## Honolulu <br> Community College



1992-93<br>CATALOG

University of Hawaii

## DIRECTORY

|  |  | Building | Telephone Number |
| :---: | :---: | :---: | :---: |
| Applications |  | 6 | 845-9129 |
| Apprenticeship |  | 2 | 845-9245 |
| Career Development Center |  | 6 | 845-9130 |
| Financial Aid |  | 6 | 845-9116 |
| Fujio Matsuda Technology Training and Education Center |  | 2 | 845-9296 |
| Security | (daytime) | ) 6 | 845-9142 |
|  | (nighttime) | 2 | 845-9245 |
| All other departments (main switchboard) |  |  | 845-9211 |
| Hearing impaired individuals desiring information may contact the College by using the Telecommunications Device (TDD) relay service: 643-8833. |  |  |  |

# Honolulu <br> Community College 

University of Hawaii
1992-93


874 Dillingham Blvd.
Honolulu, Hawaii 96817
PH: (808) 845-9211
FAX: (808) 845-9173

This catalog provides general information about Honolulu Community College, its programs and services, and summarizes those major policies and procedures of relevance to the student. The information contained in this catalog is not necessarily complete. For further information, students should consult with the appropriate unit. This catalog was prepared to provide information and does not constitute a contract. The College reserves the right to, without prior notice, change or delete, supplement or otherwise amend at any time the information, requirements, and policies contained in this catalog or other documents.

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Page Makeup: Mike Oconnor, CMART Student
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CAD Drawings: Mervin Chang, Acting Assistant Dean of Instruction

The theme for the 1992-93 catalog is Education for the 21st Century. Some images of tomorrow in HCC's quest for technological excellence are shown in the photographs on these catalog pages. HCC will play a pivotal role in training a workforce capable of dealing with current and emerging technologies into the 21st century. To meet the challenges of the 21 st century, the College seeks to institutionalize change and to continually undergo improvement of all its processes.

The cover: Honolulu Community College's logo is the kukui nut leaf which signifies "enlightenment." Contained within the leaf is the flame of knowledge which forms the school's initials. The faint sphere image symbolizes the will to go beyond. The long horizontal lines illustrate moving forward in linear, organized fashion.

## 1992-1993 Academic Calendar

FALL SEMESTER 1992
August 17, Monday . . . . . . . . . . . . . . . . . . . . . . . . . . . Faculty Duty Period Begins
August 17, Monday . . . . . . . . . . . . . . Adds/Drops, Continuing Student Registration
August 18, Tuesday. . . . . . . . . . . . . . . . . . . .New Student Advising and Registration
August 19, Wednesday . . . . Add period for students whose classes were cancelled
August 19, Wednesday . . . . . . Adds/Drops, Late Registration Continuing Students
August 20, Thursday . . . . . . . . Late Registration for New and Continuing Students, Adds/Drops
August 21, Friday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .Admissions Day (Holiday)
August 24, Monday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . INSTRUCTION BEGINS
August 24-October 16 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Drop Period Continues
September 7, Monday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Labor Day (Holiday)
October 15, Thursday . . . . . . . . . . . . . . . . . . . Last Day to Apply for Fall Graduation
October 16, Friday . . . . . . . . . . . . . . . . . . . . . Last Day to Drop Courses, Last Day to
Withdraw Completely from College
October 23, Friday . . . . . . . . . . . . Last Day to Change Major into Closed Programs
November 3, Tuesday .General Election (Holiday)
November 11, Wednesday . . . . . . . . . . . . . . . . . . . . . . . Veterans' Day (Holiday)
November 12, Thursday . . . . . . . . Last Day for Students to Submit Incomplete ('I' ')
Make-up work from Spring 1992 and Summer 1992 to Instructors
November 19, Thursday . . . . . . . . . . . . Last Day for Instructors to Submit Students' Incomplete ('I'") Make-up Grades from Spring 1992
and Summer 1992 to the Records Office
November 16-24, Monday-Sunday Pre-Registration for Spring 1993
November 26, Thursday . . . . . . . . . . . . . . . . . . . . . . . . . Thanksgiving Day (Holiday)
November 26-27, Thursday-Friday . . . . . . . . . . Thanksgiving Recess
December 11, Friday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Instruction Ends
December 12-18, Saturday-Friday . . . . . . . . . . . . . . . . . . . . . . . Evaluation Period
December 18, Friday. . . . . . . . . . . . . . . . . . . . . . . . . . . . FALL SEMESTER ENDS
December 25, Friday. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Christmas (Holiday)

## SPRING SEMESTER 1993

| Adds/Drops, Continuing Student Registration |  |
| :---: | :---: |
|  |  |
| January 7, Thursday . . . . . . . . . . . . . . . . . New Student Advising and Registration |  |
| January 11, Monday. . . . . . Add period for students whose classes were cancelled |  |
| January 11, Monday . . . . . . Adds/Drops Late Registration for Continuing Student |  |
| January 12, Tuesday . . . . . . . . . . . . . . . . . . . . . New Student Late Registration |  |
| January 13, Wednesday . . . . . . . . . . . . . . . . . . . . . . . . . INSTRUCTION BEGINS |  |
| January 13-March 12 | Drop Period Continues |
| January 18, Monday . . . . . . . . . . . . . . . . . . . . Martin Luther King Day (Holiday) |  |
| February 15, Monday . . . . . . . . . . . . . . . . . . . . . . . . . . Presidents' Day (Holiday) |  |
| March 5, Friday . . . . . . . . . . . . . Excellence in Education Conference (no classes) |  |
| March 5, Friday. . . . . . . . . . . . . . . Last Day for Students to Submit Incomplete ('l' 1 ') Make-up Work from Fall 1992 to Instructors |  |
| March 11, Thursday | ast Day to Drop Courses, Last Day to Withdraw Completely from College |
| March 15, Monday . . . . . . . . . . . . . . . . . Last Day to Apply for Spring Graduation |  |
| March 19, Friday ........ .'.Last Day for Instructors to Submit Student's Incomplete |  |
| March 22-26, Monday-Friday . . . . . . . . . . . . . . . . . . Students' Spring Recess |  |
| March 24, Wednesday . . . . . . . . . Last Day to Change Major into Closed Programs |  |
| March 26, Friday . . . . . . . . . . . . . . . . . . . . . . . . . . . . .Prince Kuhio Day (Holiday) |  |
| April 9, Friday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Good Friday (Holiday) |  |
| April 11, Sunday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Easter (Holiday) |  |
| April 14-22, Wednesday-Thursday . . . . . . . . . . . . . . Pre-Registration for Fall 1993 |  |
| May 7, Friday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Instruction Ends |  |
| May 8-14, Saturday-Friday . . . . . . . . . . . . . . . . . . . . . . . . . Evaluation Period |  |
| May 14, Friday . . . . . . . . . . . . . . . . . . . . . . . . . . . . SPRING SEMESTER ENDS |  |
| May 14, Friday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Graduation |  |
| ay 16, Sunday | culty Duty Period Ends |

## SUMMER SESSION 1993

May 17, Monday. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1st Session Begins
June 25, Friday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1st Session Ends
June 28, Monday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2nd Session Begins
August 6, Friday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2nd Session Ends
Note: Weekend classes meet before Monday holidays/recesses and following Friday holidays/recesses. Exception: No classes will meet Easter Sunday.

