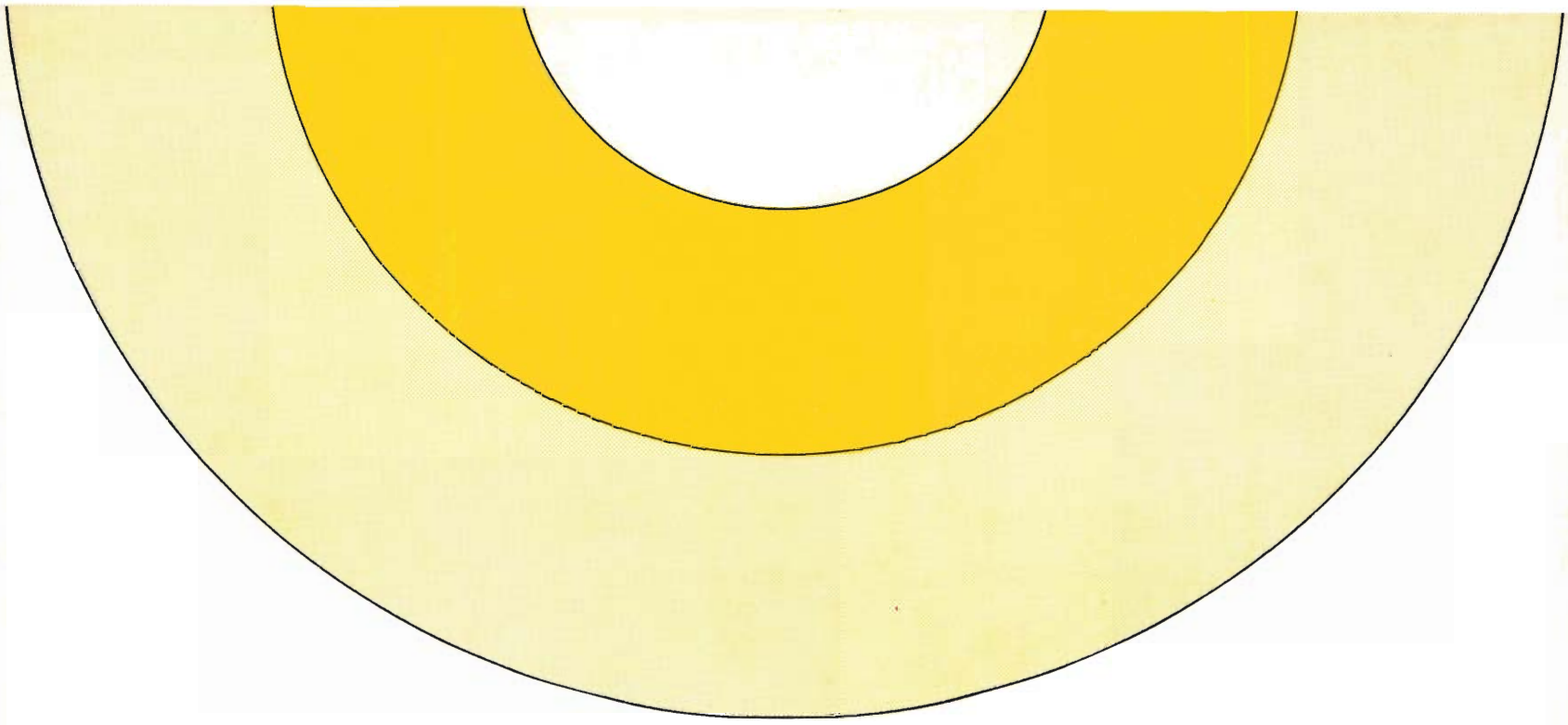

university of hawaii honolulu community college 1975-1976

UNIVERSITY OF HAWAII

HONOLULU COMMUNITY COLLEGE

1975-1976
General Catalog

874 DILLINGHAM BOULEVARD
HONOLULU, HAWAII 96817
TELEPHONE: 847-2161

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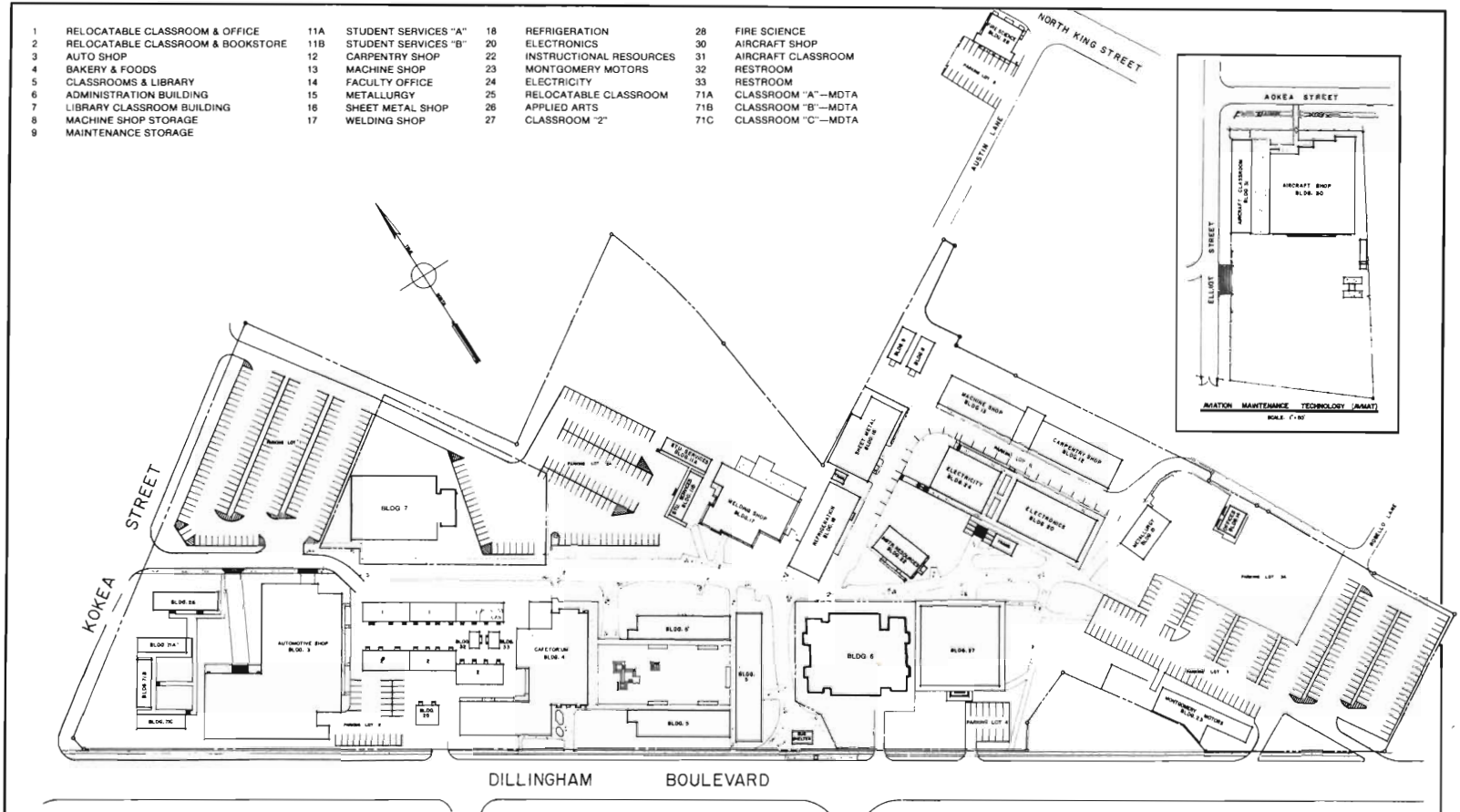


LOCATION PLAN
HONOLULU COMMUNITY COLLEGE

Drawn by: T.M.	SCALE: 1"=60'
Traced by: C.B. & J.T.	
Checked by:	SHEET NO.
Date: JULY 20, 1971	

Honolulu Community College
ADMINISTRATIVE OFFICERS

Clyde K. Yoshioka ..... Provost
Donald Y. Yanagihara ..... Dean of Instruction
Lawrence Ako ..... Acting Dean of Student Services
Herbert P. Halberg ..... Assistant Dean of Instruction
Peter R. Kessinger ..... Assistant Dean of Instruction
Alan M. Yonan ..... Assistant Dean of Instruction
Bob Hirata ..... Director of Business Affairs

UNIVERSITY OF HAWAII: HONOLULU COMMUNITY COLLEGE ACADEMIC CALENDAR 1975-1976

FALL SEMESTER

August 19-21, Tuesday thru Thursday ..... REGISTRATION, FALL SEMESTER
August 25, Monday ..... INSTRUCTION BEGINS
September 1, Monday ..... Labor Day (Holiday)
October 13, Monday ..... Discoverers' Day (Holiday)
October 15, Wednesday ..... Last Day to Apply for Fall Graduation
October 27, Monday ..... Veterans' Day (Holiday)
November 3, Monday ..... Last Day to Withdraw from Courses With a "W" Grade
November 26, Wednesday ..... Last Day to Make Up Incomplete for Spring Semester 1975
November 27, 28, Thursday, Friday ..... Thanksgiving Recess
December 15, Monday ..... Instruction Ends
December 16-19, Tuesday thru Friday ..... Evaluation Period
December 19, Friday ..... Fall Semester Ends

SPRING SEMESTER

January 12-14, Monday thru Wednesday ..... REGISTRATION, SPRING SEMESTER
January 16, Friday ..... INSTRUCTION BEGINS
February 16, Monday ..... Presidents' Day (Holiday)
February 17, Tuesday ..... Last Day to Apply for Spring Graduation
March 26, Friday ..... Kuhio Day (Holiday)
March 29, Monday ..... Last Day to Withdraw from Courses with a "W" Grade
April 9, Friday ..... Last Day to Make Up Incomplete for Fall Semester 1975
April 12-16, Monday thru Friday ..... Spring Recess
April 19, Monday ..... Instruction Resumes
May 10, Monday ..... Instruction Ends
May 11-14, Tuesday thru Friday ..... Evaluation Period
May 14, Friday ..... Spring Semester Ends
May 16, Sunday ..... Graduation

THE UNIVERSITY OF HAWAII SYSTEM

The University of Hawaii, of which Honolulu Community College is an integral part, embraces nine campuses on four of the islands of Hawaii. Each of the seven community colleges within the system has its own provost and administrative officers.

The University of Hawaii includes the following campuses:

Hawaii Community College, Hilo, Hawaii
Honolulu Community College, Honolulu, Oahu
Kapiolani Community College, Honolulu, Oahu
Kauai Community College, Lihue, Kauai
Leeward Community College, Pearl City, Oahu
Maui Community College, Kahului, Maui
Windward Community College, Kahaluu (Kaneohe), Oahu
Hilo College, Hilo, Hawaii
University of Hawaii (Manoa Campus), Honolulu, Hawaii

HONOLULU COMMUNITY COLLEGE— A BRIEF HISTORY

Honolulu Community College, which has been in continuous operation as an educational institution for over 50 years, traces its origin to the establishment in 1920 of the Territorial Trade School (located on the grounds of the Old Chinese Hospital in Palama).

After an interim period as an adjunct of McKinley High School, the former trade school was reestablished in 1927 at the present site and was renamed Honolulu Vocational School. In 1955 the name was changed to Honolulu Technical School, thereby reflecting its programs in many fields of occupational and vocations education.

Under the Community College Act of 1964, Honolulu Tech was incorporated into the University of Hawaii System. In 1966 the present name—Honolulu Community College—was approved by the Board of Regents. At the same time Honolulu Community College was authorized to grant Associate in Arts and Associate in Science degrees.

From its beginning enrollment of 850 day students and 1,500 evening students, Honolulu Community College has experienced a very rapid growth both in the number of students attending and in the diversity of its programs and the comprehensiveness of its curriculum. The projected day enrollment for 1976 is estimated at 3,400 students.

ACCREDITATION

The University of Hawaii, which administers Honolulu Community College, is accredited by the Western Association of Schools and Colleges. Honolulu Community College has been continuously and fully accredited since 1970 by the Accrediting Commission for Junior Colleges, Western Association of Schools and Colleges.

HONOLULU COMMUNITY COLLEGE— PHILOSOPHY AND OBJECTIVES

The general, yet fundamental, purpose of Honolulu Community College is to serve its students and the community. This comprehensive area of service can be specifically described in terms of services to students and areas of curriculum.

SERVICES TO STUDENTS: Honolulu Community College is dedicated to the following kinds of service to the people of the State of Hawaii, and to a limited number of students from outside the State:

1. **An open-door admission policy,** providing that (to the limit of available faculty and facilities) any person who is capable of profiting from post-high school instruction will be admitted to the College for studies up to the level of university junior standing.
2. A sufficient **range of educational opportunities** to permit students to find some program appropriate to their educational attainment, their abilities, and their ambitions.
3. **A counseling and guidance service** that will assist each applicant in choosing courses and educational objectives.

4. **Excellent teaching** that will encourage every student to persist and to do his best.
5. The requirement of **high standards** of achievement by each student of the stated objectives of the curriculum in which he is enrolled. Neither the student nor the state is well served if incompetence in any field of learning is condoned.

AREAS OF CURRICULUM: Community college courses can be classified into two groups—developmental and preparatory. Developmental courses are aimed at the improvement of skills, the enlargement of self-understanding, and the furtherance of a student's readiness to meet the daily challenges of life. The aims of the developmental courses are relevant and practical. Since a great proportion of college study is preparation for later activity, the standards and success of the preparatory services are measured by the ability of a student to perform the tasks of the trade or the advanced study in a discipline in a competent and independent manner. Within these two areas, Honolulu Community College has developed curricula of the following nature:

Developmental Services:

1. **Guidance and counseling,** to assist the student in knowing himself, in choosing educational and occupational goals, and in completing the courses necessary for achieving his goals.
2. **Educational up-grading,** to enable the student to develop entry skills necessary for him to succeed in the next level of study that he needs.
3. **General education,** to prepare every student for the life responsibilities that all of us share as persons, as family members, as consumers, as producers, and as citizens.
4. **Community services,** to open the doors of learning to citizens of all ages and in a wide variety of subject areas and of modes of presentation.

Preparatory Services:

5. **Occupational education,** based on surveys of occupational needs in the state, to prepare students at the completion of the course to get and to succeed on a job, or to advance within their career field.
6. **Transfer education,** to enable students to complete university lower division requirements and to succeed in their upper division studies.

The total instructional program provides a program of general education through courses specifically designed to afford all students effective and meaningful preparation for their responsibilities as citizens as well as the ability to meet the demands of modern living.

EQUAL OPPORTUNITY EMPLOYER: The University of Hawaii, of which Honolulu Community College is a part, subscribes to and complies with all State and Federal statutes, rules, and regulations and any amendments thereto, promulgated from time to time, which prohibit discrimination in its policies, and practices applicable to its campuses, programs, and activities.

HONOLULU COMMUNITY COLLEGE— CAMPUS AND FACILITIES

The main campus of Honolulu Community College occupies over 20 acres on Dillingham Boulevard, a short distance from the heart of downtown Honolulu.

Shops and laboratories, equipped with appropriate tools and supplies, are maintained for programs in over 20 trade-technical areas. Facilities for the steadily expanding liberal arts program are being developed and utilized.

In addition to its main campus, Honolulu Community College has an Airport Campus, located at 402 Aokea Street near Honolulu International Airport, which offers an Aviation Maintenance Technician program. This facility includes completely equipped shops which meet Federal Aviation Agency requirements.

Two other facilities are also a part of Honolulu Community College. One is the Hawaii State Senior Center, located on Lanakila Avenue in the Kalihi-Palama area. This Center, which is oriented toward education, is administered by Honolulu Community College. A second facility, the Kalihi-Palama Education Center, located on Waiakamilo Road, provides educational opportunities for adults over 16 years of age who cannot participate in other programs.

Library/Learning Resource Center

The Library occupies two floors of the Library/Classroom building and was opened in October, 1974. It is carpeted and air-conditioned, and has many quiet areas for concentrated study.

The book collection, consisting of approximately 27,000 volumes, represents all major fields of knowledge. The reference collection includes encyclopedias, indexes, bibliographies, and other tools to aid Library users in their search for information.

In addition, there is a Hawaii/Pacific collection, a microfilm collection which includes the local newspapers, approximately 300 magazines that are received on a continuous basis, and a large collection of college catalogs to aid students in selecting a school in Hawaii or on the Mainland.

Motion picture films, filmstrips, audio-tapes, and phonograph records are provided by the Library for student and faculty use. Typewriters are available in a sound-proofed typing room on the second floor.

Bookstore

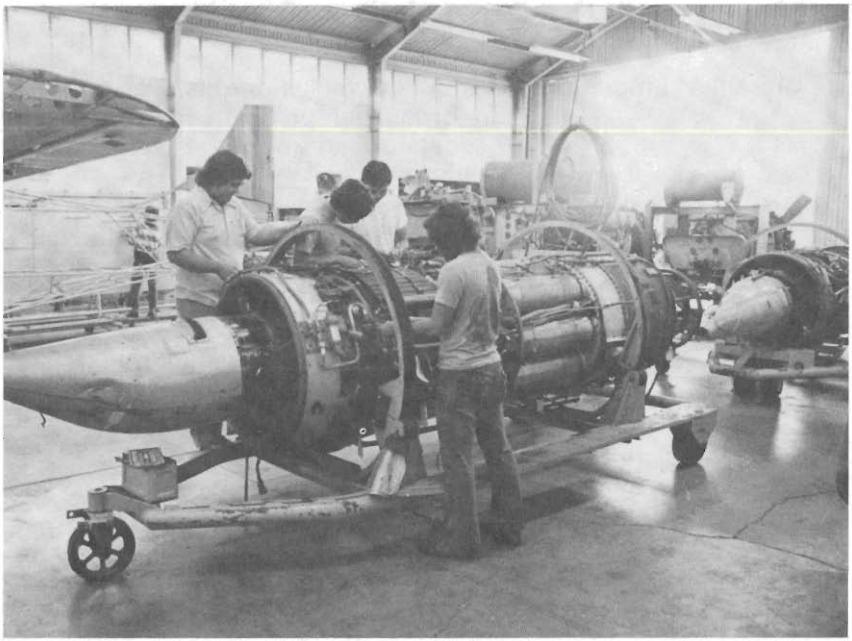
A bookstore operates on campus for the students' convenience. The hours are 9:00 a.m. to 2:00 p.m. Hours are extended during registration period and the first week of each semester. The emphasis is on the required textbooks and supplies.

Food Services

The College's food services program is operated by SAGA Food Services, Inc., and in cooperation with the Manpower Training Office, provides both training experience and food services.

Breakfast, snack and lunch are available at reasonable prices during the following hours:

Breakfast	7:00 a.m.- 9:00 a.m.
Snack	9:00 a.m.-10:00 a.m.
Lunch	11:00 a.m.- 1:00 p.m.



Academic Information and Regulations

CLASSIFICATION OF STUDENTS

Classified Student: A student who is enrolled for credit in an organized program leading to the Associate Degree or the Certificate of Achievement.

Unclassified Student: A student who is enrolled for credit but is not in an organized program leading to the Associate Degree or the Certificate of Achievement.

Special Student: A student who is a concurrent registrant, early admittee, continuing education registrant, federally-funded program registrant, high school dropout, and non-credit registrant.

STUDENT CLASS

Freshman: A student who (1) has earned less than 25 credits towards the Associate Degree or Certificate of Achievement or (2) is enrolled in first year major courses leading to the Associate Degree or a Certificate of Achievement.

Sophomore: A student who (1) has earned 25 credits or more towards the Associate Degree or Certificate of Achievement or (2) is enrolled in second year major courses leading to the Associate Degree or a Certificate of Achievement.

STUDENT STATUS:

New Student: A student attending a post-secondary institution (beyond high school) for the first time.

Continuing Student: A student who was registered for credit at this campus during the previous semester (excluding summer session).

Returning Student: A student who was last enrolled at this College and is returning to this campus after an absence of one or more semesters.

Transfer Student: A student who was last enrolled in another academic institution of post-secondary nature with acceptable credits.

FULL-TIME AND PART-TIME STUDENTS

Full-Time Student: A student who registers for 12 semester hours or more.

Part-Time Student: A student who registers for fewer than 12 semester hours.

ADMISSIONS INFORMATION

Eligibility

Any high school graduate, or any person 18 years of age or over, is eligible for admission to the College.

Application Deadlines

Deadlines for filing applications are established each semester and are generally set six weeks prior to the first day of instruction. Individuals are advised to file their applications as early as possible.

The College will begin processing applications for the Fall Semester, 1975 after December 1, 1974. Applications for the Spring Semester, 1976 will be processed after June 1, 1975; and applications for the summer session will be processed after March 1, 1976. Applications should not be submitted before these dates.

General Admissions Procedures

Honolulu Community College participates in the Coordinated Admissions program of the University of Hawaii System. Application forms and instructions are available at the Admissions Office of Honolulu Community College or in the Counseling Office of any high school in Hawaii.

The following procedures must be completed before the College can reach an admissions decision.

1. File an application for admission with the Admissions Office.
2. File the residency information form included in the application.
3. Submit transcripts of high school and/or college work. (If high school attendance was over 10 years ago, or if 24 credits or more have been completed in college, the applicant may be exempted from submitting a high school transcript.)
4. Submit other requested information, forms, documents.

After the above have been submitted, an applicant is notified by mail of his acceptance or denial to the College.

If accepted, the student must:

5. Take placement tests at the time assigned.
6. Receive program advisement and admissions counseling.

7. Take a tuberculin test or chest X-ray and file results with the Admissions Office. The results should certify that the individual is free of active tuberculosis.
8. Report to registration at the scheduled time, and pay tuition and fees required at this time.
9. Attend classes. Regular and prompt class attendance is expected of all students. A student is expected to confer with each instructor before anticipated or after unavoidable absences. The responsibility for make-up work lies with the student.

Acceptance Information

Applicants will be notified by mail of their acceptance and assigned a time for placement testing and registration.

A student is accepted into the program or major of his choice. However, in a few cases, the student may not be able to enroll in the beginning courses in his major because:

1. he has not satisfied certain pre-requisites for the courses,
2. the program may be filled, or
3. beginning courses in the program are not offered in the coming semester.

A student is thus designated as a **major,** or **pre-major,** or **standby** when he is accepted into the program.

These designations are intended only as general indicators of what courses a new student can and cannot take. They indicate to a student the probability of being able to enroll in beginning major courses. For a student designated as a **major,** there is a high probability that he can take beginning major courses in the first semester. For a student designated as a **pre-major** or **standby,** there is a **lower probability** of this.

Major The student is eligible to enroll in the beginning courses of the program, and **most likely** will be able to enroll in these courses.

Pre-major The student must complete certain pre-requisites before he can enroll in the beginning courses in his program. If he does not wish to complete the pre-requisites, he may select a program for which he is qualified.

Standby The student is eligible to enroll in the beginning courses but may be unable to enroll in them because either his program is filled, or the courses are not being offered. However, there are other related courses that he must take and he is advised to take these courses during his first semester. Usually after one semester, the student will then be able to take beginning courses in his major; however in a few programs the standby period may be longer.

Program advisors and counselors are available to provide information about the College and its programs and to assist each applicant in choosing a program which offers the maximum opportunity for self-development.

If a student does not wish to attend Honolulu Community College after being accepted, he can always request his application be re-directed to his next choice of campus or that his application be cancelled.

Admission of Non-Resident Students

The College is required to determine the residence status of each applicant. Each applicant must submit a Residency Form, together with such documentation considered necessary to clearly determine residence status.

The burden of proof for establishing residence status lies with each applicant. Final decision will be made by the Admissions Office in each case.

The maximum number of non-resident students that can be accepted by the College is limited to a quota established by the Controlled Growth Policy of the University of Hawaii System. Students classified as non-residents are required to pay non-resident tuition. However the following individuals, though subject to the non-resident quota, are exempted from paying the non-resident tuition:

1. Persons who are residents of a State or foreign country which permits Hawaii residents to pay the same tuition and fees at its public institutions of higher learning as are paid by its own residents.
2. United States military personnel and their authorized dependents while on active duty and stationed in Hawaii.
3. Persons domiciled in a district, commonwealth, territory, or insular jurisdiction, state, or nation which provides no public institution of higher learning.
4. Employees of the University of Hawaii System and their spouses and legal dependents.

Admission of Foreign Students

Foreign students are designated as **immigrants** or **non-immigrants. Non-immigrant foreign students,** are those who are neither U.S. Citizens, nor U.S. Residents. They must meet the general admissions requirements as well as the following special admissions requirements:

1. Submit scores on the Test of English as a Foreign Language (TOEFL). Scores must be from a test taken within the last two years. Acceptable scores for admission are:
   Associate in Arts degree program 600
   Associate in Science degree program 500
   Certificate of Achievement 500

Applications and/or requests for scores on this test may be made by writing to TOEFL, Educational Testing Service, Princeton, New Jersey, 08540, or by contacting the American Consulate in your country. Applicants in the following categories are exempt from taking the test:

a. Individuals whose native language is English
b. Individuals who have completed either four years of high school education **or** 60 semester hours of college level work (from an accredited university/college) in the United States, Australia, Britain, Canada or New Zealand.
c. Transfer students from accredited universities/colleges in the United States, Australia, Britain, Canada or New Zealand who have completed the equivalent of English 100 with a grade of C or better.
d. Students who have attended American, British or Canadian "international schools" in foreign countries for four years may qualify for exemption upon request.

2. Fall within the quota for non-resident students as mandated by the Controlled Growth Policy of the University of Hawaii System.
3. Submit a Supplementary Information Form for Foreign applicants.
4. Submit a completed Certificate of Health Form.
5. Submit evidence of enrollment in a health and accident insurance plan prior to registration. Enrollment in such a plan must be for the duration of the student's stay in Hawaii. Choice of plans is left to the discretion of the student. The Counseling Office has descriptive literature on several plans, and the student may choose one that meets his needs. Health and accident insurance is mandatory.

Admission of foreign non-immigrant students will generally be restricted to the Fall Semester of each year. Those students who are in Hawaii temporarily on a tourist or visitor visa, etc., will be considered for admission to the College only after all other applicants have been accommodated.

Students in Hawaii on an F-1 visa issued by another educational institution will be required to complete the equivalent of one academic year of work at that institution before being considered for admission to this College.

Foreign non-immigrant students will be accepted into a particular instructional program and will not be allowed to change their major, except under unusual circumstances. Such students will be expected to carry an academic load of at least twelve (12) units per semester and will normally not be allowed more than five semesters to complete their stated educational objective. They

must maintain a grade point average of "C" or 2.0. Those whose work is not of average quality or above at the end of two semesters will be reviewed carefully before an extension of the student visa will be granted.

Permission to work will not be recommended for foreign students during their first year.

Immigrant foreign students are those on an immigrant visa who have been admitted to live in the United State permanently. They must meet the general admission requirements as well as submit scores on the Test of English as a Foreign Language (TOEFL). Scores must be from a test taken within the last two years. Acceptable scores for admission are:

Associate in Arts degree programs 600
Associate in Science degree programs 500
Certificate of Achievement 500

Applications and/or requests for scores on this test may be made by writing to TOEFL, Educational Testing Service, Princeton, New Jersey, 08540, or by contacting the American Consulate in your country. Applicants in the following categories are exempt from taking the test:

a. Individuals whose native language is English.
b. Individuals who have completed either four years of high school education **or** 60 semester hours of college level work (from an accredited college/university) in the United States, Australia, Britain, Canada or New Zealand.
c. Transfer students from accredited universities/colleges in the United States, Australia, Britain, Canada or New Zealand who have completed the equivalent of English 100 with a grade of C or better.
d. Students who have attended American, British or Canadian "international schools" in foreign countries for four years may qualify for exemption upon request.
e. Individuals who have resided in the United States, for at least one (1) year.

In addition, immigrant students who are **not** residents of Hawaii are subject to the quota for non-resident students as mandated by the Controlled Growth Policy of the University of Hawaii System.

Early Admission

High school seniors may enroll at Honolulu Community College while completing their high school graduation requirements with the approval of their high school counselors. Students must complete the general admission procedures of the College and submit an "Early Admit" form signed by their high school counselor.

Early admittees must submit a new "Early Admit" form each semester. Enrollment is on a space available basis.

Special Admissions Requirements

Cosmetology applicants must register with the State Board of Cosmetology and present their registration cards to the instructor on the first day of classes.

Health Requirements for Admission

Certificate of Health Form—Non-immigrant foreign students must submit this form with their application for admission.

Tuberculosis Clearance—The State of Hawaii requires that **all** students submit a skin test or chest X-ray for tuberculosis prior to enrollment indicating that they are free of active tuberculosis. The regulations require the following:

Below 20 years of age .....take the tuberculin skin test. If skin test is positive, a chest X-ray is required.

20-39 years of age .....take the tuberculin skin test or the chest X-ray

40 years of age and above..take the chest X-ray

A free tuberculosis examination can be obtained at Lanakila Health Center, 1722 Lanakila Avenue, Honolulu or at any mobile unit.

REGISTRATION, WITHDRAWALS AND OTHER CHANGES

Registration

Registration for courses is usually held one week prior to the first day of instruction. A Schedule of Classes is published each semester and is available to students prior to registration. The College catalog may be purchased from the College Bookstore. Both should be used in planning the program of studies.

A students will be assigned a time to register for courses only after completing all admissions requirements and procedures.

Students are considered officially enrolled only after registering, paying fees, and attending classes. Those students who are unable to attend classes during the first week must notify their instructors in writing before the first day of classes.

Late Registration

Students registering after the regularly scheduled registration dates (see college calendar) are called late registrants and are assessed a late registration fee of $2.00.

Concurrent Registration

Students at one campus within the University of Hawaii System may register concurrently at another campus providing the course they wish to take is required for their program and is not available at their "home" campus.

Interested students must obtain a Concurrent Registration (signed by their advisor) from their home campus. At Honolulu Community College, this form is available at the Counseling Office. Students must file this form and an application form at the campus they wish to attend.

Enrollment will be permitted only if there is space available in the course(s). If courses have established pre-requisites, these must be met.

Tuition and other fees are charged in accordance with the campus part-time fee schedule, as noted in this catalog under "Tuition and Fees—Concurrent Registration Tuition".

Change of Registration: Adds and Drops

Adding or dropping a course is official only after the student has completed and submitted a **Change of Registration Form** and paid the required fee to the Business Office. Students may also drop a course within the **first two days** of the semester without paying the required fee. After the first two days of the semester, a $1.00 fee is charged each time a student adds or drops classes. The $1.00 fee is charged for each transaction. A transaction may involve adding or dropping more than one class.

Courses may be added only during the announced period which is usually sometime during the first two weeks of instruction.

Courses officially dropped during the first three weeks of instruction will not appear on the student's record. Courses officially dropped after the first three weeks will be assigned a "W" grade. The deadline for dropping a course is November 3 for the Fall semester and March 29 for the Spring Semester. Any student who fails to officially drop a course by the deadline will be given any grade except the "W". If a student never attends class, or stops attending class, but does not officially drop the class by the deadline date, the instructor shall award any grade except the "W" grade.

Complete Withdrawal From College

Students who wish to completely withdraw from the College should fill out a Student Exit Form at the Counseling Office and obtain the necessary signatures indicated on the form. If a student completely withdraws from the College within the first three weeks of instruction, the courses taken will not appear on his record. After this, the courses will be assigned "W" grade.

The deadline dates for officially withdrawing are November 3 for the Fall Semester, and March 29 for the Spring Semester. If a student never attends classes or stops attending classes, but does not officially withdraw by the deadline date, the instructor shall award any grade except the "W" grade.

The refund policy for withdrawals is explained in this catalog under "Tuition and Fees—Withdrawal Refunds".

Auditing Courses

Students are permitted to audit certain classes with the written consent of the instructor. Arrangements to audit a class should be made prior to the first class meeting. During the first week of classes, instructors will notify the Registrar's Office of all those students who are auditing their classes. The following courses cannot be audited: All Mathematics courses, Foreign Language courses, Expository writing courses, and Laboratory courses. No credit or grade is given for a course which is audited. Academic records are not maintained. The extent of classroom participation is at the option of the instructor. Auditors must complete all admission and registration requirements and procedures, including payment of fees.

Class Attendance

Regular and prompt class attendance is expected of all students. A student is expected to inform each instructor of anticipated or unavoidable absences. The responsibility for make-up work lies with the student. Instructors set the requirements for class attendance.

When a student never attends a class or stops attending class, but does not officially drop that class, the instructor may award any letter grade, including an "F" or "N" grade. Under no circumstances will the "W" grade be awarded by the instructor.

Change of Program or Major

A student who wishes to change his program or major should see his counselor and complete the required form at least six weeks before the semester ends. This will insure proper program planning and registration in the following semester.

Change of Personal Data or Address

Any change of address, name, marital status, and citizenship must be reported promptly to the Registrar's Office. Failure to do this may result in inaccurate student records, and/or failure to receive registration materials and important college announcements.

CREDITS, GRADES, AND EXAMINATIONS

Credits

Credits (also called semester hours, credit hours, or units) are granted in recognition of work successfully completed in specific courses. A lecture course of semester duration which meets three hours a week is assigned three hours credit and normally includes two hours of preparation for each hour of lecture. A laboratory course of semester duration requires three hours of laboratory for each assigned credit.

