying the mortar. Kinds of fire. Observation and adjustment of fire.

   2. Practical Instruction.
minution of ranges. Recognition and designations of service targets.

(b) The 37-mm. Gun (one pounder).—Mechanics (stripping, assembling, functioning). Construction, care and operation of gun. Types of ammunition. School of the one pounder section. Exercises and demonstrations in direct and indirect fire.


1. Theoretical Instruction.


(b) Rules of land warfare. Lectures on general principles.

2. Practical Instruction.

(a) Moot-court exercises.

IV. Command and Leadership.

1. Practical Instruction and Experience.

(See comment under IV, 1 (a) in second year of Basic Course except that instruction should be appropriate to grades of sergeant and lieutenant.)

THE ADVANCED COURSE, INFANTRY UNIT

MILITARY SCIENCE 7 & 8

(Senior Year)

Subjects and Scope

I. Tactics.

1. Theoretical Instruction.

(a) General view of the organization and conduct of the battalion and higher units.

(b) Principles governing the organization, armament, equipment and conduct of the rifle, machine gun, howitzer and headquarters companies, in offensive and defensive combat.
(c) Tactical principles governing the conduct of the platoons and smaller units in offensive and defensive combat. Details of organization, equipment and tactical employment of the rifle company, machine-gun company and howitzer company platoons. Combined action.

2. Practical Instruction.
   (a) Demonstrations, exercises and problems on sand table, map and terrain in subjects covered in (b), and (c) above.

II. Military History.
   1. Facts of American Military History, including the World War, as to:
      (a) The sources of authority for our military establishment.
      (b) The development of military resources and the military strength of the United States.
      (c) The state of national preparedness for war at critical periods in the history of the United States.
      (d) The cost of American wars in relation to national unpreparedness.

   2. Lessons from American History as to:
      (a) The traditional military policy of the United States.
      (b) The need for national organization for military defense of the nation.

III. Administration.
   1. Lectures on practical administration of a company, including interior economy and the management of the soldier.

   2. Practical work in the preparation of papers pertaining to the administration of a company. As much as a lieutenant should know concerning military correspondence, preparation and application of War Department forms, use and disposition of orders, bulletins and circulars.

IV. Command and Leadership.
   1. Practical Instruction and Experience.
      (See comment under IV, 1 (a) in second year of Basic Course except that instruction should be appropriate to grades of sergeant and lieutenant.)
UNIVERSITY EXTENSION SERVICE

"Making the Territory of Hawaii Our Campus."

The University of Hawaii is offering a program of extension service whereby some of its educational facilities may be of larger and wider use throughout the Territory. In equipping for its primary function of educating the youth of Hawaii the University has provided scientific laboratories, an extensive library and a corps of specialists as instructors. So far as it is compatible with its primary function, this equipment is offered for service beyond the University campus.

The Extension Service Department of the University of Hawaii is directing its work along several lines, as follows:

1. Extension Classes.
2. Correspondence Instruction.
3. Extension Letter.
4. Lectures and Informal Talks.
5. Public Service.

EXTENSION CLASSES

Extension courses open to all interested persons are offered by the University. The length of these courses is variable, from one week to several months. Courses in the following subjects have been given during the year 1923-24, and in a general way are indicative of an average year's program.


The course was repeated the second semester, the class meeting for two hours, one evening per week, at the Library of Hawaii, beginning February 4.

2. COURSE IA. Educational Measurements for the Classroom Teacher. A series of 15 lectures designed to acquaint teachers with the best standardized tests and how to make practical use of the results of testing. Conducted by Professor Symonds under joint auspices of Teachers' Council of Hawaii and University Extension Service. One lecture each week at Library of Hawaii, beginning October 1.

3. COURSE IIA. Physical Features of the Hawaiian Islands. A series of fifteen lectures on the physical geography
and other features of the Hawaiian Islands, designed especially for grade school teachers. Given by various lecturers under joint auspices of Teachers' Council of Hawaii and University Extension Service. One lecture each week at Library of Hawaii, beginning October 4.

4. COURSE IB. Current Events. A series of 15 lectures interpreting news for the week, with reading suggestions and comments on articles and books. Conducted by Dr. Leebick under joint auspices of Teachers' Council of Hawaii and University Extension Service. One lecture each week at Library of Hawaii, beginning February 15.


6. DRESSMAKING. A twelve weeks' course conducted by Madame Dahl. Lessons in the use of commercial patterns, scientific fitting, cutting and making of garments. One lesson each week at the University, beginning October 20.

7. MILLINERY. A ten weeks' course conducted by Madame Dahl. Lessons in the making and covering of wire and buckram frames; making of bows, flowers and fancies for trimming. One lesson each week at the University of Hawaii, beginning March 8.

8. PINEAPPLE PRODUCTION AND CANNING. A short, intensive course dealing with various problems of the pineapple industry, designed especially for field and cannery men. Held under joint auspices of the Association of Hawaiian Pineapple Canners, the H. S. P. A. Experiment Station, the Board of Agriculture and Forestry and the University Extension Service. Daily, March 25-29.

9. POULTRY CULTURE. A ten weeks' course in practical poultry husbandry, designed especially to meet the needs of Hawaiian poultry raisers. One classroom lecture and practical demonstration at the University Poultry Farm each week. Mimeographed lessons furnished as text. Conducted by Prof. Krauss, beginning January 12.

The registration in the above courses was as follows:
Instruction by Correspondence

<table>
<thead>
<tr>
<th>Course</th>
<th>*Credit Students</th>
<th>Non-Credit Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chinese (Two Classes)</td>
<td>31</td>
<td>12</td>
</tr>
<tr>
<td>2. Course IA</td>
<td>46</td>
<td>68</td>
</tr>
<tr>
<td>3. Course IIA</td>
<td>42</td>
<td>35</td>
</tr>
<tr>
<td>4. Course IB</td>
<td>25</td>
<td>69</td>
</tr>
<tr>
<td>5. Course IIB</td>
<td>32</td>
<td>12</td>
</tr>
<tr>
<td>6. Dressmaking</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>7. Millinery</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>8. Pineapple Production</td>
<td></td>
<td>146</td>
</tr>
<tr>
<td>9. Poultry Culture</td>
<td></td>
<td>26</td>
</tr>
</tbody>
</table>

The above figures represent the enrolment in each class, not excluding duplicate registrations. Figures excluding duplications are given in the General Summary of Students.

INSTRUCTION BY CORRESPONDENCE

The program of instruction by correspondence is limited, including six reading courses without university credit and one course with credit. The latter is Educational Measurements for the Classroom Teacher, prepared by Prof. P. M. Symonds and carried on with the cooperation of the Teachers’ Council of Hawaii and the Territorial Normal School. Those who successfully completed this course obtain two collegiate credits either from the University or the Normal School. There were 68 students enrolled in this course for credit and 104 not for credit.

The reading courses are prepared for local conditions and are sent out in mimeographed form, weekly. They are:
2. Soil Science.
3. Poultry Culture in Hawaii.
4. Natural History and Science.
5. The Story of Sugar.
6. School Administration.

HOME READING COURSES

In collaboration with the United States Bureau of Education a number of reading courses are offered by the Extension Division of the University. These courses, 25 in number, are arranged by experts of national reputation and offer an opportunity for

*Classed as special students in the Colleges of Applied Science and Arts and Sciences.
home reading of the world's best literature under the guidance of the University. A certain list of books in each course is required to be read and summarized and examination questions answered, all the paper work being reviewed by a member of the University Faculty. Upon satisfactory completion of this work, a certificate is awarded by the United States Bureau of Education.

The courses are as follows:

1. Great Literary Bibles.
2. Great Literature—Ancient, Mediaeval, and Modern.
3. Miscellaneous Reading Course for Parents.
4. Miscellaneous Reading Course for Boys.
5. Miscellaneous Reading Course for Girls.
7. Thirty World Heroes.
8. American Literature.
10. American History.
11. France and Her History.
13. The Call of Blue Waters (Seamanship).
15. Shipbuilding.
17. Foreign Trade.
18. Dante.
20. Teaching.
22. Agriculture and Country Life.
23. How to Know Architecture.

Forty-seven persons enrolled in these courses during the year.

PUBLICATIONS

A weekly agricultural "Extension Letter" is printed and mailed out free of charge to about 1700 "subscribers." This carries agricultural information and market news to assist the farmers throughout the Territory.
LECTURES
A program of informal lectures by faculty members has been given by the University throughout the Islands. A detailed announcement of this service will be mailed upon request.