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## General Information



## General Information

HISTORY OF THE COLLEGE
The origins of Honolulu Community College date to 1920 when it was established as the Territorial Trade School. In 1955, it was renamed the Honolulu Technical School, and in 1965, it became part of the University of Hawaii as a result of the Community College Act of 1964, legislation which provided for a system of comprehensive community colleges. In 1966, the Board of Regents approved the name Honolulu Community College and authorized it to grant Associate in Arts and Associate in Science degrees. At present, the College is one of seven community colleges in the State and one of four on the island of Oahu.

Between 1966 and 1976 Honolulu Community College experienced very rapid growth and evolved into a fully comprehensive community college. The College offers liberal arts instruction leading to the two-year Associate in Arts degree with transfer of credits to junior class standing at four-year institutions of the State. Honolulu Community College currently offers the Associate in Science degree and shorter certificate programs in more than thirty technical-occupational areas, integrated with a strong general education "core" to provide an educated citizenry for the workforce of the State of Hawaii.

The Main Campus of Honolulu Community College, a short distance from the heart of downtown Honolulu, occupies over twenty acres on Dillingham Boulevard in the Kalihi-Palama area. The campus also includes facilities near Honolulu International Airport for the Aeronautics Maintenance program, The Education Center for English as a Second Language, and automotive and heavy equipment shops on Kokea Street.

## ACCREDITATION

Honolulu Community College is a member of the American Association of Community and Junior Colleges and the Western Association of Schools and Colleges. Honolulu Community College has been continuously and fully accredited since 1970 by the Accrediting Commission for Community and Junior Colleges, Western Association of Schoois and Colleges.

## PHILOSOPHY

Honolulu Community College is committed to

1. A comprehensive offering of technical-occupational and liberal arts programs and community service
2. Open-door admissions and equal educational opportunity for all students regardless of their prior educational experience
3. Quality teaching
4. Affirmative action for non-traditional students
5. Responsiveness to the community's needs for up-to-date technical training.

## MISSION

As established by the Hawaii Community College Act of 1964, the purposes of Honolulu Community College are "to provide two-year college transfer and general education programs, semi-professional, technical, vocational, and continuing education programs, and such other educational programs and services as are appropriate to such institutions."

The State Apprenticeship Law states that "Related instruction for apprentices, coordination of instruction with job experiences, and the selection and training of teachers and coordinators for the instruction shall be the responsibility of the department of education or the community college division, University of Hawaii.'

Within the statewide mission for community colleges, Honolulu Community College's special emphasis is on developing and educating the future technical workforce of the State and providing students (including apprentices) with state-of-the-art knowledge and skills necessary in technical-occupational and liberal arts areas and thereby creating an educated, contributing and employable citizenry.

## NONDISCRIMINATION AND AFFIRMATIVE ACTION

The University of Hawaii is an Equal Opportunity/Affirmative Action Employer.
It is the policy of the University of Hawaii to comply with Federal and State laws which prohibit discrimination in University programs and activities, including but not necessarily limited to the following laws which cover students and applicants for admission to the University: Title VI of the Civil Rights Act of 1964 as amended (race, color, national origin); Age Discrimination Act of 1975 (age); Titles VII and VIII of the Public Health Service Act as amended (sex); Title IX of the Education Amendments of 1972 (sex, blindness, severely impaired vision); Section 504 of the Rehabilitation Act of 1973 (physical or mental handicap); and to comply with Federal and State laws which mandate affirmative action and/or prohibit discrimination in recruitment, hiring, training, promotion, and retention, including but not necessarily limited to the following laws which cover employees and applicants for employment: Title VII of the Civil Rights Act of 1964 as amended (race, color, national origin, religion, sex, pregnancy); Executive Order 11246 as amended (race, color, national origin, religion, sex); Equal Pay Act of 1963 as amended by Title IX of the Education Amendments of 1972 (sex); Age Discrimination in Employment Act of 1967 (ages 40-70); Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1974 (veteran's status); Section 503 and 504 of the Rehabilitation Act of 1973 (physical or mental handicap); Hawaii Revised Statutes, Chapter 76, 78, 378 (race, sex, age, religion, color, ancestry, political affiliation, physical or mental handicap, marital status, arrest and court record). The University strives to promote full realization of equal opportunity through a positive, continuing program on each campus. Accordingly, vocational education opportunities will be offered without regard to race, color, national origin, sex or handicap. American citizens or immigrants with limited English speaking skills will not be denied admission to vocational education programs.

In addition, employees and applicants for employment are protected under Title IX and Section 504.

As an integral part of its policy on Nondiscrimination and Affirmative Action, the Office of the President, University of Hawaii hereby declares and reaffirms its commitment to the University's pursuit on equal education and employment opportunity and further declares that any harassment of students or employees on the basis of
sex is prohibited and will not be tolerated. Complaints of this nature will be handled by the Honolulu Community College EEO/AA Coordinator.

Individuals designated to coordinate the Community Colleges' nondiscrimination and affirmative action programs are

Rg Logiakis (Education matters) Phone: 956-3865<br>EEO Officer (Employment matters) Phone: 956-3874<br>Office of the Chancellor for Community Colleges<br>2327 Dole Street<br>Honolulu, Hawaii 96822<br>Phone: 948-7471

Address inquiries to and obtain complaint forms and a copy of grievance procedures from

Honolulu Community College EEO/AA Coordinator (Lorry Suehiro, Personnel Officer, 847-9843)
Title IX Coordinator, Section 504 Coordinator (Beryl Morimoto, Acting Dean of Student Services, 845-9235)
Honolulu Community College
874 Dillingham Boulevard
Honolulu, Hawaii 96817

## DISCRIMINATION COMPLAINTS

Students, employees, or applicants for admission or employment who believe that they have been discriminated against on the basis of race, sex, age, religion, color, ancestry, physical, handicap, marital status, veteran's status or arrest and court record may file a complaint with the EEO/AA coordinator (Lorry Suehiro, 8479843, Bldg. 6, 2nd Floor). The EEO/AA coordinator will explain the available avenues of recourse and direct the person to the appropriate Hearing Officer.