Credit Load

The usual credit or course load for students is approximately one-half of the total requirements for one-year programs or one-fourth of the total requirement for two-year programs. A student may not register for more than 18 credits during any one semester except under special circumstances. Registration for more than 18 credits in any one semester must have the counselor's approval.

Variable Credit Courses

Certain courses, designated by "V" in this catalog and in the **Schedule of Classes,** are offered for variable credit. Students taking a variable credit course must register for the maximum number of credits for which the course is offered. The actual number of credits earned will be reported by the instructor before the end of the semester.

Course Waivers or Substitutions

Recommendation for a course waiver is made by the Program Chairman. For each course waiver there must be a recommended course substitution. At no time may a student graduate with less than the total number of required credit hours.

A student wishing to have courses waived or substituted must submit the request to the Program chairperson. In all cases, the Program chairperson will first confer with the chairperson of the department offering the course. If agreement is reached, the Program chairperson will then recommend the course(s) to be waived and substituted, giving the reason for the waiver and substitution. Such recommendation will be submitted to the Assistant Dean for approval. Notice will then be sent to the Registrar's Office. If the waiver and substitution is approved, it will be noted on the student's record.

Credit by Examination

Students who are officially enrolled at the College and who have the equivalent of a course through experience or training but have not received college credit for the course may apply for credit by examination. A student may apply only once for credit by examination for a specific course, and must be enrolled in the College before credit by examination can be officially granted. The following procedure is to be followed:

1. The student obtains the application form at the Registrar's Office.
2. The student presents the application to the department chairman. The department chairman interviews the student and indicates approval on the application form.
3. The student pays the necessary fee at the Business Office. Fees are charged in accordance with the College's tuition schedule.
4. Upon completion of the examination, the instructor reports the result to the Assistant Dean for final approval. If credits are awarded they will be recorded on the student's record and designated as credits earned through examination.

Courses passed by examination do not carry grade or grade points. An "N" grade may be used if student fails to earn credit after challenging a course through "Credit by Examination". Credits earned "by examination" may not be used to satisfy the college residency requirement.

Credit for Previous Work Experience

Students in occupational programs must check with department chairmen and discuss the possibility of credit for work experience. Such credits, if granted, will not be computed in the cumulative grade point average.

A proper form with all of the pertinent information clearly stated must be signed by the department chairman and processed through the Dean of Instruction to the Registrar's Office.

Repeating a Course

A student may repeat a course in which a grade lower than a "C" was received. Credit will be allowed only once for a course, but the student will receive the higher grade and grade points.

Certain courses may be repeated for additional credits. Students should refer to the College Catalog Course Descriptions for criteria for repetition.

Final Examinations

A schedule of final examinations will be announced at least two

weeks before each examination period. If the examination is not taken at the scheduled time, the student should make arrangements with the instructor.

Grade Reports

Grade reports will be mailed to students at the end of each semester.

Students shall assume the responsibility of reporting any errors on their grade report to the Registrar as soon as possible.

Grading

Students will be assigned grades based on standards established as appropriate for each class. Students will be informed of these criteria by the instructor, who may use such methods as written papers, participation in class discussion, performance on assigned projects, and mid-term and final examinations. Instructors are available for special assistance as needed.

Grading System

The letter grading system is used to report student achievement or standing in most courses. The "Credit-No-Grade" system is used only in the courses in this catalogue designated "Credit-No-Credit" or "Pass Withdraw".

Letter Grading System

Grade	Grade Points	Interpretation
A	4	Excellent Achievement
B	3	Above Average Achievement
C	2	Average Achievement
D	1	Minimal Passing Achievement
F	0	Failure
W	Not Computed	Withdraw
N	Not Computed	No Evaluation
I	Not Computed	Incomplete

Credit-No Grade Grading System

Grade	Grade Points	Interpretation
CR	Not Computed	Satisfactory Completion
N	Not Computed	No Evaluation
I	Not Computed	Incomplete

"CR" Grade

To denote passing work deserving of credit for all courses taken on credit-no grade grading scheme.

Withdraw or "W" Grade

This grade is given to students who formally withdraw from a course after the first three weeks of the semester, but by the last day to withdraw from courses (See Academic Calendar in front of College Catalog).

"N" Grade

This grade indicates the student has either not completed the requirements of the course or has not reached a level of accomplishment within a specified time period which will allow for an evaluation and may continue on the student's record indefinitely.

Incomplete or "I" Grade

This grade may be given to a student who has yet to complete a small but important part of the work in the course. The "I" will revert to the level of accomplishment obtained at the end of the course, if the work is not made up by the Spring recess for the Fall semester and by the Thanksgiving recess for the Spring semester. In no case will the "I" revert to a "W".

Grade Point Average

A student's grade point average is computed by dividing the student's total grade points earned by the total credits attempted, excluding credits for which grades of "W" and "I" were awarded.

Academic Deficiencies

A student will be considered as academically deficient under the following circumstances:

1. Semester grade point average is below 2.0 at the end of any semester.
2. Cumulative grade point average is below 2.0 at the end of any semester.
3. Progress towards educational objective is, in the opinion of the program advisor, unsatisfactory.

An academically deficient student is required to meet with his counselor.

Scholastic Honors

Students who earn a grade point average of 3.0 or better for 12 or more credits in a semester at Honolulu Community College earn a place on the Dean's list.

Students graduating from Honolulu Community College with a cumulative grade point average of 3.5 or better will be graduated "With Honors".

Transcript Requests

Students must file a written request for official transcripts at the Registrar's Office. A minimum of seven working days should be allowed for the processing of requests.

No fee is charged for a transcript sent to a college within the University of Hawaii System. A $1.00 fee is charged for each transcript sent outside the University of Hawaii System. Additional postage fees are charged for transcripts sent outside of the United States.

TUITION AND FEES

Schedule of Tuition and Fees (Per Semester)

All required tuition and fees must be paid by the student at the time of registration except where previous arrangements have been made with the Financial Aid Office. Students in genuine need of aid may be assisted through the financial aid program or in unusual cases, by short term emergency loans if available.

	Resident		Non-Resident	
	1-11 Credits	**12 Credits & Above**	**1-11 Credits**	**12 Credits & Above**
Tuition	$3.50 per credit	$40.00	$38.00 per credit	$450.00
Student Activity Fee	$5.00 (Optional)	$5.00	$5.00 (Optional)	$5.00
TOTAL	$3.50-$43.50	$45.00	$38.00-$423.00	$455.00

Concurrent Registration Tuition

Concurrent registrants will be assessed tuition on the Manoa Campus as follows:

Residents—$19.00 per credit hour, up to a maximum of $225.00 total tuition in addition to the Manoa Campus Center fee and activity fee.

Non-resident—$48.00 per credit hour, up to a maximum of $562.50 total tuition in addition to the Manoa Campus Center fee and activity fee.

Concurrent registrants will be assessed tuition at community college campuses as follows:

Residents—$3.50 per credit hour, up to a maximum of $40.00 total tuition each semester.

Non-residents—$38.00 per credit hour, up to a maximum of $450.00 total tuition each semester.

No fees will be charged for students who are enrolled on a full-time basis at their home campus.

Deferred Payment of Tuition

University of Hawaii policy forbids student registration by deferred payment of tuition.

Student Activity Fee

Full-time students (those carrying 12 or more units) pay a Student Activity Fee.

Part-time students may pay this fee is they wish to participate in student activities.

Course-Change Fee

A $1.00 fee is charged for each request for course change.

Senior Citizens Tuition Exemption Program

An individual is exempt from paying tuition and fees under the Senior Citizens Tuition Exemption Program if the following requirements are met:

1. he is 60 years of age or older
2. he is a resident of the State of Hawaii
3. he has completed the general admissions procedures requested by the College.

Registration for classes will be on a space available basis. Senior Citizens are encouraged to take advantage of this program and to contact the College early if they wish to attend.

College Catalog

The cost of the College Catalog is $1.00.

Cost of Books, Tools, and Other Supplies

The cost for books can be estimated between $50 and $60 per semester. The cost of tools and other supplies varies with the program and is noted in the curriculum descriptions section of this catalog.

Withdrawal Refunds

Students withdrawing completely from college must complete the required withdrawal procedures at the Registrar's Office.

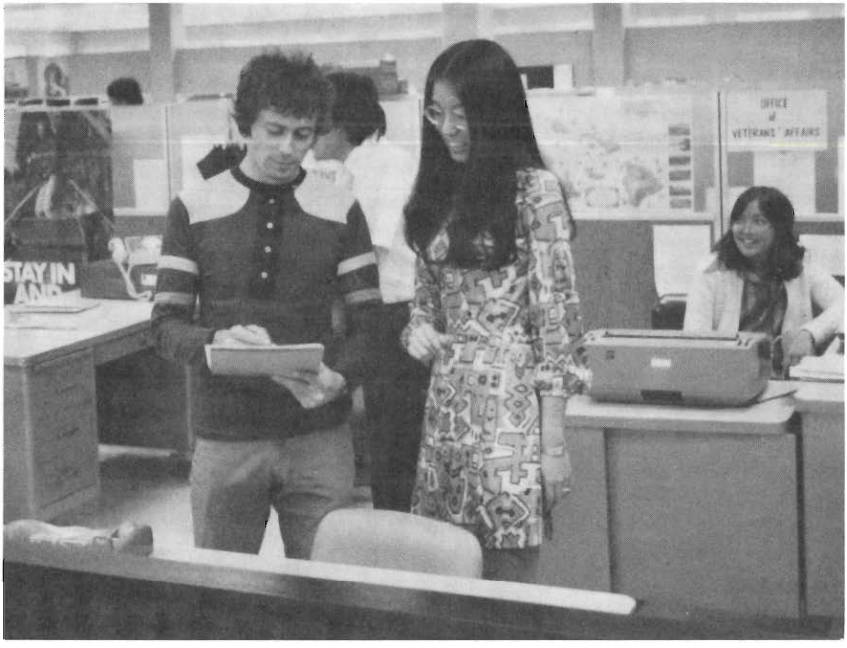
Refunds will be made to students according to the following policy:

1. 80% of tuition and fees paid shall be refunded if a student withdraws from college within the first two weeks of a semester.
2. 40% of tuition and fees paid shall be refunded if a student withdraws from college during the third or fourth week of a semester.
3. No refund after the fourth week of a semester.

One-half of the course fee will be refunded if the student withdraws during the first two weeks of a summer session.

Parking Fee

A $10.50 fee is payable for a permit to park on campus.



Services to Students

GUIDANCE AND COUNSELING

Admissions Counseling

Counseling is available to prospective students to help them select appropriate programs. Counselors will assist students in assessing their educational needs, personal interests, and academic qualifications. Information on the offerings, opportunities, and standards of the College will also be provided to help the students in deciding which program to undertake at the College.

Orientation for New Students

A campus orientation program for new students is held before registration to acquaint them with the facilities, services, and resources available. The program will also cover information on the registration procedures and the academic regulations concerning the students.

Program Advising

Counselors and faculty advisors are available to provide advising to assist the students in planning their long-range program and selecting the courses for the current semester. Advisors will provide the students with information necessary to develop a realistic educational program. Available information include prerequisites, course sequence, program entry date, graduation requirements, transfer requirements, and course placement.

Counseling and Testing

Counselors are also available to assist the student in choosing educational and occupational goals and in completing the courses necessary for achieving his goals. Students are encouraged to seek individual counseling, participate in a Vocational Exploration Group, in vocational aptitude and interest testing, and other counseling services.

Kokua Korner

KOKUA KORNER is a drop-in help center operated by students for students. Its purposes are to provide information about the College's programs and services, and to provide a place where students can rap about their problems, concerns and ideas.

Learning Assistance Center

The Learning Assistance Center's major goal is to assist students in achieving the objectives which they have set for themselves. The following is a sampling of services which are available. First, the LAC is an information center. An attempt will be made to answer questions and help students with problem solving in any area of concern to learners. Second, LAC will develop means for identifying learning problems, making specific diagnoses, and prescribing specific help in solving problems through programmed materials, interaction with a tutor, or referral to other programs on our campus or elsewhere. Third, LAC personnel work closely with the Library Learning Complex and the Instructional Resources Center to assist all learners. The LAC is located in Building 7.

Handicapped Services

The Handicapped Project provides coordinated services to students with handicaps to help them achieve their educational and vocational goals. It is a comprehensive program of (1) personalized counseling to help the student adjust to the educational system, (2) supplementary services, (3) special equipment and (4) developmental programs.

Trio Project

The purpose of the TRIO PROJECT is to provide efficient and coordinated services for low-income students who can benefit from post-secondary education. The basic objective is to insure that students will receive the services and information they may require to identify personal needs and to facilitate the process by which they may attain their goals through training and education. Special Student Services and Talent Search are part of the HCC Trio Project. Talent Search is the outreach and recruitment arm. Special Student Services in the on-campus component to aid students in learning survival skills in the social and academic world.

Office of Veterans' Affairs (OVA)

This office is established under the Veterans Cost-of-Instruction Payments (VCIP) Program to provide services to veterans in outreach, recruitment, counseling, and special education programs for the disadvantaged. The services are designed to assist the veterans both on and off campus in the pursuit of post-secondary education. Special programs for the educationally disadvantaged veterans include remedial and tutorial assistance programs. Veterans are encouraged to work closely with the VA Counselor to insure that they will receive the maximum benefit under the law. The Office is located in the Student Services Department in the Administration Building.

FINANCIAL AIDS, EMPLOYMENT, AND OTHER SERVICES

Financial Aids

Various programs of financial aids are available to students at Honolulu Community College. These include loans, grants, part-time employment and scholarships.

The basic premise of all programs described is that all eligible students be given every opportunity to obtain a college education. Students with financial problems are encouraged to consult the Financial Aids Officer located in the Student Services Department of the Administration Building.

Eligibility

Financial assistance needs and satisfactory academic standards are basic requirements for financial assistance at the College.

A student applying for National Direct Student Loans, Basic Educational Opportunity Grants, Supplemental Educational Opportunity Grants, and College Work-Study Program employment must be: (1) a citizen of the United States, or (2) a national of the United States, or (3) in the United States for other than a temporary purpose with the intention of becoming a permanent resident.

Application Procedures

Standard application forms must be used in applying for assistance offered by the college. These may be obtained at the Financial Aids Office. Students may also complete the College Scholarship Services application forms available at the counselor's office in the high schools or any Financial Aids Office in the University of Hawaii System.

Applications are evaluated as they are received, and assistance is provided on the basis of established priorities. Early submittal of applications is recommended as funds are limited.

PROGRAMS OF FINANCIAL AIDS

Basic Educational Opportunity Grant (BEOG)

Grants are available to students who began college after **April 1, 1973.** Basic Grants are intended to be the "floor" of a financial aid package and may be combined with other forms of aid in order to meet the full costs of education. The amount of the Basic Grant is determined on the basis of the student's and family's financial resources.

Supplemental Educational Opportunity Grant (SEOG)

Grants of $200 to $1,000 for the academic year are available to students who have exceptional financial need. These grants are awarded on a matching basis with other assistance provided through scholarships, loans, or employment through the College Work-Study Program. Grants cannot be more than one-half of the total amount of aid provided to any student.

Law Enforcement Education Program (LEEP)

Grants for payment of tuition, fees, and cost of books are available to full-time employees of publicly-funded law enforcement or criminal justice agencies.

National Direct Student Loan (NDSL)

A student may borrow a sum of up to $2,500 for the first two years of college or an aggregate of $5,000 for his undergraduate work. Repayment is extended over ten years and does not begin until nine months after the student leaves college. Interest is not charged while the student is in college. A rate of three percent is charged during the repayment period. Under certain circumstances, provisions are made for the partial cancellation of the loan and deferment of payment.

State Higher Education Loan (SHEL)

A student may apply for a long-term loan to meet educational expenses. The applicant must be a full-time student and must have been a resident of the State of Hawaii for one year prior to application.

No interest is charged while the student is enrolled at any of the University of Hawaii campuses. Repayment and interest charges begin nine months after graduation or withdrawal and may be extended over a ten-year period. Further details are available from the Financial Aids Office.

Federally Insured Loan

A student may borrow up to $2,500 under terms similar to the National Direct Student Loan. Loans are made through participating banks and credit unions.

College Work-Study Program

Under this federal program, a student is provided part-time employment. Students are permitted to work an average of 15 hours per week during school sessions and 40 hours per week during vacations. Pay rates range from $2.00 to $4.20 per hour.

Veterans Administration Benefits

The College is an approved educational institution for education and training under the Veterans' Educational Assistance Act (GI Bill), the Veterans' Readjustment Act, and the Dependents' Educational Act. Any person eligible for financial assistance should apply to the Veterans Administration through the Veterans' Education and Training Representative (Vet Rep) on the college campus. Information regarding eligibility, entitlement, and types of training authorized may be obtained from the Office of Veterans' Affairs located in the Student Services Department in the Administration Building.

State of Hawaii Scholarships

Awards covering tuition and registration fee are available to residents of the State of Hawaii under this program. To be eligible, students must have been residents of the State of Hawaii for five consecutive years prior to the application. The scholarships are renewable for a second year, provided the student's academic performance has been satisfactory.

Hawaii Merit Scholarships

These scholarships cover the cost of tuition. An applicant does not need to prove financial need. To be eligible, students must have been residents of the State of Hawaii for five consecutive years prior to the application. Deserving students will be selected by a committee.

Kokua Na Haumana

Grants of $50 to $100 may be awarded to students who meet the eligibility requirements for financial aid (selection by committee).

Harry P. Spoon Memorial Scholarship

A scholarship of $50 to $100 is granted to a student each year who meets the eligibility requirements for financial aid (selection by committee).

Automotive Body Painting Association of Hawaii Scholarship

Awards of $75 are available annually to students in the Auto Body and Painting program who demonstrate the potential for success in the trade (selection by committee).

Kalia Lions Club Scholarship

A scholarship of $125 is awarded to a student who resides in the Kalia Lions district (McCully) and meets the eligibility requirements for financial aid (selection by committee).

Other Scholarships

Other privately-sponsored scholarships are also offered. Contact the Financial Aids Office for further information.

Employment Services

Employment services are offered to students by the job placement officer and departmental staff.

Part-time and full-time job listings are provided at the Student Services Department.

Health Services

To prevent financial problems due to unexpected accidents and illness, all students are encouraged to enroll in one of the Health Insurance Plans. Complete description of the policy provisions are given in the brochures available at the Student Services Department.

First-Aid procedures are posted throughout the campus. First-Aid kits are available in each shop.

Housing Information

Honolulu Community College has no housing facilities and the College does not supervise, recommend, or assume responsibility for any housing facility. The Student Services Department maintains a list of housing (not available in published form).

STUDENT ACTIVITIES

Honolulu Community College recognizes the need for active student involvement in college governance and the necessity for out of classroom enrichment experiences for the total development of the student. The College provides the following programs to meet these needs:

Student Government

All Full-time students are regular members of the Associated Students of Honolulu Community College (ASHCC). Part-time students may become associate members upon payment of the membership fee.

The Student Senate is the governing body of the ASHCC and the official representative organization for students enrolled in the College.

The Student Senate represents the ASHCC on most College Committees, Faculty Senate Committees, and University Councils and Committees. It is through this important student organization that students participate directly in the governance of the College and University system.

The student government program provides interested students opportunity to learn and develop leadership skills. Student leaders learn parliamentary procedures, and individual and group leadership techniques.

Co-Curricular Activities

The student activities program at Honolulu Community College provides enrichment opportunities to students through social, cultural, recreational, athletic, and leadership experiences.

The College believes that student activities are an integral part of college life and students are encouraged to participate actively in the following activities:

Social Events

- Dances
- Banquets
- Picnics
- Luaus

Cultural Events

- Variety Shows
- Lecturers
- College Art Shows
- Films
- Musical Presentations

Board of Athletics

***Intramurals and Intercollegiate Athletics**

- Flag Football
- Volleyball
- Basketball
- Tennis
- Golf
- Ping-Pong
- Bowling

Clubs and Special Events

- Campus Crusade for Christ
- Cosmetology Club
- Engineering Technology Club
- Hawaiian Club
- Amateur Radio Club
- Fil-American Club
- Samoan Club
- Aloha Week Activities
- Car Show
- Lei Day Activities
- Speech Contests

*Students participating in sports activities must be covered by accident and health insurance and must be physically qualified.

Board of Publications

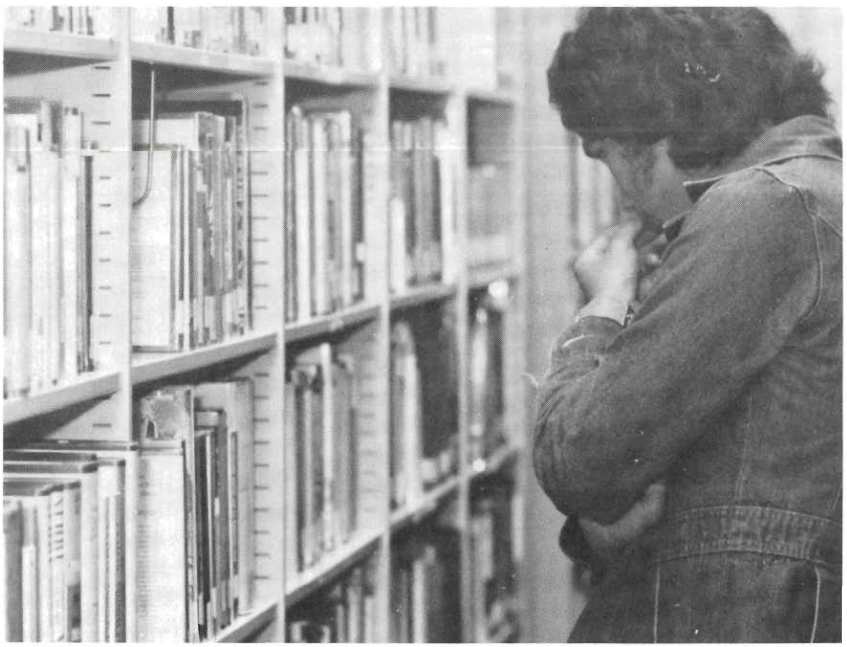
The Board is responsible for the overall financial and budgeting arrangements made for KAHILI. KAHILI is the student newspaper of Honolulu Community College. It is published by and for the students of the College and is a medium in which the College community can express views on a variety of topics.

Student Code
Rights and Responsibilities of the University of Hawaii Community

The purpose of the University is to pursue the truth through teaching, learning, and research, all in an atmosphere of freedom for body and mind. In order to fulfill this purpose, the members of the academic community, jointly and with mutual responsibility, engage in these activities and assist in the maintenance of conditions conducive to them. Each member of the academic community contributes his share toward the fulfillment of the University's purpose in a way that best reflects his individual talents and obligations. He may not, however, interfere with or disrupt the institution as determined by the academic community collectively. The right of freedom of conscience enjoyed by each member must not be infringed by others in the name of these rights.

The freedom essential to a University's purpose must be protected from those who would interfere with it. But there are so many different kinds of interference that it is impossible to enumerate them in detail. Therefore, any determination as to whether a given act constitutes interference must always be a matter of procedure and judgement. Nonetheless, it is possible to describe the categories of impermissible behavior in such a manner as to provide a standard by which behavior will be judged and to give fair notice to all members of the community of what is impermissible.

Much of such impermissible behavior is likely to be illegal under generally valid and applicable laws to which the members of the academic community like other citizens are subject. But the reason for university rules of behavior and for university judicial procedures is the protection of the university's special purposes where these are not otherwise adequately protected or where they may be better protected by the university community itself. (Further reference may be found in the Student Handbook.)



Degree Requirements

ASSOCIATE IN ARTS DEGREE PROGRAM

This program is designed for students wishing to complete their freshman and sophomore years of General College Work at Honolulu Community College prior to transferring to a four-year college.

Program requirements for the Associate in Arts degree are shown below. A minimum of twelve (12) courses distributed among the various disciplines is required. The number of courses required in each area is specified.

It is important that program advisors be consulted to help plan the selection and sequence of course work, because each of the six colleges at the University of Hawaii, Manoa Campus has specific area requirements for junior standing. Students entering Honolulu Community College who have already determined their professional career goal can achieve such standing by a judicious selection of elective courses.

NOTE: Students may substitute other Honolulu Community College Courses for a specific requirement listed below if both the program advisor and the HCC offering department agree that the substitution will receive full core requirement credit at the college to which the student intends to transfer. Substitution approvals must be entered on the student's record by the program advisor.

REQUIREMENTS FOR THE ASSOCIATE IN ARTS DEGREE

I. Program Requirements

A. Communications and quantitative or logical reasoning requirements
   1. Communications—English 100
   2. Quantitative or logical reasoning—one course chosen from the following two groups:
      a. Mathematics 100, 104, 132, 134, 173, 174, 205, 206, 231
      b. Philosophy 210

NOTE: Requirements in Quantitative Reasoning vary greatly at different four-year colleges. Consult your program advisor before selecting a course in this area to insure that the course you select will receive full credit.

B. World Civilizations Requirement
Students must pass **History 151-152,** World Civilization. With concurrence of the program advisor and the Social Science department chairman, students with an adequate comprehension of Western Civilization may substitute one or more courses in the History of Asia, such as History 241-242. Program advisors for students who intend to transfer to the Manoa Campus must insure that all substitutions are approved by the appropriate department at the Manoa Campus prior to the student entering the course.

C. General Requirements

Section 1—Three courses distributed among two or more of the following three groups:

Group A—DRAMA 160
ENG 251, 252, 253, 254, 255, 256
JPNSE LIT 261, 262

Group B—PHIL 100, 200, 201
REL 150, 151

Group C—ART 101
ASIAN 241, 242
HIST 241, 242, 281, 282
LING 102
MUS 160, 180

Section 2—Three courses (including one 4-credit lab science)

Biological Sciences	**Physical Sciences**
BOT 101	CHEM 100, 113-113L, 114-114L
MICRO 130	PHYS 100-100L, 110, 151-151L
OCEAN 201	SCI 122
ZOOL 101	GG 101
SCI 121	GEOG 101

Section 3—Three courses including at least one course from each of the following two groups:

Group A—ANTH 150,200
AMST 201, 202
PSY 100, 110, 112
SOC 100

Group B—ECON 120, 150, 151
GEOG 102, 151
POLSC 110

II. A minimum grade point average of 2.0 (C grade).

III. Residency Requirement:
The last 12 units toward the degree must be taken at Honolulu Community College. Credits earned by examination may not be used to satisfy this requirement.

IV. An aggregate of at least 60 semester hours with elective courses selected from 100 and 200 level offerings at Honolulu Community College.

Thirteen courses required by Honolulu Community College for the AA degree are similar to the University of Hawaii-Manoa lower division core requirements. The six-degree granting colleges at the Manoa campus, however, have differing area requirements for junior standing. The Honolulu Community College student can prepare for junior standing at the College which he intends to enroll by carefully choosing **elective courses** that meet that college's area requirement. For accurate descriptions of each college's area requirements, the student should refer to the appropriate sections of the Manoa Campus Catalog.

ASSOCIATE IN SCIENCE (VOCATIONAL/TECHNICAL PROGRAM)

This section lists vocational/technical programs of study available to students enrolled at Honolulu Community College. It is important that students consult with major program advisors when preparing their program of study so as to insure that the program follows a proper sequence. It should be noted that the final responsibility for course selection rests with the student.

REQUIREMENTS FOR THE ASSOCIATE IN SCIENCE DEGREE

I. Program Requirements
   A. Major courses as required
   B. Each student shall successfully complete 15 credit hours from the Arts and Sciences or special courses sections of the College catalog. The objective of this requirement is to develop in the student college level capabilities in communications, quantitative reasoning, and social and cultural understanding.
   (MATH 3, 4, 23; Reading 001, 101, ELIP 5, 10, 15 cannot be used to meet this requirement).

C. A total aggregate of at least 60 credit hours.
D. A minimum grade point average of 2.0 (*C* grade).
E. Residency Requirement: The last twelve (12) credits must be earned at Honolulu Community College. Exceptions to that policy may be made by the major departments and the Dean of Instruction. Credits earned by examination may not be used to satisfy this requirement.

ASSOCIATE IN SCIENCE DEGREE FOR APPRENTICES

Any person who has completed or is enrolled in a State or Federally approved apprenticeship program is eligible for admission to the Honolulu Community College Associate in Science degree program.

Requirements for the Associate in Science Degree

MAJOR AND RELATED COURSES: Persons who have completed all the "work process hours" and "related instruction" necessary for journeyman status in their respective trades will receive degree credit for this training according to the following schedule: Five (5) credits will be awarded for each 144–160 hour segment of related classroom instruction; seven (7) credits will be awarded for each 2000 hour segment of work process. Persons completing apprenticeship programs of less than four years in duration will need to take enough additional recommended courses to meet the minimum credit requirement for the degree.

Certificate of Achievement Requirements

The Certificate of Achievement is awarded to students who satisfactorily complete the requirements of an occupational curriculum. These curricula are designed primarily for students seeking employment.

The requirements for the Certificate of Achievement are:

1. Subject Requirements
   a. Vocational-Technical courses
      (1) Major courses.....as required
      (2) Related courses.....as required
   b. Elective courses.....as required
      See section on Curricula Descriptions for courses which will meet these requirements.
2. Credit Requirements
   A minimum of 30 credits is required for the Certificate of Achievement.
3. Grade Point Average Requirements
   A minimum grade point average of 2.0 is required for graduation.

4. Residency Requirement
   The last twelve (12) credits must be earned at Honolulu Community College. Exceptions to that policy may be made by the major departments and the Dean of Instruction. Credits earned by examination may not be used to satisfy this requirement.

Certificate of Completion

The Certificate of Completion is awarded to students who successfully complete departmental requirements in certain occupational courses. Programs are designed for students who need short-term training for employment, for workers who are already employed but want additional training for job upgrading, for others who want additional education or training for personal enrichment.

TRANSFER INFORMATION

Credits earned with course grades of "C" or better in other accredited colleges or universities may be accepted as advanced standing credit at Honolulu Community College. Only credits will be included in calculating requirements for graduation. Credits earned with course grades of "D" or better within the university of Hawaii System may be accepted for advanced standing credit and will be included in calculating requirements for graduation.

Students planning to transfer to a four-year institution should take courses which would satisfy the requirements of the college or university of their choice.

To be eligible for transfer to the University of Hawaii, Manoa or Hilo, students should successfully complete at least 24 credits in transfer-level courses (see Associate in Arts degree requirements). However, it is strongly recommended that students complete their Associate in Arts degree before transferring. Studies indicate that students transferring with a higher number of credits are generally more successful in attaining their educational goal. Applications will be processed for the 1975 Fall Semester beginning December 1, 1974 to May 1, 1975 and for the 1976 Spring Semester beginning June 1, 1975 to November 1, 1975. Applications should include official transcripts sent directly from the institutions involved, as well as all other requested credentials.

GRADUATION INFORMATION

Eligibility for Graduation

Graduation requirements are based on the program requirements listed in the College catalog. The student has the option of satisfying the requirements specified in the catalog of (1) the year he first enrolled in this College, (2) the year he re-enrolled, or (3) the year of his graduation.

English and Mathematics Requirements

Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College. The requirements may be satisfied by demonstration or by completion of Mathematics 3 and Reading 001.

Time Within Which Work Must Be Completed

The normal expectation is that students will complete their academic work in a ten-year period. Credits earned more than ten years before graduation in courses which have materially changed content or standards will be denied.

Application for Graduation

Students should consult with their counselors for an evaluation of graduation requirements before registering for their final semester.

Candidates for graduation must file an application with the Registrar's Office as follows:

Fall Semester graduates.....file by October 15
Spring Semester graduates .....file by February 17

Applications received after the announced deadline will be processed for graduation in the following semester.

A $5.00 graduation fee is payable at the time a student submits an application for graduation. This covers the cost of processing the application and ordering and printing the diploma and cover. If the student does not graduate that semester, the fee will be extended to cover the semester he does graduate.

A $5.00 graduation rental fee may be charged for rental of cap and gown should the student participate in the graduation ceremony.

Departments & Curricula

The "Department" portion of this section includes descriptions of each department in the College with curriculum guides for each of the Vocational-Technical programs of study.

The curricula section contains descriptions of all credit courses currently offered by the college.

VOCATIONAL-TECHNICAL PROGRAMS OF STUDY

ART (APPLIED ARTS; FINE ARTS)

INSTRUCTOR: Jerome Hock, Jacqueline Peebles, Mary-Blanche Vehlewald, Jim Wallace.

The Honolulu Community College program in Art currently is being modified to include a broader range of Applied Arts and Fine Arts options. Course listings, course descriptions, and program guides were incomplete at the time the catalogue went to press.

Students interested in Applied Art or Fine Art should contact Mr. Hock, Mrs. Peebles, Mrs. Vehlewald, Mr. Wallace or a counselor.

ARCHITECTURAL DRAFTING TECHNOLOGY (ADT)

INSTRUCTORS: William Au, Kaoru Hirata, Chester Kato, Thomas Katsuyoshi.

Architectural Drafting is an ever-expanding field of employment and offers opportunities in related fields. The curriculum is designed to prepare the student for initial employment as an architectural draftsman.

The two-year curriculum as outlined below leads to a Certificate of Achievement or an Associate in Science degree.

Cost for supplies and textbooks are approximately $85.

Recommended high school preparation: Drafting, Algebra/Geometry, Art, Basic Science.