PUBLIC SERVICE
Under this head are included miscellaneous forms of public service such as technical laboratory and field investigations, expert consultations, dissemination of information through the press or otherwise, special correspondence, assistance in marketing, etc.

EGG-LAYING CONTEST
In co-operation with the Poultry Division, the Second Annual Hawaii Egg-Laying Contest was inaugurated in November, 1923, to run for one year. Twenty-five unit entries of five hens each are in this contest, representing several breeds and coming from several islands. All are Hawaiian-bred and are showing what can be done in Hawaii in the poultry industry.
Degrees Conferred

DEGREES CONFERRED
JUNE, 1923

MASTER OF SCIENCE


Otto Degner, B.S. Massachusetts Agricultural College, 1922.

Giichi Fujumoto, B.S. University of Hawaii, 1921.

John Scott Boyd Pratt, Jr., B.S. in Agriculture, Cornell, 1915.

MASTER OF ARTS

Robert Thomas Aitkin, B.S. University of California, 1913.
Thesis: Mythology of Tubuai.

Leon McKinley Bower, Ph.B. Denison University, 1920.

BACHELOR OF SCIENCE

In Civil Engineering

Clarence Cooper Searle
William Sydney Wilson

In General Science

James Yuk Jay
David Keliilawaia Kapahakimohewa
Anum Yim Kealamakia
Daniel Tien Kee Low
Seichi Miyake
Yerngho T. S. Park
Richard Choy Tong
James Chow Zane
Degrees Conferred

In Sugar Technology

Shoichi Hashimoto
Wilson Niles Jacobsen
Charles Bernard Lambert
William Wolters

BACHELOR OF ARTS

*Walter Ing Akana
Henry Martin Bindt
Dora Marion Broadbent
Eva Marguerite Cartmill
Beatrice Syn Yun Chong
Herbert Francis Cullen
Kiyoshi Fukushima
May Kealohikikaupea Gay
Maria Margaret Hoermann
John Yutaka Matsumura
Yoshino Matsumura
Shizuto Nishimoto
Robert Raymond Spencer
Ruth Lu Tet Yap

HONORARY DEGREE

DOCTOR OF SCIENCE

Frederick George Krauss

*Degree granted July 5, 1923, upon receipt of certificate of completion of first year's work at Cornell Medical School.
Scholarships

UNDERGRADUATES WHO HOLD UNIVERSITY SCHOLARSHIPS

University Club Sophomore Scholarship
ERNEST KAI

Hilo Chamber of Commerce Scholarship
DAVID MAKAOI

Honolulu Rotary Club Scholarship,
FRANCIS BOWERS

Prince Fushimi Fund Scholarship,
TSUYOSHI IWANAGA
JISOO SANJUME
KAZUICHI HIRANO
KAZUMI MAKINO

Maui Women's Club Scholarship,
KEINARD WATSON

Central Union Church Special Scholarship
KAWEHELANI JANET ROSS

The Ruth Scudder Memorial Scholarship, controlled by the Women's Society of the Central Union Church, is held in 1923-24 by
MITSUKO ABE
K. JANET ROSS
AH HEE YOUNG

Association of Hawaiian Pineapple Canners' Fellowship
FRANCIS A. E. ABEL.

Daughters of American Revolution Scholarship
CLAIRE deRUSSY
DORIS HAIR

Honolulu Chamber of Commerce Freshman Scholarship
KIKUJI SAKAMOTO

Honolulu Chamber of Commerce Agricultural Scholarship
RICHARD LUM
REGISTER OF STUDENTS
1923-1924

GRADUATE STUDENTS

Abel, Francis A. E., The Macdonald.
B. S. in Sugar Technology, Univ. of Hawaii, 1921.

Biery, Marguerite, Bowling Green, Ohio; 2216 Kalia Road.
B. S., Columbia Univ., 1917.

Bryan, Edwin Horace, Bishop Museum.
B. S., Univ. of Hawaii, 1920; Ph. B., Yale, 1921.

Matsumura, Yoshino, Waimea, Kauai; 2459 Nuuanu Ave.
A. B., Univ. of Hawaii, 1923.

Neale, Marie C., 2130 Armstrong St.
A. B., Smith College, 1912.

Poole, Charles Frederick, Makaweli, Kauai.
B. S. in Sugar Technology, Univ. of Hawaii, 1920.

Pope, Willis Thomas, U. S. Experiment Station.
B. S., Kansas Agr. College, 1898; M. S., Univ. of California, 1916.

Pratt, Helen Gay, 1500 Kapilani St.
B. A., Mt. Holyoke College, 1910.

A. B., Univ. of Michigan, 1902.

Spencer, Robert Raymond, 222 Emma Square.
A. B., Univ. of Hawaii, 1923.

Starratt, Harold Earl, Olaa, Hawaii.
B. S., Univ. of Hawaii, 1916.

Tong, Richard Choy, 1013 Poha Lane.
B. S., Univ. of Hawaii, 1923.

Wist, Benjamin O., 2128 Oahu Avenue.
A. B., Spokane College, 1910.

Yap, Ruth Lu Tet, 3465 Waialae Road.
A. B., Univ. of Hawaii, 1923.
Register of Students

COLLEGE OF APPLIED SCIENCE

SENIOR CLASS

Beveridge, Thomas (Sugar Technology, Chemistry), Papaikou, Hawaii; Men's Dormitory.
Bowers, Francis Andrew Imaikalani (Sugar Technology, Agriculture), 237 Merchant St.
Chang, Peter Tai (Civil Engineering), 607 School St.
Chung, Wai (Agriculture), 803 Gulick Avenue.
Forbes, Allister (Sugar Technology, Agriculture), Hilo, Hawaii; Men's Dormitory.
Forbes, David Merlyn Lougher (General Science), Hilo, Hawaii; Men's Dormitory.
Greig, Marjorie Isabella (Home Economics), 2376 Oahu Avenue.
Hee, Kai Ngu (Agriculture) 86 School St.
Hirashima, Kazuo Bert (Civil Engineering), 320-B Frog Lane.
Kawahara, Kazuto (Sugar Technology, Engineering), Papaalou Hawaii; 626 King Street.
Keppeler, Herbert K. (Civil Engineering), Pearl City, Oahu; Men's Dormitory.
Kolke, Tsuneo (Civil Engineering), Holiula, No. Kona, Hawaii; 2225 Hyde St.
Lum, Richard (Agriculture), Wahiawa, Oahu; 2101 No. King St.
Matsuki, Henry Y. (Civil Engineering), Waimea, Kauai; 1717 Houghtaling Ave.
Morita, Helene (General Science), 1021 Kama Lane.
Morimoto, Hiroshi William (Civil Engineering), 591-D Beretania St.
Omura, Shizuo (Civil Engineering), Hamakuapoko, Maui; 2105 St. Beretania St.
Tani, Edward M. (Civil Engineering), Kamuela, Hawaii; Nuuanu Y. M. C. A.
Tong, Koon Ching (General Science, Physical), Canton, China; 1017 Maunakea St.
Wong, Sum (Civil Engineering), Heeia, Oahu; P. O. Box 1559, Honolulu.

JUNIOR CLASS

Clarke, Adna G., Jr. (General Science), 2125 Armstrong St.
Cook, Edgar Kalanikoa (General Science, Pre-Medical) Hilo, Hawaii; Men's Dormitory.
Deverill, Norman S. (Sugar Technology, Agriculture), 2172 Atherton Road.
Farden, Carl Alexander (Sugar Technology, Agriculture), Lahaina, Maui; Men's Dormitory.
Fincke, William South (Civil Engineering), Olaa, Hawaii; Moanalua and 20th Ave.
Forbes, Dyfrig McHattie (Sugar Technology, Agriculture), Waiakea Mill, Hilo, Hawaii; Men's Dormitory.
Iing, Edmund T. K. (General Science, Pre-Medical), 1703 Lewis Ave.
Iwasaki, Koji (Sugar Technology, Agriculture), Kurtistown, Hawaii; P. O. Box 1238.
Kobatake, Akeshi (Civil Engineering), Pahoa, Hawaii; P. O. Box 936.
Kunimoto, Takeo (General Science), Kawaiola, Waialua, Oahu; 1335 Pua Lane.
Lung, Kwai Chong (Civil Engineering), Kilauea, Kauai; 1707 Nuuanu Street.
Lyman, Richard, Jr. (General Science, Biological), Kapoho, Puna, Hawaii; Men's Dormitory.
Minvielle, Albert Edward, Jr. (General Science), 1641 Young St.
Mori, Takeshi (Civil Engineering), Iwilei, Honolulu.
Nakano, John Motojiro (Sugar Technology, Agriculture), Cor. Nuuanu and Kukui Sts.
Reeves, Charles K. (General Science), 1031 East 5th Avenue, Kaimuki.
Sakamaki, Paul Fukuo (Sugar Technology, Agriculture), Olaa, Hawaii; 610 South King St.
Samson, Walter (Sugar Technology, Agriculture), 600 Wylie St.
Suga, Hajime (Civil Engineering), Koloa, Kauai; 2105 So. Beretania Street.
Tani, Ernest M. (Civil Engineering) Kamuela, Hawaii; 22 So. Vineyard Street.
Tanimura, John Masato (Civil Engineering), Paauilo, Hawaii; 1968-Ohia Lane, Pauoa.
Tong, Ruddy F. (General Science), 1013 Poha Lane.
Tsujii, Keizo (General Science), 1921 Kalia Road.
Waters, Theodore (Sugar Technology, Chemistry), 118 Kealohilani Avenue.
Wicke, Henry, A. (Civil Engineering), 1232 Young St.
Wong, Bung Fong (General Science), 1087-D Beretania St.
Yamanaka, Toshio (Civil Engineering), Watertown, Oahu.