Students may also file complaints of discrimination with the Office of Civil Rights, U.S. Department of Education, Old Federal Building, 50 United Nations Plaza, Rm. 239, San Francisco, California 94.102. Phone: (415) 556-7035.

## EDUCATIONAL FACILITIES

The main campus of Honolulu Community College has been almost totally rebuilt since 1970. Shops and laboratories equipped with appropriate tools and supplies are maintained for instructional programs in over thirty technical-occupational areas, and modern classrooms and laboratories have been built for liberal arts courses.

A trade-industrial complex provides up-to-date facilities for training in many trade areas. Students working toward associate degrees use the complex during the day in carpentry, refrigeration and air conditioning, and welding. Apprentices and journeyworkers in twenty different trades are trained in its shops and classrooms during evening hours and on weekends.

The Campus Center Building offers a modern central setting for student activities, as well as specialized instructional facilities for Commercial Art, Business, Engineering Technology, Architectural Drafting, Computer Science, and Music.

The Aeronautics Maintenance facility, located at 402 Aokea Street near Honolulu International Airport, includes completely equipped shops which meet Federal Aviation Agency requirements.

Housed in the renovated historic Palama Fire Station, The Education Center provides English as a Second Language Training and Immigrant Services.

Two transportation technology facilities are located on Kokea Street, makai of the main campus. The facilities house well-lighted classrooms and airy shops that complement both theoretical learning and hands-on training in Automotive Mechanics Technology and Heavy Equipment Maintenance and Repair. The Automotive facility is used extensively during the evening hours and on weekends for in-service skill training.

## LIBRARY

The Library occupies the first two floors of the Library/Classroom Building (BIdg. 7). It has an on-line computer public access catalog with terminals for student use; CD ROM magazine index with microfilm full-text journals; microfilm and microfiche reader/printers; and electronic typewriters.

The collection supports both the liberal arts and the technical curricula; special collections include an Automotive Technical Collection to support college courses and industry and a collection of Hawaii/Pacific materials.

## EDUCATIONAL MEDIA CENTER

The Educational Media Center is located on the third floor of Building 7 and contains facilities for the support of instruction. Among the services offered are: 1) duplication of study materials, tests and forms needed by the College and by student organizations, 2) production of graphic and photographic materials, 3) production and duplication of audio and video materials, 4) procurement and promotion of all types of audiovisual instructional materials and equipment.

## THE LEARNING CENTER

The Learning Center is a delivery system for campus-wide academic support services and alternative modes of learning/instruction, including computer-assisted instruction. Multimedia materials and equipment are used as integral or supplementary parts of courses or for independent learning. Support services include tutoring, testing, learning skills development, and learning styles diagnosis.

The Learning Center is located on the third floor of Building 7 adjacent to the Educational Media Center.

## COMPUTER LAB FACILITIES

The College has various computer labs to support the development of computer literacy as well as programming and computer-assisted drafting and design (CADD). The computer labs are located on the fourth and fifth floors of Building 2, in the Aeronautics, Commercial Art, Natural Science, Business and Office Administration departments, and in the Learning Center.

# FUJIO MATSUDA TECHNOLOGY TRAINING AND EDUCATION CENTER 

(Bldg. 2, Rm. 506; 845-9296)

Endowed by a significant gift to the UH Foundation, the Fujio Matsuda Technology Training and Education Center (MATSUDA TECHNOLOGY CENTER) serves as the technological bridge connecting Honolulu Community College with appropriate businesses and industries in Hawaii.

The Matsuda Center introduces emerging technologies to the community through workshops, seminars, and non-credit classes.

## TRANSPORTATION

Honolulu Community College is conveniently located where many bus routes cross in front of the campus.

Bus routes that travel on Dillingham Boulevard: 50 Honolulu-Ewa-Makakilo, 51 Honolulu-Makaha, 52 Wahiawa-Circle Island, 3 Navy, and 20 Waikiki-Pearlridge.

Bus routes that pass King \& Liliha/King \& Dillingham: 1 Kalihi-Kaimuki/Hawaii Kai and 2 Liliha.

There is limited parking on or near the campus. See parking permits.

## ILLICIT DRUGS AND ALCOHOL

Copies of policies governing the possession, consumption, serving and sale of illicit drugs and alcohol on the University of Hawaii, Honolulu Community College campus are available in the Student Health Office and the Office of the Chancellor for Community Colleges.

Campus-sponsored activities on campus that involve either the serving or selling of alcoholic beverages must be in compliance with applicable College/University policies and State laws.

In conformance with the existing law, University faculty, staff and students are not permitted to manufacture, distribute, possess, use, dispense or be under the influence of illegal drugs and/or alcohol as prohibited by State and Federal law, at Uni-versity-sponsored or approved events or on University property or in buildings used by the University for education, research or recreational programs. Consistent with its mission, the University will cooperate with law enforcement agencies responsible for enforcing laws related to the use of illegal drugs and alcohol. Students found in violation of this part shall be subject to the provisions of the student conduct code. Faculty and staff found in violation of this part are subject to disciplinary action as provided in collective bargaining agreements, University policy, and other applicable State laws and rules.

## SMOKING

In accordance with State Law and University policy, smoking is prohibited in campus buildings.

PARKING
Parking Regulations are available at the cashier's desk in the Administration Bulding.

## LETHAL WEAPONS

Lethal Weapons (Firearms, spear guns, and bows and arrows) are prohibited on campus except with specific prior permission of the Provost.

## Student Affairs



First Annual Tricycle Relay Race held February 1992.

## Student Affairs

The College offers students a wide range of services and activities throughout the academic year and summer months. Students are encouraged to seek individual or group counseling, testing, career and vocational exploration, and other related student services such as those listed below.

## Admissions Counseling

Counseling is available to prospective students to help them select appropriate programs. Admissions Counselors will assist students in assessing their educational needs, career interests, and academic qualifications. Information on the offerings and program requirements are provided to help students decide which program to undertake at the College.

## Advising for New Students

Advising is held prior to registration to help all new students successfully adjust to college life. New students meet with a counselor, faculty advisors, and other students to become familiar with college offerings, services, and regulations. Students are encouraged to see their Academic Counselor at least once each semester.

## Academic Counseling

Counselors and faculty advisors are available to assist students in setting educational goals and in planning programs of study. Information about course placement, prerequisities, course sequence, and registration and transfer information are provided.

## Career Counseling

Counselors are avalable to work with students to explore career possibilities and training opportunities. Career Counselors will help student assess their skills, interests, and values in developing career/life plans. Individualized assistance as well as workshops and courses help students in self-directed career life planning and job search activities.