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
ADT 21	Architectural Drafting I	4	4
ADT 22	Architectural Materials	4	4
ADT 25	Descriptive Geometry for Drafting	3	3
	Communications		3
MATH 19 or 44	Elementary Technical Mathematics II (MATH 44 may be substituted)		3
		11	17
SECOND SEMESTER			
ADT 23	Architectural Drafting II	4	4
ADT 24	Architectural Construction	4	4
CARP 36	Principles of General Carpentry	3	3
SMP 29	Sheetmetal Architectural Design	2	2
	Social Science		3
		13	16
THIRD SEMESTER			
ADT 41	Advanced Architectural Drafting	4	4
ADT 42	Problems in Architecture	4	4
PHYS 21	Mechanics of Solids and Fluids (PHYS 41 and 151 may be substituted)		4
BLPRT 41	Blueprint Reading		3
		8	15
FOURTH SEMESTER			
ADT 43	Architectural Engineering	4	4
ADT 44	Architectural Graphics	4	4
ADT 45	Structural Drafting	3	3
WELD 26	General Welding		1
	Art and Science Elective		2
		11	14
Minimum Credits Required		43	62

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

AUTO BODY REPAIR AND PAINTING (ABRP)

INSTRUCTORS: Stanley Oganeku, Samuel Uchida.

The curriculum is designed to prepare the students for employment in the Auto Body Repair and Painting trade. Classroom and laboratory work is offered in a modern and well-equipped facility.

Cost for supplies and textbooks is approximately $175.

Recommended high school preparation: Industrial Arts, Mechanical Drawing, Mathematics, Physical Science, Communication skills—reading and speaking.

Courses open to non-major students (space available only) (ABRP 21, 22, 23—Fall) (ABRP 24, 25, 26—Spring)

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
ABRP 21	Basic Metal Work	4	4
ABRP 22	Fender Repair	4	4
ABRP 23	Steel and Automobile Sheet Metal	2	2
MATH 18	Mathematics I		3
		10	13
SECOND SEMESTER			
ABRP 24	Special Body Tools, Equipment and Materials	2	2
ABRP 25	Basic Fundamentals of Painting	4	4
ABRP 26	Spot Painting	4	4
PHYSC 25	Fundamentals of Metallurgy		4
	Communications		3
		10	17
THIRD SEMESTER			
ABRP 41	Frame Repairing	4	4
ABRP 42	Body Panel Adjustments & Alignment	3	3
ABRP 43	Radiator Repairing	3	3
	Art & Science Electives		2
	Social Science		3
		10	15
FOURTH SEMESTER			
ABRP 44	Body Panel Replacement	3	3
ABRP 45	Estimating, Shop Management & Ind. Rel.	1	1
ABRP 46	Front Suspension and Wheel Alignment	3	3
ABRP 47	Hardware, Trim, Upholstery and Glass	3	3
	Electives Recommended: CVE		5
		10	15
Minimum Credits Required		40	60

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

AUTOMOTIVE MECHANICS TECHNOLOGY (AMT)

INSTRUCTORS: James Nakagawa, Henry Obayashi, George Ryusaki, Walter Uehira, Richard Wong, William Yamada.

The program is designed to develop degrees of proficiency which will allow the student to become employed in the industry, advance into supervisory positions, and pursue advanced education at institutions of higher learning.

Physical requirement involves high eye-hand coordination to make precise repairs and avoid substantial material losses or personal injury.

Cost of supplies, tools, and textbooks is approximately $250.

Recommended high school preparation: Mathematics, General Science, and Industrial Arts.

		Certificate of Achievement Credits	Associate in Science Degree Credits
ENTRY SEMESTER—Option 1			
AMT 21	Internal Combustion Engines	8	8
*AMT 23	Machine Tools, Industrial Materials	3	3
WELD 27	General Welding	1	1
	Communications		3
		12	15

*MST 35 may be substituted

ENTRY SEMESTER—Option 2			
AMT 22	Fuel Systems and Carburetion	3	3
AMT 24	Electrical Systems	7	7
MATH 18	Elementary Technical Math II		3
	Social Science		3
		10	16
ENTRY SEMESTER—Option 3			
AMT 41	Power Train	3	3
AMT 42	Brake, Steering and Suspension	4	4
AMT 46	Automatic Transmission	3	3
PHYS 21	Solid and Fluid Mechanics		4
		10	14
FOURTH SEMESTER			
AMT 45	Diagnostics	10	10
AMT 43	Introduction to Diesel Engines		3
	Art & Science Elective		2
		10	15
Minimum Credits Required		42	60

Recommended Electives:

AMT 44	Small Engine Repair
AMT 47	Automotive Air Conditioning
AMT 49	Emission Control
CVE 93	Cooperative Vocational Education (1-4 credits) (Approval of Department Chairman)

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

AVIATION MAINTENANCE TECHNICIAN (AVMAT)

INSTRUCTORS: Clement Chun, Felix Duhaylongsod, Edgar Hanohano, Gordon Scott, Robert Whittinghill.

The AVMAT department is an approved aviation maintenance technician training facility operating under Air Agency Certificate No. 4618, issued by the Federal Aviation Administration of the United States of America, and is a major source of airframe and powerplant technicians to supply the needs of industry.

The Airframe and Powerplant courses require intensive classroom instructions and practical training. An Associate in Science degree or Certificate of Achievement is awarded to all students who successfully complete the FAA approved courses.

The AVMAT curriculum combines the General Aviation Maintenance curriculum consisting of 400 hours of instruction with the Airframe curriculum of 750 hours and Powerplant curriculum of 750 hours for a total of 1900 hours of instruction in four (4) semesters. Students may elect to enter the Airframe or Powerplant course after successfully completing the General Aviation Maintenance course. Only in extreme cases and with the approval of the Department Chairman, may a student elect to enter the Airframe or Powerplant course without first completing the General Aviation Maintenance course.

The Airframe and Powerplant program provides individuals with the opportunity to develop theoretical, practical, as well as manipulative skills required for many vocational fields throughout industry. Such skills include, but are not limited to welding, woodworking, sheetmetal and handforming, powerplants (reciprocating and gas turbine), fuel, lubrication, generator, ignition, carburetor (float, pressure, and direct injection), refrigeration and air-conditioning, pressurization, electrical, and hydraulic system and component repair.

The student studies under qualified instructors who have had extensive and broad experience in the aviation industry. Faculty and staff members possess appropriate FAA certificates and qualifications.

Cost for the entire course, excluding semester fees, is approximately $250 which includes textbooks and a required tool kit.

POWERPLANT CURRICULUM

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
AVMAT 21	Gen Mnt Tech I	5	5
AVMAT 22	Gen Mnt Tech II	5	5
AVMAT 23	Gen Mnt Tech III	7	7
MATH 18	Elem Tech Math I	3	3
		20	20
English, Social Sciences or Humanities requirements, time and load permitting.			
SECOND SEMESTER			
AVMAT 24	Recipr Eng	5	5
AVMAT 26	P/P Sys Comp I	6	6
AVMAT 28	P/P Sys Comp II	2	2
AVMAT 40	Eng Elec Sys Cmp	8	8
		21	21
English, Social Sciences or Humanities requirements, time and load permitting.			
THIRD SEMESTER			
AVMAT 42	Propellers	3	3
AVMAT 44	Insp Mnt Rep Eng	4	4
AVMAT 46	A/C Gas Turbines	4	4
Hours added for review, oral & written exams (End Powerplant Curriculum. Student starts Airframe Curriculum)			
AVMAT 25	A/F Struct I	4	4
AVMAT 27	A/F Struct II	5	5
		20	20
English, Social Sciences or Humanities requirements, time and load permitting.			
FOURTH SEMESTER			
AVMAT 29	A/F Struct III	3	3
AVMAT 41	A/C Sys Comp I	5	5
AVMAT 43	A/C Sys Comp II	6	6
AVMAT 45	A/C Sys Comp III	7	7
Hours added for review, oral & written exams			
		21	21

English, Math, Social Sciences, Humanities requirements, scheduled load and time permitting.

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

AIRFRAME CURRICULUM

FIRST SEMESTER		Certificate of Achievement Credits	Associate in Science Degree Credits
AVMAT 21	Gen Mnt Tech I	5	5
AVMAT 22	Gen Mnt Tech II	5	5
AVMAT 23	Gen Mnt Tech III	7	7
AVMAT 25	A/F Struct I	4	4
MATH 18	Elem Tech Math I	3	3
		24	24

English, Social Sciences, or Humanities requirements, time and load permitting.

SECOND SEMESTER			
AVMAT 27	A/F Struct II	5	5
AVMAT 29	A/F Struct III	3	3
AVMAT 41	A/C Sys Comp I	5	5
AVMAT 43	A/C Sys Comp II	6	6
		19	19

English, Social Sciences or Humanities requirements, time and load permitting.

THIRD SEMESTER			
AVMAT 45	A/C Sys Comp III	7	7
Hours added for review, oral & written exams (End Airframe Curriculum. Student starts Powerplant Curriculum)			
AVMAT 24	Recipr Eng	5	5
AVMAT 26	P/P Sys Comp I	6	6
AVMAT 28	P/P Sys Comp II	2	2
		20	20

English, Social Sciences or Humanities requirements, time and load permitting.

FOURTH SEMESTER			
AVMAT 40	Eng Elec Sys Cmp	8	8
AVMAT 42	Propellers	3	3
AVMAT 44	Insp Mnt Rep Eng	4	4
AVMAT 46	A/C Gas Turbines	4	4
		19	19

English, Math, Social Sciences, Humanities requirements, scheduled load and time permitting.

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

CARPENTRY (CARP)

INSTRUCTORS: Harvey Chun, Sueo Kawakami.

Carpentry is one of the basic trades in the construction field. Entrance into this trade is usually obtained through serving a four-year indentured apprenticeship. The Carpentry Department offers a program of instruction which when successfully completed, provides an excellent background for those desiring to enter the apprenticeship program. Students may also take selected courses appropriate to their needs.

Cost for tools, equipment and textbooks is approximately $90 for the first semester, and $50 for each succeeding semester.

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
CARP 21	Hand and Power Tools	4	4
CARP 22	Concrete Form and Layout	6	6
CARP 23	Introduction to Carpentry	1	1
CARP 25	Industrial Safety	2	2
BLPRT 41	Construction Drawing Interpretation	3	3
MATH 18	Elementary Technical Mathematics I	3	3
	Communications		3
		19	22
SECOND SEMESTER			
CARP 26	Advanced Concrete Form and Layout	8	8
CARP 27	Heavy Concrete Construction	3	3
BLPRT 44	Construction Drawing	4	4
CARP 24	Materials and Hardware	2	2
MATH 19	Elementary Technical Mathematics II	3	3
		20	20
THIRD SEMESTER			
CARP 41	Rough Framing	6	6
CARP 42	Exterior Finish	4	4
CARP 45	Building Code	1	1
WELD 26	General Welding I	1	1
	Social Science		3
		12	15
FOURTH SEMESTER			
CARP 43	Interior Finish	4	4
CARP 44	Surveying and Building Layout	2	2
CARP 46	Advanced Blueprint Reading & Estimating	6	6
	Liberal Arts Electives		3
		12	15
Minimum Credits Required		63	72

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

COMMERCIAL BAKING (CB)

INSTRUCTORS: Herbert Foo, William Ho.

The curriculum is designed to prepare the graduate for employment in retail or wholesale establishments as a beginning baker, or for positions as pastry maker, or other classification requiring a knowledge of baking in the areas of commercial food preparation.

Those who cannot comply with the certificate and degree requirements may, after consultation with the instructor, be permitted to apply for a Certificate of Completion.

Health Requirement: Chest x-ray.

Cost of uniform and textbooks is approximately $50.

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
CB 21	Introduction to Baking Industry I	10	10
MATH 18	Elementary Technical Mathematics I		3
	Communications		3
		10	16
SECOND SEMESTER			
CB 22	Introduction to Baking Industry II	10	10
MICRO 30	Introduction to Microbiology		3
	Social Science		3
		10	16
THIRD SEMESTER			
CB 41	Advanced Shop Practice I	8	8
ART 21	Basic Art		3
	Elective		2
		8	13
FOURTH SEMESTER			
CB 42	Advanced Shop Practice II	8	8
BUS 41	Management Theory and Practice		3
CHEM 26	Introduction to Chemistry		4
		8	15
Minimum Credits Required		36	60

Recommended Electives:

ECON 40	Consumer Economics
PSY 54	Industrial Psychology and Personal Adjustment
HIST 54	Issues in American History
HIST 59	History of Hawaii and the Pacific

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

COSMETOLOGY (COSME)

INSTRUCTORS: Irene Hussman, Inez Monckton, Gene Schaefer.

The Cosmetology program is a 12-month course designed to prepare qualified men and women to become licensed beauticians. The curriculum conforms to regulations of the Hawaii State Board of Cosmetology. Classroom instruction is offered concurrently with clinical practice in order to assist the student in the application of cosmetology theory to actual beauty shop situations. In order to receive a certificate, a minimum average of "C" in the program is required.

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
COSME 21	Introduction to Cosmetology	3	3
COSME 22	Elementary Laboratory I	5	5
COSME 23	Scalp and Skin Treatment	3	3
COSME 24	Elementary Laboratory II	5	5
CHEM 26	Introduction to Chemistry	4	4
		20	20
SECOND SEMESTER			
COSME 25	Principles of Techology	3	3
COSME 26	Intermediate Laboratory I	5	5
COSME 27	Salon and Professional Practices	3	3
COSME 28	Intermediate Laboratory II	5	5
ART 21	Basic Art or	3	3
BUS 41	Management Theory and Practice		
		19	19
THIRD SEMESTER			
COSME 41	Advanced Principles of Trichology	3	3
COSME 42	Advanced Care of Hair and Scalp	5	5
COSME 43	Hair Shaping and Styling III	3	3
COSME 44	Advanced Cosmetology Laboratory	5	5
ART 21	Basic Art or	3	3
BUS 41	Management Theory and Practice		
		19	19
FOURTH SEMESTER			
	Communications		3
	Social Science		3
			6
Minimum Credits Required		58	64

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

ELECTRONICS TECHNOLOGY (ET)

INSTRUCTORS: Robert Couzens, Robert Jones, Raymond Kamaura, Lawrence Torres.

The curriculum covers the technical aspects of applied electronics appropriate for entrance into the communications, radar and microwave fields, sufficient theoretical material and mathematics are covered to give the student a background adequate for his present needs as well as to provide a foundation for future growth in the field. Classroom and laboratory work with modern equipment give indispensable experience required for competency in the field.

Cost of supplies and textbooks is approximately $125.

		Associate in Science Degree Credits
FIRST SEMESTER		
ET 21	Basic Electricity	5
ET 21L	Basic Electricity Laboratory	3
MATH 44	Advanced Technical Math (MATH 134 and above may be substituted)	3
PHYS 41	Mechanics and Heat	4
		15
SECOND SEMESTER		
ET 22	Basic Electronics	5
ET 22L	Basic Electronics Laboratory	3
ET 25	Electronics Drafting	2
ENG 43	Technical Report Writing	3
	Social Science	3
		16
THIRD SEMESTER		
ET 41	Pulse Circuits	5
ET 41L	Pulse Circuits Laboratory	2
PHYS 42	Sound, Light and Electricity (PHYS 151/152 and above may be substituted)	4
	Electives in Electronics	4
		15
FOURTH SEMESTER		
ET 42	Radar and Microwaves	5
ET 42L	Radar and Microwaves Laboratory	3
	Electives in Electronics	6
		14
Minimum Credits Required		60

Recommended Electives:
MATH 104 and above
ET 24, 26, 43, 44, 46, 54/54L

NOTE: Admission to ET 21 is readiness for ENG 43 and MATH 44.

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

ENGINEERING TECHNOLOGY (ENGT)

INSTRUCTOR: Charles Yamamoto.

SURVEYING and STRUCTURAL DRAFTING are the two curriculums offered in the Engineering Technology program. Both curriculums, each two years in length, include courses to provide general education, fundamental engineering theories, and a knowledge of basic industrial practices. Students who successfully complete a curriculum will satisfy the requirements for graduation with an Associate in Science Degree. Graduates are highly qualified for employment as engineering technicians in their respective field of specialization.

During the first year, a common core of fundamental courses in engineering technology is offered. Maximum flexibility is available to persuade the student to enroll in supplementary courses, the levels of which are compatible with his degree of proficiency based on his previous educational background.

In the second year, the student selects one of the two curriculums he wishes to pursue; the SURVEYING option or the STRUCTURAL DRAFTING option. Both options are branches of Civil Engineering and prepare the student of employment as an engineering technician with specialization in his respective area.

A qualified surveying engineering technician participates in field surveying, civic drafting, and computing work. A qualified structural drafting engineering technician participates in structural design drafting, materials testing, and computing work.

The curriculum for the SURVEYING option has been approved by the state as meeting the educational requirements for the Hawaii State license as a land surveyor. Thus, the engineering technician is allowed to take the State Board of Registration examination for a registered land surveyor upon completion of seven years employment in this field.

Students must receive a qualifying score on the entering placement test to be eligible for enrollment in the Engineering Technology program. Those who do not qualify on the test may take a Pre-Engineering Technology program and, upon presenting evidence of satisfactory scholastic achievement, may request permission to enroll in the Engineering Technology program.

High School preparation for this program should include two years of algebra. Courses such as geometry, trigonometry, chemistry, and physics are desirable but not required for entry into the program.

ENGINEERING TECHNOLOGY

Options: Structural Engineering Technology
Surveying Engineering Technology

Courses required for the Associate-in-Science (A.S.) Degree in Engineering Technology:

		Associate in Science Degree Credits
FIRST YEAR (common to both options)		
FIRST SEMESTER		
ENGT 15	Surveying & Measurements I	4
ENGT 110	Basic Graphics	4
MATH 44	Advanced Technical Mathematics (MATH 104, 132, 134 may be substituted)	3
ENG 45	Intro to Expository Writing (ENG 100 may be substituted)	3
PHYS 41	Mechanics & Heat (PHYS 42, 151/151L may be substituted)	4
		18
SECOND SEMESTER		
ENGT 25	Surveying & Measurements II	4
ENGT 26	Mechanics I	3
MATH 104	Engineering Mathematics (MATH 132, 134 may be substituted)	3
SP 45	Introduction to Speech (SP 151 may be substituted)	3
Social Science		3
		16

OPTION IN SURVEYING ENGINEERING TECHNOLOGY

SECOND YEAR		
FIRST SEMESTER		
ENGT 31	Topographic Drafting I	3
ENGT 33	Photogrammetry	2
ENGT 39	Advanced Surveying	4
ENGT 42	Drainage & Sewage	3
Elective		3
		15
SECOND SEMESTER		
ENGT 40	Route Surveys & Design	4
ENGT 44	Roadway Design & Construction	3
ENGT 105	Hawaiian Land Laws	2
Elective		3
		12

OPTION IN STRUCTURAL ENGINEERING TECHNOLOGY

SECOND YEAR

FIRST SEMESTER

ENGT 31	Topographic Drafting I	3
ENGT 36	Strength of Materials	4
ENGT 38	Structural Drafting I	3
ENGT 42	Drainage & Sewage	3
ENGT 43	Soils & Foundations	3
		16

SECOND SEMESTER

ENGT 37	Structural Design I	3
ENGT 46	Material Testing Laboratory	2
ENGT 48	Structural Drafting	3
ENGT 50	Seminar	2
Elective		3
		13

Recommended Electives include courses in:
Engineering Technology
Mathematics
Physics
Chemistry

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

FIRE SCIENCE (FS)

COORDINATOR: Richard Miyashiro.

The fire protection career offers a high level of occupational and personal satisfaction through assisting people, especially when they are in need of help. The high regard and warmth shown by the people for the holders of this job make the occupation a very rewarding one.

The purpose of the fire science technology program is to make a student a better employee on his job, a contributing member of his society, and a self-confident person. Following are the program objectives:

1. To provide the student with a large amount of technical information for the proper and proficient performance of his fire protection activities;
2. To broaden the student's general educational area so he is equipped to participate intelligently in affairs of his community;
3. To teach the student to be responsible in all his endeavors.

The program is designed for:

1. Employed firefighters to increase their occupational efficiency;
2. Personnel employed in other agencies of the fire protection field, also to increase their job efficiency;
3. High school graduates and others who are interested in the fire service career;
4. High school graduates and others who are interested in other aspects of the fire protection field;
5. And, persons interested in fire science courses for their self-improvement.

The College offers a sixty-unit program leading to the Associate of Science degree in Fire Science Technology, based on 30 units of technical fire science subjects and 30 units of general educational subjects and electives. It also offers a Certificate of Achievement in Fire Science to a student who completes 30 units of fire science subjects. Besides meeting these standards of the fire science program, the candidates must satisfy the minimum requirements of the College. Two such requirements are residence and proficiency in English and Mathematics. The College, which operates on an open-door policy, welcomes the student to join the program. The Fire Science Department helps the student through the program.

The cost of textbooks and supplies are about $75 for the starting semester, and $50 for each succeeding semester.

A student should contact the fire science coordinator or a counselor before starting the program, and periodically thereafter while he is in it.

Suggested Semester Schedule

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
FS 22	Fundamentals of Fire Suppression	3	3
FS 23	Fundamentals of Fire Prevention	3	3
MATH 18	Elementary Technical Mathematics I		3
ENG 45	Introduction to Expository Writing		3
CHEM 26	Introduction to Chemistry		4
		6	16
SECOND SEMESTER			
FS 24	Fire Fighting Tactics and Strategy	3	3
FS 41	Fire Safety Codes and Ordinances	3	3
SP 45	Introduction to Speech		3
MATH 19	Elementary Technical Mathematics II		3
PHYS 26	Introduction to Physics		4
		6	16
THIRD SEMESTER			
FS 25	Fire Protection Equipment and Systems	3	3
FS 42	Fire Hydraulics	3	3
FS 47	Legal Aspects of Fire Protection	3	3
POLSC 55	Problems in Hawaii Politics		3
PSY 54	Industrial Psychology and Personal Adjustment		3
		9	15
FOURTH SEMESTER			
FS 44	Fire Company Organization and Procedure	3	3
FS 46	Building Construction for Fire Protection	3	3
FS 49	Hazardous Materials I	3	3
SOC 51	Marriage and the Family		3
	Electives		1
		9	13
Minimum amount of credits required for graduation		30	60

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

HEAVY EQUIPMENT MAINTENANCE AND REPAIR (HEMR)

INSTRUCTORS: Frank Ho, Frank Warner.

The program is designed to give the student knowledge of heavy equipment engines and chassis components and to develop the student's proficiency in the repair and maintenance of heavy equipment which will allow the student to become employed in the industry.

Cost of tools, supplies, and textbooks will be approximately $240.

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
HEMR 21	Diesel Engines	10	10
WELD 26	General Welding	1	1
MST 35	Machine Processes	3	3
	Communications		3
		14	17
SECOND SEMESTER			
HEMR 31	Fuel and Electrical Systems	10	10
WELD 27	General Welding	1	1
	Social Science		3
		11	14
THIRD SEMESTER			
HEMR 41	Heavy Equipment Chassis	10	10
PHYS 21	Solid and Fluid Mechanics		4
MATH 18	Elem Tech Math I		3
		10	17
FOURTH SEMESTER			
HEMR 42	Heavy Equipment Special Systems	10	10
	Liberal Arts Elective		2
		10	12
Minimum Credits Required		45	60

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

HUMAN RESOURCES DEVELOPMENT (Fashion Arts)

INSTRUCTORS: Karen Neel, Lillian Zane.

The Honolulu Community College program in Fashion Arts currently is being modified to include a broader range of related homemaking skills. Course listings, course descriptions, and program guides were incomplete at the time this catalogue went to press.

Students interested in courses or programs in Fashion Arts, Home Economics, Foods, and Nutrition or Human Development should contact Mrs. Zane, Mrs. Neel, or their counselor.

INDUSTRIAL EDUCATION (IED)

A coordinated program of preparation for lower education Industrial Arts teachers has been established between the University of Hawaii, College of Education, and Honolulu Community College. Candidates completing program requirements are awarded the Associate of Arts—Industrial Education degree and can transfer to the College of Education to complete general education, professional education, and teaching field major requirements during their junior, senior, and fifth year.

Admission requirements for the program is readiness for transfer-level course work in English and Mathematics.

	Associate in Arts Degree Credits
I. General Education Core Semester Credits 24	
COMMUNICATIONS: 1 semester course in English and 1 semester course in Speech English 100 Speech 151	6
QUANTITATIVE REASONING: 1 semester course Mathematics 100, 104, 132, 134, 174, 205, 206, 231. Philosophy 210	3
WORLD CIVILIZATION: 2 semester courses History 151, 152	6
HUMANITIES: 1 semester course Art 101, 108; Drama 160; English 250, 251, 252, 253, 254, 255, 256; History 241, 242, 281, 282; Linguistics 102, 180; Music 160, 180; Philosophy 100, 200, 201; Religion 150, 151.	3
NATURAL SCIENCES: 1 semester course Botany 101; Chemistry 100, 100L, 113, 113L, 114, 114L General Science 121, 122; Geography 101, GG 101; Microbiology 130, Oceanography 201; Physics 100, 100L, 110, 151, 151L, 152, 152L; Zoology 101.	3
SOCIAL SCIENCES: 1 semester course American Studies 201, 202; Anthropology 150, 200; Economics 120 or 150, 151; Geography 102, 151; Psychology 100, 110, 112; Political Science 110; Science 110; Sociology 100.	3
	24

II. Technology Core* Semester Credits 36

The Technology Core consists of program of courses in eight areas. Courses in five areas are offered at Honolulu Community College.

1. Power Technology
2. Drafting Technology
3. Electrical/Electronic Technology
4. Metal Technology
5. Wood Construction Technology

Courses in two areas are offered at the University of Hawaii.

6. Industrial Crafts Technology
7. Plastics Technology
8. Graphic Arts Technology

The Industrial Education major requirement may be met in any one of three options.

Option A—Three credits in each of four areas and six credits in each of four additional areas.

Option B—Three credits in each of six areas and nine credits in each of two areas.

Option C—Three credits in each of six areas and 18 credits in one area.

*All courses are not offered every semester—Check the semester schedule for the term's offerings.

Areas	3 credits	6 credits	9 credits	18 credits
Power Technology	IEDPT 102, 201, or 202	IEDPT 102, 201, or 202	IEDPT 102, 201, or 202	AMT 21, 22, 24 IEDPT 202 or IEDPT 102, 201 AMT 22, 41, 42, 46
Drafting Technology	IEDDD 101	IEDDD 101, 102	IEDDD 101, 102, 201	ADT 21, 22, 23, 24, 25
Electrical/ Electronic Technology	ET 27-28, or IEDET 101	IEDET 101, 103	IEDET 101, 103; IEDIE 102	A.S. Degree program in ET
Metals Technology	IEDMS 101, IEDW 102, or IEDSM 103	IEDMS 101, IEDW 102, or IEDSM 103	IEDMS 101, IEDW 102, or IEDSM 103	IEDMS 101, IEDW 102, IEDSM 103 and MST 21, 22, 23, 35, 41, 44 or WELD 23, 24, 41, 43, 44, or SMP 24, 25, 26 (concurrent) to total 18 credits

Areas	3 Credits	6 Credits	9 Credits	18 Credits
Wood Construction Technology	IEDWC 101	IEDWC 101, 102	IEDWC 101, 102, 202, or IEDWC 101, 102, and CARP 22, 41, 42, 43 to total 9 credits	IEDWC 101, 102, 202, or IEDWC 101, 102, and CARP 22, 41, 42, 43 to total 18 credits
Graphic Arts Technology	EDCI 309, or APART 23, or APART 25	EDCI 309, and APART 23, or APART 25	EDCI 309, APART 23, and APART 25 or EDCI 309, APART 23, and APART 50	EDCI 309, APART 23, APART 50, APART 51, and APART 25

III. A total aggregate of at least 60 semester hours.

IV. A minimum grade point average of 2.0 (C)
Other courses than those listed may be recommended, or substituted, on the approval of the advisor and/or counselor.

INDUSTRIAL ELECTRICITY (IE)

INSTRUCTORS: Felix Giso, James Lee.

The curriculum is designed to prepare the student for entry into the Electrical Construction and Maintenance Industry. The student is introduced to and receives practice in the many operations required for the wireman and electrical repairman and troubleshooter.

Cost of supplies and textbooks is approximately $210.

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
PHYS 23	Fundamentals of Electricity	4	4
IE 21	Industrial Electricity	3	3
MATH 18	Elementary Technical Mathematics I	3	3
	Communications		3
	Electives		3
		10	16
SECOND SEMESTER			
PHYS 24	Fundamentals of Electricity II	4	4
IE 22	Industrial Wiring Systems	4	4
IE 23	Industrial Wiring Theory	3	3
BLPRT 41	Construction Drawing Interpretation	3	3
MATH 19	Elementary Technical Mathematics II	3	3
		17	17
THIRD SEMESTER			
IE 40	Electrical Power—Advanced Industrial Wiring Systems	4	4
IE 41	Electrical Power—A.C. Machinery	3	3
	Social Science		3
	Electives		4
		7	14
FOURTH SEMESTER			
IE 42	Alternating Current Laboratory	4	4
IE 43	Alternating Current Theory	3	3
	Electives		6
		7	13
Minimum Credits Required		41	60

Recommended Electives

PSY 54	Industrial Psychology and Personal Adjustment (3 credits)
ECON 40	Consumer Economics (3 credits)
MATH 27	Intermediate Algebra (3 credits)
MATH 132	Trigonometry (3 credits)
ENG 43	Technical Writing (3 credits)

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

MACHINE SHOP TECHNOLOGY (MST)

INSTRUCTORS: Robert Apau, George Kalilikane.

The curriculum is designed to provide instruction for the student desiring employment in industry where the use of metalworking machinery is extensive. Sources of employment are repair and maintenance shops, machine shops, industrial plants, shipyards and machine industries.

Cost of supplies and textbooks are approximately $75 plus additional cost of approximately $25 during the second semester.

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
MST 21	Benchwork	3	3
MST 22	Lathe I	6	6
BLPRT 42	Blueprint Interpreting & Sketching	2	2
MATH 18	Elementary Technical Math I		3
		11	14
SECOND SEMESTER			
MST 23	Lathe II	6	6
MST 42	Grinding	3	3
	Communications		3
	Social Science		3
		9	15
THIRD SEMESTER			
MST 41	Milling Machine	6	6
MST 43	Cutter Grinding	3	3
PHYSC 25	Fundamentals of Metallurgy		4
	Arts & Science Electives		2
		9	15
FOURTH SEMESTER			
MST 44	Advanced Machine Tool Practice	1-10	1-10
WELD 40	Welding for Machine Shop Technology	3	3
	Electives		3-12
		4	16
Minimum Credits Required		33	60

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

POLICE SCIENCE (PS)

COORDINATOR: Robert Lansing.

This program will provide the student with the basic information which a law enforcement officer should have when entering into police service. This program is also designed to keep the in-service officer abreast of the changes that are taking place within the law enforcement field.

A student who successfully completes twelve (12) units of Police Science college work at Honolulu Community College will receive six (6) additional units for completing basic recruit training for police as required by government law enforcement agencies. No allowance will be permitted other than as outlined by this policy.

Twenty-seven units in Police Science courses are needed to satisfy the major course requirements. (Special sections of technical writing are offered specifically for Police Science students.)

		Associate in Science Degree Credits
FIRST SEMESTER		
PS 121	Introduction to Law Enforcement	3
	Police Science Electives Recommended: PS 123	3
	Communications	3
	Social Science	3
	Electives Recommended: PS 127	3
		15
SECOND SEMESTER		
	Police Science Electives Recommended: PS 124, 126	6
	Arts & Science Electives	6
	Speech	3
		15
THIRD SEMESTER		
	Police Science Electives Recommended: PS 241, 242, 244	9
	Electives	6
		15
FOURTH SEMESTER		
	Police Science Electives Recommended: PS 243, 245	6
	Electives Recommended: PS 240, 246; Social Sciences	9
		15
Minimum Credits Required		60

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

PROGRAM FOR PARAPROFESSIONALS IN HUMAN SERVICES (PPHS)

INSTRUCTOR: Karen Kelly.

The curriculum is designed to prepare the student for para-professional occupations (child care worker or educational assistant, community worker, health aide, corrections worker, office worker in human service agencies, and the elderly services worker). Graduates of the program will also be prepared to transfer to professional training programs in education, human development, and other human service fields. Students who are not employed in human service jobs directly related to the area of study will be assigned appropriate field experiences. The Human Services curriculum leads toward a Certificate of Achievement or an Associate in Science Degree.