SOPHOMORE CLASS

First figure shows grade points earned; second figure shows semester credits earned.
Chan, Ruth Me Lan 147, 55 (General Science, Pre-Medical), 178 School St.
Clark, Montgomery 103, 58 (General Science), c/o Chamber of Commerce, Honolulu.
Cornellson, Alexander 86, 48 (General Science), 2536 Manoa Road.
Crulickshank, George Bruce 25, 45 (General Science, Biological, Waiau, Oahu; Men's Dormitory.
Downer, John Mahiheilima 31, 41 (General Science, Pre-Medical), 14 Kau Lane, Hilo, Hawaii; Men's Dormitory.
Hair, Edward Beckwith 54, 54 (Sugar Technology, Agriculture), Hamakuaapoko, Maui; Men's Dormitory.
Hartman, William Alfred 62, 51 (Civil Engineering), Hilo, Hawaii; Men's Dormitory.
Ikuta, Shunji 99, 60 (General Science, Pre-Medical), 1522 Oliver Lane.
Ishikawa, Yasuo 101, 58 (Sugar Technology, Chemistry), Kealakekua, Kona, Hawaii; 134 S. Vineyard St.
Kang, Chung-Ho 118, 60 (Civil Engineering), 584-M Circle Lane.
Katsuki, Sadao 86, 54 (General Science, Pre-Medical), 1326 Keaumoku Street.
Kerns, Kenneth R. 58, 54 (General Science), Waipahu, Oahu.
Kerns, Lambert Clarence 32, 49 (General Science), Waipahu, Oahu.
**Kinney, Howard 98, 104 (General Science, Physical), 1337 Fort St. Krauss, Beatrice 75, 47 (Agriculture), 2447 Parker St.
Kum, Kong Lun 23, 38 (Agriculture), 2734 Beretania st.
Lee, Suo Nam 50, 46 (General Science), 960-C Alapai Lane.
Lennox, Colin Gordon 90, 60 (General Science), 982 Prospect St.
Leong, David 54, 51 (Agriculture), 1338 Young St.
Leong, Peter Kim Fook 32, 46 (Agriculture), 1417 Beretania St.
Low, James 73, 56 (Agriculture), 2236 Young St.
Makino, Kazumi 117, 60 (Civil Engineering), Honomu, Hawaii; 1483 So. King St.
McLennan, Ronald Horner 54, 54 (Agriculture), Niuli, Kohala, Hawaii; Men's Dormitory.
Mermod, Leon 69, 48 (General Science, Pre-Medical), Winters, Yolo County, Calif.; Waipahu, Oahu.
Miyamoto, Koichi, 30, 51 General Science, Pre-Medical), Coral St., near Queen St.
Mopua, Francis 16, 45 (Sugar Technology, Agriculture), 106 School Street.
Mossman, Thomas 50, 54 (General Science, Pre-Medical), 1350 Miller Street.
Nakamura, Hideo 52, 53 (Agriculture), Puuloa, Oahu.
Nakamura, Takeo 74, 57 (Sugar Technology, Chemistry), 222 Paokalani St.
†Nicoll, James Lundie 26, 15 (Sugar Technology, Agriculture), Paia, Maui; 2561 Jones St.

**Given sophomore rating because of Freshman or Entrance deficiencies.
†Entered with advanced standing.
Register of Students

Ohta, Takashi 54, 46 (General Science, Pre-Medical), 1719 No. King Street.
Pang, Hong Quon 113, 60 (General Science, Pre-Medical), Cunha's Lane, No. 4, Vineyard St.
Pang, John 64, 58 (Civil Engineering), 1799 Kalakaua Avenue.
Penhallow, Richard 48, 34 (Sugar Technology, Agriculture), Wailuku, Maui.
Searle, Theodore Cooper, 44, 50 (General Science, Physical), 1534 Magazine St.
Sonoda, Allen Sadao 43, 48 (General Science, Pre-Medical), 474 No. Kukui St.
Takakawa, Sadao 25, 44 (Agriculture), 1025 Kama Lane, Palama.
Thompson, Henry 50, 57 (Sugar Technology, Agriculture), 2521 Rose Street.
Tokimasa, Hidemichi 86, 49 (Agriculture), Kahaluu, Oahu; 610 So. King St.
Tong Fook Hing 53, 58 (General Science, Pre-Medical), Hau, Hawaii; 1115-B Pilkoj St.
Uchiyama, Hoichiro 53, 49 (General Science, Pre-Medical), Pearl City, Oahu.
Wedemeyer, Ernest F. 62, 57 (Civil Engineering), Lihue, Kauai; Men's Dormitory.
Yamamoto, Shigeo 117, 60 (General Science, Pre-Medical), 1145 Okada Store, So. King St.
Yapp, Chester Fook Loy 52, 48 (General Science), 1216 Young St.
Young, Fred Owen 50, 52 (Civil Engineering), 3818 Paki Avenue.

FRESHMAN CLASS

Alnoa, Daniel Kanuha 28, 20 (Civil Engineering), 1068 Kaili St.
Aki, Alfred 31, 17 (General Science, Physical), 909 Kealone Lane.
Beers, Fred Douglas 6, 12 (Civil Engineering), Hilo, Hawaii; Men's Dormitory.
Benner, Edwin, Jr. 45, 20 (Agriculture), 2420 Upper Manoa Road.
Betsui, Takeji 34, 20 (General Science, Pre-Medical), Hanapepe, Kauai; 610 So. King St.
Brandt, Isaac John 10, 11 (General Science), Koloa, Kauai; 1529 Punahou Street.
Carter, Edward William 25, 15 (Civil Engineering), 160 Kealohilani Avenue.
Chung-Hoon, Cyril 12, 20 (Civil Engineering), 3262 Waialae Road.
Chung, Euicho 21, 18 (Agriculture), Koloa, Kauai; Library of Hawaii.
Chung, Kun Sung 18, 16 (General Science, Physical), 35 Mamane Lane, Pauoa.

Cockroft, Ruth Walcott 32, 18 (Home Economics), Lahaina, Maui; Box 3415.

Collins, Quinlan 3, 6 (General Science, Physical), Fairfield, Iowa; Central Y. M. C. A.

*Duvauchelle, Henry Napeha, (General Science, Pre-Medical), Pukoo, Molokai; 1635 Gulick Ave.

Ellis, Norman Wilson 33, 18 (General Science), 1428 Pilkoi St.

Eremeeff, Basil Sergeevich 23, 15 (Civil Engineering), 610 South King St.

Fuginaga, Satoshi 21, 15 (Civil Engineering), Hakalau, Hawaii; 118 So. Vineyard St.

Fung, Chong Tom 8, 14 (Sugar Technology, Agriculture), No. Kohala, Hawaii; 1508 Artesian St.

Hair, Doris Baillie 28, 13 (Home Economics), Hamakuapoko, Maui; Girls' Dormitory.

Hamamoto, Masakatsu 43, 20 (General Science), Waiau, Oahu; 656 No. School St.

Hayashi, Morl 16, 17 (General Science, Pre-Medical), 764 South St.

Heminger, Murray V. 10, 16 (General Science), Men's Dormitory.

Iwai, Charles Kazuo 28, 20 (Civil Engineering), Upper Manoa Valley, c/o Manoa Japanese School.

Iwao, Fukumi 18, 17 (Civil Engineering), Waipahu, Oahu.

Iwasaki, Hisao 16, 17 (General Science, Pre-Medical), 1571 Auld Lane.