## Career Resource Library

The Career Resource Library has information about occupations, colleges, job search, and personal development. The Career Library includes videotapes, audio cassettes, workbooks, periodicals, and other multimedia resources for student use.

## Job Placement

Job placement services are available to students and recent graduates of Honolulu Community College. Current full and part-time jobs are posted on job boards. Job placement services also include the development of job search techniques such as writing resumés and interviewing skills.

## Transfer Library

Catalogs and other resource publications from a number of bachelor granting institutions on the mainland are available in the Liberal Arts Academic Counselor's Office.

## Individual Assessment

A variety of vocationally related tests are available at the Career Development Center. Students may learn more about themselves by taking tests that determine interests, values, personality traits, and abilities.

## Career Exploration

Two computerized career information systems are available to Honolulu Community College students. Using Career Kokua and Discover, students can access current local labor market, educational and career information; consider career choices based on their own needs and interests; and make course selections based on their career decisions.

Unique in the community college system, the Tech Discovery Center offers work samples which enable students to obtain hands-on experience performing job tasks and using tools of the trades in 15 technical-occupational areas. Videotapes containing information on salaries, job opportunities, interviews with industry representatives, training opportunities, and future employment outlooks are also avallable for each of the areas.

## Services to Students with Disabilities

The College through the Student Health Office, provides coordinated services to help students with disabilities achieve their educational goals. The following support services are arranged through the program:

- application and registration assistance, financial aid information;
- career, personal, and academic counseling;
- auxiliary equipment such as portable laptop computer, portable tables, cassette recorders, taped texts, magnifiers, and wheelchairs;
- tutoring, notetaking, mobility and laboratory aids, and
- sign language interpreters
- A Telecommunications Device for the Deaf (TDD) is available in the Student Health Office, Building 2, Room 108.
- Students with mobility problems may request on-campus parking and/or handicapped parking.
- A campus accessibility map showing locations of ramps, restrooms, elevators and handicapped parking stalls is available from the Admissions Office and the Student Health Office.
Students desiring special services are advised to contact the Student Health Office as early as possible so that services may be arranged on a timely basis. For further information contact the Student Health Office, located in Building 2, Room 108, 845-9282. A Registered Nurse is on duty Monday-Friday, 7:45 am to $4: 30 \mathrm{pm}$. The Student Health Office is part of the Student Life and Development Office, 845-9219.


## FINANCIAL AID

The financial aid program at Honlulu Community College helps those students who can benefit from higher education but who may have difficulty attending HCC
without financial help. The financial aid program adds to the efforts of the student and the student's parents/spouse. All students are encouraged to apply for financial aid at Honolulu Community College.

## How to Apply for Aid

To be considered for financial aid at Honolulu Community College an applicant must

1. Be accepted for admission (or be currently enrolled) in a degree or certificate program
2. Have filed an application for financial aid.

Applications for financial aid are available at the Financial Aid Office at Honolulu Community College, other college or university financial aid offices and at high school guidance offices. Financial aid is not automatically renewable. Formal application and Satisfactory Academic Progress (see section on Satisfactory Academic Progress) are required each year that aid is sought. Applicants who submit a financial aid application will automatically be considered for the Pell Grant, Supplemental Educational Opportunity Grant, Hawaii State Incentive Grant, Perkins Loan, Stafford Loan, State Higher Education Loan, College Work-Study, and need-based Tuition Waiver.

Students who have attended any other college or university are also required, by federal regulation, to submit a financial aid transcript from that school.

## When to Apply for Aid

Awards are made for an academic year (fall 92/spring 93). Applications should be filed as soon after January 1st as possible. The College will begin making awards for fall and spring in March. Applicants who apply (and re-apply) early have the best opportunity to have their needs met.

Applicants must file a financial aid application for each academic year that they seek aid. The amount and type of aid for each year depends upon the applicant's continued need, date of application, and academic progress.

## Awards

Awards are made to applicants who are enrolled at least half time ( 6 credits) or who have been accepted for enrollment in a degree or certificate program. Awards are made to students without financial obligations and without reference to racial or ethnic origin, sex, age, handicap, or marital status.

## Financial Aid Satisfactory Academic Progress Policy

Students enrolled at Honolulu Community College (HCC) must be making satisfactory progress in accordance with U.S. Department of Education regulations before any financial aid will be awarded. Progress is measured in the number of credits completed toward the degree/certificate and grade point average. HCC measures students' progress at the end of the academic year.

## DEFINITION

## TIME FRAME

A. At HCC, students are determined to be making progress if they complete degree requirements within the equivalent of six full-time semesters. This
applies to all students enrolled at HCC, including students who change majors or who seek a degree or certificate in more than one program.
B. The number of semesters full-time students are eligible for financial aid is determined by their degree objective at HCC:

Degree Sought<br>AA or AS<br>Certificate of Achievement

Maximum Semesters
of Eligibility
6*
4
*Programs requiring more than 60 credits may be considered for additional semesters of eligibility.
C. Credits accepted in transfer from another institution will be used to calculate remaining credits required for completion of the degree or certificate.
D. Because of limited funds, students who have earned sufficient credits applicable to their degree will not be eligible for additional semester(s) of aid, even though they may not have used their maximum semesters of eligiblity.

## CREDIT COMPLETION REQUIREMENTS

A. Honolulu Community College has established the following minimum for financial aid satistactory academic progress. Credit load refers only to credits required for the students' declared degree or certificate at HCC.

| Semester <br> Enrollment | Number credits <br> each semester | Completed <br> 1 semester | Completed <br> 2 semesters |
| :--- | :--- | :--- | :--- |
| full-time | 12 or more | 10 credits | 20 credits |
| three-quarters | $9,10,11$ | 8 credits | 15 credits |
| half-time | $6,7,8$ | 5 credits | 10 credits |

Less than half-time students will have their progress measured according to the following rate for each semester:

| Credits attempted: | 5 | 4 | 3 | 2 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Credits completed: | 4 | 3 | 2 | 2 | 1 |

If students change their enrollment from semester to semester, the following requirements apply toward the two semesters:

Enrollment Combination
full-time + three-quarters

## Minimum Credits Completed

full-time + half-time -15
three-quarters + half-time 13
B. Students may receive payment for repeating a required course in which a grade lower than a "C" was received. This option is available only once per required course. Each attempt will be counted toward the students' number of equivalent full-time semesters.
C. The following will be considered as credits not successfully completed:

1. "F" Grades
2. 'W" Withdrawals
3. "N" No Grade
4. "I' Incompletes

An Incomplete (I) grade is calculated as no credit received until the grade is changed by the instructor and added to the student's academic record by the Records Office. At that time, the grade received is calculated at face value. If students need that completed grade to change their status (probation/suspension) they should contact the Financial Aid Office when the grade is added to the transcript. The Financial Aid Office will not automatically review for an incomplete grade.