Certificate and Degree Requirements

Early Childhood Education Option I
(Students planning to transfer: choose liberal arts courses from pre-education requirements, UH Manoa, College of Education)

Courses	Certificate of Achievement Credits	Associate in Science Degree Credits
English 35 or above		3
Mathematics 23 or above		2
Psychology		3
Other Arts & Sciences or special courses (Sociology, Anthropology, Speech, Ethnic Studies, Art recommended)		min. 9
ED 167 (3), HD 130 (3), HD 231 (3)	9	9
PPHS 101 (3 cr., may be repeated)	9–12	9–12
PPHS 111 (1 cr., may be repeated)	3–4	3–4
Other Human Service Courses (ED, HD, HF, or PPHS)	5–9	min. 9
Electives		0–13
TOTAL	30	60

Associate Degree Requirements

Early Childhood Education Option II
(Students planning to transfer: choose liberal arts courses
from pre-education requirements, UH Manoa, College of Education)

Courses	Certificate of Achievement Credits	Associate in Science Degree Credits
English 35 or above		3
Mathematics 23 or above		2
Psychology		3
Other Arts & Sciences or special courses (Sociology, Anthropology, Speech, Ethnic Studies, Art recommended)		9
Human Services Courses PPHS 250, 251, 252 (10–30 cr.) (competency-based training) Other Human Services Courses (0–15 cr.) (ED, HD, HF, or PPHS)	min. 30	min. 30
Electives (additional courses in communications recommended)		0–13
TOTAL	30	30

General Education Option

(Students planning to transfer: choose liberal arts courses
from pre-education requirements, UH Manoa, College of Education)

Courses	Certificate of Achievement Credits	Associate in Science Degree Credits
English 35 or above		3
Mathematics 23 or above		2
Psychology		3
Other Arts & Sciences or special courses (Sociology, Anthropology, Speech, and Art recommended)		min. 9
ED 112 (3), ED 114 (1), ED 114L (1), HD 231 (3), or HD 232 (3)	11	11
PPHS 101 (3 cr., may be repeated)	9–12	9–12
PPHS 111 (1 cr., may be repeated)	3–4	3–4
Other Human Services Courses and courses in teaching field (ED, HD, HF, PPHS)	3–7	min. 3–7
Electives		0–13
TOTAL	30	60

Community Service Option

Courses	Certificate of Achievement Credits	Associate in Science Degree Credits
English 35 or above		3
Mathematics 23 or above		2
Sociology		3
Other Arts & Sciences or special courses (Psychology, Anthropology, Speech, Ethnic Studies recommended)		min. 9
HD 231 (3), HD 232 (3), HF 102 (1), PPHS 215 (3), PPHS 216 (3)	13	13
PPHS 102 (3 cr., may be repeated)	9–12	9–12
PPHS 111 (1 cr., may be repeated)	3–4	3–4
Other Human Services Courses (ED, HD, HF, PPHS—HD 235 recommended)	1–5	1–5
Electives		0–13
TOTAL	30	60

Health Option

Courses	Certificate of Achievement Credits	Associate in Science Degree Credits
English 35 or above		3
Mathematics 23 or above		2
Psychology		3
Other Arts & Sciences or special courses (Sociology, Anthropology, Ethnic Studies recommended)		min. 9
Job-related courses in health individually selected for student	12–18	12–18
PPHS 103 (3 cr., may be repeated)	9–12	9–12
PPHS 111 (1 cr., may be repeated)	3–4	3–4
Other Human Services Courses (HD, HF, PPHS)	0–6	0–6
Electives		0–13
TOTAL	30	60

Corrections Option
(Final Curriculum Committee Approval pending)

Courses	Certificate of Achievement Credits	Associate in Science Degree Credits
English 35 or above		3
Mathematics 23 or above		2
Other Arts & Sciences or special courses (Psychology, Sociology, Anthropology, Ethnic Studies, Political Science recommended)		min. 12
Human Services	30	min. 30
Courses in Corrections, PPHS 230, 231, 232, and other courses in 230 series (min. 18), some course descriptions not yet developed at time of printing)		
Other Human Services Courses, HD, 232, HF 103, PPHS 104, PPHS 111 recommended		
Electives		0–13
TOTAL	30	60

Elderly Services Option
(Final Curriculum Committee Approval Pending)

Courses	Certificate of Achievement Credits	Associate in Science Degree Credits
English 35 or above		3
Mathematics 23 or above		2
Other Arts & Sciences or special courses (Psychology, Sociology, Anthropology, Ethnic Studies, Political Science recommended)		min. 12
HD 231 (3), HD 232 (3)		6
HF 102 (1), HF 103 (1), HF 110 (1)		3
Human Services Courses	30	30
PPHS 106 (9–12 cr.)		
PPHS 111 (3–4 cr.)		
Courses in Gerontology (PPHS 260 series, course descriptions not yet developed at time of printing)		
Other Human Services Courses		
Electives		0–13
TOTAL	30	60

Office Work Option

Courses	Certificate of Achievement Credits	Associate in Science Degree Credits
English 35 or above		3
Mathematics 23 or above		2
Other Arts & Sciences or special courses (Psychology, Sociology, Anthropology, recommended)		12
HD 231 (3), HD 232 (3), HD 235 (3), HF 103 (1)	10	10
PPHS 105 (3 cr., may be repeated)	9–12	9–12
PPHS 111 (1 cr., may be repeated)	3–4	3–4
Other Human Services Courses (ED, HD, HPE, PPHS)	4–8	4–8
Electives		0–13
TOTAL	30	60

Additional requirements for students in Office Work:

One year of office work or any equivalent combination of experience and training, but such equivalency shall include experience in typing and office procedures.

Knowledge of: office practices and procedures; grammar, punctuation, spelling, and word usage; filing; office machines and equipment.

Ability to: type accurately from plain or corrected copy at the rate of 45 net words per minute; compare names and numbers rapidly and accurately; deal effectively with ordinary office situations; organize and complete assigned tasks.

REFRIGERATION AND AIR CONDITIONING TECHNOLOGY (RAC)

INSTRUCTORS: Thomas Combs, Thomas De Laura

The curriculum is designed to prepare the students for entry into the field of refrigeration and air conditioning by providing a thorough grounding in its fundamental and technical aspects.

The costs of textbooks, supplies and tools will be approximately $250.

		Certificate of Achievement Degree	Associate in Science Degree Credits
FIRST SEMESTER			
RAC 21	Fundamentals of Refrigeration	5	5
RAC 22	Refrigeration Laboratory I	5	5
RAC 27	Refrigeration Electricity	4	4
WELD 26	General Welding	1	1
WELD 27	General Welding	1	1
MATH 18	Elementary Technical Math I	3	3
		19	19
SECOND SEMESTER			
RAC 23	Advanced Refrigeration	5	5
RAC 24	Refrigeration Laboratory II	5	5
RAC 28	Applied Electricity	2	2
BLPRT 41	Construction Drawing Interpretation	3	3
MATH 19	Elementary Technical Math II	3	3
		18	18
THIRD SEMESTER			
RAC 41	Psychrometry and Cooling Load	5	5
RAC 42	Air Conditioning Machinery Lab I	5	5
PHYS 21	Solid & Fluid Mechanic (PHYS 41 or 42 may be substituted)		4
	Social Science		3
		10	17
FOURTH SEMESTER			
RAC 43	Air Distribution and Air Conditioning Systems	5	5
RAC 44	Air Conditioning Machinery Laboratory II	5	5
	Communications		3
		10	13
Minimum Credits Required		57	67

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

SHEET METAL AND PLASTICS TECHNOLOGY (SMP)

INSTRUCTORS: Charles Beach, Frederick Shine.

This curriculum is designed to qualify students for entry into the field of sheet metal as advanced apprentices. They will develop skills in fabricating air conditioning duct, architectural metal work, welding and fabricating plastics and pattern development.

The cost of supplies and textbooks will be approximately $125.

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
BLPRT 40	Mechanical Drawing	2	2
SMP 21	Hand Tool and Machine Processes	4	4
SMP 22	Fabrication Processes	4	4
SMP 23	Introduction to Surface Development	3	3
MATH 18	Elementary Technical Math I	3	3
		16	16
SECOND SEMESTER			
SMP 24	Advanced Fabrication Processes	4	4
SMP 25	Air Conditioning Fabrication	4	4
SMP 26	Pattern Development I	3	3
	Communications		3
	Social Science		3
		11	17
THIRD SEMESTER			
SMP 41	Advanced Air Conditioning Fabrication	4	4
SMP 42	Plastic Fabrication	4	4
SMP 43	Pattern Development II	3	3
SAFTY 20	Occupational Safety and Health	2	2
HUM 40	Critical Judgment and Expression	3	3
	(Recommended Elective: SMP 47)		
		16	16
FOURTH SEMESTER			
SMP 44	Blow Pipe Fabricator	4	4
SMP 45	Advanced Fabrication	4	4
PHYSC 25	Fundamentals of Metallurgy		4
		8	12
Minimum Credits Required		51	61

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

WELDING TECHNOLOGY (WELD)

INSTRUCTORS: Charles Kim, Stanley Torricer, Shizuo Yoshimoto.

The curriculum is designed to prepare the student for employment as a welder and welding technician. Training is given in both theory and practical skills in the various phases of welding and cutting.

The cost of textbooks and equipment will be approximately $90.

		Certificate of Achievement Credits	Associate in Science Degree Credits
FIRST SEMESTER			
WELD 21	Basic Oxy-acetylene Cutting	3	3
WELD 22	Basic Arc Welding	5	5
WELD 23	Intermediate Arc Welding	5	5
BLPRT 41	Intermediate Drawing Interpretation	3	3
		16	16
SECOND SEMESTER			
WELD 24	Welding Fabrication Technology	5	5
BLPRT 43	Blueprint for Welder	3	3
MATH 18	Elementary Technical Math I		3
	Communications		3
		8	14
THIRD SEMESTER			
WELD 41	Advance Arc Welding	3	3
WELD 42	Welding Qualification Procedure		3
PHYSC 25	Fundamentals of Metallurgy		4
	Art & Science Elective		2
	Elective		3
		3	15
FOURTH SEMESTER			
WELD 43	Tungsten Inert Gas and Metallic Inert Gas		3
WELD 44	Special Processes	5	5
	Social Science		3
	Electives		4
		5	15
Minimum credits required		32	60

Recommended Electives for Certificate of Achievement:

WELD 42	Welding Qualification of Achievement (3)
WELD 43	Tungsten Inert Gas and Metallic Inert Gas (3)
MST 35	Machine Process (3)
MATH 18	Elementary Technical Mathematics I (3)

Recommended Electives for Associate in Science Degree:

ENG 43	Technical Writing (3)
PSY 54	Industrial Psychology (3)
ECON 40	Consumer Economics (3)
MST 35	Machine Processes (3)

NOTE: Students qualifying for either the Certificate of Achievement or the Associate Degree must meet the minimum proficiency standards in English and Mathematics established by the College.

ARTS & SCIENCE DEPARTMENTS, DISCIPLINES, & STAFF

HUMANITIES

INSTRUCTORS: David Ball, Terrence Haney, Doric Little, Walter McGoldrick, James Wallace, Alan Yonan.

Subject areas offered in the Humanities Department include Art, Drama & Theatre, Music, Philosophy, Religion, and Speech. The department is actively engaged in experimental courses which integrate the humanities into career and vocational programs and the community at large.

LANGUAGE ARTS

INSTRUCTORS: William Brainerd, Sonia Chess, Shan Correa, Howard Driver, Sandra Hirose, Gloria Hooper, Bernard Myers, Nobuko Pugarelli, Louis Willand.

The Language Arts Department offers courses in Composition (advanced and developmental), Reading, English Literature, World Literature, Types of Literature, Journalism, and Foreign Languages.

MATHEMATICS

INSTRUCTORS: Alice Bertram, Roy Fujimoto, Iris Fukui, Kenji Inouye, Rachael Kagehiro, James Reeder, Consuelo Rogers.

Students planning to take courses in mathematics at Honolulu Community College should be aware that the courses are arranged in a definite sequence, with each course either serving as preparation for a succeeding course or as a final course in one part of the sequence. To help the student better visualize this sequence, it is presented in schematic form below. Specific prerequisites are listed in the course descriptions.

NATURAL SCIENCES

INSTRUCTORS: Donald Bourassa, Raymond Chang, Robert Eddinger, Lois Higashi, Joseph Krahulik, Samuel Liu, Wade Parker, Andrew Puccetti.

The department of Natural Science is made up of the three disciplines of biology, chemistry, and physics, which meets the science-course needs of vocational, general education, and liberal arts transfer students. Subject areas offered in the Natural Sciences department include Botany, Chemistry, Microbiology, Oceanography, Physics, Physical Science, Science, and Zoology.

SOCIAL SCIENCES

INSTRUCTORS: Carolyn Blanchard, Dewey Caldwell, David Cleveland, Noel Grogan, Norman Hallett, John Homer, Maka Larsen-Basse, Charles Mast, Thomas Ohta, Ramsey Pedersen, Barbara Peterson.

The program is designed to prepare students for success in social sciences curricula at 4-year institutions; enhance and develop students' awareness in social sciences for use in making personal and social decisions.

The subject areas offered in the Social Sciences department include American Studies, Anthropology, Asian Studies, Economics, Ethnic Studies, Geography, History, Political Science, Psychology, Social Science, and Sociology.

SPECIAL COURSES AND PROGRAMS

APPRENTICESHIP/JOURNEYMAN TRAINING

COORDINATORS. Jiggs Kuboyama, Tad Miyazaki, Orville Mun

This program provides the "related classroom instruction" portion of the training received by people on Oahu Apprenticing in the Construction and Mechanical trades. In addition, upgrading training is offered for journeymen who desire self-improvement in their respective trade areas.

Courses are offered during the late afternoon, evening, and Saturday mornings in the following discipline areas:

Auto Body: A 2 year program of related instruction, plus 4 years of work experience.

Auto Painting: A ½ year of related instruction, plus 3 years of work experience.

Auto Mechanic (AMT)
A 4 year program of related instruction, plus 4 years of work experience.
Auto Transmission (ATR)
A 2 year program of related instruction.
Boiler Maker
A 4 year program of related instruction, plus 4 years of work experience.
Bricklayer Mason (BLM)
A 2 year program of related instruction, plus 3 years of work experience.
Carpentry (CARP)
A 3½ year program of related instruction, plus 4 years of work experience.
Cement Finishers (CEMFI)
A 1 year program of related instruction, plus 2 years of work experience.
Drywall (DW)
A 1½ year program of related instruction, plus 3 years of work experience.
Electrician (IE)
A 4 year program of related instruction, plus 4 years of work experience.
Electronic Technology (ET)
Several levels of electronic courses are offered.
Floor Layer (FL)
A 1½ year program of related instruction, plus 3 years of work experience.
Glaziers (GL)
A 3 year program of related instruction, plus 4 years of work experience.
Ironworker (IW)
A 3 year program of related instruction, plus 3 years of work experience.
Lathers (LATH)
A 3 year program of related instruction, plus 4 years of work experience.
Machine Shop (MS)
A 4 year program of related instruction, plus 4 years of work experience.
Millman Woodworking (MW)
A 3½ year program of related instruction, plus 4 years of work experience.
Operating Engineer (OE)
A 2 year program of related instruction, plus 2 years of work experience.
Painting & Decorating (PD)
A 3 year program of related instruction, plus 3 years of work experience.
Plant Assembler (PA)
A 1½ year program of related instruction, plus 2 years of work experience.
Plasterers (PLAS)
A 2 year program of related instruction, plus 3 years of work experience.
Plumbers (PLUMB)
A 5 year program of related instruction, plus 5 years of work experience.
Refrigeration & Air Conditioning (RAC)
A 5 year program of related instruction, plus 5 years of work experience.
Reinforcing Steel (RS)
A 2 year program of related instruction, plus 2½ years of work experience.
Roofers (RF)
A 1 year program of related instruction, plus 3 years of work experience.
Sheet Metal (SMP)
A 5 year program of related instruction, plus 5 years of work experience.
Sheet Metal Detailer (SMD)
A 3 year program of related instruction, plus 4 years of work experience.
Tapers (TAPER)
A 1 year program of related instruction, plus 2 years of work experience.
Welding (WELD)
A practical and demonstrated course for welders and trainees.

Home Study courses are provided in those areas where the demand exists to train indentured apprentices. Training programs that are now being offered are:

Mechanic
Business Machines Repairman
Dental Technician
Electrical Maintenance Repairman
Furniture Upholsterer
Plumbing Maintenance Repairman
Optical Technician
Meatcutter
Printer
Pressman

COMPUTER SCIENCE CENTER (COMSC)

Although Honolulu Community College does not offer a major in Computer Science, it does offer courses designed to acquaint students with computer fundamentals and introductory computer programming. The Computer Science Center is open during the normal school year and equipment is available for student and faculty use.

COOPERATIVE VOCATIONAL EDUCATION (CVE)

COORDINATOR: Edgar Hanohano

This program will provide the student with opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction. Relevance to classroom instruction is realized and experience in the real world of work is acquired. Cost of student education is greatly reduced; because he earns as he learns. The cooperative employer pays a fair wage for each student hour performed in the cooperative education program. The student must be enrolled in the appropriate major courses.

Courses available in cooperative vocational education are ABRP 39, ADT 93, AMT 93, APART 93, CB 93, ET 93, HEMR 93, and IE 93.

See appropriate departmental listings for further information.

EXPERIMENTAL COURSES

Course	Title	Credit
AERO 100	Primary Ground School	3
AERO 150	Flight Training	3
AERO 199	Flight Training I	3
AERO 200	Commercial and Instrument Ground School	4

AERO 299E	Flight Training IIA (Independent Study)	3
AERO 299B	Flight Training IIB (Independent Study)	3
AERO 299C	Flight Training IIC (Independent Study)	3
AERO 299D	Flight Training IID (Independent Study)	3
APART 51	Graphic Reproduction	4
APART 142	Television Production I	3
ASIAN 241-242	Civilizations of Asia	3-3
AVTEC 51	General Aviation Maintenance	2
AVTEC 52	Airframe Maintenance	3
AVTEC 53	Powerplant Maintenance	3
ED 220	Teaching Language Skills (Early Childhood Dev)	3
ENG 213	Introduction to Creative Writing	3
ES 150	Ethnic Relations World Perspective	3
ES 200	Japanese Americans	3
ES 221	Hawaiian Americans	3
FNS 185	Contemporary Issues in Food & Nutrition	3
FNS 285	Introduction to Human Nutrition	3
HD 196	Introductory Seminar in Student Development	2
HD 232	Introduction to Human Development II	3
HE 267	Home Furnishings	3
HPE 101	Physical Fitness	1
HPE 107	Beginning Tennis	1
HPE 108	Advanced Tennis	1
HPE 110	Golfing	1
HPE 115	Bowling	1
HUM 32	Senior Perspectives	3
JPNSE 45	Conversational Japanese	3
MUS 43	Introduction to Guitar	1
MUS 102	University Chorus	1
POLSC 210	Political Participation	3
PPHS 140	Developmentally Based Care of the Very Young Child	3
PPHS 200V	Special Studies in Human Services I	1-3
PPHS 202V	Special Studies in Human Services III	1-3
PPHS 251V	Child Development Associated Training Program II	1-10
PPHS 252V	Child Development Associated Training Program III	1-10
PS 240	Principles of Police	3
PS 298	Disadvantaged Youths and Deviancy	3
PS 299	Deviancy and Social Control	3
SAFETY 20	Occupational Safety and Health	2
SOC 152	Marriage: Social Institute	3
SOCSC 110	Introduction to Futuristics	3
SOCSC 145	Psychic Phenomenon	3
TYPW 20	Beginning Typewriting	3

SPECIAL STUDIES

Unique among the many course offerings Honolulu Community College students may elect to take are those described under the heading "Special Studies."

30V/130V **Special Studies (1-4)**
An opportunity for students with special interest and abilities in subject areas to meet with faculty members to discuss and investigate topics of particular interest. Problems and unit credit are worked out with and

at the discretion of the instructor. (Special Studies sections will be organized as needed in each department and identified by the departmental name. e.g. POLSC 30 and ENGT 30.)

35V **Materials and Processes (1-4)**
General lecture, lecture-discussion, or lecture-laboratory course designed to provide a knowledge and understanding of new developments, materials, equipment or processes in technical vocational fields. (Such courses when offered will be found listed under the department offering the course. e.g. SMP 35 and ART 35.)

SATELLITE CAMPUSES

KALIHI PALAMA EDUCATION CENTER (KPED CENTER)

STAFF MEMBERS: Dorothy Douthit, Margaret Iofi, Gary Tasaka.

The Kalihi Palama Education Center has been a part of the Honolulu Community College since January, 1972. Its offices are located at 847 Moowaa St. The Center is designed to provide educational opportunities for adults over the age of sixteen who cannot participate in other programs.

The program has six components:
1. Classes.
2. Learning Lab.
3. Counseling, Information, and Referral.
4. Samoan Demonstration Program.
5. Supportive services for Highway Construction workers.
6. Educational Activities.

The Center differs from other adult education programs in many ways:
1. Outreach workers go out to talk to people in the community;
2. services are offered all year;
3. classes start at any time;
4. classes are conducted for as few as 6 people;
5. translators are available for most languages;
6. individualized counseling is available;
7. tutoring is available twelve hours a day five days a week in our learning lab.

HAWAII STATE SENIOR CENTER (HSSC)

STAFF MEMBERS: Charles Amor, Michelle Greening, Elaine Yasumori.

The Hawaii State Senior Center is a multi-purpose center offering direct services to persons 55 and over and residing in the Kalihi-Palama area. The service areas are Individualized Services, Group Activities and Community Development. It is staffed by professionals under University policies and augmented by senior aides, volunteers and community agency personnel.

It operates 6 days a week from an attractive State owned facility designed with the primary purpose of serving older persons.

Activities and Services Offered:

A. Group Activities:
   1. Educational—(English skills, foreign language, public responsibility, culture and arts, leadership training.)
   2. Recreational and Leisure Time Activities—(Dances and songs of ethnic groups, socials, hula, folk, arts and crafts, painting, photography, excursions and field trips.)

B. Individualized Services:
   1. Counseling and Guidance
      Membership interview and assessment—referral to agencies.
      Outreach on membership.
   2. Information to members and general public.
      a. General public on services for aged throughout target area.
      b. Activities offered at the center.
      c. Referral to agencies.
   3. Multi-phasic health screening—Planning, Coordination, Training, Follow-up and Evaluation.

C. Community Service:
   1. Leadership Development.
   2. Advocacy Role.
   3. Volunteer Services (friendly visitations, international entertainers, short-term requests from community agencies).
   4. Consultation.

JOB EXPERIENCE EDUCATION

COORDINATOR: Robert Kita.

The Job Experience Education program is a work-study program in which trainees spend four hours at work stations and four hours in classes daily. Courses are designed to meet work station needs and all instructions are individualized.

The Job Experience Education program is federally funded and is limited to qualified candidates. All questions relevant to entry into the program should be directed to the Job Experience Education office located in Building 27-201; telephone: 845-9214.

PEARL HARBOR NAVAL SHIPYARD APPRENTICE SCHOOL

INSTRUCTOR: Robert Scannell, Donald Young.

The Pearl Harbor Naval Shipyard Apprentice School provides a four-year program of instruction in ship and shipyard maintenance and repair. Each year approximately 150 new apprentices are accepted into the program which offers career training in 20 separate vocational areas.

Apprentices in the Shipyard program receive both classroom instruction and work-experience training as a part of their regular eight-hour working day. Each year of training is broken down into eight week cycles of which six weeks are spent in the shop and two weeks in the classroom. During the classroom phase of instruction, courses are offered by Honolulu Community College instructors in Drafting, English, Industrial Psychology, Mathematics, Science, and Speech. Within the "work-experience" and "trade theory" phases of the program, each apprentice receives Honolulu Community College approved trade training instruction.

Each apprentice will receive regular Honolulu Community College credit for liberal arts courses completed under Honolulu Community College instruction. Upon successful completion of apprenticeship, each graduate will be awarded 45 Honolulu Community College "career-course" credits for the work experience and trade theory phases of the program. These 45 credits added to a minimum of 15 arts & science credits earned in the classroom, will qualify the graduating apprentice for the Honolulu Community College Associate in Science degree. (See page 00 for complete AS degree information.)

COURSE DESCRIPTIONS

All courses offered at Honolulu Community College are listed alphabetically in this section according to the discipline.

AMERICAN STUDIES (AMST)

AMST 201-202 Introduction to American Civilization (3-3)
American Studies focus on some of the central concerns of contemporary American life and thought. The course is presented from a multi-disciplinary perspective and concentrates on one topic per semester. Some recent topics include: American Individualism, American Popular Culture, The Search of Community, and Alienation in Modern America. (3 hrs. lect.)

ANTHROPOLOGY (ANTH)

INSTRUCTOR: Maka Larsen-Basse

ANTH 52 Man and Environment (3)
This course examines the development of man, human variation, adaptation to the environment, and the interaction of human biology and culture. Case studies deal with the people of developing countries. Designed for non-transfer students. (3 hrs. lect.)

ANTH 150 Introduction to Anthropology (3)
A general introduction to anthropology, dealing particularly with the major principles and theoretical orientations of physical anthropology, archaeology and ethology. (3 hrs. lect.)

ANTH 200 Cultural Anthropology (3)
This course is concerned with the nature of culture; an introduction to basic concepts of analyzing cultural behavior; patterning, integration, and dynamics of culture; culture and the individual and change. (3 hrs. lect.)

ANTH 215 Introduction to Physical Anthropology (3)
A general introduction to physical anthropology, primatology, fossil man, heredity, modern man, human growth and constitution. (3 hrs. lect.)

ARCHITECTURAL DRAFTING (ADT)

INSTRUCTORS: William Au, Kaoru Hirata, Chester Kato, Thomas Katsuyoshi.

ADT 21 **Architectural Drafting I (4)**
Co-requisite: ADT 22
This course introduces representation in construction. It covers the fundamentals of drafting, including projection, sectioning, pictorial drawings, and architectural representation. It orients the students to the nature and scope of the course and to the drafting occupation. (1 hr. lect.; 9 hrs. lab.)

ADT 22 **Architectural Materials (4)**
Co-requisite: ADT 21
This course is a broad survey of the materials used in construction, the buildings made from such materials, and manner in which these materials and structures are utilized. Materials and methods of light wood construction, lumber grades and uses, mill work, plywood, lath and plaster, roofing, flashing, woodworking joints, foundations, footings, walls, floors, building code requirements are studied. (1 hr. lect.; 9 hrs. lab.)

ADT 23 **Architectural Drafting II (4)**
Prerequisite: ADT 22; Co-requisite: ADT 24
Advanced study and application of materials and methods of construction. Light wood construction principles and practices. Basic residential planning, drafting expressions, architectural details, and complete working drawings of residential buildings. (1 hr. lect.; 9 hrs. lab.)

ADT 24 **Architectural Construction (4)**
Co-requisite: ADT 23
This course introduces the student to the basic principles of statics and structural mechanics and to the effects of loads and loading on building elements and frames. Methods are developed for determining preliminary sizes of certain key building elements, knowledge of which is essential to proper building layout and development. (1 hr. lect.; 9 hrs. lab.)

ADT 43 **Architectural Engineering (4)**
Prerequisite: ADT 42; Co-requisite: ADT 44
Preliminary and detail planning of multi-dwelling, small commercial and industrial buildings, store fronts, etc., in wood, plastics, brick, glass, concrete block, reinforced concrete, and steel. Standards of plumbing and sanitation, sewage disposal, storm drainage, air conditioning, heating, electrical circuits, illumination and the preparation of schematic plans for these services. (1 hr. lect.; 9 hrs. lab.)

ADT 25 **Descriptive Geometry for Drafting (3)**
A course designed to prepare the student to make graphical solutions of space problems using orthographic views to solve problems applied to engineering projects. (2 hrs. lect.; 3 hrs. lab.)

ADT 41 **Advanced Architectural Drafting (4)**
Prerequisite: ADT 24; Co-requisite: ADT 42
Advanced residential design using wood, steel and concrete as basic building materials. The graphic methods of representation the student has acquired in previous courses are strengthened in this course, but more emphasis is placed on creativity. He completes several residential design problems, which provides him with the groundwork for a professional attitude. (1 hr. lect.; 9 hrs. lab.)

ADT 42 **Problems in Architecture (4)**
Prerequisite: ADT 24; Co-requisite: ADT 41
The course explains organization and operation of the architect's, engineer's, or contractor's office. It includes the study of office practices, accounting methods, and general administration and of the restrictions, standards, and the legal documents governing the construction of buildings and also the benefits and responsibilities of drafting, writing specifications, contracts, estimating and environmental considerations. (1 hr. lect.; 9 hrs. lab.)

ADT 44 **Architectural Graphics (4)**
Co-requisite: ADT 43
Includes the theory and practice of the elements of proper presentation, accuracy and neatness of working drawings. (1 hr. lect.; 9 hrs. lab.)

ADT 45 **Structural Drafting (3)**
Prerequisite: ADT 24 & 25
Introduction to structural drafting using wood, reinforced concrete, and steel. Terminology, fundamentals of design elements, local building codes, typical details and shop drawings are emphasized. (2 hrs. lect.; 3 hrs. lab.)

ADT 93 **Cooperative Education (1-4)**
Prerequisite: Approval of department chairman.
This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Architectural Drafting Technology.

ART (ART)

INSTRUCTOR: James Wallace

ART 21 **Basic Art (3)**
Fundamental approach to the study of the elements of designs and color. (2 hrs. lect.; 3 hrs. lab.)

ART 28 **Textile Art (3)**
Fundamental approach to the study of fibers, weaves, and finishes and to the application of designing, coloring, and printing techniques. (2 hrs. lect.; 3 hrs. lab.)

ART 101 **Introduction to the Visual Arts (3)**
Nature of visual art and its expression in various forms. Lecture and demonstration. (3 hrs. lect./demo.)

ART 108 **Introduction to Painting (3)**
Studio experience in painting using water colors, acrylics, and oils. Lectures and projects. Credit cannot count toward major requirements for the Bachelor's degree in Art.

ASIAN STUDIES (ASIAN)

INSTRUCTORS: Norman Hallett.

ASIAN 241-242 **Civilizations of Asia (3-3) (Crosslisted as History 241-242)**
Historical survey of the major civilizations of Asia from the earliest times to the present. (3 hrs. lect.)

AUTO BODY REPAIR AND PAINTING (ABRP)

INSTRUCTOR: Stanley Oganeku, Samuel Uchida.

ABRP 21 **Basic Metal Work (4)**
Co-requisite: ABRP 22, 23
The principles and practices of roughing out, dinging, picking, filing, disc sanding, soldering, shrinking and welding. Safe operation of sander and welding equipment. (2 hrs. lect.; 6 hrs. lab.)

ABRP 22 **Fender Repairing (4)**
Co-requisite: ABRP 21, 23
Theory and practice in dinging and metal finishing, patching rust holes, and lining up fender. Safe operation of foot shear and bending brake. (1 hr. lect.; 9 hrs. lab.)

ABRP 23 **Steel and Automobile Sheet Metal (2)**
Co-requisite: ABRP 21, 22
Introduction to general and specific subject of steel and sheet metal; basic shapes and reinforcements; elasticity of sheet metal; stress and strain of sheet metal; and expansion and construction of metal. (2 hrs. lect.)

ABRP 24 **Special Body Tools, Equipment, Parts and Materials (2)**
Co-requisite: ABRP 25, 26.
Training in safety, care and use of tools and equipment; also includes body and chassis nomenclature; materials and terms of the trade. (1 hr. lect.; 3 hrs. lab.)

ABRP 25 **Basic Fundamentals of Painting (4)**
Co-requisite: ABRP 24, 26.
Training in safety, care and use of tools and equipment; preparation for refinishing; application of acrylic, enamel, and acrylic enamel. (2 hrs. lect.; 6 hrs. lab.)

ABRP 26 **Spot Painting (4)**
Co-requisite: ABRP 24, 25.
Advanced course on mixing, matching, and blending; use of color formula chart and mixing machine. (2 hrs. lect.; 6 hrs. lab.)

ABRP 30V **Special Studies (1-3)**
Prerequisite: Consent of Instructor
The students meet on an individual basis with instructor to pursue special projects in Auto Body curriculum. (3-9 hrs. lab.)

ABRP 41 **Frame Repairing (4)**
Prerequisite: ABRP 23; Co-requisite: ABRP 42, 43.
Theory and practice of straightening and aligning frames, both conventional and unitized; use of tram-track and centering gauges; removing and replacing fenders and grilles; aligning front end sheet metal, and straightening bumpers and brackets. (2 hrs. lect.; 6 hrs. lab.)

ABRP 42 **Body Panel Adjustment and Alignment (3)**
Prerequisite: ABRP 21, Co-requisite: ABRP 41, 43.
Training in adjustment and alignment of door, hood, deck lid, and front fender; also includes repairing of these panels. (1 hr. lect.; 6 hrs. lab.)

ABRP 43 **Radiator Repairing (3)**
Prerequisite: ABRP 21; Co-requisite: 41, 42.
Basic principles and practice in radiator repairing, recoring, and rodding; also includes care and use of radiator repairing and testing equipment. (2 hrs. lect.; 3 hrs. lab.)

ABRP 44 **Body Panel Replacement (3)**
Prerequisite: ABRP 23; Co-requisite: ABRP 45, 46, 47.
Training in replacing body panels, such as door panel, quarter panel, rocker panel, center pillar, and turret top; also includes repairing and testing equipment. (2 hrs. lect.; 3 hrs. lab.)

ABRP 45 **Estimating, Shop Management, and Industrial Relations (1)**
Prerequisite: ABRP 21; Co-requisite: ABRP 44, 46, 47.
Theory and practice on everyday business transactions; proper procedures and methods of estimating; and the problems facing potential service manager, foremen, and shop owners in areas of industrial relations. (1 hr. lect.)

ABRP 46 **Front Suspension and Wheel Alignment (3)**
Co-requisite: ABRP 44, 45, 47.
Corrective and repair procedures on front suspension and wheel alignment damage. (1 hr. lect.; 6 hrs. lab.)

ABRP 47 **Fundamentals of Hardware, Trim, Upholstery and Window Servicing (3)**
Co-requisite: ABRP 44, 45, 46.
Theory and practice on basic procedures for removing and replacing trim, glass, upholstery and weather-stripping. (2 hrs. lect.; 3 hrs. lab.)