Jacobson, Roy Edward 21, 19 (Agriculture), 3155 Wailae Road, Kaimuki.

Johnston, Russel 8, 11 (General Science, Physical), Colonial Hotel.

Judd, Julian Hastings 0, 0 (Agriculture), Kualoa Ranch, Walkane P. O., Oahu; Men's Dormitory.

Kaaua, Archibald Spencer 30, 20 (Civil Engineering), Kamuela, Hawaii; 1910 Fort St.

Kamm, Tin Pui 27, 20 (Sugar Technology, Engineering), 128 South School Street.

Katsunuma, Joseph 3, 17 (General Science), 2304 Metcalf St.

Keala, Samuel Louis 30, 20 (Civil Engineering), Waipio, Kukuihaele, Hawaii; 1337 Fort St.

Kodama, George Haruto 19, 17 (General Science, Pre-Medical), Kalihi St.

Kurio, Howard Hisayuki 22, 20 (Civil Engineering), Lahaina, Maui; 1220 Pensacola St.

*Withdrew before end of semester.
Register of Students

Leong, Quon Sein 8, 17 (General Science), Waialua, Oahu; c/o Wo Hop Co., Smith St.

Louis, James 12, 17 (Civil Engineering), 1060 Koko Head and Palolo Avenues.

Lum, William Ko 6, 8 (General Science), 20 Walkahalulu Lane.

Lyman, Orlando Hammond 17, 16 (Sugar Technology, Agriculture), Halaulani Place, Hilo, Hawaii; Men's Dormitory.

Marciel, Valentine 14, 15 (Agriculture), Walluku, Maui; 1805 Kahana Street.

Masunaga, Eichi 31, 17 (General Science), Kalaheo, Kauai; 1708 Nuuanu St.

Matsumura, Edward Shizuo 25, 20 (Civil Engineering), 1318 Alani St., McInerny Tract.

Mau, Francis 44, 20 (Civil Engineering), 1635 Young St.

*McNair, Douglas (Civil Engineering), 1627 Anapuni St.

*Miyamoto, Hannah (Home Economics), Hakalau, Hawaii; 1946 Pauoa Road.

Mizuire, Shizuto 25, 17 (General Science, Pre-Medical), Pepeekee, Hawaii; P. O. Box 877.

Moragne, William Middleton 22, 17 (Agriculture), Lihue, Kauai; 1030 16th Ave., Kaimuki.

Mountcastle, William Herbert 16, 20 (Civil Engineering), Kahului, Maui; 1434 Gulick Ave.

*Mukai, Shigeru (Civil Engineering), Mill Camp, Puunene, Maui; 1220 Pensacola St.

Naramoto, Ichine 36, 20 (Sugar Technology, Engineering), 2619 So. King St.

Nishimura, Michiru 5, 20 (Civil Engineering), 1725 So. King St.

Nomura, Shuji 33, 15 (Civil Engineering), 1238 Hala Drive.

Ochiai, Hiroshi 17, 17 (General Science), Mountain View, Hawaii; P. O. Box 877.

Ohara, Yutaka 20, 14 (General Science, Pre-Dental), Pearl City, Oahu.

Okazaki, Kyuro 35, 20 (Agriculture), 794 N. King St.

‡Paul, George Henry, Jr. (Sugar Technology, Engineering), 2031 Vancouver Highway.

Penhallow, David 35, 20 (Civil Engineering), Walluku, Maui; Men's Dormitory.

Pung, Ernest Fook On 21, 19 (General Science), Kohala, Hawaii; 1949 Young St.

*Ramirez, Vicente (General Science), Sto. Domingo, Ilocos Sur, Philippine Is.; Hawaiian Bd., Filipino Center.

*Withdraw before end of the first semester.

‡ Died September 19, 1923.
*Rose, Charles H., Jr. (General Science, Pre-Medical), 2025 Kamehameha Avenue.

Sakihara, Tadao 22, 20 (Agriculture), Waipahu, Oahu.

Smith, Dudley Wall 29, 20 (Civil Engineering), Kahala, Oahu; P. O. Box 121, Honolulu.

*Smith, John Nelson (General Science, Pre-Medical), 1117 15th Ave., Kaimuki.

Suehiro, Amy 33, 14 (Home Economics), 2329 Lower Manoa Road.

Sweet, Ernest Albert, Jr. 19, 14 (General Science), U. S. Quarantine Station, Honolulu.

Tashima, Charles Wakatsu 4, 4 (Civil Engineering), Pahoa, Puna, Hawaii; Hongwanji Mission, Fort St.

Tashiro, Stewart Toshichiro 35, 19 (General Science), 19 Kapena St. Tejo, Fortunato 28, 20 (Sugar Technology, Chemistry), Kapaa, Kauai; 1813 Liliha St.

Teragawa, Hiroji 20, 17 (General Science, Pre Medical), Waimea, Kauai; 636 Hotel St.

Trotter, Frederick Eugene, Jr. 37, 17 (General Science), 1414 Heulu Street.

Tsuchiya, Shizuo 33, 20 (General Science, Pre-Medical), 160 No. Vineyard Street.

Watanabe, James Kazu 27, 19 (Sugar Technology, Agriculture), 1239 So. King St.

Wong, Hong Chang 10, 14 (General Science, Pre-Medical), 1918 Fort Street.

Yamamoto, Shigeki 43, 20 (General Science, Pre-Medical), Papaikou, Hawaii; 12 McGrew Lane, School St.

Yamashita, Takeo 28, 20 (General Science, Biological), Honokaa, Hawaii; Japanese Boarding School, Honolulu.

SPECIAL STUDENTS

Amana, Bessie, 1757 Fort St.

Auld, Kenneth, Alewa Heights.

Bain, Anne Fuller, 228 Beach Walk.

Bal, Louise, 2610 Doris Place.

Barrere, Rosalind, 2231 Hyde Street.

Barrette, Katherine Biddle, Fort Shafter.

Barrette, Mary Lydia, Fort Shafter.

Beckley, Fred W. Jr., 1127 Fifteenth Ave.

Benner, Emma Catherine, 2420 Manoa Road.

Berg, Alice G., 2414 Parker St.

*Withdrawed before end of the first semester.
Berndt, Lilli P., 3745 Pahoa Ave.
Bickford, Lillian C., 1512 Spreckels St.
Boyd, Bertha B., 1644 Kalakaua Avenue.
Brash, Lionel Verne, 1294 Emma St.
Brown, Jane Lishman, 33 Dowsett Avenue.
Buchanan, Gertrude P., Lahaina, Maui; 1312 Artesian St.
Buck, Victor M., La Grangeville, N. Y.; 610 So. King St.
Cameron, Jessie Powers, 1829 Makiki St.
Campbell, Dorothy F., 2289 Kamehameha Avenue.
Cannon, Mrs. Glenn Douglas, 385 Alewa Drive.
Chandler, Martha A., 1625 Dole St.
Chang, Grace Liu, P. O. Box 1834, Honolulu.
Chatham, Marie, Philadelphia, Pa.; 2526-F Cleghorn Drive.
Ching, Margaret M. L., 568 Queen St.
Chock, Quan Chew, 586 Beretania St.
Chung-Hoon, Kaul, P. O. Box 3320, Honolulu.
Clark, Mrs. Adna G., 2125 Armstrong St.
Cooley, Olita P., Portland, Ore.; Kamehameha Schools.
Cooper, Dr. Harry B., Beach Walk.
Culman, Harry, 232 Dewey Avenue.
Day, Ellen Daisy, Moweaqua, Illinois; Ocean View Court.
Dean, Leora Parmelee, 2225 Hyde St.
Deverill, Florence K., 2172 Atherton Rd.
Donaghho, Lila V., 961 Alewa Heights.
Duvel, Albert Walter, Hilo, Hawaii; Men's Dormitory.
Edwards, Caroline Wortman, 2216-A Kalia Road, Waikiki.
Ellis, Ethel Angus, 2140 Armstrong St.
Espanola, Nicolas, Colasi, P. I.; Filipino Center, Honolulu.
Field, Margaret R., Waikiki, Honolulu.
French, Stella M., 2628 Kuahine Drive.
Gibson, Helene, 1250 Center St.
Gilliland, Louise C., 1210 Kalihi St.
Gomes, Carrie Phillip, 1290-B Akoko Lane.
Graham, Katharine B., 2646 Oahu Avenue.
Hill, Lois, 1582-M Phillips Avenue.
Hopwood, Mabel B., 2410 Kaala Avenue.
Huckstein, Inez L., 520 Analu St.
Hugo, Grace Hathaway, 2220 Metcalf St.
Ing, Beatrice, 230 School St.
Ing, Ruth, 230 School St.
Iwasaki, Miyono, P. O. Box 1386, Honolulu.
Johnson, David Murry, Kapiolani Park Zoo, Honolulu.
Johnson, Jean L., 2115 Kamehameha Avenue.
Kau, Esther Ing, 1040 Beretania St.
Register of Students

Kau, Shoo Tsin, 1858 Liliha St.
Keller, Lora T., 2456 Oahu Avenue.
Kisner, Martha L., Fort Ruger.
Koehler, Lucy Josephine, Menomonee Falls, Wis.; Macdonald Hotel.
Lam, Kathleen Len, 1419 Kapiolani St.
Lau, Aoe, Moanalua, T. H.
Lee, Jennie Nyet Chan, 55 Kukui Lane.
Lemon, Eva V., 627 Prospect St.
Lewis, Gloria M., 1240 Kinau St.
Lind, Beatrice, St. Paul, Minn.; 31 Ocean View Court.
Liwai, Moses, 2010 Liliha St.
Lund, August Soren Thompson, Blooming Prairie, Minn.; Old Naval Station.