GRADE POINT AVERAGE (GPA) REQUIREMENT
All financial aid recipients are expected to maintain a semester and cumulative grade point average of at least 2.0.

## FINANCIAL AID PROBATIONISUSPENSION

## FINANCIAL AID PROBATION

Credits and grades earned will be reviewed at the end of each semester.
A. After the Fall semester, students who do not meet the minimum credit completion for their enrollment status but complete at least half of their credits will be placed on probation for the following Spring and receive aid.
B. Students who do not meet the semester and cumulative GPA requirement after their first semester of enrollment at HCC but complete at least half of their credits will be placed on probation the following semester.
C. At the discretion of the Financial Aid Office, students may have their probationary period extended beyond one semester if their cumulative GPA has not been raised to a 2.00 but their semester GPA is at 2.00 or above.

Students on financial aid probation will be notified in writing of their status and advised to take appropriate action.

## FINANCIAL AID SUSPENSION

Students' financial aid at HCC will be suspended and they will not be eligible for financial aid in subsequent semesters under the following conditions:
A. At the end of a probationary period, students completing less than the required minimum earned credit hours or failing to achieve semester and cumulative grade point average of at least 2.00 OR
B. Students who do not complete at least half of the credits for which they enrolled. Enrollment will be the highest number of credits the student enrolled for in a semester.

Suspended students not enrolling at HCC in the succeeding semester, will have their suspension stand until they have met the requirements for reinstatement.

## REINSTATEMENT

Students who have been placed on financial aid suspension may re-establish their eligibility by demonstrating satisfactory academic progress.

1. To re-instate eligibility, students must 1 ) enroll at least half time ( 6 or more credits required for the degree), 2) complete the required number of credits for their credit load, and, 3) earn a semester and cumulative grade point average of at least 2.00.
2. Students who attempt to re-instate eligibility during the summer sessions must complete at least 6 credits during the summer (may combine sessions) with current and cumulative grade point average of at least 2.00.
3. Upon successful completion of credits and grade point average, students must notify the Financial Aid Office, in writing, that they wish to be re-instated. The Financial Aid Office will notify students, in writing, whether or not they have been re-instated.

Note: For summer only-due to the short time between the end of the summer sessions and fall registration, it will not be possible for students to be re-instated before Fall registration. Requests for re-instatement will be processed in September. If students are re-instated, their aid application will be re-activated on the date they are re-instated. Students will need to pay their own tuition and fees at registration.

## APPEAL OF FINANCIAL AID SUSPENSION

A. Students who have been suspended from financial aid at HCC may appeal the decision. A written appeal must be submitted to the Financial Aid Office, explaining in detail 1) the specific reasons which contributed to the students' lack of progress and 2 ) the steps being taken to ensure academic progress if students are re-instated.
B. The Financial Aid Administrator will review the appeal and determine whether or not the students will be granted one semester of financial aid probation. Students will be advised in writing of the decision.

Note: Copies of the complete policy are available at the Financial Aid Office. Check with the Financial Aid Office for the most up-to-date and complete policy.

## Federal Financial Aid

The majority of aid awarded by Honolulu Community College is federal and based on demonstrated financial need. Eligibility requirements are determined by federal rules and include the following:
Applicant must

- be a U.S. citizen or an eligible non-citizen (permanent resident)
- be enrolled at least half-time (six credits) in a degree granting program (you must be a classified student)
- be making satisfactory progress toward your degree
- not be in default on a loan or owe a refund on a federal grant
- have demonstrated financial need
- be registered with Selective Service, if required.

Note: Military Selective Service Act (P.L. 97-252) requires that beginning July 1, 1983, any student who is required to register with the Selective Service Sys-
tem and fails to do so shall be ineligible to receive Federal Title IV student financial aid including: Pell Grants, Supplemental Educational Opportunity Grants, College Work Study, Carl Perkins Loan Program, Stafford Loans, and State Student Incentive Grants. This requirement affects all male students who are at least eighteen years of age, who were born after December 31, 1959 and who are not currently on active duty with the armed forces. Members of the Reserves and National Guard are not considered on active duty and must be registered. The group of affected male students includes citizens and noncitizens eligible to receive Federal financial aid except citizens of the Federated States of Micronesia, the Marshall Islands, or a permanent resident of the Trust Territory of the Pacific Islands (Palau). For further information contact the Financial Aid Administrator at 845-9116.

- not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.
All financial aid programs are subject to change due to legislative action.


## Federal Grants

PELL GRANT is available to students who have not received a bachelor's degree. The Department of Education sends a Student Aid Report (SAR) directly to the student to confirm eligibility.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (SEOG) is available to students with exceptional need. Priority must be given to Pell grant recipients.

HAWAII STUDENT INCENTIVE GRANT (HSIG) is available to Hawaii residents who are eligible for Pell grants. The award covers tuition. Half is paid by the federal government and half by the institution.

## Federal Loans

CARL PERKINS LOAN PROGRAM (formerly National Direct Student Loan (NDSL) Program) The maximum amount is $\$ 4500$ for a student who has not completed two academic years of study toward a baccalaureate degree (i.e. a student who has not achieved third-year standing). Students at HCC are limited to a total of $\$ 4500$ in this program (including NDSL and Perkins from other schools). Awards are based on need and availability of funds. Repayment begins 9 months after the borrower ceases to be at least a half-time student. Interest charges of $5 \%$ begin at the start of the repayment period. Repayment schedules vary according to the aggregate loan amount received. Deferments are available.

STAFFORD LOANS (Formerly Guaranteed Student Loans (GSL)) The maximum loan is $\$ 2625$ per academic year for students attending Honolulu Community College, and a total of $\$ 17,250$ for all undergraduate studies. Stafford loan is through a bank or other lending institution guaranteed by a state agency. Repayment begins six months after the borrower ceases to be enrolled at least half-time. Eight percent interest begins at the start of the repayment period and increases to ten percent interest after four years into repayment. Deferments are available.

PARENT'S LOAN FOR UNDERGRADUATE STUDENTS (PLUS) and SUPPLEMENTAL LOANS FOR STUDENTS (SLS) Provides additional funds for a student's educational expenses. Parents of dependent students may borrow up to $\$ 4,000$ per child per year and an aggregate loan amount of $\$ 20,000$ per child under the PLUS program. An independent undergraduate may borrow a maximum of $\$ 4,000$ per year under the SLS program. The aggregate maximum is $\$ 20,000$. The interest rate
is variable as determined June 1 of each year. Parent borrowers and SLS borrowers begin paying interest and principle within 60 days of the date of disbursement. Deferments are available.