ABRP 93V **Cooperative Education (1-4)**
Prerequisite: Approval of department chairman.
This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Auto Body Repair and Paint.

AUTOMOTIVE MECHANICS TECHNOLOGY (AMT)

INSTRUCTORS: James Nakagawa, Henry Obayashi, George Ryusaki, Walter Uehira, Richard Wong, William Yamada.

AMT 10 **Exploring Auto Mechanics (2)**
An exploratory course in auto mechanics for non-majors with primary emphasis on preventive maintenance services. (2 hrs. lect.)

AMT 21 **Internal Combustion Engines (8)**
Theory and practice in the operation, repair, and maintenance of modern internal combustion engines including disassembly, inspection, precision measurement, repair or replacement of components, reassembly, and final adjustment. (15 hrs. lect./lb.)

AMT 22 **Fuel Systems and Carburetion Theory and Lab (3)**
Theory and laboratory work in gasoline fuel systems and their components. (6 hrs. lect./lab.)

AMT 23 **Machine Tools and Industrial Materials (3)**
Instruction in the care and use of hand and power tools. Basic characteristics of industrial materials and the identification of common handware. (5 hrs. lect./lab.)

AMT 24 **Electrical Systems Theory and Lab (7)**
Theory and laboratory work in automotive electrical systems and components. (14 hrs. lect./lab.)

AMT 41 Power Train (3)
Theory and practice in the description and nomenclature, operation, diagnosis of trouble, disassembly, inspection, precise measurements, repair or replacement, reassembly, and adjustment of power train components. (6 hrs. lect./lab.)

AMT 42 **Brake, Steering, and Suspension (4)**
Theory and practice in the description and nomenclature, operation, maintenance, and repair of hydraulic and power brake systems, mechanical and power steering systems, wheel alignment and balance, and suspension systems. (8 hrs. lect./lab.)

AMT 43 **Introduction to Diesel Engines (3)**
A study of diesel engine principles, design and construction with emphasis on two-cycle engine operation, diesel fuel injection systems, turbocharging and operation and maintenance. (3 hrs. lect.)

AMT 44 **Small Engine Repairs (2)**
Prerequisite: AMT 21
Theory and practice in the description and operation, repair and maintenance of small engines. (4 hrs. lect./lab)

AMT 45 **Diagnostics (10)**
Prerequisite: Completion of three semesters of AMT major courses.
Application of diagnostic skills and techniques in advanced automotive mechanic technology with emphasis on realism in laboratory and shop operations. The course includes cumulative proficiency testing in all phases of automotive mechanics technology. (20 hrs. lect./lab.)

AMT 46 **Automatic Transmissions (3)**
Prerequisite: AMT 41
Fundamental theory and practical application of the basic laws of simple and multiple planetary gearing as applied in automatic transmission study to include transmission units. (6 hrs. lect./lab.)

AMT 47 **Automotive Air Conditioning (3)**
Prerequisites: AMT 21, 24, (or consent of instructor).
A basic study of refrigeration principles will be followed by system construction and theory of operation. As the student develops a proficiency of theory, construction and functions of system components, diagnostic and service procedures will be introduced. (5 hrs. lect./lab.)

AMT 49 **Emission Control (1)**
Prerequisites: AMT 21, 22, 23, 24, (or consent of instructor).
Diagnosis and service procedures as they pertain to the function of vehical emission control systems and devices. This course is tailored to provide advanced automotive mechanics technology students and in-service mechanics with working knowledge to properly diagnose trouble, service and repair crankcase, exhaust, and evaporative emission control systems. (2 hrs. lect./lab.)

AMT 93V **Cooperative Education (1-4)**
Prerequisite: Approval of department Chairman.
This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Automotive Mechanics Technology.

AVIATION MAINTENANCE TECHNOLOGY (AVMAT)

INSTRUCTORS: Clement Chun, Felix Duhaylongsod, Edgar Hanohano, Gordon Scott, Robert Whittinghill.
Prerequisite or Co-requisite: MATH 18

AVMAT 21 **General Maintenance Technician I (5)**
General and technical information with laboratory projects necessary as practical application to theories, principles and concepts of mechanics privileges and limitations, forms, records, publications, weight, and balance, fluid lines and fittings and basic physics. (51 hrs. lect.; 59 hrs. lab.)

AVMAT 22 **General Maintenance Technician II (5)**
General and technical information and laboratory projects required for understanding practical application, principles, theories and concepts of materials and processes as well as corrosion control. (52 hrs. lect.; 65 hrs. lab.)

AVMAT 23 **General Maintenance Technician III (7)**
General and technical coverage of basic electricity, aircraft drawing, aircraft ground operation and servicing along with practical application. (72.5 hrs. lect.; 69 hrs. lab.)

AVMAT 24 **Reciprocating Engines (5)**
Development of skills in methods of disassembly, inspection, repair and assembly of opposed and redial aircraft engines. (39.5 hrs. lect.; 108 hrs. lab.)

AVMAT 25 **Airframe Structures I (4)**
Developing skills and knowledge of methods in aircraft woodwork, dope and fabric, painting and welding processes. (43 hrs. lect.; 61 hrs. lab.)

AVMAT 26 **Powerplant Systems and Components I (6)**
Principles of operation, overhaul, assembly and repair of lubrication, engine fuel and metering systems with their components. (73.5 hrs. lect.; 67 hrs. lab.)

AVMAT 27 **Airframe Structures II (5)**
Training in the use of hand and power tools to form, fit, inspect, assemble, and repair aircraft sheet metal surfaces, sub-assemblies and component structures. (42 hrs. lect.; 104 hrs. lab.)

AVMAT 28 **Powerplant Systems and Components II (2)**
Understanding and requirements for induction, cooling and exhaust systems plus components on various powerplants. (20 hrs. lect.; 25.5 hrs. lab.)

AVMAT 29 **Airframe Structures III (3)**
Methods of assembling and rigging flight control surfaces, annual and 100-hour inspections with discrepancy repairs. (29 hrs. lect.; 65 hrs. lab.)

AVMAT 40 **Engine Electrical Systems and Components (8)**
Covers electrical, ignition, instruments and fire protection methods in use. The maintenance and repair of components in various systems. (86 hrs. lect.; 87 hrs. lab.)

AVMAT 41 **Aircraft Systems and Components I (5)**
The aircraft wiring, circuitry and systems. Inspection, maintenance and repair of all units with sub-system trouble shooting techniques. (51 hrs. lect.; 54 hrs. lab.)

AVMAT 42 **Propellers (3)**
Function, theory, operation, overhaul, inspection, and repair of various types of propellers. (36 hrs. lect.; 42 hrs. lab.)

AVMAT 43 **Aircraft Systems and Components II (6)**
Operation and maintenance of hydraulic and pneumatic power systems and units. Landing gear maintenance operation and repair. (65 hrs. lect.; 89 hrs. lab.)

AVMAT 44 **Inspect, Troubleshoot, and Repair Reciprocating Engines (4)**
Flight line operations with a variety of opposed and radial engines on ground, run-up, safety procedures and conformity with FAA regulations. (39 hrs. lect.; 62 hrs. lab.)

AVMAT 45 **Aircraft Systems and Components III (7)**
Instruction and operation on warning, instrumentation, cabin atmosphere, ice and rain control, fire detection and fuel system units. Maintenance troubleshooting and repair on various sub-systems. (87.5 hrs. lect.; 62.5 hrs. lab.)

AVMAT 46 **Aircraft Gas Turbine Engine (3)**
Theoretical analysis of the factors involved in producing thrust. A study of the section and systems of the jet engine. Shop work consists of inspection, section disassembly, and run-up of jet engines. The theory of turboprops will also be studied. (34 hrs. lect.; 20.5 hrs. lab.)

BLUEPRINT READING (BLPRT)

INSTRUCTOR: Kaoru Hirata, Chester Kato.

BLPRT 40 **Mechanical Drawing (2)**
A basic mechanical drawing course in the care and use of drafting instruments, orthographic projection, pictorial drawings, auxiliaries, sections, dimensioning, and freehand sketching. For Sheet Metal and Plastics Technology and Machine Shop Technology majors. (1 hr. lect.; 3 hrs. lab.)

BLPRT 41 **Construction Drawing Interpretation (3)**
A basic course designed for students in the construction trades. Principles of graphic presentation used in architectural drafting: interpretation of working drawings and building specifications will be emphasized. Primarily for Carpentry, Industrial Electricity, Sheet Metal and Plastics Technology, Refrigeration and Air Conditioning Technology and Welding Technology majors. (3 hrs. lect.)

BLPRT 42 **Blueprint Interpretation and Sketching (2)**
Basic principles of graphic presentation used in machine trade drawing. The terminology and nomenclature, interpretation of working drawings and the sketching of shop drawings. Primarily for Machine Shop Technology majors. (2 hrs. lect./lab.)

BLPRT 43 **Blueprint Reading for Welders (3)**
A basic course concerned with the fundamentals of blueprint interpretation as applied to the welding trade. Emphasis will be placed on welding symbols and their significance. Basic instruction in structural shapes and estimating will also be covered. Primarily for Welder. (3 hrs. lect.)

BLPRT 44 **Construction Drawings (4)**
The course is designed to give a student a deeper understanding of the blueprint and the specifications. The student draws a floor plan, elevations, details, sections and schedules. (3 hrs. lect.; 3 hrs. lab.)

BOTANY (BOT)

INSTRUCTOR: Joseph Krahulik.

BOT 101 **General Botany (4)**
Prerequisite: None
Growth, functions and evolution of plants; their relations to the environment and particularly to man and his activities. (3 hrs. lect.; 3 hrs. lab.)

BUSINESS EDUCATION (BUS)

INSTRUCTOR: Herbert Foo.

BUS 41 **Management Theory and Practice (3)**
Study of the economic and social environment within which the small business concern functions. Examination of major forms of business organizations. Particular emphasis placed upon the aspects of business management that are uniquely important to small firms. (3 hrs. lect.)

CARPENTRY (CARP)

INSTRUCTOR: Sueo Kawakami, James Lee.

CARP 21 **Hand and Power Tools (4)**
Prerequisite or Co-requisite: Math 18.
The selection, care, safety, and use of carpentry tools are covered. Proper care of tools and methods of renewing workworn and abused tools are stressed. Types of operations and safety for each power tool are included. (2 hrs. lect.; 6 hrs. lab.)

CARP 22 **Concrete Forms and Layout (6)**
Prerequisite: Carp 21.
Prerequisite or Co-requisite: Math 19
This course is elementary in presentation and basic for understanding concrete form construction. It covers terms, materials, and methods used in constructing footing, stern, pier, and floor. (3 hrs. lect.; 9 hrs. lab.)

CARP 23 **Introduction to Carpentry (1)**
This course provides information regarding unions as well as an understanding of the goals, background, and methods of the trade movement. Included in the offerings are: historical background, labor and management problems, collective bargaining, labor laws, and management operations. (1 hr. lect.)

CARP 24 **Materials and Hardware (2)**
This course is designed to introduce to a student the kinds of materials that are available and used in the construction industry. It covers the manufacture, uses, grades, working properties, and application of various products. (2 hrs. lect.)

CARP 25 **Industrial Safety (2)**
Safe practices in performing the work of a carpenter are stressed; first aid treatment for injuries that might occur on a construction job is also covered. (2 hrs. lect.)

CARP 26 **Advanced Concrete Form & Layout (8)**
Prerequisite: Carp 22.
This course is an advanced presentation for students to understand concrete form construction. It covers the work terms, materials and methods used in constructing wall, column, buck, anchor bolts, intersecting beam, wall beam, slab, bulkheads, screed, and stair forms. (5 hrs. lect.; 9 hrs. lab.)

CARP 27 **Heavy Concrete Construction (3)**
Prerequisite: Carp 26.
This course is designed to provide the student with an understanding of the basic method of heavy concrete construction. It covers the work terms, materials and methods used in pre-stressing, post-stressing, lift slab, tilt-up, architectural concrete, bridges, tunnels, and manholes. (2 hrs. lect.; 3 hrs. lab.)

CARP 36 **Principles of General Carpentry (3)**
This basic course covers the principles of construction involving foundations, framing, interior and exterior trim, hand and power tools, legal aspects of the building code, and materials and products. For the non-major (3 hrs. lect.)

CARP 41 ***Rough Framing* (6)**
Prerequisite: Carp 26
The course covers the essentials of good dwelling construction. The framing areas covered are footings and foundations, floor, stair and stair wells, walls and partitions, window and door openings, and rafters. (3 hrs. lect.; 9 hrs. lab.)

CARP 42 ***Exterior* Finish (4)**
Prerequisite: Carp 41
The course covers wall sheathings and applications, roofing materials and applications, making and installing window and door frames, exterior trims and application, and stair layout and construction. (2 hrs. lect.; 6 hrs. lab.)

CARP 43 ***Interior* Finish (4)**
Prerequisite: Carp 42.
The course covers interior panels and application, hanging doors and windows, layout and build cabinets, and closets, special panels and applications, interior trims and mouldings, and interior hardware and applications. (2 hrs. lect.; 6 hrs. lab.)

CARP 45 Building Code (1)
This course covers the rules and regulations set up by the City and County of Honolulu and the Uniform Code. Emphasis is placed on the code which applies to site preparation, construction, occupancy, and health and safety of homes and apartments (1 hr. lect.)

CARP 46 Advanced Blueprint Reading and Estimating (6)
Prerequisites: Carp 42; Blprt 41, 44.
The course covers the reading of residential and commercial building plans, symbols, spec and to estimate for necessary materials to complete the buildings (3 hrs. lect.; 9 hrs. lab.)

CHEMISTRY (CHEM)

INSTRUCTORS: Lois Higashi, Andrew Puccetti.

CHEM 26 Introduction to Chemistry (4)
Prerequisite: MATH 23 or equivalent
Fundamental principles and laws underlying chemical reactions; and applications of chemical principles. (3 hrs. lect.; 3 hrs. lab.)

CHEM 100 Chemistry and Man (3)
Co-requisite: CHEM 100L.
A non-mathematical descriptive overview designed to give the non-science major a basic understanding of chemistry, particularly as it relates to problems of society and the environment. The course includes topics such as atomic structure, chemical bonding, nuclear power and energy sources, air and water pollution, pesticides, drugs, plastics, soaps and detergents, and nutrition. (3 hrs. lect.)

CHEM 100L Chemistry and Man Laboratory (1)
Co-requisite: CHEM 100
Experiments illustrating the role of chemistry in society to the non-scientist.

CHEM 113-114 General Chemistry (3-3)
Prerequisite: ALGEBRA and PLANE GEOMETRY or MATH 25, 113 is prerequisite for 114.
Concurrent registration: CHEM 113 and CHEM 113L, CHEM 114 and CHEM 114L.
Fundamental principles and theories of chemistry including atomic structure, chemical calculations, states of matter, solutions, equilibria, electrochemistry, chemical bonding, chemical kinetics, nuclear chemistry, organic chemistry. (3 hrs. lect.)

CHEM 113L General Chemistry Laboratory (1)
Co-requisite: CHEM 113
Experiments illustrating fundamental principles of chemistry. (3 hrs. lab.)

CHEM 114L General Chemistry Laboratory (1)
Prerequisite: CHEM 113L
Co-requisite: CHEM 114
Continuation of 113L. (3 hrs. lab.)

COMMERCIAL BAKING (CB)

INSTRUCTORS: Herbert Foo, William Ho.

CB 21 **Introduction to the Baking Industry I (10)**
An introduction to the baking industry—past, present, and future. Specific instruction in the areas of safety, sanitation, and industrial housekeeping. Nomenclature, use, care, and maintenance of tools and equipment used in the baking industry. Theory of and practice in the production of cakes, cookies, pies, and sweet rolls at an introductory level. A study of wheat, milling, and flour. An introduction to the mathematics associated with formula construction and product control. (5 hrs. lect.; 15 hrs. lab.)

CB 22 **Introduction to the Baking Industry II (10)**
Prerequisite: CB 21.
A continuation of CB 21 to more advanced practices. Technology and practice in the production of basic types of yeast-raised products on a laboratory scale. Advanced practice in calculations concerning the construction and balance of formulas, fermentation, and cost control. Introduction to retail store operation and customer service. A detailed study of raw materials associated with the production of bakery products. (5 hrs. lect.; 15 hrs. lab.)

CB 30V **Special Studies (1-4)**
For only qualified students with past baking experience and approval of department chairman. Concentration on select areas of practical baking.

CB 41 **Advanced Shop Practice I (8)**
Prerequisite: CB 22.
Practical application of theories learned, and skills acquired in CB 21, 22. Formulas and methods employed, approximate standard industrial practices in the production of breads, rolls, doughnuts, sweet rolls, cakes, cookies, and pies. Instruction and practice in foremanship, material purchasing and stock control, cost computation, retail store operation, and record keeping. (2 hrs. lect.; 18 hrs lab.)

CB 42 **Advanced Shop Practice II (8)**
Prerequisite: CB 41
A continuation of CB 41. Students are rotated systematically through the various production and operational areas. Assignments are varied in proportion to the individual's abilities and interests. Special consideration is given to the handling of fancy pastries and cake decoration. (2 hrs. lect.; 18 hrs. lab.)

CB 93V **Cooperative Education (1-4)**
Prerequisite: Approval of department chairman.
This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Commercial Baking.

COMPUTER SCIENCE (COMSC)

COMSC 150 Computer Principles (3)
Prerequisites: None (Math 25 or equivalent recommended).
A basic course in the fundamentals of digital and analog computers. Functional descriptions of peripheral equipment and discussion of general system operations. Introduction to programming, binary codes, algorithmic systems. (3 hrs. per week.)

COMSC 151 Introduction to Programming I (3)
Prerequisites: Consent of instructor
This course will provide the skills necessary for the beginning programmer. Flowcharting, decision tables, programming logic, compilers and assemblers will be discussed. The particular language involved will vary as facilities permit. (2 hrs. lect.; 3 hrs. lab per week.)

COSMETOLOGY

INSTRUCTORS: Irene Hussman, Inez Monckton, Gene Schaefer.

COSME 21 Introduction to Cosmetology (3)
Prerequisite: Admission to the Program; Co-requisite: COSME 22
A course in the scientific foundations of beauty culture, including physiology and hygiene of the head and face as they apply to areas on which beauty work is performed. Skin histology, structure of hair and nails; as well as bacteriology, sterilization and sanitation are taught. (5 hrs. lect. for 8 weeks: 40 hrs.)

COSME 22 Elementary Laboratory I (5)
Co-requisite: COSME 21
A beginning course in manipulative skills and the care of equipment. Basic demonstrations and practice in shampooing, fingerwaving, curl construction, cutting and hair combing, care and shaping eyebrows, and make-up. (30 hrs. lab. for 8 weeks: 240 hrs.)

COSME 23 Scalp and Skin Treatment (3)
Prerequisite: COSME 21; Co-requisite: COSME 24
Cells, tissues, organs and systems are studies; attention is given to the condition and texture of skin. A study is made of the beneficial effects of massage. (5 hrs. lect. for 8 weeks: 240 hrs.)

COSME 24 Elementary Laboratory II (5)
Co-requisite: COSME 26
Practical application of the skills used in permanent waving, hair and scalp care, hair cutting, hair styling, bleaching and coloring hair, and facials and manicuring. (30 hrs. lab. for 8 weeks: 240 hrs.)

COSME 25 Principles of Trichology (3)
Prerequisite: COSME 23; Co-requisite: COSME 26
The strength, porosity, and texture of hair are analyzed; chemical reactions of the solutions on hair and scalp are studied. The history of hair styling is explored; wigs and hair pieces, and the aesthetics of balance and design in hairstyling are introduced. (5 hrs. lect. for 8 weeks: 40 hrs.)

COSME 26 Intermediate Lab I (5)
Co-requisite: COSME 25
Students practice special shampoos and rinses, the reconditioning of hair, scalp treatments, methods of lightening and tinting hair, permanent waving, hair straightening, and elements of hair styling. Students receive first experience of working on public. (30 hrs. lab. for 8 weeks: 240 hrs.)

COSME 27 Salon and Professional Practices (3)
Prerequisite: COSME 25; Co-requisite: COSME 28
Attention is given to professional associations, state laws, ethic, salesmanship, appointment desk duties, and safety precautions. Styling and make-up for facial types, the therapeutic value of massage, and the use of electrical currents and lights are studied, along with conditions of hair, skin, and nails. (5 hrs. lect. for 8 weeks: 40 hrs.)

COSME 28 Intermediate Lab II (5)
Co-requisite: COSME 27
Skills developed in the basic courses are practiced on the public. (30 hrs. lab. for 8 weeks: 240 hrs.)

COSME 30V Special Studies (1-4)
Prerequisite: Completion of COSME 21 through 44
In this course the theory and practical skills required to prepare for the State Board of Cosmetology examination are reviewed. It also provides retraining opportunities for those employed in the trade.

COSME 41 Advanced Principles of Trichology (3)
Prerequisite: COSME 27; Co-requisite: COSME 42
Studied in this course are the hair structure, its chemical composition, and the theory of the change which takes place in the hair shaft. (5 hrs. lect. for 8 weeks: 40 hrs.)

COSME 42 Advanced Care of Hair and Scalp (5)
Co-requisite: COSME 42
More skills are practiced and mastered on the public. Experience includes corrective scalp and hair conditioning treatments, methods of permanent waving, modern methods of hair straightening, the use of all classifications of hair tints and lighteners, chemical aniline dye removal, and brow and lash dyeing. (30 hrs. lab. for 8 weeks: 240 hrs.)

COSME 43 Hair Shaping and Styling III (3)
Prerequisite: COSME 41; Co-requisite: COSME 44
Modern methods of hair shaping and hair styling are discussed. Types and conditions of hair and corrective measures pertaining to shaping and styling are covered. (5 hrs. lect. for 8 weeks: 40 hrs.)

COSME 44 Advanced Cosmetology Lab (5)
Co-requisite: COSME 43
Attention is paid to developing speed and finesse in all operations preparatory for job performance. Current hair styling and make-up are practiced. (30 hrs. lab. for 8 weeks: 240 hrs.)

DRAMA (DRAMA)

INSTRUCTOR: Walter McGoldrick

DRAMA 160 Introduction to Drama and Theatre (3)
Representative plays, studies as illustrative of changing forms in the theatre and dramatic literature. (3 hrs. lect.)

ECONOMICS (ECON)

INSTRUCTOR: John Homer

ECON 40 **Consumer Economics (3)**
A study of the essential and basic economic involvement of adult life in American society. This course deals with such topics as wages, taxation, wills, contracts, insurance, long-term credit buying loans and interest, credit, comparison shopping, and general consumer protection. Surveys will be made of sources of consumer protection information and public and private agencies of consumer protection and assistance. (3 hrs. lect.)

ECON 104 **Income Tax Preparation (1)**
An accelerated four-week course which provides an overview of current income tax regulations combined with practical guidance in the preparation of basic income tax forms. The goal of the course is to provide the student with fundamental knowledge concerning the annual income tax process so the student acquires the ability to prepare and understand his own tax forms. (1 hr. lect.)

ECON 120 **Introduction to Economics (3)**
A one semester course in economics for non-majors. Provides general understanding of functioning of economic systems, including various approaches to organization of production and allocation of resources, and of politics designed to achieve national economic goals. The course combines important aspects of the macro and micro perspectives and emphasizes the application of basic economic principles to problems of public policy. (3 hrs. lect.)

ECON 150 **Principles of Economics (3)**
Analysis of functioning of economic systems with emphasis on forces determining levels and changes of national income and employment. Describes basic economic institutions, e.g., markets, money, banks, labor organizations, corporations. (3 hrs. lect.)

ECON 151 **Principles of Economics (3)**
Analysis of how commodity and factor prices are determined. Economic behavior of individuals and of business firms; market structures. Discusses policies for efficient allocation of scarce resources. Recommended for students in Business Administration or Co-op Work Study Programs. (3 hrs. lect.)

EDUCATION (ED)

ED 112 **Introduction to Curriculum and Instruction (3)**
Study of objectives and organization of curriculum; discussion of principles and practices in education; instructional roles. Emphasis is on the role of the educational assistant.

ED 114 **Introduction to Audio-Visual Techniques (1)**
Introduces the student to techniques of equipment operation and materials production useful in education.

ED 114L **Introduction to Audio-Visual Techniques Lab (1)**
Introduces the student to techniques of equipment operation and materials production useful in education.

ED 167 **Introduction to Early Childhood Curriculum (3)**
This course deals with teaching techniques, preschool activities, meeting needs of individual children, and program planning.

ED 219 **Introduction to Children's Literature (3)**
Selecting and evaluating children's books, methods of presenting stories, writing stories, and program planning. Emphasis is on presentation skills.

ED 220 **Teaching Language Skills (Early Childhood Education) (3)**
Deals with teaching language skills in an integrated way. Includes listening, oral language, written language, pre-reading, and reading at preschool, kindergarten, and primary levels. (Final Curriculum Committee Approval pending.)

ELECTRONICS TECHNOLOGY (ET)

INSTRUCTOR: Robert Couzens, Robert Jones, Raymond Kamaura, Lawrence Torres.

ET 21 **Basic Electronics (5)**
Prerequisite or co-requisite: MATH 44
Structure of atom, ohm's law, series and parallel circuits, network theorems, meters, batteries, inductive and capacitive reactance and relationship to impedance, RC and RL time constants, complex number in AC circuits, resonance, applications of low pass filters, high pass filters and other passive type filters construction of electron tubes and applications as simple rectifers, detectors and amplifiers, basic theory of semiconductors as rectifiers and transistor amplifiers. (5 hrs. lect.)

ET 21L **Basic Electronics Laboratory (3)**
Co-requisite: ET 21
Laboratory assignments designed to give the student practical experience in using the components and circuits studied in ET 21. (9 hrs. lab.)

ET 22 **Application of Electronics (5)**
Prerequisite: ET 21/ET 21L
A detailed study of transistors and vacuum tubes employed as audio and radio frequency amplifiers, of oscillators and their various feedback circuits, of power supplies including both vacuum tube and solid state rectifiers. Transmitter circuits are studied along with the various modulation and keying methods. The basic theory of antennas and transmission lines is covered. Receivers are studied and the theory of operation of superheterodyne radio receivers is examined in detail. Test instruments including oscilloscopes, signal generators and various types of indicating meters are studied. (5 hrs. lect.)

ET 22L **Applications of Electronics Laboratory (3)**
Co-requisite: ET 22
Laboratory assignments include experiments using the theories and applications studied in ET 22. (9 hrs. lab.)

ET 24 **Electronic Problems (2)**
This course runs concurrently with electronic theory and laboratory. Primarily used as an adjunct to these courses for the practical application of electronic theory in mathematical form. Use of the slide rule in problem solving is stressed. (2 hrs. lect.)

ET 25 **Electronic Drafting (2)**
The language of electronics spoken with symbols and illustrated by using the correct schematic presentation and arrangement. Provides the student with experiences in design, layout, wiring and cost analysis as well as interpretation of graphs, synchrograms and hystograms which are an important part of this course. (2 hrs. lect./demo.)

ET 26 **F.C.C. (3)**
Prerequisite: ET 22 or consent of instructor.
This license preparation course covers the specialized communication theory, supplementing the electronic fundamentals studied in Basic Electronics ET 21 and Applications of Electronics ET 22, that is necessary for a student preparing for the Federal Communications Commission Radio-telephone Second Class examination. (3 hrs. lect.)

ET 27 **Fundamentals of Electronics (3)**
For non-majors
Must be taken concurrently with ET 27L
Study of fundamentals of electronics with emphasis on understanding basic theory of operation of vacuum tubes and transistor electronic equipment. (3 hrs. lect.)

ET 27L **Fundamentals of Electronic Laboratory (1)**
For non-majors
Must be taken concurrently with ET 27.
Laboratory assignments covering practical applications of the basic theories studied in ET 27. The laboratory experiments stress minor servicing of electronic equipment using voltage measuring, resistance readings and signal tracing techniques. (3 hrs. lab.)

ET 41 **Pulse Circuits (5)**
Prerequisite: ET 22
Nonsinusoidal waveforms, multivibrators, blocking oscillators, shock excited oscillators, waveshaping circuits, limiters, clampers, stepcounters, and sweep generator circuits will be studied. (5 hrs. lect.)

ET 41L **Pulse Circuits Laboratory (2)**
Co-requisite: ET 41
Laboratory assignments include experiments with circuits and components demonstrating principles studied in ET 41. (6 hrs. lab.)

ET 42 **Radar and Microwaves (5)**
Prerequisite: ET 41
Radar systems, radar timing systems, generation of microwaves, klystrons, magnetrons, waveguides, microwave components, and elementary microwave measurements will be studied. (5 hrs. lect.)

ET 42L **Radar and Microwave Laboratory (3)**
Co-requisite: ET 42
The laboratory portion of the course provides the student with an opportunity to work with circuits and components which demonstrate the principles studied in ET 42. (9 hrs. lab.)

ET 43 **Computer Fundamentals (3)**
Prerequisite: ET 41 and MATH 44
An introduction to basic computing systems. The development and analysis of digital-analog circuitry is stressed. (3 hrs. lect.)

ET 44 **Instruments and Measurements (2)**
Prerequisite: ET 21
Measurement of current, voltage and power—commercial type vacuum tube voltmeters—impedance bridges—Z-Y bridge, "Q" meters—capitance and inductance measurements by indirect methods—instruments amplifiers—frequency standards and audio and RF calibration methods. (2 hrs. lect.)

ET 45 **Industrial Electronics (3)**
Prerequisite: ET 22
Theory and operation of gaseous and vapor filled tubes and control of thyratrons, photo tubes and photo electric devices, relays and time delay action, semi-conductors, magnetic devices, light and heat control, meter controls, welding controls, RF heating commercial devices, computer, synchros, selsyns, servo-mechanism and test equipment used in industrial electronics. (3 hrs. lect.)

ET 46 **Introduction to Television (3)**
Prerequisite: ET 22 or consent of instructor
Introduction to the history, development, and fundamentals of television. Includes the basic theory and operation of the following television systems: monochrome, color, portable, and recording systems and the applications of television in educational, industrial and home use. (3 hrs. lect.)

ET 47 **Solid State Application (2)**
Prerequisite: ET 22
Study on applications and theory of solid state devices as used in modern electronics equipment; including bipolar transistors, silicon controlled rectifiers, tunnel diodes, varactors, field effect transistors and integrated circuits. (2 hrs. lect.)

ET 54 **Electronic Communications Systems (2)**
Prerequisite: ET 22
Lecture study of communications systems with emphasis on all types of modulations that have evolved since the inception of simple double sideband, amplitude modulation including frequency modulation, single sideband and multiplexing systems. (2 hrs. lect.)

ET 54L **Electronic Communications Systems Laboratory (1)**
Co-requisite: ET 54
Laboratory assignments covering all types of modulation that have evolved since the inception of simple double sideband, amplitude modulation including frequency modulation, pulse types of modulation, single, sideband and multiplexing systems. (3 hrs. lab.)

ET 93V **Cooperative Education (1-4)**
Prerequisite: Approval of department chairman
This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Electronics Technology. (5-20 hrs. lect.)

ENGINEERING TECHNOLOGY (ENGT)

INSTRUCTOR: Charles Yamamoto.

ENGT 10 **Introduction to Engineering Technology (1)**
A study of the engineering technology profession, its requirements, opportunities, and responsibilities. A preview in the use and application of the various engineering technology equipment and instructions. (1 hr. lect.)

ENGT 11 **Engineering Materials (2)**
Physical and mechanical properties of common materials used in civil engineering structures. (2 hrs. lect.)

ENGT 15 **Surveying & Measurements I (4)**
Co-requisite: MATH 44, 104, 132, or 134.
Introduction to the concepts of plane surveying, including the use, adjustment, and maintenance of the engineering transit and the level. The art of measuring distances and angles in the transit-tape surveys and the art of determining elevations through leveling. Emphasis on free-hand lettering in notekeeping and accuracy in performing field work. (2 hrs. lect.; 6 hrs. lab.)

ENGT 25 **Surveying & Measurement II (4)**
Prerequisite: ENGT 15
Principles of the rectangular coordinate system and adjustment of transit-tape surveys. Office computation of land areas, volumes of earthwork, and simple highway curves. Concept of rural and urban land surveying and also some legal aspects of surveying. Introduction to the U.S. Public land surveys and restoration of lost or obliterated corners. (2 hrs. lect.; 6 hrs. lab.)

ENGT 26 **Mechanics I (3)**
Prerequisite: MATH 44; Co-requisite: MATH 104, 132 or 134.
Equilibrium of rigid body systems; centroids; moments of inertia; friction, introduction to shear and moment diagrams. (3 hrs. lect.)

ENGT 31 **Topographic Drafting I (3)**
Prerequisite: ENGT 25; Co-requisite: ENGT 39
Fundamentals of graphic representation of land surface areas; includes topographic features in accordance with general engineering practices; symbolic representations of natural and man-made features; traverse plotting; contour and profile sketching. (1 hr. lect.; 6 hrs. lab.)

ENGT 33 **Photogrammetry (2)**
Prerequisite: ENGT 25
Study of terrestrial photogrammetry as used in construction of contour maps of terrains adverse to ground survey. Aerial stereoscopic photographs and interpretations; types of equipment used. (1 hr. lect.; 3 hrs. lab.)

ENGT 36 **Strength of Materials (4)**
Prerequisite: ENGT 26; MATH 104
Elastic stress-strain relationship and behavior of structural systems under axial, flexural, and torsional loading conditions shear and moment diagrams; analyses and design of structural members. (3 hrs. lect.; 3 hrs. lab.)