Lydick, Elsie May, Oklahoma City, Oklahoma; Women's Dormitory.
Mahikoa, Mabel N., 1366 Wilhelmina Rise.
Marques, Laura L., 2312 Liloa Rise.
Matsuguma, Shigi, 1311 Auld Lane.
McNamara, Mary C., 2577 Parker St.
Miles, Frances Gonsalves, Judd St.
Miller, Erman L., Skidmore, Mo.; Mid-Pacific Institute.
Mitchell, James O., 1943 Ahuula St.
Moo, Eleanor, 1040 Sixth Avenue, Kaimuki.
Moo, Lillian, 1040 Sixth Avenue, Kaimuki.
Morgan, Laura A., 2421 Armstrong St.
Neyler, Sybil, Ala Moana Road.
Nelson, Amanda, 1294-D Cedar St.
Ormiston, Douglas von Holt, 1020 Eighth Avenue, Kaimuki.
Otremba, Hedwig, 2659 Oahu Ave.
Ouderkirk, Mabel Jo, 2742 Terrace Drive.
Perry, Emily S., 3458 Maluhia St., Honolulu.
Perry, Eugenia M., 2420 Oahu Avenue.
Peters, Doris Deffebach, 276 Beach Walk.
Pope, Blanche, U. S. Experiment Station.
Reis, Palmyra, Spencer St.
Reutiman, Gladys H., Stillwater, Minn.; 2 Haulani Ct., Kalla Rd.
Roberson, Hazel, Kansas City, Mo.; 222 Liliuokalani.
Rodenhurst, Mary, Kohala, Hawaii; 3850 Waialae Road.
Rodman, Valerie, Vancouver, B. C.; 9 Haulani Ct.
Sapp, Vera, Palolo Hill Road.
Scheffler, Bertha, Denver, Colorado; 1133 Hassinger St.
Schmidt, Jacob, 1150 Alakea St.
Smith, Margaret Rudy, Henderson, Kentucky; Mid-Pacific Institute.
Smith, Walter E., Berkeley, Cal.; McNamara Ct.
Soong, Callie, 1111 McCully St.
Spalding, Elizabeth G., 2376 Liloa Rise.
Swezey, Mary H., 2048 Lanihuli Drive.
Tachera, Rita C., 1720 Kaani St.
Thompson, Robert Russell, 3741 Harding Avenue.
Tolbert, Rose, 1833 Kahanau St.
Tom, Bernard C., 1505 So. Beretania St.
Turner, Helen Von Inwegen, Honolulu.
VanWinkle, Margaret E., 1536 Dominis St.
Vieira, Juliet Perry, 1935-N John Ena Road, Waikiki.
Vroom, Emma A., Denver, Colorado; 2065 Lanihuli Drive.
Waterhouse, Shadford, 76-C Wyllie St.
Webster, Leonie Leahi, 947 Prospect St.
Welch, Merle, San Jose, California; Apt. 11, Ocean View Court.
Wells, Douglas Harold, Haiku, Maui; No. 24 Trentown, Honolulu.
Whittle, Mabel, 584-N Circle Lane.
Wilder, Eva Boswell, 1718 Anapuni St.
Williams, Clyde, Norris City, Illinois; Pearl Harbor, U.S.N., Hospital.
Williams, Daisy, 1320 Wilhelmina Rise.
Wilson, Vivienne, 2665 Oahu Avenue.
Witt, Kathryn, 251 Kaaulani Avenue.
Won, Arthur F., 1950 Pauoa Road.
Wong, Eva F., 1222-C Pua Lane.
Wright, May, 1054 Kinau St.
Wrede, Elsie M., Hayfield, Minnesota; 250-B Kaiulani Avenue.
Yamamoto, James K., 1943 Fort St.
Yoshikoa, Watson S., 1151 Nineteenth Ave.
Young, Alice Pauline, King and Victoria Streets.
Young, Hilda Byrne, 2364 Vancouver Highway.

COLLEGE OF ARTS AND SCIENCES
SENIOR CLASS
Allen, Gwenfred Elaine (Group II), 1436 Makiki St.
Bierbach, Gretchen Heilbron (Group II), 2346 Oahu Avenue.
*Brown, Robert Wendell (Group I, Pre-Legal), Bad Axe, Michigan.
Cho, Jay Uhn (Commerce), 1523 Miller St.
Chun, James Joy H. (Group IV), 82 No. Beretania St.
Clarke, Benita (Group II), 2125 Armstrong St.
Durfee, Leonor Noble (Group II), 315 Saratoga Road.
Faulkner, Robert Mardis (Education), Redlands, Cal.; 233 Saratoga Road.

*To receive degree upon completion of first year at University of Michigan Law School.
Register of Students

Goto, Yasuo Baron (Group III Pre-Medical), Puako, Hawaii; 2105 So. Beretania Street.

Hirano, Kazuichi (Group I), Wahiawa, Kauai; 1239 King St.

Kunikiyo, Toworu (Commerce), 1804 Nuuanu St.; 1111 Fort St.

Lau, Lawrence Bung Lit (Group IV), 1340 Beretania St.

Leong, Yau Sing (Group I), 1533 Keola Lane, off Fort St.

Liu, Ken Kiu (Commerce), 2136 So. King St.

Luke, Jannie K. J. (Education), 1308 Date St.

Mashimo, Ruth Sadako (Group II), 1252 Young St.

McVeagh, Rebecca Cochrane (Education), Kahala.

Mossman, Doris (Education), Women's Dormitory.

Nichols, Martha Alberta (Group II), U. S. Naval Sta., Pearl Harbor.

Perry, Larlette (Group I), 525 Schofield Barracks; Women's Dormitory.

Sakai, Hannah (Education), 1968-C Ohai Lane, Pauoa.

Seals, James Forbes (Commerce), 1513 Spreckels St.

Searle, Lucy (Education), Lahaina, Maui; Women's Dormitory.

Shields, Euphe (Group II), 2544 Jones St.

Sur, Kee Moon (Group I), Lellehua, Oahu; Korean Christian Inst.

Ting, Joseph Geen (Group I), 978 Dowsett Lane; 82 No. Beretania St.

Yanagihara, Masaichi (Commerce), 1467 So. King St.

JUNIOR CLASS

Abe, Mitsuko (Education), Kurtistown, Hawaii; 2336 Liloa Rise.

Beardmore, Dorothy (Group II), 2391 Beckwith St.

Cameron, Rhoda (Education), Johnstown, Pa.; Women's Dormitory.

Choy, Soon Hee Priscilla (Education), 1614 Kamamalu Ave.; Cluett House.

Chung, Clara Wal-Ung (Education), 1028 Beretania St.

Goo, Paul Kim-Chow (Group III), Mamane Lane; 82 No. Beretania St.

Hansen, Agnes Eda (Education), Leeds, No. Dakota; 233 Saratoga Rd.

Harada, Shizuo (Commerce), 1233 Elm St.

Hayashi, Chisato (Group I), Holualoa, No. Kona, Hawaii; 610 So. King Street.

Hess, Juanita (Group I), 204 Kalulani Avenue.

Hirano, Umeyo (Group II), 1013 Peterson Lane.

Hope, Robert Burmeister (Group III, Pre-Medical), 2516 Lower Manoa Road.

Katsuki, Ichio (Group III, Pre-Medical), 1326 Keeauumoku St.