## Employment

COLLEGE WORK-STUDY is part-time employment on campus. Students are limited to a maximum of 20 hours per week during the academic terms. An individual student's award is based upon his or her individual need and the availability of funds.

## State Loans

STATE HIGHER EDUCATION LOAN (SHEL) A low interest $3 \%$ loan for Hawaii residents who are enrolled full-time. Awards are based on demonstrated financial need and availability of funds. Repayment begins 9 months after the student ceases to be enrolled at least half-time. Deferments are available.

## Tuition Waivers

TUITION WAIVERS may be awarded to students on the basis of need, merit, service, or recruitment for particular programs. Refer to the Tuition \& Fees section of the Catalog for additional tuition waivers.

Tuition waiver (Need-Based)-Students who submit an application for financial aid are considered for a tuition waiver based on need.
Tuition Waiver (Merit)- Students who have completed at least 12 credits at HCC and who maintain a current and cumulative grade point average of 3.5 or better. Applications are available at the Financial Aid Office.
Tuition Waiver (Recruitment)- To encourage a balance of male and female students in the various programs of study, tuition waivers may be awarded to students who are majoring in programs customarily dominated by members of the opposite sex. Applications are available at the Financial Aid Office
Tuition Waiver (High School Honors)- Tuition waivers are available to entering high school seniors who have been designated by their principal as outstanding high school graduates. Nomination forms are mailed to high school principals in the spring. Contact high school principal for individual school requirements and application.
Tuition Waiver (Service)- Tuition waivers are available to students who have contributed to the community and HCC. The student must be recommended by an HCC staff or faculty member. Applications are available at the Financial Aid Office.
Tuition Waiver (Viet Nam Era Veterans)- To qualify, a veteran must 1) have served in the Southeast Asian theatre of conflict; 2) have been discharged under conditions other than dishonorable; 3) be currently ineligible for any other VA educational benefits; and 4) be a resident of Hawaii for tuition purposes. In addition to the tuition waiver application, applicants must present verification from the Veterans Administration Regional Office that they meet conditions 1, 2, and 3. Applications are available at the Records Office.

## Scholarship Programs

PACIFIC ASIAN SCHOLARSHIPS (PACAS) for the amount of tuition for students with high scholastic merit who are pursuing or intend to pursue a course of
study important to the Pacific-Asian region. Full-time students who have completed at least 12 credits at HCC in the courses which meet their degree requirements and who have maintained a cumulative grade point average of at least 3.00 are eligible for this program. Preference is given to non-residents who are residents of Pacific, East Asian, and Southeast Asian countries; however, other full-time, non-resident students and full time Hawaii residents will be considered. Applications are available at the Financial Aid Office.

The PHYLLIS LOVELESS SCHOLARSHIP is available for individuals who live or work in Kalihi-Palama and are accepted for admission in Child Development Associate Training or in the Early Childhood Education Option. Application and selection are made through the department.

The AUTOMOTIVE BODY-PAINTING ASSOCIATION OF HAWAII SCHOLARSHIP is granted to a student who demonstrates the potential for success in the trade and is accepted for admission in the Auto Body and Painting program at the College. Selection by committee.

HEMENWAY SCHOLARSHIPS are available for Hawaii residents who have demonstrated financial need through an application for financial aid. Scholarship applications are available at the Financial Aid Office.

RUTH BLACK SCHOLARSHIPS are available for students whose parents are or were employed in the Hawaii construction industry and who have demonstrated financial need through an application for financial aid. Applications are avallable at the Financial Aid Office.

The AMERICAN CONGRESS OF SURVEYING \& MAPPING (HAWAII SECTION) SCHOLARSHIP provides a $\$ 400$ award to a student accepted for admission into the Engineering Technology program at Honolulu Community College. This scholarship will be awarded bi-annually. Recipients will be selected on the basis of academic promise, character and financial need by the ACSM Scholarship Committee.

## Short Term Loans

Emergency Short Term Loans are available to help meet unexpected expenses. The loans are repayable within 30 days. Check with the Financial Aid Office for additional information and application.

## Student Employment/Job Placement

Honolulu Community College maintains lists of full-time and part-time off-campus employment opportunities as well as on-campus jobs. Students may also receive assistance with job search skills, application procedures, resumé writing, and interview skills. For more information, please contact the Career Development Center at 845-9204.

## How Financial Need is Determined

Demonstrated financial need is the difference between the "cost of education" and the "expected family contribution"

$$
\begin{aligned}
& \text { Cost of Education } \\
= & \text { Expected Family Contribution } \\
= & \text { Demonstrated Financial Need }
\end{aligned}
$$

The application for financial aid, completed by the student and the student's family, determines the "expected family contribution." This is an amount based on income
and assets, expenses, number of family members, etc. as reported on the application.

A Standard "cost of education" is established for each student. This amount is an average of typical expenses within the academic year. This estimate includes some things which the student does not pay to HCC. Typical items include:

- tuition and fees (adjusted for enrollment status)
- room and board allowance
- books, supplies, and tools
- personal expenses
- transportation
- child care

With supporting documentation, additional expenses related to attending HCC can be considered to the standard budget.

## Changes in Financial Status

Changes in the student's financial status may result in an increase or decrease in the student's cost of education or increase or decrease in the student's expected family contribution. Either would change the amount of aid for which the student is eligible. If a student's financial circumstances change significantly from the time that he/she originally applied for aid, he/she should see a Financial Aid Administrator.

## Selection, Notification, and Payment

Upon receiving a Student Aid Report, the Financial Aid Office will review the student's file for completeness and, if complete, determine the student's eligibility for aid. Notification will be made to all eligible applicants who have submitted complete applications. Awards will be made on the basis of need. Applicants are encouraged to apply as soon after January 1st as possible; some funds are limited and run out.

Offers of aid will be made in an aid award letter. The letter will tell the student of the awards and the conditions of those awards. The letter will have a date due by which the student must sign the letter and return it to the Financial Aid Office.

Unless otherwise noted on the Financial Aid Award Offer Letter, all awards are paid equally for the fall and spring semester. With the exception of tuition waivers, awards cannot be paid until the first day of class for that semester. Payment is by check, made payable to the student. The Financial Aid Office orders a check for the student after the student returns his/her signed aid award letter. It takes approximately 3 weeks from the time that the check is ordered before the student receives the check. By applying early, the student can receive payment earlier but not earlier than the first day of class.

## Rights and Responsibilities

The student has the right to know:

- the cost of attending HCC and the policy on refunds to students who drop out
- What financial assistance is available
- What procedures and deadlines are for submitting applications for each available financial aid program
- How HCC selects financial aid recipients
- How need is determined
- How much of the student's need has been met
- How and when the student will be paid
- The interest rate on any loans offered to the student and the conditions of repayment
- If offered College Work-Study, what kind of job it is, what hours must be worked, duties, rate of pay, and method of payment
- How an aid package is reconsidered if the student believes a mistake has been made or if enrollment or financial circumstances have changed.
- How HCC determines satisfactory academic progress.