ENGT 37 **Structural Design I (3)**
Co-requisite: ENGT 36
Introduction to design of building components using structural steel reinforced concrete, and timber. Elementary connection using bolts and welds are also emphasized. (3 hrs. lect.)

ENGT 38 **Structural Drafting I (3)**
Prerequisite: ENGT 110; Co-requisite: ENGT 37
Drafting room procedures, terminology, conventions, and dimensioning. Emphasis on working drawings in structural steel and reinforced concrete buildings. (1 hr. lect.; 6 hrs. lab.)

ENGT 39 **Advanced Surveying (4)**
Prerequisite: ENGT 25
Principles of topographic survey which includes stadia and planetable surveying also includes the fundamentals of triangulation systems. Concepts and applications of construction surveying. Introduction to the principles of field astronomy and observations of the sun and stars for determining azimuths, time, and location. (2 hrs. lect.; 6 hrs. lab.)

ENGT 40 **Route Surveys and Design (4)**
Prerequisite: ENGT 39
Study of transportation systems in general and the concepts and methods used in route surveying. Analysis and applications of parabolic, compound, reverse, and transition curves. Introduction to highway safety and design. (2 hrs. lect.; 6 hrs. lab.)

ENGT 41 **Topographic Drafting II (2)**
Prerequisite: ENGT 31
An advanced course in topographic mapping. Study entails reproduction of finished maps on cloth to various scales directly from field notes. (1 hr. lect.; 3 hrs. lab.)

ENGT 42 **Drainage & Sewage (3)**
Prerequisite: ENGT 26
Precipitation, runoff, stream flow and their influence on drainage, and flood control systems. Includes basic fluid mechanics and hydrology. Introduction to sewage treatment systems, terminology. (3 hrs. lect.)

ENGT 43 **Soils and Foundations (3)**
Prerequisite: ENGT 26
Basic soil mechanics, terminology, soil test methods and procedures. Visits to State Materials Testing Laboratory. (3 hrs. lect.)

ENGT 44 **Roadway Design & Construction (3)**
Prerequisite: ENGT 39; Co-requisite: ENGT 40
Study of roadway grade construction, roadway foundations, subgrade construction, pavement materials, surface properties, composition and design of flexible and concrete pavements. (3 hrs. lect.)

ENGT 45 **Legal & Economic Aspect of Engineering (2)**
Prerequisite: Second semester sophomore standing
Introductory study of legal relations and economic problems in engineering work, such as bidding procedures, bonding, awarding of contracts, torts, negligence, etc. (2 hrs. lect.)

ENGT 46 **Material Testing Laboratory (2)**
Prerequisite: ENGT 36
Principle and operation of universal testing machines; destructive testing of steel, concrete, aluminum and timber specimens. Nondestructive testing of steel, and aluminum beams. Observation of materials under various loading conditions. (6 hrs. lab.)

ENGT 47 **Structural Design II (3)**
Prerequisite: ENGT 37
Design of elements of steel, reinforced concrete and timber buildings with emphasis on integrating elements into system. Introduction to pre-stressed concrete design. (3 hrs. lect.)

ENGT 48 **Structural Drafting II (3)**
Prerequisite: ENGT 38
Working drawings in structural steel, reinforced concrete and timber with special emphasis on actual structures. Primary concern with building. (1 hr. lect.; 3 hrs. lab.)

ENGT 50 **Seminar (2)**
Prerequisite: Second semester sophomore standing
Discussions on literature, developments and activities in the construction industry both in Hawaii and elsewhere. Scheduled speakers from industry and government on current events and areas of interests. Field trips. (1 hr. lect.; 3 hrs. lab.)

ENGT 93V **Cooperative Education (1-4)**
Prerequisite: Approval of Department chairman
This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Engineering Technology.

ENGT 105 **Hawaiian Land Laws (2)**
Prerequisite: Second semester sophomore standing
History of Hawaii land tenure from the Great Mahele of 1848 to present, common Hawaiian surveying terms and phrases, land court and other systems of land registration. (2 hrs. lect.)

ENGT 110 **Engineering Graphics (4)**
Co-requisite: MATH 44, 104, 132, or 134
The fundamental principles of orthographic projection; the concepts of basic descriptive-projective geometry and their application to the analysis and solution of special problems arising in engineering. Delineation and dimensioning of simple mechanisms in pictorial, detail, and assembly drawings and sketches. (1 hr. lect.; 9 hrs. lab.)

ENGLISH (ENG)

INSTRUCTORS: William Brainard, Sonia Chess, Shan Correa, Howard Driver, Sandra Hirose, Gloria Hooper, Bernard Myers, Louis Willand.

***ENG 30** **College Communication Skills/Basic Composition (3)**
A practical workshop in the elements and types of writing. Emphasis is placed on understanding the way words work and how sentences are made to communicate the writer's ideas. Formerly ENG 12. (3 hrs. lect.)

***ENG 35** **Business Writing (Business English) (3)**
An analysis of business styles of writing with emphasis placed on letter writing, report writing, preparing self-descriptive job dossiers. Formerly ENG 42. (3 hrs. lect.)

***ENG 40** **Literary Fundamentals (3)**
Study of literature; novels, short stories, plays, poetry, and essays. Emphasis is placed on enjoyment, enrichment, and communication. (3 hrs. lect.)

***ENG 43** **Technical Writing (3)**
Study of effective ways of presenting technical information; emphasis placed on the utility of report writing, use of graphs, drawing, sketches, audiovisual media. (3 hrs. lect.)

***ENG 45** **Introduction to Expository Writing (3)**
Intensive study of structure, usage, and vocabulary of English as a necessary prelude to effective writing. Emphasis is placed on the organization of sentences to communicate well developed ideas in short papers. Students are encouraged to exercise critical thinking and clear, correct language in their written communications. (3 hrs. lect.)

***ENG 55** **Reading for Pleasure (3)**
Designed primarily for non-Liberal Arts majors. This course provides the student with individual guidelines and tools for a life-long exploration of the pleasures of reading. Fiction, biography, newspapers, magazines etc. will be read and analyzed. (3 hrs. lect.)

***ENG 100** **Expository Writing (3)**
Prerequisite: Satisfactory score on placement test or completion of ENG 45 with grade of "C" or better.
Training in analysis of expository essays; discussion and practice of important rhetorical procedures, including exemplification, definition, classification and comparison. Transfer course—Freshmen college English. (3 hrs. lect.)

*Placement in these courses is determined by Placement Testing.

The following semester courses may be taken in any sequence. No one is dependent on the others. ENG 100 is a prerequisite for all.

ENG 250 **American Literature (3)**
A study and analysis of major writers of American literature. Equal emphasis is placed on works created before and after 1900. Novels, short stories, poems, and modern drama are studies.

ENG 251 **Major Works of British Literature before 1800 (3)**
Study of major British works from the Middle Ages to 1800.

ENG 252 **Major Works of British Literature after 1800. (3)**
Study of major British works from 1800 to the present. (3 hrs. lect.)

ENG 253 **World Literature (to 1600) (3)**
Study of representative works of Classical, Oriental, and European literature from ancient times to the 17th century. (3 hrs. lect.)

ENG 254 **World Literature (1600 to present) (3)**
Study of representative works of Oriental, European, and American literature from 1600 to present. (3 hrs. lect.)

ENG 255 **Types of Literature-Novel (3)**
Study and criticism of American and European short stories and novels. (3 hrs. lect.)

ENG 256 **Types of Literature-Drama (3)**
Study and criticism of American and European drama, biography and poetry. (3 hrs. lect.)

ENGLISH LANGUAGE INSTITUTE PROGRAM (ELIP)

INSTRUCTORS: Sonia Chess, Joyce Henna, Gloria Hooper.

ELIP 5, 10, 20 **English as a Second Language (3)**
Emphasis will be placed on practical usage of English through listening, speaking, and writing practices. Placement in the course will be determined by test scores and individual conferences with the instructor. Three credits are offered for successful completion of each course. These courses do not satisfy degree requirements. Formerly ENG 14. (3 hrs. lect. each course) Graded on CR-N basis.

ETHNIC STUDIES (ES)

INSTRUCTOR: Ramsey Pedersen

ES 101 **Inter Ethnic Relations in Hawaii (3)**
This course is designed to expose the student to the major theoretical aspects of race and ethnic relations through the application of theory to Hawaii's Multiethnic experience. Topics covered include Ethnic group history, labor relations, class stratification, personality and identity, and educational, political and economic group strategies. (3 hrs. lect.)

ES 200 **Japanese Americans (3)**
This course provides a broad socio-cultural perspective of the Japanese-American experience in America, with particular emphasis on the frustration, anger, anguish, resolve, anxiety, failure, success and inspiration of the Japanese-Americans of Hawaii. Historical incidents—events such as World War II, the growth of organized labor and the Democratic Party in Hawaii will be used to show the Japanese-American's adjustment and maladjustment to American society.

ES 202 **Filipino Americans (3)**
An analysis of the major problems facing the Filipino American community in the United States, with special emphasis on Hawaii. The course covers the process of immigration, cultural transition and alteration, family and social organizations, educational problems and achievements, housing and job availability, conflict with existing ethnic communities. A historical analysis, from plantation paternalism to urban competition, and the changing Filipino roles, will also be covered.

ES 221 **Hawaiian Americans (3)**
Hawaiian-Americans deal with the crucial political, social and economic problems of the Hawaiian ethnic group in modern Hawaii. It seeks to analyze the contemporary group position of Hawaiians in light of historical development, stressing the importance of Hawaiian identity and values, from a Hawaiian point of view.

FIRE SCIENCE (FS)

INSTRUCTOR: Richard Miyashiro.

FS 21 **Introduction to Fire Protection Profession (3)**
Philosophy and history of fire protection; history of loss of life and property by fire, review of municipal fire defenses; study of the organization and function of Federal, State, County and private fire protection agencies; survey of professional fire protection career opportunities. (3 hrs. lect.)

FS 22 **Fundamentals of Fire Suppression (3)**
Fire Suppression Organization; fire suppression equipment; characteristics and behavior of fires, fire hazard properties of ordinary materials, building design and construction; extinguishing agents; basic fire fighting tactics; and public relations. (3 hrs. lect.)

FS 23 **Fundamentals of Fire Prevention (3)**
Organization and function of the fire prevention organization inspections, surveying and mapping procedures; recognition of fire hazards; engineering a solution, and public relations as affected by fire prevention. (3 hrs. lect.)

FS 24 **Fire Fighting Tactics and Strategy (3)**
Prerequisite: FS 22 or consent of instructor.
Review of fire chemistry, equipment and manpower; basic fire fighting tactics and strategy; methods of attack; preplanning fire problems. (3 hrs. lect.)

FS 25 **Fire Protection Equipment and Systems (3)**
Prerequisites: FS 22 and 23 or consent of instructor
Portable fire extinguishing equipment; sprinkler systems; protection for special hazards; and fire alarm and detection systems. (3 hrs. lect.)

FS 41 **Fire Safety Codes and Ordinances (3)**
Prerequisites: FS 22 and 23 or consent of instructor.
Familiarization with national, state, local laws and ordinances which influence the field of fire prevention and control. (3 hrs. lect.)

FS 42 **Fire Hydraulics (3)**
Prerequisites: FS 22 and 23 or consent of instructor.
Review of basic mathematics; hydraulic laws and formulas as applied to the fire service; application of formulas and mental calculation to hydraulic problems; water supply problems; and underwriter's requirements for pump. (3 hrs. lect.)

FS 43 **Fire Apparatus and Equipment (3)**
Prerequisite: FS 22 or consent of instructor
Driving laws and driving techniques; construction and operation of pumping engines, ladder trucks, aerial platforms, and specialized equipment; and apparatus maintenance. (3 hrs. lect.)

FS 44 **Fire Company Organization and Procedures (3)**
Prerequisites: FS 22 and 23 or consent of instructor
Review of fire department organization. Study of fire company organization, company officer, personnel administration, communication; fire equipment, maintenance, training, fire prevention, fire fighting, company fire fighting capability and records, and reports. (3 hrs. lect.)

FS 45 **Rescue and Emergency Controls (3)**
Prerequisite: FS 22 or consent of instructor.
Rescue practices, study of the human body, emergency care of victims, childbirth, artificial respiration, toxic gases, chemical hazards, radioactive hazards, rescue problems and rescue techniques. (3 hrs. lect.)

FS 46 **Building Construction for Fire Protection (3)**
Prerequisites: FS 22 and 23 or consent of instructor.
Exploration of building construction and design with emphasis focused on fire protection concerns; review of related statutory and suggested guidelines both local, state and national in scope. (3 hrs. lect.)

FS 47 **Legal Aspects of Fire Protection (3)**
Prerequisites: FS 22 and 23 or consent of instructor
A study of legal rights and duties, liability concerns and responsibilities of the fire department organization while carrying out its duties; and a study of some of the working conditions of the firefighters. (3 hrs. lect.)

FS 48 **Fire Causes and Detection (3)**
Prerequisites: FS 22 and 23 or consent of instructor.
The history, development and philosophy of fire investigation and protection, including inspection techniques; gathering of evidence and development of technical report; fundamentals of arson investigation, processing of criminal evidence and criminal procedures related to various local and state statutes. (3 hrs. lect.)

FS 49 **Hazardous Materials I (3)**
Prerequisites: FS 22 and 23 or consent of instructor.
Study of chemical characteristics and reaction related to storage, transportation, handling hazardous materials, such as flammable liquids, combustible, oxidizing and corrosive materials and radioactive compounds. Emphasis on emergency situation and fire fighting control. (3 hrs. lect.)

GEOGRAPHY (GEOG)

INSTRUCTOR: Thomas Ohta

GEOG 52 **Fundamentals of Geography (3)**
A three-unit non-transfer course designed to refresh or acquaint the student with the basic concepts and tools of the geographer. With these aids and the subsequent knowledge derived from the course, the individual may undertake intensive study of earth forms and formations, topography, the study of climates, and air pressure. The class would meet for three hours a week in lecture-discussion sessions. The study is designed to bridge the gap between the physical sciences and the anthropology survey course, offering the student the terminology to understand more fully the world in which we live. (3 hrs. lect.)

GEOG 101 **Elements of Physical Geography (3)**
Survey of man's natural environment distribution and inter-relationships of climates, vegetation, soils, landforms. Laboratory problems in map interpretation and environmental analysis. (2 hrs. lect.; 2 hrs. lab)

GEOG 102 **World Regional Geography (3)**
Study of the world's major geographic and population regions and the interrelationships between the physical and human elements of those regions. An overall view of the regions related to geographical factors will be undertaken with regard to the human cultural, political and economic factors. The use of maps, understanding of climate controls, and unifying geographical factors will be sought to discern general world patterns. (3 hrs. lect.)

GEOG 151 **Geography and Contemporary Society (3)**
Elements of economic geography and resource management, populations and urban geography; application to current problems of developed and underdeveloped worlds. (3 hrs. lect.)

HAWAIIAN (HAW)

HAW 101-102 **Elementary Hawaiian (3-3) Yr**
Development of listening, speaking, writing skills. Meets 1 hour daily, Monday through Friday, with 4 out of 5 hours devoted to drill and practice. Daily laboratory work.

HEALTH FOUNDATIONS (HF)

HF 102 **Personal and Community Health (1)**
This course is designed to provide the student with a standard of health knowledge and health practices which will enable him to meet his proper health responsibilities in his occupation, in the home and in the community. Formerly HPE 195.

HF 103 **First Aid and Safety (1)**
The student will gain new and useful information for application to healthful daily living, with emphasis on the prevention of accidents and first aid care. Includes cardiopulmonary resuscitation (CPR).

HF 110 **Basic Nutrition (1)**
A basic study of the nutrient elements in foods and their utilization in body metabolism. Consideration of nutrient requirements of the individual as they affect health and the prevention and treatment of disease from infancy to old age.

HEAVY EQUIPMENT AND MAINTENANCE REPAIR (HEMR)

INSTRUCTOR: Francis Warner.

HEMR 21 **Diesel Engines (10)**
A course on how 4-cycle and 2-cycle diesel engines operate, how they are put together, their maintenance and repair, and the maintenance and repair of its integral systems such as lubrication, cooling, air and exhaust, and starting systems. (20 hrs. lect./lab.)

HEMR 31 **Fuel and Electrical Systems (10)**
The purpose, design, construction, theory, and operating principles of fuel and electrical systems are covered in this course with special emphasis on developing the skills required to service, repair, test, and adjust the components and its associated systems. (20 hrs. lect./lab.)

HEMR 41 **Heavy Equipment Chassis (10)**
Theory and practice in the description and nomenclature, operation, diagnosis of troubles, disassembly, inspection and measurement, reassembly of the major components of the heavy equipment chassis to include power trains, steering systems, differentials, final drives and undercarriage. (20 hrs. lect./lab.)

HEMR 42 **Heavy Equipment Special Systems (10)**
A course designed to cover the various hydraulic systems found on heavy equipment machines, the pneumatic systems and special power systems. Theory, operation, troubleshooting, repair and maintenance are covered in detail. (20 hrs. lect./lab.)

HEMR 93 V **Cooperative Education (1-4)**
Prerequisite: Approval of department chairman
This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Heavy Equipment Maintenance and Repair.

HISTORY (HIST)

INSTRUCTORS: C. Dewey Caldwell, Normal Hallett, Barbara Peterson.

HIST 54 **Issues in American History (3)**
A survey course in U.S. History from colonial times to the present day, with emphasis on selected issues and problems shaping the history of American democracy. (3 hrs. lect.)

HIST 58 **Far Eastern History (3)**
A survey of the history of the civilizations of China, Japan and related areas, from the earliest times to the present. (3 hrs. lect.)

HIST 59 **History of Hawaii and the Pacific (3)**
A study of the social and political development of the islands of the Pacific. The course will inspect early cultures and migrations, the influence of European and American colonialism and current problems of social modernization. (3 hrs. lect.)

HIST 151-152 World Civilization (3-3)
Development of civilization from its prehistoric origins to the present. (3 hrs. lect.)

HIST 224 **History of the Hawaiian Islands (3)**
A general study of the major events of the last two hundred years of Hawaiian history. Emphasis will be placed on the Monarchy period and activities of the whalers, merchants and missionaries. The prehistoric Hawaiian migration from Polynesia will be traced as well as the movements from Monarchy to Republic, Territory and Statehood. (3 hrs. lect.)

HIST 241-242 Civilizations of Asia (3-3) (Cross listed as Asian 241-242)
Historical survey of the major civilizations of Asia from the earliest times to the present. (3 hrs. lect.)

HIST 281-282 Introduction to American History (3-3)
Interpretative survey of United States history from the earliest settlements to the present. (3 hrs. lect.)

HUMAN DEVELOPMENT (HD)

HD 130 **Child Management (3)**
Major focus is on developing skills needed to successfully communicate and guide preschool children. Techniques for preventing and solving behavior problems.

HD 196 **Introductory Seminar in Student Development (2)**
Exploration of issues in higher education, both academic and personal.
Emphasis on student development (acceptance of student roles with a setting of higher education).
Assessment of personal growth and increased self-perception is encouraged through an identification and affirmation of personal values and strengths.

HD 231 **Introduction to Human Development I (3)**
Principles of development from conception to puberty. Focus on the inter-relation of physical, cognitive, and social-emotional aspects of the individual during this period.

HD 232 **Introduction to Human Development II (3)**
Principles of development from puberty to death. Focus on the inter-relation of physical, cognitive, and social-emotional aspects of the individual during this period.

HD 235 **Work with Parents (3)**
Study of multiple causes of parental behavior and its relationship to child-rearing practices. Central focus upon developing skills for establishing effective relationships with parents, including such skills as active listening and problem solving. Practice sessions will include parent-teacher counseling, home visits, and various types of group meetings.

HUMANITIES (HUM)

INSTRUCTOR: Terrence Haney

HUM 32 **Senior Perspectives (3)**
(Offered at Hawaii State Senior Center)
This is a discussion-type course which attempts to bring to bear the unique perspectives of age upon humanistic concerns. It encourages participants to express and compare their reflections upon a different topic each semester. Grade on CR-N basis. Topics are as follows:

HUM 32B **The Nature of Religion and Religious Experience (3 hrs. lect.)**
HUM 32C **Human Health (3 hrs. lect.)**
HUM 32D **Hawaiian Humanism (3 hrs. lect.)**
HUM 32E **Poetic Experience East and West (3 hrs. lect.)**
HUM 32F **Values in Transition (3 hrs. lect.)**
HUM 32G **Senior Leadership (3 hrs. lect.)**
HUM 32H **World Cultures through Music (3 hrs. lect.)**

HUM 40 **Critical Thinking (3)**
This is an inter-disciplinary seminar which addresses the problem "How can I evaluate and express my own ideas clearly and confidently?" The emphasis is upon developing critical judgement as a basis of listening, speaking, reading, and writing. (3 hrs. lect.) Grade on CR-N basis.

HUM 41 **Introduction to Humanities (3)**
Readings and study of Art, Music, Literature as viewed throughout history. This course is designed for the general education student. (3 hrs. lect.) Grade on CR-N basis.

HUM 141-142 Humanities—Classical (3), Modern (3)
A two-semester course surveying the role of man as seen in literature, art, and music. Special emphasis will be placed upon the development of an integrated view of Western man. A student need not take both courses to receive credit. At least a 10th grade reading level is required. (3 hrs. lect. each semester)

INDUSTRIAL EDUCATION—DRAFTING (IEDDD)

INSTRUCTOR: Kaoru Hirata.

IEDDD 101 **Basic Drafting and Design for Industrial Education (3)**
A basic mechanical drawing course in the care and use of drafting instruments. Drafting and design techniques in orthographic projection, isometric, development problems, pictorial and contemporary design applied to fabrication. (5 hrs. lect./lab.)

IEDDD 102 **Drafting and Design for Industrial Education (3)**
Prerequisite: IEDDD 101
Continuation of 101, machine and assembly drafting, auxiliary views, sectioning, architectural and technical illustration. (5 hrs. lect./lab.)

IEDDD 201 Advanced Drafting and Design (3)
Prerequisites: IEDDD 101, 102
This course covers the fundamentals of architectural drafting. It covers lettering, projections, sections, detailing, pictorial drawings and working drawings. (5 hrs. lect./lab.)

INDUSTRIAL EDUCATION—ELECTRONIC (IEDET)

IEDET 101 DC/AC Fundamentals (3)
Fundamentals of electricity: Electrical units, electrons, conductors, insulators, Ohm's law, Kirchhoff's law, volts-amps, resistance, power, wattage, magnetism, inductance, reactance, resonance, frequency, alternating current, direct current, motors and generators. (5 hrs. lect./lab.)

IEDET 103 Electronic Devices (3)
Prerequisite: IEDET 101 or equivalent.
Basic concepts of vacuum tubes, semiconductors, integrated circuits and their applications to power supplies, amplifiers, oscillators, sinusoidal and nonsinusoidal and basic logic circuits. (5 hrs. lect./lab.)

INDUSTRIAL EDUCATION—ELECTRICITY (IEDIE)

IEDIE 102 Application of DC/AC Fundamentals (3)
Prerequisite: IEDET 101
Signal circuits, industrial and residential wiring, motor rewinding, motor control, transformers, power distribution. (5 hrs. lect./lab.)

INDUSTRIAL EDUCATION—POWER TECHNOLOGY (IEDPT)

INSTRUCTOR: George Ryusaki.

IEDPT 102 Internal Combustion Engines (3)
Theory and practice in the operation, repair, and maintenance of modern internal combustion engines to include disassembly, inspection, precision, measurement, repair or replacement of components, reassembly, and final adjustments. (5 hrs. lect./lab.)

IEDPT 201 Electrical Systems (3)
Theory and laboratory work in automotive electrical systems and components. (5 hrs. lect./lab.)

IEDPT 202 Power Train (3)
Theory and practice of clutches, transmissions, overdrives, drive lines, rear axles and differentials. Theory and practice in the descriptions and nomenclature, operation, maintenance, and repair of hydraulic and power brake systems, mechanical and power steering systems, wheel alignment and balance and suspension systems. (5 hrs. lect./lab.)

INDUSTRIAL EDUCATION—WOOD CONSTRUCTION (IEDWC)

INSTRUCTORS: Harvey Chun, Kazukiyo Kuboyama.

IEDWC 101 Hand and Portable Power Tools/Material and Hardware (3)
This course is to orient students as to the usage and maintenance of hand tools most commonly used on woods and construction. Basic theory and application is essential in this course and in addition includes purchasing practices, cost and usage of various building materials and hardware. (5 hrs. lect./lab.)

IEDWC 102 Machinery and Joinery (3)
Prerequisite: IEDWC 101 or equivalent.
This course is designed for an individual student to have a complete knowledge of power equipment most commonly used in construction. It also includes usage and maintenance as well as different types of cuts that can be applied to each equipment. (5 hrs. lect./lab.)

IEDWC 202 Cabinet Making (3)
Prerequisite: IEDWC 102
This course is designed to give the basic working knowledge and skill in cabinet making for Industrial Arts majors and any interested students. The course follows cabinet making for homes but the basics are similar so it should be able to satisfy any other cabinet making program. (5 hrs. lect./lab.)

INDUSTRIAL EDUCATION—MACHINE SHOP (IEDMS)

INSTRUCTORS: Robert Apau, George Kalilikani.

IEDMS 101 Machine Shop for Industrial Education (3)
Survey of the fundamental processes and operations in metalworking and production technology. An overview of the entire machine shop is made. Some skill is developed in the use of hand tools, lathe, drill press, milling machine, shaper and layout techniques. (5 hrs. lect./lab.)

INDUSTRIAL EDUCATION—WELDING (IEDW)

INSTRUCTOR: Charles Kim

IEDW 102 Welding for Industrial Education (3)
This course will provide the general overview of various welding processes while providing practical instruction in the development of specific welding skills. (5 hrs. lect./lab.)

INDUSTRIAL EDUCATION—SHEET METAL (IEDSM)

INSTRUCTOR: Charles Beach

IEDSM 103 Sheet Metal for Industrial Education (3)
This course is designed to assist the Industrial Education major to gain experience and proficiency in the area of sheet metal, so he can share these experiences with his students. (5 hrs. lect./lab.)

INDUSTRIAL ELECTRICITY (IE)

INSTRUCTORS: Felix Giso, James Lee.

IE 21 Industrial Electricity (3)
Co-requisite: PHYS 23; Prerequisite: ENG 30, MATH 4
Fundamentals of Electricity—Series, parallel and compound circuits, resistance, capacitance and inductance, electrical applications of low voltage and high voltage systems. Application of alternating and direct current, electrical formulas. (9 hrs. lab.)

IE 22 Industrial Wiring Systems (4)
Co-requisite: IE 23 and PHYS 24
Signal circuit wiring and construction, residential and industrial electrical circuitry, AC/DC motors, generators and alternators. Transformers—single phase and three phase. (12 hrs. lab.)

IE 23 **Industrial Wiring Systems Theory (3)**
Co-requisite: IE 22 and PHYS 24
AC/DC motor theory, trouble-shooting and analysis. Theory and calculation of electrical/electronic circuits, technical writing and drafting of electrical circuits. Power distribution circuits. (3 hrs. lect.)

IE 40 **Electrical Power—Advanced Industrial Wiring Systems (4)**
Prerequisite: IE 21
Interior wiring conductors and cables, properties and characteristics. Interior wiring systems, grounding systems, overcurrent protection, branch-circuit, feeder and service calculations. Electrical wiring material and methods of installation. Lighting and power trouble-shooting, repair, and maintenance. General provisions and application of the Natural Electrical Code. (12 hrs. lab.)

IE 41 **Electrical Power—A.C. Machinery (3)**
Co-requisite: IE 40
Alternating current fundamental ideas and analysis. Use of vectors in computing AC currents and voltages. Impedances in series, parallel and combination configuration. Single-phase AC power generation, power factor, and secondary power distribution systems. Alternator construction and types, methods of field excitation, voltage control, performance and operation. Single-phase fractional horsepower motors, induction and repulsion motors, and basic motor controllers. (3 hrs. lect.)

IE 42 **Alternating Current Laboratory (4)**
Prerequisite: IE 21
Three-phase motors and control equipment, performance, and application. Troubles of AC motors and controllers, their localization, correction, repair, and preventive maintenance. Three-phase transformer connection and method of installation. Special provisions and applications of the National Electrical Code Industrial electrical material and methods of installation. (12 hrs. lab.)

IE 43 **Alternating Current Theory (3)**
Co-requisite: IE 42
Polyphase power generation, circuits, and distribution systems. Three-phase transformers, theory of operation, circuits, and applications. Three-phase motors and control equipment, theory of operation, performance, and application. Introduction to electronic and solid-state devices and circuits, saturable core amplifiers, converters, and rectifiers. (3 hrs. lect.)

IE 93V **Cooperative Education (1-4)**
Prerequisite: Approval of department Chairman.
This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Industrial Electricity. (5-20 hrs. lect.)

JAPANESE (JPNSE)

INSTRUCTOR: Noboku Pugarelli.

JPNSE 101-102 **Elementary Japanese (4)**
JPNSE 101 is a prerequisite for JPNSE 102.
Development of listening, speaking, reading, writing. Structural points introduced inductively. Meets 1 hour daily, Monday through Friday; 4 out of 5 hours devoted to directed drill and practice. Laboratory work is required.

JAPANESE LITERATURE (JALIT)

INSTRUCTOR: Noboku Pugarelli

JALIT 261 **Japanese Literature in Translation—Traditional (3)**
Prerequisite: ENG 45 or over
Survey of traditional Japanese literature with emphasis on analysis and comparison.

JALIT 262 **Japanese Literature—Modern (3)**
Prerequisite: ENG 45 or over
Survey of modern Japanese literature with emphasis on analysis and comparison.

JOURNALISM (JOURN)

JOURN 205 News Writing (3)
Prerequisite: ENG 100 or consent of instructor.
A general introduction to materials, techniques, and ideas pertinent to the preparation of adequate news copy. (3 hrs. lect.)

JOURN 206 News Editing (3)
Prerequisite: ENG 100 or consent of instructor.
A laboratory course in which students spend four (4) hours per week either working on assigned projects on their own or working individually with the journalism instructor in the evaluation and improvement of their individual efforts.

LINGUISTICS (LING)

INSTRUCTOR: Bernard Myers.

LING 102 **Introduction to the Study of Language (3)**
Nature and working of language; its role in culture and history. (3 hrs. lect.)

MACHINE SHOP TECHNOLOGY (MST)

INSTRUCTORS: Robert Apau, George Kalilikane.

MST 21 **Benchwork (3)**
Co-requisite: MST 22
Skill in the use of basic hand tools, measuring, screw thread cutting, layout techniques and basic drill press operations as required to work metal. (2 hrs. lect.; 3 hrs. lab.)

MST 22 **Lathe I (6)**
Co-requisite: MST 21
An introductory course in the principles of engine lathe operations of cutting tool geometry, speeds, feeds, turning, facing, drilling, reaming and screw thread changing. (4 hrs. lect.; 6 hrs. lab.)

MST 23 **Lathe II (6)**
Co-requisite: MST 42
Prerequisite: MST 22 or instructor's approval
An advanced course in metalworking lathe operation of taper and angular turning, boring, cutting internal and external Acme screw thread and face plate job set-up. Stresses on the use of micrometers and vernier calipers in varied assignments to develop the concept of precision measurement. (4 hrs. lect.; 6 hrs. lab.)

MST 35 **Machine Processes (3)**
This course is designed primarily as a survey course for students to develop a basic technical knowledge of common processes used in metalworking. An overview of the entire machine shop is made. Some skill is developed in the use of hand tools, layout techniques, lathe and drill press. (2 hrs. lect.; 3 hrs. lab.)

MST 41 **Milling Machine (6)**
Co-requisite: MST 43
Prerequisite: MST 22 or instructor's approval.
A course in the concepts and operations of planing and milling tools in methods of tooling, set-up feeds and speeds for commonly used metals. The student develops skill in the operation of the shaper, vertical and horizontal milling machine. Jobs performed are plane milling, face milling, key-way cutting, gear cutting and job set-up on the various milling machine attachments. (4 hrs. lect.; 6 hrs. lab.)

MST 42 **Grinding (3)**
Co-requisite: MST 23
A course in the concept and operation of grinding and abrasive machining with stress on the effects of grit sizes, coolants, and surface speeds and feeds. The student uses the surface grinder, universal grinder and the abrasive-belt machine to gain skill and proficiency. (2 hrs. lect.; 3 hrs. lab.)

MST 43 **Cutter Grinding (3)**
Prerequisite: MST 42
Co-requisite: MST 42
An advanced course in the use of grinding machines with emphasis on sharpening milling machine cutter. (2 hrs. lect.; 3 hrs. lab.)

MST 44 **Advanced Machine Tool Practice (1-10)**
An advanced course in the set-up, tooling and operation of engine lathe, vertical and horizontal milling machine, shaper, drill press, surface grinder and universal grinder with stress on the utilization of technical handbooks and data publications to carry out projects and assignments. (3-30 laboratory hours to be arranged.)

MATHEMATICS (MATH)

INSTRUCTORS: Alice Bertram, Roy Fujimoto, Iris Fukui, Kenji Inouye, Rachael Kagehiro, James Reeder.