Kawachi, Kensuke (Group I), Kealakekua, Kona, Hawaii; 610 So. King Street.
Register of Students

Kono, Ayako (Education), Hilo, Hawaii; P. O. Box 877.
**Krauss, Dorothea Hilmer (Group II), 2447 Parker St.
Lai, Lee (Group I), 1132-B Davenport St.
Li, Benjamin Luka (Group III, Pre-Medical), 52 So. Kukui St.
Mark, Yin Fo (Pre-Medical), 1417 Beretania St.
McGrew, Clifford Dick (Group I, Pre-Legal), Men's Dormitory.
Pratt, Laura Meinzies (Group I), 2048 Nuuanu Avenue.
Ross, Kawehelani Janet (Education), 1256-D Palm Drive.
Saiki, Kazu (Group III, Pre-Medical), Kapaa, Kauai; 1338 No. King St.
Tokioka, Masayuki (Group I), 2478 Kuhio and Kealohilani, Waikiki.
Weaver, Ida Eleanor (Group III, Pre-Medical), Wailuku, Maui; 903 Spencer St.
Yamaguchi, Shichiro (Commerce), 2728 So. King St.
Yamamoto, Takeo (Education), 1139 Beretania St.
Yamashiro, Masami (Music), 206 No. Beretania St.
Young, Ah Hee (Education), Wailuku, Maui; 1014-A Kapio1ani St.

SOPHOMORE CLASS

First figure shows grade points earned; second figure shows semester credits earned.

Adams, Katherine 139, 48 (Group I), 2315 Liloa Rise.
Bell, Alfred Kaonohi 81, 56 (Group I, Pre-Legal), Hilo, Hawaii; 42 Pauahi St.
Carvalho, Anita 39, 40 (Education), Papaikou, Hawaii; Women's Dormitory.
Ching, Raymond Hong Chow 91, 57 (Group I), 77 Kukui Lane.
Chung, Tai Wha 47, 38 (Group I, Pre-Legal), Honokaa, Hawaii; 1530-C Holt Lane.
Collins, Louis K. 86, 52 (Education), 3337 Campbell Ave.; Men's Dormitory.
Correll, Bernice Emily 118, 54 (Group IV), Hamakuapoko, Maui; Women's Dormitory.
Cruickshank, James 12, 35 (Commerce), Waialua, Oahu; Men's Dormitory.
Fujino, Ellen Yanagi 55, 48 (Education), 1234 Emma Lane.
*Fuller, Virginia Wise 12, 10 (Group I), Fort Kamehameha.
Hara, Iwao 45, 45 (Group II), Waialae, Hilo, Hawaii; 411 No. King Street.
Hornung, Cenie Simmerman 69, 43 (Education), 2466 Maui St.
Hughes, William Notley 112, 50 (Group I, Pre-Legal), 1615 Wilder Ave.
Ymai, Kolchi 78, 51 (Commerce), 437 School St.

**Given Junior rating because of Sophomore deficiencies.
*Entered with advanced standing.
Register of Students

Iwanaga, Tsuyoshi 135, 62 (Group I, Pre-Legal), 66 Laimi Road.
Kai, Ernest Kapuamailani 139, 57 (Commerce), Hilo, Hawaii; Men's Dormitory.
Kanayama, Uichi 117, 54 (Group IV), South and Second Sts.
Katagiri, Masatoshi 91, 53 (Commerce), Waialua, Oahu; 7 So. King Street.
Kawelo, James 62, 49 (Group II), 2125-M Bannister St.
Kekoa, Albert K., 39, 45 (Commerce), Waiohinu, Hawaii; 789 So. Hotel St.
**Kuribayashi, Herbert Seichi 113, 87 (Commerce), Wailuku, Maui;
53 Chaplain Lane.
Lam, Elizabeth Kam Sui 111, 56 (Education), 377 Buckle Lane.
Landers, James 35, 38 (Commerce), Fort Shafter.
Lau, Kenneth Kimn Chan 48, 47 (Commerce), Kula, Maui; P. O. Box 1553.
Lee, Yun Fat 57, 46 (Commerce), 2136 So. King St.
Lindeman, Agnes Theone 72, 42 (Group I), 2060 Vancouver Highway.
Loo, Sau Ung 52, 22 (Group I), 1065 Beretania St.
Louis, Berthie 70, 48 (Education), 1060 Koko Head and Harding Aves., Kaimuki.
Lum, Hardy Chun 45, 48 (Group I), Honokaa, Hawaii; P. O. Box 1676.
**Matsuno, Taichi 105, 84 (Group I, Pre-Theological), 576 Quinn Lane.
McNicoll, Simpson Allan 44, 34 (Commerce), Makiki and Kinau Sts.
Messing, Regina Elizabeth 75, 49 (Group III), 2420 Koa Avenue.
Miyake, Iwao 105, 60 (Group III) Koloa, Kauai; 2212 So. King St.
Morse, John Douglas 10, 27 (Commerce), 2355 Oahu Avenue.
Nishimoto, Shinkichi 77, 51 (Group I), Lawai, Koloa, Kauai; U. S. Experiment Station.
Park, Esther 109, 56 (Education), Waialua, Oahu; 1517 Miller St.
Poepoe, Samuel Keao 84, 54 (Group III), 768 Kanoa St.
Ritchie, Evelyn Mae 105, 57 (Education), 508 Schofield Barracks;
Women's Dormitory.
Ryan, Ella Nora 47, 44 (Education), 123 Schofield Barracks; Women's Dormitory.
Sakamaki, George 56, 39 (Group I), Olaa, Hawaii; 610 So. King St.
Sanjume, Jisoo 79, 53 (Group III, Pre-Medical), Lale, Oahu; Moana Hotel.
Searby, Margaret Lavinia 96, 48 (Group II), 903 Spencer St.
Short, Walter John 56, 39 (Group I, Pre-Legal), Seaside Hotel.
*Thomson, Somerville (Education), Orange, Cal.; 1533 Kapilolani St.
Tomita, Shunzo 52, 34 (Group III, Pre-Medical), Pilihonua, Hawaii;
25 Halelema St.

*Entered second semester 1923-24.
**Given Sophomore rating because of Freshman or entrance deficiencies.
Register of Students

Tsugawa, Seichi 58, 51 (Commerce), Papaikou, Hawaii; 1660 Beretania St.
Varela, Lucila Alice 88, 47 (Group I), Fort Kamehameha.
Wall, Margaret Ruth 51, 38 (Group II), Makiki Heights.
Whang, Joon Tai 60, 48 (Group I), P. O. Box 2133.
Wilcox, Kaui 83, 47 (Education), Wailuku, Maui; Women’s Dormitory.
Wise, William Spencer 80, 45 (Commerce), 1910 Fort St.
Yamane, Eiji 61, 61 (Commerce), 3244 Olu Avenue.
Yamashita, Minoru 62, 50 (Commerce), Kukuihaele, Hawaii; P. O. Box 1286.

FRESHMAN CLASS

Abel, Marielouise 38, 18 (Group IV), Macdonald Hotel.
Akau, Joseph Porter Umi 32, 20 (Group I, Pre-Legal), Hilo, Hawaii; Men’s Dormitory.
Barber, James Theodore 42, 17 (Commerce), 1438 Wilder Avenue.
Black, Margaret Donald 29, 16 (Group I), 1020 Kapiolani St.
Blom, Irving Albin 19, 17 (Group III), 2213 Manoa Road.
Chang, Yen Pui 31, 17 (Group III, Pre-Medical), Hanapepe, Kauai; 1118 Pawaa Lane.
Ching, Kam Dai 17, 17 (Commerce), 1234 Emma Lane.
Chong, Clarence Lee 3, 6 (Group III, Pre-Medical), 1308 Lilihi St.
Chong, Francis Kim Lin 11, 14 (Group III, Pre-Medical), Waimea, Kauai; 1312 Young St.
Chong, Nyuk Yin 27, 15 (Education), 723 Waialamilo Road.
Clark, Elizabeth LaVerne 12, 13 (Group I), Pahala, Kau, Hawaii; Women’s Dormitory.
Cooper, John William 32, 20 (Group III, Pre-Medical), 268 Beach Walk.
Countermine, Ruth Godley 22, 12 (Group I), 2745 Oahu Avenue.
deRussy, Claire Hyland 20, 16 (Group I), Fort deRussy.
Fernandez, Edwin Kane, Jr. 37, 17 (Commerce), 2001 Beckley St.
Field, Edith Ululani Gooding 34, 13 (Education), 1925 Kalua Road.
Goto, Kenji 22, 17 (Commerce), Kealakekua, Kona, Hawaii; 2105 Beretania St.
Hasegawa, Yoshio 25, 17 (Group III, Pre-Medical), Hanaai, Kauai; 202 Perry St.
Haxton, Robert Spear 25, 11 (Commerce), 2020 Makiki St.
Hee, Young 15, 16 (Commerce), 25 Young Lane, Fort Street.
Hino, Shunma 32, 18 (Commerce), Kukuihaele, Hamakua, Hawaii; P. O. Box 1286.
Register of Students