The student is responsible for:

- Reviewing and considering all information about a school's program before enrolling
- Submitting complete and accurate information concerning enrollment and financial circumstances
- Knowing and complying with all deadlines for applying and reapplying for financial aid
- Providing all documentation, corrections, and/or new information requested by the Financial Aid Office
- Notifying the Financial Aid Office of any information which has changed
- Reading, understanding, and keeping copies of all forms requiring the student's signature
- Repaying any student loans and attending entrance and exit interviews for those loans
- Satisfactorily performing work agreed upon in a College Work-Study job
- Understanding HCC's refund policy.


## VETERANS ADMINISTRATION BENEFITS

The College is an approved educational institution for education and training under the Veteran's Educational Assistance Act (Gl Bill), the Veteran's Readjustment Act, and the Dependents' Educational Act. Information regarding eligibility, entitlement and types of training authorized may be obtained from the Veterans Administration Regional Office.

## STUDENT HEALTH OFFICE

The Student Health Office, located on the first floor of Building 2, is open Monday through Friday from 7:45 a.m.-4:30 p.m. and provides first aid assistance, health education, counseling, and referrals to community agencies and services.

Free services and activities are provided by a registered nurse for students currently enrolled at the College. NON-COLLEGE SERVICES, SUCH AS AMBULANCE AND EMERGENCY ROOM FEES, ARE NOT COVERED BY THE COLLEGE. Therefore, students should expect to pay these costs on their own.

No Comprehensive health care is available at the College. Therefore, students are encouraged to explore other medical and health options, such as the University of Hawaii Medical Insurance Plans which are designed for student needs and are less expensive than most other health insurance plans available to students. Open Enrollment periods are limited to the beginning of each semester. Brochures and applications for the student health plans are available at the Student Health Office.

For more information about activities and programs, medical insurance plans or other health related matters, contact the Student Health Office.

See "Health Requirements for Admissions" for medical clearance requirements for admissions.

## HOUSING INFORMATION

Honolulu Community College has no housing facilities and the College does not supervise, recommend or assume responsibility for any housing facility. The Office of Student Life and Development maintains an off-campus housing information list. For information contact the Student Life and Development Office.

## FOOD SERVICE

The College's cafeteria serves breakfast, snacks and lunch at reasonable prices. Food vending machines are located in various buildings of the campus.

## BOOKSTORE

There is a bookstore on the first floor of the Campus Center Building for the students' convenience. The hours are 8:00 a.m. to 3:00 p.m. Mondays, Tuesdays, Thursdays, and Fridays and until 6:30 p.m. on Wednesdays. Hours are extended during registration periods and the first week of each semester. The main items for sale are required textbooks and supplies.

## STUDENT LIFE

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. Student Life activities add a dynamic dimension to the college experience through the co-curriculum by providing new learning experiences and opportunities.

## The Campus Center

The Campus Center in Bulding 2 includes offices for the Campus Activities Board, the Board of Student Publications, meeting rooms, a viewing room, a student lounge, a gameroom, the Bookstore and the Student Health Office. The Student Life and Development Office, located on the second floor, provides support for all student organizations on campus and houses the lost and found center for the College.

## Student Government

All fee paying students are regular members of the Associated Students of HonoIulu Community College (ASHCC) (see also Tuition and Fees).

The Student Senate represents the ASHCC on most College committees, Faculty Council committees and University councils and committees. It is through this important student organization that students play a prominent role in the governance of the college and the University System.

The student government program provides interested students the opportunity to learn and develop leadership skills. Student leaders learn parliamentary procedures and individual and group decision-making and interaction techniques. For more information contact the ASHCC office.

## Campus Activities

The activities calendar of social, cultural, recreational and educational programs is planned and implemented primarily by the Campus Activities Board (CAB). The


Honolulu Community College's connection to the world in the information age. Students get hands-on experience in satellite communications technology at Honolulu Community College.

CAB initiates activities and supports other campus clubs and organizations in delivering a wide range of interesting programs to the campus community. For example, there are musical offerings, intramurals and outdoor recreation*, dances, films, concerts, lectures, informal gatherings and special interest clubs. For more information contact the CAB office in the Campus Center, Rm. 214.
*In order to participate in sports activities students must be covered by accident and health insurance and must fill out Risk and Release and Medical Consent forms available in the Student Life and Development Office.

## Publications

The Board of Student Publications is responsible for the formulation of policies, bylaws and procedures applicable to student publications.

The KAHILI is the student newspaper of Honolulu Community College. It is published by and for the students of the College and is an open forum in which the College community can express views on a variety of topics. It is a publication of Honolulu Community College journalism students. As such, it reflects only the views of the editors and writers of the publication who are solely responsible for its content.

## STUDENT REGULATIONS

Student Conduct: The University of Hawaii, Honolulu Community College has a Code of Student Conduct which defines expected conduct for students and specifies those acts subject to University sanctions. Students should farniliarize themselves with the Code of Student Conduct, since upon enrollment at UH, Honolulu Community College the student has placed herself/himself under the policies and regulations of the University and its duly constituted bodies. The disciplinary authority is exercised through the Student Conduct Committee. The Committee has developed procedures for hearing allegations of misconduct.

Copies of the student conduct code are available at the Office of the Dean of Student Services.

Academic Dishonesty: Academic dishonesty cannot be condoned by the University. Such dishonesty includes cheating and plagiarism (examples of which are given below) which violate the Student Conduct Code and may result in expulsion from the University.

Cheating includes but is not limited to giving unauthorized help during an examination, obtaining unauthorized information about an examination before it is administered, using inappropriate sources of information during an examination, altering the record of any grades, altering answers after an examination has been submitted, falsifying any official University record, and misrepresenting the facts in order to obtain exemptions from course requirements.

Plagiarism includes but is not limited to submitting any document to satisfy an academic requirement that has been copied in whole or part from another individual's work without identifying that individual; neglecting to identify as a quotation a documented idea that has not been assimilated into the student's language and style, or paraphrasing a passage so closely that the reader is misled as to the source; sub-
mitting the same written or oral material in more than one course without obtaining authorization from the instructors involved; or dry-labbing, which includes (a) obtaining and using experimental data from other students without the express consent of the instructor, (b) utilizing experimental data and laboratory writeups from other sections of the course or from previous terms during which the course was conducted and (c) fabricating data to fit the expected results.