MATH 3 **Fundamentals of Arithmetic (3)**
Individualized instruction in operations of whole numbers, fractions, mixed numbers, decimals, and percents. Graded on a CR-N basis. (3 hrs. per week)

MATH 4 **Fundamentals of Measurement (1)**
Individualized instruction in the theory and applications of measurement. Graded on a CR-N basis. (3 hrs. per week)

MATH 18 **Elementary Technical Mathematics I (3)**
Prerequisite: MATH 4 or equivalent and enrollment in an occupational program.
Basic algebra and basic geometry as applied to shop problems. (3 hrs. per week)

MATH 19 **Elementary Technical Mathematics II (3)**
Prerequisite: MATH 18 or equivalent and enrollment in an occupational program.
Basic numerical trigonometry and further applications of algebra and geometry to shop problems. (3 hrs. per week)

MATH 23 **Pre-Algebra Mathematics (2)**
Prerequisite: MATH 4 or sufficiently high score on placement test. The use of real numbers, the concept of a variable, and the language and basic ideas of elementary algebra. Graded on a CR-N basis. (3 hrs. per week)

MATH 24 **Elementary Algebra I (3)**
Prerequisite: MATH 23 or equivalent
Concept of a variable, integers, simple equations, products and factors, and fractions. (3 hrs. per week)

MATH 25 **Elementary Algebra II (3)**
Prerequisite: MATH 24 or equivalent
Linear functions and equations, quadratic functions and equations, irrational numbers, radical expressions, and number systems. (3 hrs. per week)

MATH 27 **Intermediate Algebra (3)**
Prerequisite: MATH 25 or equivalent
Brief review of elementary algebra, linear and quadratic functions, exponential and logarithmic functions, and selected topics. (3 hrs. per week)

MATH 44 **Advanced Technical Mathematics (3)**
Prerequisite: MATH 25 or equivalent
Functions and their graphs; systems of equations; topics of trigonometry; fundamental operations with complex numbers and vectors; logarithmic and exponential functions as they apply in electronics and engineering technology. (3 hrs. per week)

MATH 51 **Selected Topics in Mathematics (1)**
Prerequisite: consent of instructor
A short course on one topic of special interest to students; for example, slide rule or metric system. Students or faculty may suggest topics. Graded on a CR-N basis. (1 hr. per week)

MATH 100 **Survey of Mathematics (3)**
Prerequisite: MATH 25 or equivalent
A study of the historical development of mathematics and its role in modern society. (3 hrs. per week)

MATH 104 **Engineering Mathematics (3)**
Prerequisite: MATH 44
Analytical trigonometry, complex numbers, vectors, analytic geometry, and elements of differential and integral calculus with emphasis on applications to engineering and electronics. (3 hrs. per week)

MATH 132 **Trigonometry (3)**
Prerequisite: MATH 27 or equivalent
A study of angles, trigonometric and circular functions, solutions of triangles, graphical representation, identities and complex numbers. (3 hrs. per week)

MATH 134 Pre-Calculus Mathematics (3)
Prerequisite: MATH 132 or equivalent; MATH 173 is recommended, either previously or concurrently.
A study of elementary functions, including algebraic, trigonometric, exponential and logarithmic functions; mappings and inverses. Emphasis is placed on those topics which will prove useful to students planning to take calculus. (3 hrs. per week)

MATH 173 Introduction to Linear Algebra (3)
Prerequisite: MATH 132 or equivalent
This is a "companion" course, designed to be taken concurrently with MATH 134, 205, 206, or 231. It may also be taken separately if the student so desires. A basic introduction to topics in linear algebra, including matrices, vectors, linear transformations, and vector spaces. (3 hrs. per week)

MATH 174 Introduction to Statistics (3)
Prerequisite: MATH 27 or equivalent
This is a "companion" course, designed to be taken concurrently with MATH 132, 134, 205, 206, or 231. It may also be taken separately if the student so desires. A basic introduction to topics in statistics, with a brief look at probability. Emphasis on applications to physical and social sciences. (3 hrs. per week)

MATH 205 Calculus I (4)
Prerequisite: MATH 134 or equivalent
Recommend: MATH 173, either previously or concurrently
Basic concepts, techniques of differentiation and integration of algebraic and trigonometric functions and applications. (5 hrs. per week)

MATH 206 Calculus II (4)
Prerequisite: MATH 205 or equivalent
Recommend: MATH 173, either previously or concurrently
Exponential, logarithmic, and hyperbolic functions; techniques of integration; limits and continuity, infinite series. (5 hrs. per week)

MATH 231 Calculus III (4)
Prerequisite: MATH 206 or equivalent
Recommend: MATH 173, either previously or concurrently
Vector-oriented study of functions of several variables; partial differentiation and line integrals; further applications of integration; introduction to multiple integrals. (5 hrs. per week)

MICROBIOLOGY (MICRO)

INSTRUCTOR: Joseph Krahulik.

MICRO 30 Introduction to Microbiology (3)
A survey of the roles bacteria, viruses, yeasts, molds and fungi play in man's world. Their roles in food preparation and manufacture, food spoilage, and disease transmission in foods. Also explored are the how and why of food preservation and sanitation practices in food preparation. (3 hrs. lect.)

MICRO 130 General Microbiology (3)
Fundamentals of microbiology. The role of microorganisms and how they affect man and his possessions. (3 hrs. lect.)

MICRO 130L General Microbiology Laboratory (1)
Co-requisite: MICRO 130
Laboratory illustrating fundamental principles of microbiology. (3 hrs. lab.)

MUSIC (MUS)

MUS 102 University Chorus (1)
Performance of choral literature from Renaissance to present. Previous choral experience not required. May be repeated. Graded on a CR-N basis. (2 hrs. lect.)

MUS 129 Elementary Classical Guitar (3)
Basic principles of classical guitar performance. Relevant problems in guitar literature at elementary level. Graded on a CR-N basis. (3 hrs. lect.)

MUS 160 Introduction to Music Literature (3)
Elements, styles and forms of music, from listener's point of view. Lab section required. (3 hrs. lect.)

MUS 180 Fundamentals of Western Music (3)
Fundamental concepts in organization of music as expressive medium in Western culture. Roles of composer, performer and listener. Notation as means of communication. Discovery and verification of ideas through laboratory experience. (3 hrs. lect.)

OCEANOGRAPHY (OCEAN)

OCEAN 201 Science of the Sea (3)
An introduction to oceanography: a descriptive overview, broad, non-mathematical; a survey of various sciences as they relate to the study of the oceans of the earth. (3 hrs. lect.)

PHILOSOPHY (PHIL)

INSTRUCTORS: Terrence Haney, Ronald Pine.

PHIL 100 Introduction to Philosophy (3)
Readings in the problems, fields, and methods of studying philosophy with emphasis placed on acquiring a philosophical attitude towards life as seen in these works. (3 hrs. lect.)

PHIL 200 History of Philosophy (To 1600) (3)
Western Philosophy from the Greeks to the Renaissance. (3 hrs. lect.)

PHIL 201 History of Philosophy (From 1600) (3)
Western Philosophy from Renaissance to present. (3 hrs. lect.)

PHIL 210 Logic (An Introduction) (3)
Study of inductive and deductive reasoning with emphasis placed on developing symbolic patterns. (3 hrs. lect.)

PHYSICS (PHYS)

INSTRUCTORS: Donald Bourassa, Raymond Chang, Wade Parker.

PHYS 21 Solid and Fluid Mechanics (4)
Prerequisite or Co-requisite: MATH 18 or equivalent.
Introductory applied mechanics. Precision measurement; properties of materials; forces and torque; laws of motion; work, power, and energy; machines and power transmission; liquid and gas pressures, density, specific gravity, and buoyancy; Pascal's Law and hydraulic devices; heat effects and energy. (3 hrs. lect.; 3 hrs. lab.)

PHYS 23 **Fundamentals of Electricity (4)**
Magnetism, electric charges, conduction and induction, electric power, chemical effects of electricity, electromagnetism, the electric motor, electromagnetic induction, the generator, the transformer, inductive reactance, power factor, rectifiers, electron theory. (3 hrs. lect.; 3 hrs. lab.)

PHYS 26 **Introduction to Physics (4)**
Prerequisite or Co-requisite: MATH 18 or equivalent.
Introductory applied physics. Measurement, forces, simple machines, motion, energy, work, power, fluid pressure and flow. Heat measurement and transfer, basic electricity. (3 hrs. lect.; 3 hrs. lab.)

PHYS 41 **Mechanics and Heat (4)**
Prerequisite or Co-requisite: ALGEBRA and/or TRIGONOMETRY
Designed primarily for technical or engineering technology majors. Principles of precision measurement: scalar and vector quantities, applied forces, laws of motion, work, power and energy, simple machines, fluid mechanics, laws of heat, thermodynamics. (3 hrs. lect.; 3 hrs. lab.)

PHYS 42 **Sound, Light, and Electricity (4)**
Prerequisite or Co-requisite: ALGEBRA and/or TRIGONOMETRY
Designed primarily for technical or engineering technology majors. Vectors, wave motion, technical applications of sound waves, illumination, interference, diffraction, reflection, refraction, optics, spectra, electromagnetic waves, electrostatics, electric current, potential difference, resistance, basic circuits, electric fields, induction, generators and motors, vacuum tubes, and elementary solid state theory. (3 hrs. lect.; 3 hrs. lab.)

PHYS 100 **Survey of Physics (3)**
Co-requisite: PHYS 100L
An introductory course in physics for the non-science major, covering basic concepts and principles as related to everyday life, with emphasis on the interaction between society and physics—the most basic of all the sciences. (3 hrs. lect.)

PHYS 100L **Survey of Physics Laboratory (1)**
Co-requisite: PHYS 100
Simple experiments in the basic concepts of physics, illustrating the role of physics in society to the non-scientist. (3 hrs. lab.)

PHYS 110 **Astronomy (3)**
Survey of nature of astronomical universe for non-science majors, with much emphasis on scientific method and development of scientific thought. (3 hrs. lect.)

PHYS 151-152 College Physics (3-3)
Prerequisite: MATH 132 or equivalent. 151 is prerequisite for 152.
Co-requisite: PHYS 151 and PHYS 151L; PHYS 152 and PHYS 152L.
A non-calculus, two-semester, transfer level course for pre-professional or non-engineering majors. Study of the basic concepts of physics. Including fundamental principles, theories, and experimental methods in mechanics, thermodynamics, electricity, magnetism, optics, and modern physics. (3 hrs. lect.)

PHYS 151L-152L College Physics Laboratory (1-1)
151L Co-requisite with 151; 152L Co-requisite with 152. (3 hrs. lab.)

PHYSICAL SCIENCE (PHYSC)

INSTRUCTOR: Samuel Liu.

PHYSC 25 Fundamentals of Metallurgy (4)
Designed for students in majors involving metal fabrication. A lecture, demonstration, and laboratory course in the identification and recognition of metals; testing and analytical examination of metals; processing of metals; alloys; heat treatment; annealing and hardening of metals; metallurgy of welding and machining. (3 hrs. lect.; 3 hrs. lab.)

POLICE SCIENCE (PS)

INSTRUCTOR: Robert Lansing.

PS 121 Introduction to Law Enforcement (3)
Prerequisite: ENG 30
Introduction to the historical and philosophical background of law enforcement. The purpose of the law enforcement; the position of law enforcement agencies at the local, state, and federal level. The English influence upon the American police agencies. Employment opportunities. This course is required of all Police Science majors. (3 hrs. lect.)

PS 123 Criminal Investigation I (3)
Prerequisite or Co-requisite: PS 121
Proper handling of major criminal offenses, crime scene protection; what constitutes physical evidence; the assistance that may be obtained from various divisions or bureaus within the department. (3 hrs. lect.)

PS 124 Criminal Investigation II (3)
Prerequisite: PS 123 or consent of instructor.
Case preparations; collection, preservation of physical evidence, crime scene search; use of fingerprints, casts, photographs, laboratory assistance, and scientific equipment available to assist the investigator. (3 hrs. lect.)

PS 126 Juvenile Procedures (3)
Prerequisite or Co-requisite: PS 121
Etiology of delinquent activities; factors such as age, sex, race, and home situation will be explored. The methods and agencies which handle the juvenile offenders from violation to disposition. Some theories regarding the behavior of the youthful offender. (3 hrs. lect.)

PS 127 Operations of Uniformed Police (3)
Prerequisite or Co-requisite: PS 121
This course will teach the student what the uniformed sections of the police department do. The responsibilities of patrol, traffic, and other uniformed personnel. Various types and methods of patrol will be covered; newer concepts surrounding the uniformed officer such as team policing, unit beat policing, basic car plan, and things of this nature will be discussed and illustrations given. (3 hrs. lect.)

PS 240 Principles of Police Supervision (3)
Prerequisite or Co-requisite: PS 121
The course will cover such essentials as the function of the supervisor in organization and management, elements of leadership, the training function, instructional process, personnel evaluation systems, personnel complaint investigation procedures and techniques. This course should be taken by all first line supervisory personnel. (3 hrs. lect.)

PS 241 **Criminal Evidence (3)**
Prerequisite or Co-requisite: PS 121
Evidence defined; rules of evidence, where they originate, how they are interpreted, what effect they have on law enforcement. Major emphasis placed on the courtroom use of evidence, and courtroom demeanor. (3 hrs. lect.)

PS 242 **Criminal Law I (3)**
This course is for Sophomore Police Science Students.
The Substantive Criminal Law—definitions and classifications; offenses against the person and habitation; larceny and kindred offenses against property; offenses against morality and decency, the public peace and offenses affecting sovereignty or the administration of governmental functions. Imputability, attempts, conspiracy and the doctrine of criminal agency. Parties to crime. (3 hrs. lect.)

PS 243 **Criminal Law II (3)**
Prerequisite: PS 242
Criminal responsibility in general; limitations and modifying circumstances affecting criminal responsibility, including defenses of ignorance and mistake, consent or condonation, immaturity, insanity and diminished mental responsibility. Special defenses. Limitations on prosecution and rights and privileges of the accused. (3 hrs. lect.)

PS 244 **Administration of Justice (3)**
Prerequisite or Co-requisite: PS 121
The history of our judicial (court) system; the various courts and their respective areas of jurisdiction; procedures from the time of arrest through the sentencing of the individual or whatever disposition the court feels necessary. (3 hrs. lect.)

PS 245 **Organization and Administration (3)**
Prerequisite or Co-requisite: PS 121
Principles of organization and administration in law enforcement; operations and activities of various divisions, bureaus or details, training, recruitment, planning; research, policy, inspection, and control. (3 hrs. lect.)

PS 246 **Police Community Relations (3)**
Prerequisite or Co-requisite: PS 121
The role of the police department in the city government; the importance of a good community relations program, what constitutes a community relations program. Race attitude toward police, the "why" of such attitudes, and what might be done to change such attitudes. Various factors to be considered when organizing a community relations detail or program. (3 hrs. lect.)

POLITICAL SCIENCE (POLSC)

INSTRUCTOR: Noel Grogan.

POLSC 55 **Problems in Hawaii Politics (3)**
A study of the major issues concerning contemporary Hawaii politics at both the state and local level. This course includes a survey of problems involving political responsibility, political participation, civil liberties, and the role of governmental agencies and other political groups and organizations in the social and economic life of the community. Problems which students will face in their day-to-day life in the Hawaii community will be emphasized. (3 hrs. lect.)

POLSC 110 Introduction to Political Science (3)
An introduction to political problems, systems, ideologies, and processes offered through five sub-courses: (A) political theory/philosophy; (B) international relations; (C) comparative politics/American government; (D) decision making/judicial process/public law; (E) selected subjects. Each sub-course may be taken by an individual student for credit. (3 hrs. lect.)

POLSC 210 Political Participation (3)
Prerequisite: Political Science 110 or consent of instructor.
Political Participation will acquaint the student with a variety of political concerns facing contemporary society. Concerns within Hawaii political systems will be emphasized. Political science research methods and theories related to elections, legislative and executive bodies, corporate, labor union and governmental interaction, lobbying and citizen action programs will be discussed and students will be required to directly involve themselves in a selected area of concern and complete an elementary research project related to their involvement. (3 hrs. lect.)

PROGRAM FOR PARAPROFESSIONALS IN HUMAN SERVICES (PPHS)

PPHS 23 Introduction to Social Services (3)
This course presents an overview of social services as an expression of society's concern for human welfare; American social services programs, their heritage, their present philosophy related to recognized values of a democratic society; types of problems to which social services are addressed; social services responsibilities of federal, state, and local governments; public responsibility versus voluntary effort to deal with social problems; the interdependence of social, cultural, political, and economic factors in social services; future trends in social services. Emphasis is on the role of the social services aide.

PPHS 24 Interviewing in Human Services (3)
This course covers the interview, the meaning of representing a government agency, human relations in interviewing, confidentiality, beginning the interview, giving information and explanation, handling complaints and criticism, ending the interview.

PPHS 101V Work Practicum/Education (1-3)
Supervised work experience. Individualized in-service training in education. May be repeated until 12 credits are earned. Responsibilities to increase with each repeat. Concurrent enrollment in PPHS 111 is recommended.

PPHS 102V Work Practicum/Community Service (1-3)
Supervised work experience. Individualized in-service training in community service. May be repeated until 12 credits are earned. Responsibilities to increase with each repeat. Concurrent enrollment in PPHS 111 is recommended.

PPHS 103V Work Practicum/Health (1-3)
Supervised work experience. Individualized in-service training in health. May be repeated until 12 credits are earned. Responsibilities to increase with each repeat. Concurrent enrollment in PPHS 111 is recommended.

PPHS 104V Work Practicum/Corrections (1-3)
Supervised work experience. Individualized in-service training in corrections. May be repeated until 12 credits are earned. Responsibilities to increase with each repeat. Concurrent enrollment in PPHS 111 is recommended.

PPHS 105V Work Practicum/Office Work (1-3)
Supervised work experience. Individualized in-service training in office work in a human service agency. May be repeated until 12 credits are earned. Responsibilities to increase with each repeat. Concurrent enrollment in PPHS 111 is recommended.

PPHS 106V Work Practicum/Elderly Services (1-3)
Supervised work experience. Individualized field experience in an agency serving the elderly. May be repeated until 12 credits are earned. Responsibilities to increase with each repeat. Concurrent enrollment in PPHS 111 is recommended. (Final Curriculum Committee Approval pending.)

PPHS 111 Work Practicum Seminar (1)
Seminar course designed to provide an opportunity for the student to discuss problems that are experienced in work practicum and other courses. Counseling, guidance, problem-solving and evaluating experiences. May be repeated. Students must be concurrently enrolled in PPHS 101, 102, 103, 104, 105 or 106.

PPHS 140 Developmentally Based Care of the Very Young Child (3)
Skills and knowledge necessary for quality care of infants and toddlers. Units to be presented include: physical care of the child, care in emergencies and sickness, food for the young child, observation growth and development, learning, guidance, working with parents, and general management of a small day care operation. The units will be presented in various levels of complexity according to individual student's needs.

PPHS 200V Special Studies in Human Services I (1-3)
Workshop, project, or readings in methods or problems in human services for paraprofessionals: (1) general human services, (2) general education, (3) early childhood education, (4) elementary education, (5) vocational/business education, (6) liberal arts education, (7) community service, (8) health, (9) corrections, (10) office work in human service agencies, (11) elderly services. May be repeated for credit.

PPHS 201V Special Studies in Human Services II (1-3)
Workshop, project, or readings in methods or problems in human services for paraprofessionals: (1) general human services, (2) general education, (3) early childhood education, (4) elementary education, (5) vocational/business education, (6) liberal arts education, (7) community service, (8) health, (9) corrections, (10) office work in human service agencies, (11) elderly services. May be repeated for credit.

PPHS 202V Special Studies in Human Services III (1-3)
Workshop, project, or readings in methods or problems in human services for paraprofessionals: (1) general human services, (2) general education, (3) early childhood education, (4) elementary education, (5) vocational/business education, (6) liberal arts education, (7) community service, (8) health, (9) corrections, (10) office work in human service agencies, (11) elderly services. May be repeated for credit.

PPHS 203V Special Studies in Human Services IV (1-6)
Workshop, project, or readings in methods or problems in human services for paraprofessionals: (1) general human services, (2) general education, (3) early childhood education, (4) elementary education, (5) vocational/business education, (6) liberal arts education, (7) community service, (8) health, (9) corrections, (10) office work in human service agencies, (11) elderly services. May be repeated for credit.

PPHS 215 Introduction to Community Work Methods (3)
Primarily designed for the paraprofessional social service aides in Head Start and other human service programs. Course will relate the theories and practices of social work to performance standards required of social service aides.

PPHS 216 Introduction to Working with Groups (3)
This course will attempt to relate Social Work Group work principles and theories for practical application for paraprofessional social service aides in Head Start and related programs. Prerequisite: PPHS 215. (Final Curriculum Committee Approval pending.)

PPHS 230 Introduction to Corrections (3)
Survey of American corrections systems showing relationship between law enforcement, courts and corrections, legal rights of prisoners, Hawaii Penal Code and concepts of Hawaii Corrections Master Plan. (Final Curriculum Committee Approval pending.)

PPHS 231 Contemporary Practices in Corrections (3)
Survey of theory and contemporary practices of corrections in institutional and community based settings. (Final Curriculum Committee Approval pending.)

PPHS 232 Interviewing in Corrections Work (3)
Theory and practice of interviewing as it related to correctional settings. (Final Curriculum Committee Approval pending.)

PPHS 233 Individual and Group Counseling in Corrections (3)
Basic concepts for influencing human behavior. Casual on-going counseling; formal individual counseling; group counseling. Survey of innovative counseling techniques; potential and limits of paraprofessionals in counseling. Special emphasis on application in correctional settings. (Final Curriculum Committee Approval pending.)

PPHS 250V Child Development Associate Training Program I (1-10)
Competency-based training to prepare child care specialist with the basic competencies to assume primary responsibility for the daily activities of groups of preschool children in center-based programs. Emphasis is on field training and credit by assessment. May be taken concurrently with PPHS 251, 252.

PPHS 251V Child Development Associate Training Program II (1-10)
Competency-based training to prepare child care specialist with the basic competencies to assume primary responsibility for the daily activities of groups of preschool children in center-based programs. Emphasis is on field training and credit by assessment. May be taken concurrently with PPHS 250, 252.

PPHS 252V **Child Development Associate Training Program III (1-10)**
Competency-based training to prepare child care specialist with the basic competencies to assume primary responsibility for the daily activities of groups of preschool children in center-based programs. Emphasis is on field training and credit by assessment. May be taken concurrently with PPHS 250, 251.

PSYCHOLOGY (PSY)

INSTRUCTORS: Caroline Blanchard, Charles Mast.

PSY 54 **Industrial Psychology and Personal Adjustment (3)**
This course is a survey of the psychological principles of human behavior and their application to personal adjustment, both in life in general and in the employer-employee relationship in particular. (3 hrs. lect.)

PSY 100 **Survey of Psychology (3)**
A survey of factors influencing human and animal behavior, including genetics, brain-behavior relationships, learning, and socialization. (3 hrs. lect.)

PSY 110 **Psychology of Adjustment (3)**
This course deals with the factors involved in understanding and improving adjustment needs, frustrations, conflicts, anxieties, patterns of adjustment. General concepts of mental health are also discussed. (3 hrs. lect.)

PSY 112 **Introductory Laboratory in Psychology (3)**
Prerequisite: PSY 100
An introduction to experimental techniques in the study of behavior. Laboratory studies of learning, emotion, behavior genetics, and brain-behavior relationships will illustrate how scientific information is gathered. (2 hrs. lect.; 2 hrs. lab)

PSY 214 **Learning and Motivation (3)**
Major conditions influencing learning and forgetting: the role of practice, reward, motivation, drive and emotion; theoretical interpretations of learning and motivation. (3 hrs. lect.)

REFRIGERATION AND AIR CONDITIONING (RAC)

INSTRUCTORS: Thomas Combs, Thomas De Laura.

RAC 21 **Fundamental of refrigeration (5)**
Co-requisites: RAC 22 & 27; MATH 18
Principles of Physics applicable to mechanical and absorption cycles. Heat energy, heat transfer, properties of matter, change of state, laws of gases, termperature-pressure relationship, thermodynamic principles in the mechanical cycle, compressors, condensers, receivers, refrigerant controls, evaporators and accessories. (5 hrs. lect.)

RAC 22 **Refrigeration Laboratory I (5)**
Co-requisites: RAC 21 & 27; MATH 18
Hand tools, fasteners, special refrigeration tools, tube bending, flaring, soldering, compressor overhaul, condensing unit overhaul, refrigeration system construction, operation, test and repair (15 hrs. lab.)

RAC 23 **Advanced Refrigeration (5)**
Prerequisite: RAC 27
Co-requisites: RAC 24 & 28
Commercial systems: application, installation, servicing, heat loads and piping. Absorption principles and special refrigeration devices and application. (5 hrs. lect.)

RAC 24 **Refrigeration Laboratory II (5)**
Co-requisites: RAC 23 & 28
A continuation of RAC 22. Advanced maintenance, trouble shooting and repair of domestic and commercial units. (15 hrs. lab.)

RAC 27 **Refrigeration Electricity (4)**
Co-requisites: RAC 21 & 22; MATH 18
D.C. and A.C. theory and circuitry including vector analysis of A.C. circuits. A.C. motor theory, relays, overloads, line starters and motor control circuitry.

RAC 28 **Applied Electricity (2)**
Co-requisites: RAC 23 & 24
Meters, motors, line starters and electrical devices with emphasis on refrigeration and air conditioning circuitry. (1 hr. lect.; 3 hrs. lab.)

RAC 41 **Psychrometry and Cooling Load (5)**
Prerequisite: RAC 28; Co-requisite: RAC 42
Chemistry of air, air and human comfort, psychrometric properties of air, the psychrometric chart, problems for the conditioned air supply, conduction, solar, transmission, occupancy and equipment heat gains and losses, coil load and total air supply. (5 hrs. lect.)

RAC 42 **Air Conditioning Machinery Lab I (5)**
Co-requisite: RAC 41
Equipment installation, check-out and start-up procedures. Routine maintenance procedures, field work on campus installations and operations of a maintenance shop. (15 hrs. lab.)

RAC 43 **Air Distribution and Air Conditioning Systems (5)**
Prerequisites: RAC 42; Co-requisite: RAC 44
Duct sizing, duct devices, system design, system balance, control systems, double-duct systems, hydraulic systems, centrifugal systems and heat pumps. (5 hrs. lect.)

RAC 44 **Air Conditioning Machinery Lab II (5)**
Co-requisite: RAC 43
A continuation of RAC 42. Advanced maintenance, trouble shooting, system balance, control set-up, water testing and engineering studies on central station chill water air conditioning system and operation of a maintenance shop. (15 hrs. lab.)

READING (READ)

INSTRUCTORS: Sonia Chess, Joyce Henna, Gloria Hooper.

READ 001 **College Communication Skills/Reading and Study Techniques (3)**
This course is to develop techniques essential to reading general and technical materials. Vocabulary skills and rate of comprehension are developed and techniques for effective study in content areas are developed and applied. Does not satisfy degree requirements. Formerly ENG 10. (3 hrs. lect.) Grade on CR-N basis.

READ 101 **Developmental and Speed Reading**
Improvement in college and adult level reading with emphasis on increasing reading rate and comprehension through techniques of phrase reading, skimming, and vocabulary development.
Formerly ENG 50. (3 hrs. lect.)

RELIGION (REL)

INSTRUCTOR: David Ball.

REL 150 **World Religion (3)**
Introduction to world's living religions: Hinduism, Buddism, Shintoism, Confucianism, Taoism, Judaism, Christianity, Islamism. (3 hrs. lect.)

REL 151 **Meaning of Existence (3)**
Introduction to basic ideas and issues of contemporary religious thought related to the question: "What is the meaning of existence?" (3 hrs. lect.)

REL 200 **Understanding the Old Testament (3)**
Study of developing beliefs and practices of Hebrew religion as set forth in the Old Testament. Emphasis on meaning of its faith for the modern world.

REL 201 **Understanding the new Testament (3)**
Origin and development of early Christian message as set forth in New Testament, with special attention to Jesus and Paul.

SCIENCE (SCI)

SCI 121 **Introduction to Science—Biological Science (4)**
Scientific approaches, life characteristics, ecological succession, environment, science and society. (3 hrs. lect.; 3 hrs. lab.)

SCI 122 **Introduction to Science—Physical Sciences (4)**
Science and modern society. A survey of astronomy, physics, chemistry, and geology, (3 hrs. lect.; 3 hrs. lab.)

SHEET METAL AND PLASTICS TECHNOLOGY (SMP)

INSTRUCTORS: Charles Beach, Federick J. Shine.

SMP 21 **Hand Tool and Machine Processes (4)**
Co-requisite: SMP 22 and 23
Skills and safety practices in the use of hand tools and machines. The techniques of soldering, drilling, punching, riveting, seaming, and other tools and machine operations. The characteristics and uses of sheet metal, supplies, fastening devices and plastics. (2 hrs. lect.; 6 hrs. lab.)

SMP 22 **Fabrication Processes (Architectural) (4)**
Co-requisite: SMP 21 and 23
Emphasis on various shaped gutters, gutter miters, hangers, flashing of all types, downspout, expansion joints and other similar work. Standard installation practices. (2 hrs. lect.; 6 hrs. lab.)

SMP 23 **Introduction to Surface Development (3)**
Co-requisite: SMP 21 and 22
Construction of geometrical figures. Concept of multi-view drawings and the planes of projection. Principles of parallel and radial line development and triangulation. Simple patterns. (3 hrs. lect.)

SMP 24 **Advanced Fabrication Processes (Architectural) (4)**
Prerequisite: SMP 23; Co-requisites: SMP 25 and 26
Skills in the fabrication of mitered transitional roof jacks, cornices, skylights, louvers, roof ventilators, and complex roofing seams. Different methods of installation. (2 hrs. lect.; 6 hrs. lab.)

SMP 25 **Air Conditioning Fabrication (4)**
Co-requisites: SMP 24 and 25
Training in fabricating air conditioning and ventilating duct work. Seams, locks, hangers, fastening devices, vaned turned elbows and other basic fittings that are commonly used. Standard installation practices. (2 hrs. lect.; 6 hrs. lab.)

SMP 26 **Pattern Development I (3)**
Co-requisites: SMP 24 and 25
Patterns for various types of transitions. Square to round, oval to round and other fittings in this area. Patterns for the basic fittings that are used in air conditioning work. (3 hrs. lect.)

SMP 29 **Sheet Metal Architectural Design (2)**
Prerequisite: ADT 21
This course provides the sheet metal experiences that will enable the student to appreciate the relation between design and sheet metal practices. The manufacture, properties, and application to the trade of the various metals and supplies used in the sheet metal industry are studied. This is open to all building trade students; designed primarily for architectural majors. (2 hrs. lect.)

SMP 41 **Advanced Air Conditioning Fabrication (4)**
Prerequisite: SMP 26; Co-requisites: SMP 42 and 43
Fabrication of complex fittings in both high and low velocity air conditioning systems. Various types of reinforcing and transverse seams, sealants and insulation. (2 hrs. lect.; 6 hrs. lab.)

SMP 42 **Plastic Fabrication (4)**
Co-requisites: SMP 41 and 43
Skills in fabricating and welding polyvinyl chloride plastic. Fabrication and sealing of fiber glass ducts. Basic fabrication processes are included. (2 hrs. lect.; 6 hrs. lab.)

SMP 43 **Pattern Development II (3)**
Prerequisite: SMP 26; Co-requisites: SMP 41 and 42
In this course patterns are developed for low, medium and high pressure air conditioning systems. Patterns for fittings used in blow pipe work are included in this course. (3 hrs. lect.)

SMP 44 **Blow Pipe Fabrication (4)**
Co-requisite: SMP 45
The emphasis is on round work in such areas as blow pipe, air conditioning duct, and ventilation systems. Included in this course is the fabrication of canopies and hoods for machines. (2 hrs. lect.; 6 hrs. lab.)

SMP 45 **Advanced Fabrication (General) (4)**
Prerequisite: SMP 41; Co-requisite: SMP 44
The emphasis of this course is on fabricating complex work in all areas of sheet metal. Field trips to shops that specialize in kitchen equipment; spiral pipe and other specialty shops are part of this course. (2 hrs. lect.; 6 hrs. lab.)

SMP 46 **Pattern Development III (3)**
Co-requisites: SMP 44 and 45
Pattern development, emphasizing complex, intersecting problems and short-cut methods that are practical in industry. (3 hrs. lect.)

SMP 47 **Plastic Welding and Fabrication I (2)**
Prerequisite: SMP 42 or can be taken concurrently
In this course the student will learn to work with polypropylene plastic. Fitting and objects peculiar to the sheet metal trade will be welded and fabricated. (1 hr. lect.; 3 hrs. lab.)

SMP 48 **Plastic Welding and Fabrication II (2)**
Prerequisite: SMP 42
In this course the student will learn to work with polyethylene and acrylics plastic. Fitting and objects peculiar to the sheet metal trade will be welded and fabricated. (1 hr. lect.; 3 hrs. lab.)

SOCIOLOGY (SOC)

INSTRUCTORS: David Cleveland, Meda Chesney Lind.

SOC 51 **Marriage and the Family (3)**
An introduction to the family and its relation to the larger social structure. Emphasis will be placed on problems of illegitimacy, mate selection and marriage, role relation within the family, dissolution of the family, dissolution of the family patterns. (3 hrs. lect.)

SOC 100 **Survey of General Sociology (3)**
Basic social relationships, norms, social structures and processes affecting social change. (3 hrs. lect.)