Hironaka, Sunao 15, 17 (Group II), 2044 Clement St.
Hoermann, Bernhard Lothar 30, 17 (Group II), 1036 Green St.
Hong, Gilbert See Ngin 12, 11 (Group III, Pre-Medical), 284 Kukui St.
Howell, Helen Harriet 18, 11 (Group II), 1552 Keeaumoku St.
Humes, Hyberta Cecile 13, 8 (Group II), Pearl City, Oahu.
Hung, Ching Chong 20, 23 (Group I), Canton, China; Fort St. Chinese Church.
Isonaka, Masao 37, 17 (Group III, Pre-Dental), Wainaku, Hawaii; Hongwanji Mission, Fort St.
Iwasaki, Ernest Kenji 30, 18 (Group I), Kukuluahele, Hawaii; 1239 So. King Street.
Iwata, Henry Yoshikazu 11, 17 (Commerce), 2019 Kealoha St., Kalihi.
Kamiine, Minoru 5, 11 (Group III, Pre-Dental), Wainaku, Hawaii; P. O. Box 1384.
Karimoto, Clarence Keiso 40, 18 (Commerce), Kohala, Hawaii; 522 So. Hotel St.
Kataoka, Thomas Sadaichi 4, 11 (Commerce), 1803 So. King St.
Kawabe, Arthur Akira 23, 17 (Group III, Pre-Medical), Honomu, Hawaii; P. O. Box 877.
Kawamura, Horace Masayoshi* (Group II), 69 Smith Lane.
Keiki, Louis 9, 6 (Group I, Pre-Legal), Hana, Maui; 1068 Aala Park.
Kishida, Takeo 25, 17 (Group III), 25 Hotel St.
Lantz, Abraham 2, 5 (Commerce), Mansfield, Ohio; Luke Field.
Lau, Sam Choy 8, 13 (Group I), 1816-C So. King St.
Lee, Cheuk Poh 6, 6 (Commerce), Canton, China; P. O. Box 1497.
Lee, Mary Shin 19, 16 (Group I), 1522-A Holt Lane.
Lindeman, Edith Adele 27, 15 (Group II), 2060 Vancouver Highway.
Lord, Lillian 19, 16 (Education), Ewa, Oahu; Women's Dormitory.
Lum, Yin Tai 32, 20 (Group I), Woodlawn Ave., Manoa.
Makaoi, David 52, 19 (Commerce), Waipio, Hawaii; 3255 George St.
Martin, Charles Em 10, 14 (Commerce), 3550 Campbell Ave.
Matsubayashi, Seisho 15, 15 (Commerce), Hilo, Hawaii; 610 So. King St.
Moo, Jenchow 16, 14 (Commerce), 1040 6th Avenue; Kaimuki.
Morton, Marlon 32, 16 (Group II), St. Helens, Oregon; 2346 Oahu Av.
Muramaru, Norikazu 33, 18 (Group I, Pre-Legal), 2212 South King St.
Nakamura, Takeo 22, 17 (Commerce), 2609 So. King St.
Nakano, Ernest Shuichi 20, 17 (Group III, Biological), Hakalau, Hawaii; 1220 Pensacola St.
Nishihara, Matsuji 7, 17 (Commerce), 318 Kalihi St.
Nohokalu, Jesse Kahihilakapu, Jr. 22, 14 (Commerce), Hilo, Hawaii; 2014 Kapulani Road.
Oda, Yoshiye 30, 18 (Commerce), 2030 Pahukui St.

*Withdrew before end of semester.
Register of Students

Ogawa, Esther Aika 34, 16 (Group III, Pre-Medical), Paia, Maui; 1071 Kinau St.
Roy, David 9, 14 (Commerce), Kealakekua, Hawaii; 1519 Beretania Street.
Sakamaki, Shunzo 36, 17 (Group I), Olaa, Hawaii; 610 So. King St.
Sakamoto, Kikuji 21, 18 (Group III, Pre-Medical), 258 No. Beretania Street.
Shiramizu, Harry Shigeru 35, 19 (Group I), Hanamaulu, Kauai; Japanese Boarding House, Honolulu.
Smith, Donald Crosswell* (Group I, Pre-Legal), Kamehameha IV Road and Kalihi St.
Smith, Elizabeth Louise 19, 16 (Group II), 1576 Pensacola St.
Soong, Kiwo 2, 8 (Group III, Pre-Dental), Waikapu, Maui; 1709-A Nuuanu Avenue.
Spaulding, Stephen Tucker 51, 17 (Group I), Washington, D.C.; 2651 Nuuanu Avenue.
Sunn, Koon Hung 14, 10 (Group III, Pre-Dental), 1464-D Gandall Lane.
Sunn, Tai Hung 20, 16 (Commerce), 1837 Fort St.
Suzuki, Taro 33, 17 (Commerce), 1582-Q Philip St.
Takata, Harry 26, 17 (Group III, Pre-Medical), Waimea, Kauai; Klushuya Hotel, No. King St.
Tavares, Julia Josephine 26, 15 (Education), Paia, Maui; Women's Dormitory.
Thom, Wah-Chan 16, 17 (Commerce), 1721 Ahuula St.
Tom, Kiong 19, 17 (Commerce), Hall, near Kukui St.
Tranquada, Ernest A 25, 17 (Group I), 46 Pawale Lane.
Traut, John Henderson 25, 16 (Commerce), 1120 S. King St.
Tyau, George 23, 17 (Group III, Pre-Medical), 5 Banyan St.
Willard, Alleen 34, 15 (Group I), Ventura, Cal.; Fernhurst.
Wong, Ah Hon 20, 17 (Group I, Pre-Legal), Hilo, Hawaii; 610 So. King St.
Wright, George Theon 30, 15 (Group I), 2448 Alewa St.
Zane, Arthur Kee Yu 8, 17 (Group I), Kohala, Hawaii; 1270 Elm St.

SPECIAL STUDENTS

Abrehamsen, Elizabeth, c/o Oahu Insane Asylum.
Ahole, Irene K., Kaneohe School.
Alona, Joseph Y., 1925 Young St.
Alexander, Ruth, 41 Young Building.
Amadei, Nela A., c/o Mrs. B. L. Marx, 1250 11th Avenue, Kaimuki.
Anderson, Katherine, Pelican Rapids, Minn.; Mid-Pacific Institute.
Armstrong, Mabel, Wai'alea Beach.

*Withdrew before end of semester.
Ashin, Eva L., 1840 Luso St.
Astleford, Elsie, 720 17th Avenue, Kaimuki.
Astleford, Ida, 720 17th Avenue, Kaimuki.
Badger, Hilda, 1249 16th Avenue, Kaimuki.
Baldwin, Charles W., 2614 Kuahine Drive.
Ball, Augusta L., 2877 Oahu Avenue.
Banning, Claude G., Kamehameha Schools.
Barnes, Daza Kerr, 1432 Kewalo St.
Barnhard, Emma C., Independence, Mo.; Punahou Schools.
Bayless, Elizabeth, 1815 South King St.
Berg, Ethel Marie, Fernhurst.
Betts, Charlotte B., 1545 Kewalo St.
Bindt, Henry Martyn, 3258 Monsarrat Avenue.
Born, Isabel K., 1873-B Makave Lane.
Brunner, Frederick Christian, New York City; 1923-E Kalia Road.
Brunner, Mrs. O. C., 2361 Liloa Rise.
Buel, Rae, Maquaketa, Iowa; Iolani School.
Buller, Jacob P., Henderson, Neb.; 2466 Koa Ave.
Caro, Ida J., Colonial Hotel.
Carter, Mrs. H. B., Myrtle Creek, Ore.; Dewey Court.
Cathcart, Abel K., 2435 Ferdinand Ave.
Ching, Elsie Y. K., 1675 Kamamalu Ave.
Ching, George K., 239 Kuakini St.
Ching, Hung Wai, "B," Christley Lane.
Ching, Margaret Y., 1720 Hau St.
Chong, Ethel K., Kohala, Hawaii; Kailulani Home.
Choy, Tsulan, Lahaina, Maui; 1300 Eleventh Ave.
Chun, Myra H., 1234-F Emma Lane.
Cohan, Earl, Old Naval Station.
Cole, Dorcy McCrystal, Schofield Barracks, T. H.
Cook, George A., 816 16th Avenue, Kaimuki.
Cooper, Florence Thomas, 268 Beach Walk.
Correa, Eva Cecilia, 1041 Twelfth Avenue, Kaimuki.
Correa, Joseph, 1820 Kapiolani St.
Curry, Hubert Manley, Clayton, Illinois; Mid-Pacific Institute.
Cutler, Wyllian Helen, 2065 Lanihull Drive.
Davey, Mary Rogers, Deer Lodge, Wis.; 1231 Matlock Avenue.
Davis, Emma, Johnstown, Pa.; 25 Trentown, Honolulu.
Duarte, Bertha, Hilo, Hawaii; 261 Perry St.
Elston, Bert, Ridgefield Park, N.J.; Army and Navy Y.M.C.A.
Faulkner, Mrs. R. M., 233 Saratoga Road.
Ferreira, Mary Ruth, 1319 Emma St.
Register of Students