SOC 152 **Introduction to the Family as a Social Institution (3)**
This course offers a sociological study of the modern family. As such the class will focus on both the place of this family system in history and recent changes in its structure. Implications of shifts in these areas will be reviewed: male and female sex roles (women's liberation), birth control, sexual behavior, attitudes toward divorce and parenthood, and the erosion of monogamy (open marriage). Cross cultural comparisons will also be drawn to gain additional perspective on the Contemporary American family. Finally, the role of the family in the larger society will be explored. (3 hrs. lect.)

SOC 210 **Survey of Social Problems (3)**
Prerequisite: SOC 100
Introduction to social problems will acquaint the student with the variety of social problems facing our society today. Local problems will be emphasized. Sociological research and theories related to crime and delinquency, drug and alcohol abuse, sexual deviance, ethnic relations and family disorganization will be discussed and students will be required to conduct a small research project in a selected area. (3 hrs. lect.)

SOCIAL SCIENCE (SOCSC)

SOCSC 200 **Human Sexuality (3)**
Human Sexuality as a course will provide fundamental information facilitating the student's understanding of human sex and reproduction. The course will create a healthy atmosphere for the discussion of these matters. The core of the course will be presented through video tapes, films, slides, lectures and guest speakers. Study sessions will be held to discuss these presentations in order to orient the student to the objectives of the course. (3 hrs. lect.)

SPEECH (SP)

INSTRUCTORS: Doric Little, Walter McGoldrick, Alan Yonan.

SP 45 **Introduction to Speech (3)**
Designed for students interested in basic speech. Emphasis will be based on developing self-confidence, poise, and oral fluency in practical situations where communication is important. (3 hrs. lect.) Grade on CR-N basis.

SP 151 **Introduction to Speech (3)**
This basic course introduces students to principles of inter-personal communication. In addition to discussing theoretical materials students have opportunities to experience speech in a variety of informal and formal activities, including person-to-person, small group, oral readings, and public address situations. (3 hrs. lect.)

SP 251 **Introduction to Public Speaking (3)**
Prerequisite: SP 151
Designed to help students prepare and present speeches; the steps necessary and the rhetorical theory behind public speaking. (3 hrs. lect.)

SP 253 **Argumentation and Debate (3)**
Prerequisite: SP 151 or Consent of Instructor
Argument as a technique in the investigation of social problems; formal and informal practice in the use of evidence, proof, refutation, and argument. (3 hrs. lect.)

WELDING TECHNOLOGY (WELD)

INSTRUCTORS: Charles Kim, Stanley Torricer, Shizuo Yoshimoto.

WELD 21 **Basic Oxy-acetylene Cutting of Ferrous Metals (3)**
Introduction to the safe operation of the oxy-acetylene equipment. Fundamentals of oxy-acetylene process. Cutting of ferrous metals by various methods. Safe operation of sanders and grinder. (6 hrs. lec./demo.)

WELD 22 **Basic Arc Welding of Ferrous Metals (5)**
Introduction to the operation of the various types of arc welding equipment and the welding of ferrous metals in the flat position. Safe operation of the metal shear and abrasive cutter. (3 hrs. lect.; 6 hrs. lab.)

WELD 23 **Intermediate Arc Welding of Ferrous Metals (5)**
Co-requisite: WELD 22
Introduction to horizontal, vertical and overhead position welding. (3 hrs. lect.; 6 hrs. lab.)

WELD 24 **Welding Fabrication Techniques and Procedures (5)**
Introduction to layout and fabrication of welded structures, jigs, and fixtures. Interpretation and practical application of blueprints and sketches. (3 hrs. lect.; 6 hrs. lab.)

WELD 26 **General Welding (1) for Non-majors**
Basic arc welding. Safe operation of machines and equipment. Fundamentals of arc welding ferrous metals. Introduction to oxy-acetylene cutting. (2 hrs. demo./lab.)

WELD 27 **General Welding (1) for Non-majors**
Basic oxy-acetylene welding. Introduction to the safe operation of oxy-acetylene equipment. Fundamentals of fusion welding of ferrous metals in various positions. Fundamentals in brazing and silver soldering of ferrous and non-ferrous metals. Introduction to oxy-acetylene cutting. (2 hrs. demo./lab.)

WELD 40 **Welding for Machine Shop Technology (3)**
Introduction to the various methods of welding. Including arc, oxy-acetylene and oxy-acetylene cutting. (3 hrs. lect.; 6 hrs. lab.)

WELD 41 **Advanced Arc Welding of Ferrous Metals (3)**
Prerequisite: WELD 23
Advanced techniques in arc welding and preparation for the qualification test in horizontal, vertical and overhead positions. (6 hrs. lect./demo.)

WELD 42 **Welding Qualification Procedures and Test and Pipe Welding (3)**
Prerequisite: WELD 41 or consent of instructor
Introduction to qualification procedures. Testing of welded specimens by the guided blend test and other methods. (6 hrs. lect./demo.)

WELD 43 **Tungsten Inert Gas (TIG) and Metallic Inert Gas (MIG) Welding (3)**
Prerequisite: Consent of instructor
Introduction to the tungsten gas (TIG) and metallic inert gas (MIG) methods of welding aluminum and stainless steel. (6 hrs. demo./lab.)

WELD 44 **Special Processes in Arc and Oxy-Acetylene Welding (5)**
Preparation of pipe joints and the arc welding of pipes in all positions. Identification and welding of ferrous and non-ferrous metals by the arc and oxy-acetylene process. (3 hrs. lect.; 6 hrs. lab.)

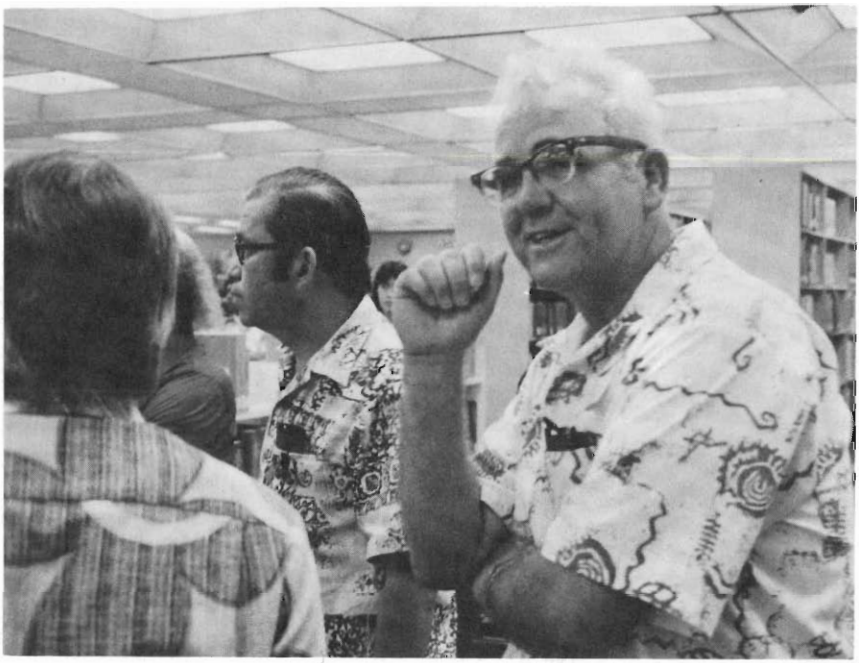
ZOOLOGY (ZOOL)

INSTRUCTOR: Charles R. Eddinger.

ZOOL 101 **Principles of Zoology (4)**
Living animals, their structure, physiology, development, reproduction, evolution, habits, ecology, and their relationship to other living organisms and the environment. (3 hrs. lect.; 3 hrs. lab.)

ZOOL 230 **Fundamentals of Ecology (4)**
Prerequisites: BOT 101, ZOOL 101, or SCI 121.
A study of the relations of living things to their environment. Lectures will deal with basic ecological principles and concepts for both plants and animals. Laboratories will be field trips to various types of ecological habitats on Oahu. (3 hrs. lect.; 3 hrs. lab.)

ZOOL 240 **Ethology (4)**
Prerequisites: BOT 101, ZOOL 101, or SCI 121.
The interplay of exogenous (outside the animal) and endogenous (within the animal) factors in the control and development of animal behavior are explored. The various types of social cooperation—mating behavior, family and group life, and fighting are also explored. (3 hrs. lect.; 3 hrs. lab.)



Administration and Faculty

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UNIVERSITY OF HAWAII

MATSUDA, FUJIO ..... President

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Donald Y. Yanagihara ..... Dean of Instruction
Lawrence T.C.C. Ako ..... Acting Dean of Student Services
Herbert P. Halberg ..... Assistant Dean of Instruction
Peter R. Kessinger ..... Assistant Dean of Instruction
Alan M. Yonan ..... Assistant Dean of Instruction
Bob Hirata ..... Director of Business Affairs

HAWAII COMMUNITY COLLEGE

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GOTO, ALFRED H. ..... Acting Dean of Instruction

HONOLULU COMMUNITY COLLEGE

YOSHIOKA, CLYDE K. ..... Provost
YANAGIHARA, DONALD Y. ..... Dean of Instruction
AKO, LAWRENCE T.C.C. ..... Acting Dean of Student Services

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HAEHNLEN, FREDERICK P. ..... Provost
NAKAMOTO, HARRIET H. ..... Dean of Instruction
OHARA, RALPH ..... Dean of Students

KAUAI COMMUNITY COLLEGE

WHITE, EDWARD T. ..... Provost
KOHASHI, DOROTHY ..... Acting Dean of Instruction
FUJIUCHI, GUY ..... Dean of Student Services

LEEWARD COMMUNITY COLLEGE

MIWA, RALPH M. ..... Provost
KIYUNA, KENNETH ..... Dean of Instruction

MAUI COMMUNITY COLLEGE

MOIKEHA, SANAE ..... Provost
LUNTEY, HAROLD G. ..... Dean of Instruction

WINDWARD COMMUNITY COLLEGE

KING, LEROY ..... Provost
SAKAGUCHI, MELVYN ..... Dean of Educational Services

FACULTY

AKO, LAWRENCE T. C. C. ..... Counselor
B.S., University of Hawaii; advanced work, Stout State University, State University of Iowa, University of Hawaii; Professional Counseling Certificate, Hawaii.

APAU, ROBERT JR. ..... Machine Shop Technology
B.A., University of Hawaii; advanced work, San Jose State College, University of Hawaii.

AU, WILLIAM ..... Architectural Drafting
Registered Professional Architect. State of Hawaii.

BALL, DAVID P. ..... Humanities
B.A., M.Ed.; St. Mary's College, Minnesota; Diploma in Theology (Cours Moyen), Institute des Ecole Chreitiens, Roma, Italy; graduate work, University of Hawaii; Loyola University, Chicago.

BEACH, CHARLES J. ..... Sheet Metal
Construction Supervisor, U.S. Navy; Professional Teaching Certificate, Hawaii; advanced work, University of Hawaii.

BERTRAM, ALICE ..... Mathematics
M.A., B.A., University of California. (on leave)

BLANCHARD, CAROLINE (MRS.) ..... Social Science
B.A., Hollins College; M.A., University of Iowa; Ph.D., University of Hawaii.

BOURASSA, DONALD J. ..... Physics
B.S., University of California at Berkeley; M.S., University of Hawaii; advanced work, University of Oregon, University of Hawaii.

BRAINERD, WILLIAM R. ..... Language Arts
B.A., Lehigh University; M.A., University of Chicago; advanced work, University of Chicago.

CALDWELL, C. DEWEY ..... History
A.A., Mt. San Antonio College; B.A., LaVerne College, Cum Laude; M.A., Claremont Graduate School, University of Hawaii, Utah State University.

CHANG, RAYMOND M. ..... Physics
B.A., University of Hawaii; M.S., New York University; advanced work, Purdue University, Stanford University, University of Illinois, University of Michigan, Bucknell University.

CHESS, SONIA M. (MRS.) ..... English
B.A., 5th Year Certificate, University of Hawaii, M.A.

CHUN, HARVEY C.K. ..... Carpentry
Graduate, Honolulu Vocational School.

CLEVELAND, DAVID R. ..... Social Science
B.A., Lake Forest College; M.A., University of Hawaii; advanced work, University of Hawaii.

COMBS, THOMAS ..... Refrigeration and Air Conditioning Technology
Instructors Training School, U.S. Navy; Industrial Management Certificate, San Diego State College; Professional Technical Teaching Certificate, Hawaii; A.S. degree, Honolulu Community College; advanced work, University of Hawaii.

CORREA, E. SHAN ..... Instructor
B.A., University of Washington; M.A., University of Hawaii; advanced work, University of Hawaii.

COUZENS, C. ROBERT ..... Electronic Technology
A.A., Martins Hollywood Radio Television Broadcasting School; A.S., Honolulu Community College; Professional Teaching Certificate, Hawaii; FAA Certified Aviation Education; FCC Licensed Radio Telephone; graduate of Missile and Electronics Systems Analyst School; U.S.A.F.; graduate, Navy Instructor School, San Diego; advanced work, Denver University, University of Hawaii, Southern Oregon College, Wichita State University, Colorado State University, University of Nebraska.

DE LAURA, THOMAS ..... Refrigeration and Air Conditioning Technology
Certificate, Honolulu Technical School; Certificate, Technical School Teacher, Hawaii; Refrigeration and Air Conditioning Supervisor and Instructor, Pearl Harbor Naval Shipyard; MDTA Home Appliance Instructor, Hawaii Department of Education.

DRIVER, HOWARD G. ..... English
B.A., M.A., University of Hawaii.

DUHAYLONGSOD, FELIX ..... Aviation Maintenance Technician
Aircraft Maintenance Technician School, U.S.A.F.; Flight Engineer Technician FAA Powerplant and Airframe Certificate, University of Hawaii.

EDDINGER, BOB ..... Biology
B.S., Clarion State College; M.S., Ph.D., University of Hawaii.

FOO, HERBERT Y.S. ..... Commercial Baking
B.S., University of Southern California; Dunwoody Industrial Institute, advanced work, University of Hawaii.

FUJIMOTO, ROY ..... Mathematics
B.A., University of Hawaii; advanced work, University of Hawaii, Polytechnic Institute of Brooklyn.

FUKUI, IRIS T. (MRS.).....Mathematics
B. Ed., M. Ed., University of Hawaii; advanced work, Stanford University.

GISO, FELIX N. .....Industrial Electricity
Bliss Electrical College; Provisional Technical Teaching Certificate, Hawaii; advanced work, University of Hawaii; Member Society of Cable Engineers.

GROGAN, NOEL.....Political Science
B.S., California State Polytechnic University; M.A. University of Hawaii.

HALBERG, HERBERT P..... Assistant Dean of Instruction
B.E., M. Ed., Colorado State University.

HALLETT, NORMAN F.....History
B.A., University of Miami; M.A., University of Illinois; advanced work, University of Washington.

HANEY, TERRENCE E. .....Humanities
B.A., M.A., Ph.L., Gonzaga University; Ph.D. (candid) University of Hawaii.

HANOHANO, EDGAR K.....Aviation Maintenance Technician
A.A., Los Angeles Trade Technical College; El Camino Junior College; B.A., California State College, Long Beach; FAA Airframe and Powerplant Mechanic Certificate; advanced work, University of Hawaii.

HIGA, SANDRA J. (MRS.)..... Graphic Artist
University of Arizona; U.S. Army Intelligence School; Art Instruction School.

HIGASHI, LOIS S. (MISS).....Science
B. Ed., University of Hawaii; M. Ed., University of Hawaii; advanced work, University of Hawaii.

HIRATA, BOB M.....Director of Business Affairs
B.B.A., University of Hawaii.

HIRATA, KAORU..... Architectural Drafting
B.A., Colorado State College; M.A., Colorado State College; advanced work, University of Hawaii.

HO, FRANK K.F. .....Automotive Mechanics Technology
U.S. Army Ordinance School; U.S. Army Engineer School; A.S., Honolulu Community College; B. Ed., University of Hawaii; advanced work, University of Hawaii.

HO, WILLIAM G. ..... Commercial Baking
William Hood Dunwoody Institute.

HOCK, JEROME A.....Applied Art
B.F.A., University of Missouri; M.F.A., Kansas City Art Institute; graduate Work, New York University; advanced work, University of Hawaii, North Texas State University.

HOOPER, GLORIA.....English
Whitman College; B.A., Eastern Washington State College; M. Ed., University of Hawaii; advanced work, University of Hawaii.

HUSSMAN, IRENE .....Cosmetology
Bonnie Beauty School; Cosmetology Instructor's Certificate, State of Hawaii, advanced work, University of Hawaii.

INOUYE, KENJI.....Mathematics
B. Ed., University of Hawaii; M.A., Teacher's College, Columbia University; advanced work, Stanford University, University of Hawaii, University of Illinois, Cornell University.

ISA, LEINAALA S.P. .....Assistant Fiscal Officer
A.A., Graceland College; B. Ed., 5th year certificate, University of Hawaii; advanced work, University of Hawaii.

JONES, ROBERT W..... Electronic Technology
Teaching Certificate, Hawaii; Navy Electronics Programs; Instructor's School, U.S. Navy; advanced study, University of Hawaii, Church College of Hawaii; National Radio Institute.

KALILIKANE, GEORGE W. ..... Machine Shop Technology
A.S., Honolulu Community College; Pearl Harbor Apprentice School; University of Hawaii, B. Ed., University of Hawaii.

KAMAURA, RAYMOND ..... Electronic Technology
Electronics Supervisor, Hawaiian Airlines; A.S., Honolulu Community College; B. Ed., University of Hawaii; advanced work, University of Hawaii.

KANESHIRO, RONALD I. ..... Veteran's Counselor
B.S., Pacific Union College; M.S., University of Wisconsin; Stout, advanced work, University of Hawaii.

KATAYOSHI, THOMAS S. ..... Architectural Drafting Technology
Bachelor of Architecture, Master of Architecture, University of Illinois.

KATO, CHESTER N. ..... Architectural Drafting
Certificate in Engineering Technology; B.A. in Architecture, M. Arch.; University of Hawaii.

KAWAKAMI, SUEO ..... Carpentry
Professional Technical Teaching Certificate, Hawaii; advanced work, University of Hawaii.

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B.A., M. Ed., Ph.D., University of Arizona.

KIM, CHARLES S.C. ..... Welding Technology
Graduate Apprentice, Pearl Harbor; Instructor, Pearl Harbor; A.S., Honolulu Community College; B. Ed., University of Hawaii; advanced work, University of Hawaii.

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B.A., M.A., Occidental College, Los Angeles; Doctoral Program, University of Hawaii (Manoa).

KUBOYAMA, KAZUKIYO ..... Apprentice Coordinator
B.S., Stout State College; advanced work, University of Hawaii.

LANSING, ROBERT E. ..... Coordinator, Police Science
A.A., San Bernadino Valley College; A.B., University of Redlands; graduate work, University of California, Berkeley; M. Ed., University of Hawaii.

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B.A., University of Alaska; M.A., Stanford University; advanced work, University of Copenhagen, Denmark, University of Michigan, University of Hawaii.

LEE, JAMES Y.L. ..... Industrial Electricity
Pearl Harbor Naval Shipyard, Electric Shop Training Coordinator and Apprentice Instructor; advanced work, University of Hawaii.

LIND, MEDA CHESNEY ..... Social Science
B.A., Whitman College; M.A., University of Hawaii; advanced work, University of Hawaii.

LINDLEY, SAMUEL E. ..... Assistant Librarian
Earlham College; B.A., University of Hawaii; Yale University; M.L.S., University of Hawaii; Ph.D., Cornell University.

LITTLE, DORIC A. ..... Speech
B.A., University of Washington; M.A., University of California at Davis.

LIU, SAMUEL ..... Physical Science
University of Illinois Chicago Circle, B.S. and M.S.

LOO, SHARYN ..... Registrar
B.A., University of California, Berkeley; M.A., University of Michigan.

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B.A., University of Hawaii.

MAST, CHARLES J. ..... Psychology
A.A., Chaffey Junior College; B.A., M.S. Ed., University of Southern California; M. Ed., University of Hawaii; Ph.D., Walden University.

McGOLDRICK, WALTER L. ..... Humanities
B.A., University of the South; M.A., George Peabody College; M.A., Columbia University; advanced work, University of Hawaii.

MIYAMASU, EDWARD T. ..... Architectural Drafting Technology
B.S.C.E., Purdue University; B.S., Architectural Engineering—University of Illinois; Master of Architecture—University of Pennsylvania; Registered Architect, State of Hawaii.

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B.A., University of Hawaii; advanced work, University of Hawaii; M. Ed., University of Hawaii.

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MONCKTON, INEZ M. (MRS.) ..... Cosmetology
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B.S., University of Nebraska; Nancy Childs School of Professional Modeling, Lincoln, Nebraska; M.S., University of Hawaii. Additional work at University of Hawaii.

OBAYASHI, HENRY Y. ..... Automotive Mechanics Technology

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Certificate, Honolulu Technical School; advanced work, University of Hawaii.

OHTA, THOMAS A. ..... Instructor, Geography
B.A., M.A., University of Hawaii; advanced work in curriculum and instruction, University of Hawaii.

PARKER, WADE T. ..... Chemistry, Physics
North Carolina State University; M. Ed., University of Virginia, University of Hawaii.

PEDERSEN, RAMSEY ..... Ethnic Studies & Futuristics
B.A., M.A., E.P.D.A., Community College Teaching Certificate, advanced work, University of Hawaii.

PEEBLES, JACQUELYN ..... Applied Arts
B.S., M.A., Florida State University.

PETERSON, BARBARA A. (MRS.) ..... Instructor, History
B.A., B.S., Oregon State University; M.S., Stanford University; advanced work, Sophia University, Tokyo (Fulbright); University of Hawaii.

PETRIS, PETER ..... Counselor
A.A., Los Angeles City College; B.A., Los Angeles State College; M. Ed., University of Hawaii; advanced work, University of Hawaii.

PINE, RONALD C. ..... Humanities
B.A., California State College at Fullerton; M.A., University of Hawaii.

PUCCETTI, ANDREW ..... Chemistry
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PUGARELLI, NOBUKO ..... Japanese
B.A., Waseda University; M.A., University of Hawaii; advanced work, University of Hawaii.

REEDER, JAMES C. ..... Mathematics
B.A., University of California at Los Angeles; M.A.T., Washington State University.

RYUSAKI, GEORGE ..... Automotive Mechanics Technology

SASAKI, RICHARD K. ..... Counselor
A.A., Graceland College; B.A., University of Northern Iowa; advanced work, University of Hawaii.

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B.S., Tuft College; M. Ed., University of Hawaii; advanced work, Arizona State University, University of Hawaii.

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Green Bay Beauty College; New York Antoine Styling School; Cosmetology Instructor's Certificate, State of Hawaii; advanced work, University of Hawaii.

SCOTT, GORDON A. ..... Aviation Maintenance Technology
University of Baltimore; Hillyer College/Tulane University; San Bernardino Valley College; A.A., Chaffey College; Military Specialist School; FAA Airframe and Powerplant Mechanic Certificate; University of Hawaii; Leeward Community College; A.S., Honolulu Community College.

SHINE, FREDERICK J. ..... Sheet Metal and Plastics
Professional Technical Teaching Certificate, Hawaii; advanced work, University of Hawaii; advanced work, Tyerson Steel, Chicago, Illinois; United McGill corporation Columbus, Ohio; Plastic-Vac Corporation, Charlotte, North Carolina; Kamweld Company, Norwood, Massachusetts; Pure-Aire Corporation, Los Angeles, California; Member of the "Society of Plastic Engineers."

SPOON, MADGE R. (MRS.) ..... Counselor
A.B., San Jose State University; M.A., San Francisco State University; graduate work, University of California at Berkeley, University of the Pacific, University of Hawaii.

TORRES, LAWRENCE E. ..... Electronic Technology
University of California at Los Angeles; Professional Technical Teaching Certificate, Hawaii; A.S., Honolulu Community College; B. Ed., University of Hawaii; advanced work, University of Hawaii. (on sabbatical)

TORRICER, STANLEY E. ..... Welding Technology
Honolulu Vocational School; International Harvester Maintenance; Hoffman Aircraft Institute, A.S., Honolulu Community College; advanced work, University of Hawaii.

UCHIDA, SAMUEL T. ..... Auto Body Repair and Painting Technology
Certificate, Honolulu Vocational School; advanced work, University of Hawaii; A.S., Honolulu Community College.

UEHIRA, WALTER H. ..... Automotive Mechanics Technology
B.S., Church College of Hawaii; Chrysler Corporation School; DeVilbiss Corporation School; Bear Manufacturing Company School; Sun Electric Corporation School; advanced work, University of Hawaii. United Motor Services, GM.

VEHLEWALD, MARY B. ..... Applied Arts
B.F.A., Stephens College.

WALLACE, JAMES E. ..... Art
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WARNER, FRANCIS K. ..... Automotive Mechanics Technology
Honolulu Technical School; Caterpillar Products and Instructor School; advanced work, University of Hawaii.

WHITTINGHILL, ROBERT S. ..... Aviation Maintenance Technician
Certificate, Pan American Training School; Professional Technical Teaching Certificate, Hawaii; FAA Airframe and Powerplant Mechanic Certificate; advanced work, University of Hawaii.

WILEY, WILLIAM J. ..... Director, Learning Resource Center
B.A., University of Southern California; M.S., Chapman College; M. Ed., University of Hawaii.

WILLAND, LOUIS A. ..... English
B.A., Barrington College; M.S., Eastern Connecticut State College; advanced work, University of Connecticut, University of Hawaii; M. Ed., University of Hawaii, candidate for Ph.D.; Laurence University; candidate for Ed. D.; University of Hawaii.

WONG, RICHARD K.H. ..... Automotive Mechanics Technology
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YAMADA, WILLIAM Y. ..... Automotive Mechanics Technology
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YAMAMOTO, CHARLES A. ..... Engineering Technology
B.S., University of Michigan; M.S., University of Santa Clara.

YANAGIHARA, DONALD Y. ..... Dean of Instruction
B.S., M.S., Bradley University; advanced work, University of Hawaii.

YONAN, ALAN M. ..... Assistant Dean of Instruction
B.A., M.A., Michigan State University; graduate work, University of Washington.

YOSHIKAWA, BENG POH (MRS.) ..... Counselor
B.A., University of Singapore; M. Ed., University of Hawaii; advanced work, Teacher's College, Columbia University, University of Hawaii.

YOSHIMOTO, SHIZUO ..... Welding Technology
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YOSHIOKA, CLYDE K. ..... Provost
Certificate, Honolulu Vocational School; B.S., M.S., Bradley University; graduate work, University of Hawaii, University of Maryland.

YOUNG, DONALD H.B. ..... Apprentice Instructor
B.A., Colorado State College; M. Ed., University of Hawaii; advanced work, University of Hawaii.

ZANE, LILLIAN S. (MRS.) ..... Fashion Arts
B.S., University of Hawaii.

YOSHINO, JAMES T. (Retired) ..... Advisor/Consultant, Auto Body Repair and Painting Technology
Professional Technical Teaching Certificate, Hawaii; advanced work, University of Hawaii; A.S., Honolulu Community College; B. Ed., University of Hawaii.

HEAD START

MATSUDA, KIMI (MRS.) ..... Project Manager, Head Start Supplementary Training
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JOB EXPERIENCE PROGRAM

KITA, ROBERT S. ..... Director of Training
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CAREER OPPORTUNITIES PROGRAM

KELLY, KAREN G. ..... Project Director, Career Opportunities Program
B.A., University of Cincinnati; M.A., Central Michigan University.

SENIOR CITIZENS CENTER

AMOR, CHARLES W.....Executive Director, Hawaii State Senior Center
A.B., Fresno State College; Advanced Certificate, Public Administration, University of Hawaii; Institute of Gerontology, University of Southern California.

YASUMORI, ELAINE K..... Individualized Services Coordinator Hawaii State Senior Center
B.S., Nursing, University of Hawaii.

GREENING, MECHELLE.....Group Activities Coordinator Hawaii State Senior Center
B.A., Liberal Arts, Arizona State University; Certified Therapeutic Recreation Worker.

KALIHI PALAMA EDUCATION CENTER

DOUTHIT, DOROTHY..... Director, Kalihi Palama Education Center
B.A., Wayne State University; M.A., Ph.D., University of Texas; advanced work in public administration, Central Michigan University; Professional Administration Certificate; State of Hawaii.

IOFI, MARGARET ..... Coordinator/Counselor, Samoan Demonstration Program, Kalihi Palama Education Center
Nursing School of Hospital of American Samoa; Mt. San Antonio College; Basic Education Instructor for Manpower, Hawaii; Adult Education, Hawaii.

TASAKA, GARY R.....Educational Center Lab Coordinator
B.A., University of Hawaii.

TRIO PROJECT

MACHADO, COLETTE ..... Talent Search Counselor
B. Ed., University of Hawaii.

MIYAMOTO, EDWARD T. .....Special Student Services Counselor, Trio Project
B.A., Biola College, California; advanced work, San Diego State College, University of Hawaii.

YOKOUCHI, HAROLD..... Trio Project Coordinator
B.A., University of Hawaii.

VOCATION EDUCATION—DISADVANTAGED PROJECT

HIROSE, SANDRA N. (MRS.) .....English
B. Ed., 5th year certificate, M.A., University of Hawaii.

KAGEHIRO, RACHEL U. (MRS.).....Mathematics
B.S., St. Mary College; 5th year certificate, University of Hawaii; Kapiolani Community College.

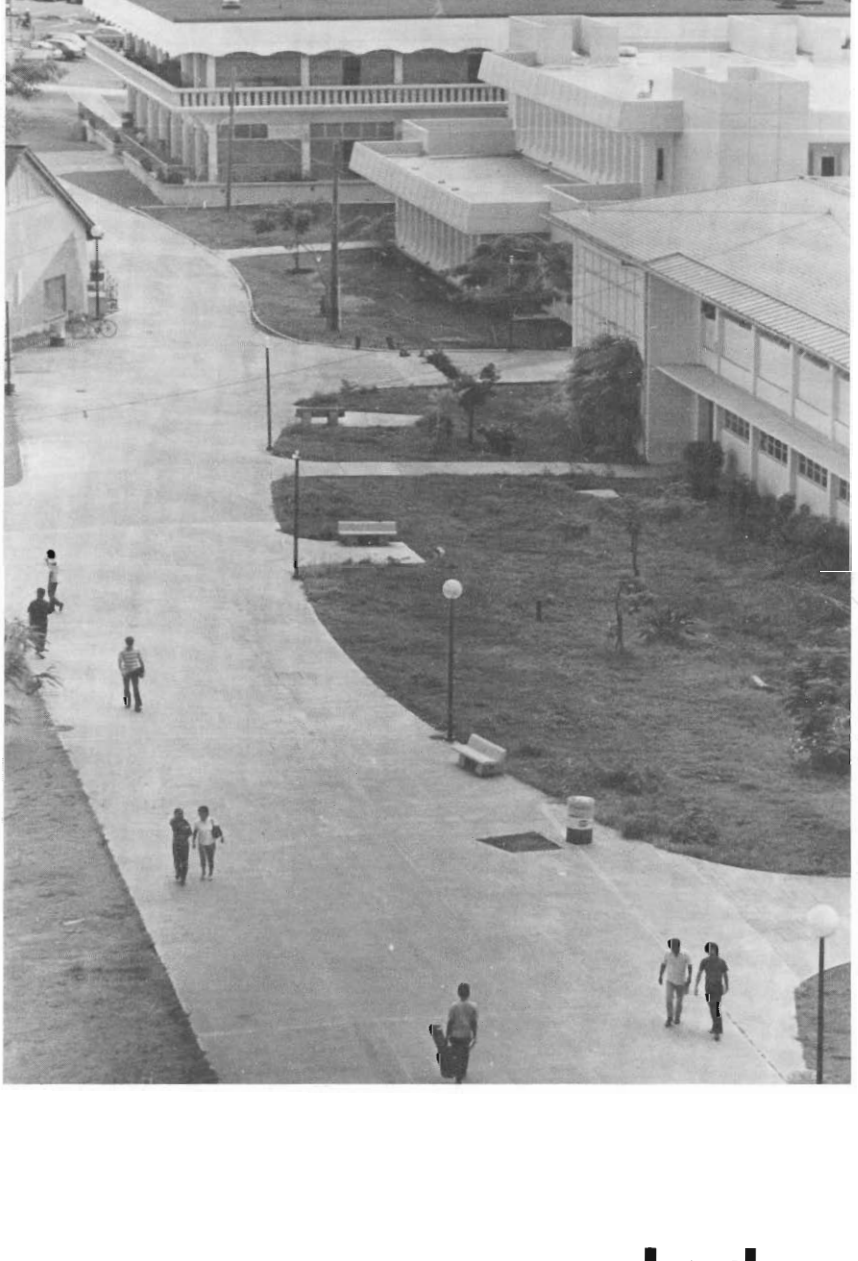
ROGERS, MARIA CONSUELO (MRS.) .....Mathematics

B.S. in Chemistry, University of Santo Tomas, Philippines; Registered Chemist certificate from the Philippine Board of Examiners for Chemists; Graduate work in Physics-Mathematics Education, De La Salle College Graduate School, Philippines; Ateneo University, Philippines; NSF Science Institute (at Tokyo), University of Hawaii.

VOCATION EDUCATION—HANDICAPPED

UESATO, ROSEMAE .....Counselor

B.A., University of Hawaii; M.S., California State University at San Francisco.



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