Foo, Lois C., 827 South Hotel St.
Foo, Prescott Achin, 827 South Hotel St.
Gannon, Michael V., Davenport, Iowa; Schofield Barracks.
Godwin, Mary Leong, 8 Kaulia St.
Griffith, Homer Jordan, Chico, Cal.; Punahou Schools.
Halpern, Florence, Brooklyn, N.Y.; 167 Kealohilani Ave.
Hamilton, Florence Ruth, 2163 Atherton Road.
Harrison, Calla J., 1023 Sixth Ave.
Hasty, Helen E., Punahou Schools.
Hatch, Grenville, 145-D Liliuokalani Ave.
Hayward, Florence Bates, Kahala.
Heen, Elizabeth Lulu, 1319 Emma St.
Hendry, Eva, 1945 Kalia Road.
Hewitt, Harry Reynolds, Pleasanton Hotel.
Hindrichsen, Eunice, Kaneohe, Oahu.
Hoermann, Maria, 1036 Green St.
Holliday, Cecyl d'Arville, Fairfax, Cal.; Punahou Schools.
Honan, Mary, 725 Kinau St.
Hookano, Kealoha, Pearl City; 164 So. Vineyard St.
Hottle, Emma B., 1630 Clark St.
Howe, Mehana W., Waialua, Oahu; Kailua Home.
Hunt, Lulu Jane, 2140 Lanihuli Drive.
Jarrett, Lorna Hooleia, 2356 Oahu Avenue.
Kaaha, John K., Helen's Court.
Kaeo, Emma M., 2570 Lemon Road, Waikiki.
Kahananui, Dorothy Mitchell, 1943 Akuula St.
Kauhal Hao, Fanny, 2570 W. Lemon Road.
Kekapa, William K., 1219 Center St.
Kelley, Antoinette, Donna Hotel.
Kim, Hark Sung, 217 North Queen St.
Kim, Khil Seurk, Liliha St.
King, Helen Gertrude, 1836 Punahou St.
Klum, Otto, 2122 Hunnewell St.
Kong, Irma Tsui Ki, 2566 Jack Lane, Nuuanu Valley.
Kong, Walter L., 35 Laimi Road.
Koto, Charles J., Eleele, Kauai; 55 No. Hotel St.
Lambe, Esther P., 1945 B4 John Ena Tract.
Lawson, William George, Honokaa, Hawaii; Central Y.M.C.A.
Lee, Mabel, 804 Eighth Avenue, Kaimuki.
Lee, Samuel, Hilo, Hawaii; 584-M Circle Lane.
Lee, Violet Wongwai, 1863-H Miti Lane, Kalakaua Avenue.
Leshin, Emanuel D., 277 Beach Walk.
Lum, Raymond C., 1571 Auld Lane.
Lun, Goo, 1348 Nuuanu St.
Lutken, Thomasine, Logtown, Miss.; Castle Kindergarten.
Lyon, Maude Fletcher, 1328 Matlock Avenue.
Macfie, Gertie G. T., 1641 Anapuni St.
Macfie, Harriet B., 2472 Prince Edward St.
Madison, Marie, Alameda, Cal.; Fernhurst, Y.W.C.A.
Mahoe, Rosabelle Coelho, 2444-B Coelho Lane, Nuuanu.
Marshall, Elizabeth, San Jose, Cal.; Iolani School.
McCall, Joe, Shark, Arkansas; Mid-Pacific Institute.
McCluskey, William, 1215 Wilder Ave.
McGregor, Louise Ave., 95 Kukui St.
McKeon, Erna P., 3742 Harding Ave.
McPike, Helene F, 222-C Emma Square.
Miles, Wallace E., Hawaiian Ordnance Dept.
Mitchell, Mildred B., Donna Hotel.
Miyamoto, Kiyoshi, 932 Birch St.
Moon, Wook, 11 Yong Lane, Nuuanu Avenue.
Mosser, Lani A., 1640 South King St.
Mossman, Emma K., 1646 Luso St.
Mossman, Rebecca Kekumano, 1350 Miller Lane.
Murphy, Thelma Katherine, 1600 Kapiolani St.
Murray, Lucy P., Kamehameha Schools.
Ostergaard, James Mathias, 2517 Kalakaua Avenue.
Overend, Cecil, 1005 Twelfth Ave.
Palmer, Louisa F., Brooklyn, Mich.; Fernhurst, Y.W.C.A.
Peace, Florence E., 625 Hotel St.
Pearce, Gladys A., 1319 Emma St.
Pearman, Karl, Bedford, Va.; Iolani School.
Pearson, Marion Graham, Glasgow, Scotland; 2010 Kamehameha Ave.
Pilol, Maria K., 2242 Kalia Road.
Po, Shih, Peking, China; 1020 Isenberg Road.
Potter, Irmgard, Pacific Heights.
Reeder, Julia Potter, Fort Shafter.
Remick, Grace, 239 Lewers Road.
Reynolds, Emma A., Ventura, Cal.; Fernhurst.
Reynolds, Ruth E., Los Angeles, Cal.; Punahou Schools.
Riggin, Margaret J., 1541 Makiki St.
Riviere, Claude, Paris, France; Moana Hotel.
Robley, Samuel W., 2536 Puunui St.
Rugh, Dwight, University of Hawaii.
Rutherford, Esther Kaul, 1969 Metcalf St.
Ruttman, George F. K., Westwood, Los Angeles, Cal.; 1550-D Pensacola Street.
Sanderson, Henry E., Jr., Stockton, Cal.; Schofield Barracks.
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<td>Shaw, Ruth C.</td>
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<td>Shim, Wai On</td>
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<td>Smith, Beulah Naomi</td>
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<td>Snyder, Norvell Robert</td>
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### RESIDENT STUDENTS

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#### GRAND TOTAL

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<td>Scotland</td>
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*Resident Extension Students taking work for University credit are included in figures for Special Students above.
In 1921 the University of Hawaii commenced the publication of the "Quarterly Bulletin," to be issued four times a year, in October, January, April and August. This catalog is the second number of Vol. III. The preceding numbers were:—

Vol. I., No. 1—Register of Officers and Students and Abridged Announcement of Courses, October, 1921.
Vol. I., No. 3—Catalogue and Announcement of Courses, 1922-1923; April, 1922.
Vol. I., No. 4—Register of Officers and Students and Abridged Announcement of Courses, October, 1922.
Vol. II., No. 1—Fifth Annual Report of the Department of Agriculture, July 1, 1921—June 31, 1922;
Vol. II., No. 2—Report of the Board of Regents to the Legislature of 1923; February, 1923.
Vol. II., No. 3—Catalogue and Announcement of Courses, 1923-1924; April, 1923.
Vol. II., No. 4—Register of Officers and Students and Abridged Announcement of Courses; October 1923.

OCCASIONAL PAPERS

OTHER PUBLICATIONS

Before the Quarterly Bulletin was begun two "University Records" were published, following the earlier series referred to below as "College Records." These two were:—

No. 1. Report of the Board of Regents to the Legislature of 1921. February, 1921; pp. 44.

As "College Records" there have been published previous to July, 1920, some twenty catalogues and reports to the Territorial Legislature.

An earlier series of miscellaneous publications were issued as "Bulletins," as follows:—
Publications

No. 1. Rock, Joseph F. Notes upon Hawaiian Plants, with Descriptions of New Species and Varieties, December, 1911, pp. 20.


No. 4. Rock, Joseph F. Palmyra Island, with a Description of Its Flora. April, 1916, pp. 53.


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