Financial Obligations to the University: Students who have not satisfactorily adjusted their financial obligations (such as tuition and fees, traffic violations, parking tickets, unreturned library books, library fines, other fines, locker fees, laboratory breakage charges, transcript fees, loans past due, rental payments, etc.) may be denied grades, transcripts, diplomas and registration.

A copy of the "Rules and Regulations Governing Delinquent Financial Obligations Owed the University of Hawaii,' promulgated by the Board of Regents, is on file in the Business Office.

Student Grievances: The process of addressing allegations of misconduct or acts of discrimination is described in the procedures for Handling Impermissible Behavior and the Academic Grievance Procedures and in CCCM No. 2210 UH Community College Procedure and Guidelines Relating to Complaints of Discrimination. Copies are available at the Office of the Dean of Student Services.

Other regulations that apply to students may be found in the General Information section.

## Academic Regulations



Academic Counselor James Niino uses computer support to help Qiong Liu (shown with daughter Olena) plan a career for the 21st century.

## Academic Regulations

## CLASSIFICATION OF STUDENTS IN CREDIT PROGRAMS

Classified Student: A student who is enrolled for credit in an official program leading to the Associate Degree or Certificate of Achievement or Certificate of Completion.
Unclassified Student: A student who is enrolled for credit but is not in an official program leading to the Associate Degree or the Certificate of Achievement or Certificate of Completion.
Special Student: A student who is enrolled for credit as a concurrent registrant or an early admittee.
EDUCATIONAL LEVEL
Freshman: A student who has earned fewer than 25 credits towards the Associate Degree or Certificate of Achievement or Certificate or Completion.
Sophomore: A student who has earned 25 credits or more towards the Associate Degree or Certificate of Achievement.
FULL-TIME AND PART-TIME STUDENTS
Full-time Student: A student who registers for 12 semester credits or more.
Part-time Student: A student who registers for fewer than 12 semester credits.

## ADMISSIONS INFORMATION

## Eligibility

Any U.S. high school graduate or any person 18 years of age or over who can profit from the instruction offered is eligible for admission to the College, subject to the availability of resources.

## Application Deadlines

Deadlines for filing applications for priority admission are July 1 for the Fall Semester and December 1 for the Spring Semester. The deadline for the Summer Session will be announced. Individuals are advised to file their applications as early as possible.

## General Admissions Requirements

Honolulu Community College participates in the Coordinated Admissions Program of the University of Hawaii. 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.

## Application Procedure

1. File the Common Application Form with the Admissions Office.
2. File the Residence Information forms included in the application.
3. Submit other information, forms, and documents as requested by the College. Request additional forms if you are in the following categories:
-Foreign (Non-Immigrants)

- Military personnel (or dependents) stationed in Hawail.
-Cosmetology applicants show proof of graduation from high school.
An applicant is notified by mail of acceptance or nonacceptance by the College only after the above items have been completed and submitted to the Admissions Office.

All documents, transcripts and forms submitted become the property of the College and will not be returned to the applicant.

## Acceptance Information

Applicants will be notified by mail of their acceptance and scheduled for placement testing.

If accepted, the student must

1. Take placement tests at the time assigned unless waived.
2. Attend New Student Advising and Registration Briefing.
3. Take tuberculin test or chest $x$-ray and submit the results to the Health Center. The results should certify that the individual is free of active tuberculosis.
4. Report for registration at the scheduled time and pay all tuition and fees required at this time.
5. Attend classes (see "Class Attendance").

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

1. certain prerequisites for the courses have not been met
2. the program may be filled
3. beginning courses in the program are not offered in that semester.

A student is given a Program Status and designated as Eligible (E) or Not Eligible (NE) after placement. Student will be notified of program status at New Student Advising.

Eligible (E) - You are eligible to enter the beginning courses in your program, but there may not yet be space.
Not Eligible (NE) - You are not eligible because you must complete English and/or Math prerequisites.
Check the list below to see which programs accept students in both Fall and Spring semesters. If the program is filled, students are unable to enroll in the beginning courses in their program and are advised to take required related courses during the first semester. After one semester, the student usually will be able to take beginning courses in the program; however, in a few programs the waiting period may extend to a full academic year or more.

Admissions 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 or she may request that the application be redirected to the next choice campus of the University of Hawaii or that the application be cancelled.

## Starting Dates for Programs

The chart shows when new majors may start a program. A dot ( $\bullet$ ) in the F column means a student may enter the program in the Fall Semester (F). A dot ( $\bullet$ ) in the $S$ column means a student may enter the program in the Spring Semester (S).

|  | F S |  | F S |
| :---: | :---: | :---: | :---: |
| Administration of Justice (AJ) |  | Engineering Technology (ENGT) | - |
| Advanced Automotive Technology | - | Fashion Technology (FT) |  |
| Aeronautics Maintenance (AERO) |  | Fire Science (FIRE) <br> Heavy Equipment Maintenance |  |
| Art, Commercial (CMART) | - - | and Repair (HEMR) |  |
| Applied Trades (APTRD) | - - | Human Services (HSERV) |  |
| Architectural Drafting (ADT) | - | Industrial Education (IED) |  |
| Auto Body Repair and Painting (ABRP) | - | Liberal Arts (LBART) <br> Machine Shop Technology (MST) |  |
| Automotive Mechanics (AMT) | * | Occupational Safety and Health |  |
| Baking, Commercial (BAKE) | - | (OSH) |  |
| Carpentry (CARP) | - | Refrigeration and Air Condition- |  |
| Cosmetology (COSME) | - • | ing (RAC) |  |
| Electrical Installation \& |  | Sheet Metal and Plastics (SMP) | - |
| Maintenance Technology |  | Ship Repair (SHIP) <br> Welding (WEID) |  |
| Electronics (ET) | - • |  |  |
| - Offered this semester <br> $\star$ Every other Spring |  |  |  |
| Check with Admissions regarding | gr | status. |  |

## Residence Regulations for Tuition Purposes

Students other than statutory exempt individuals, who do not qualify as bona fide residents of the State of Hawaii, according to the University of Hawaii rules and regulations in effect at the time they register, must pay the nonresident tuition. An official determination of residency status will be made at the time of application. Applicants may be required to provide documentation to verify residency status. Once classified as a nonresident, a student continues to be so classified during his/her term at the College until he/she can present satisfactory evidence to the residency officer that proves otherwise.

Some of the more pertinent University residency regulations follow. For additional information or interpretation, contact the Registrar at Honolulu Community College, Building 6, 845-9120.

DEFINITION OF HAWAII RESIDENCY: A student is deemed a resident of the State of Hawaii for tuition purposes if the student (18 or older) or the student (under 18) and his/her parents or legal guardian have
A. Demonstrated intent to permanently reside in Hawaii (see below for indicia);
B. Been physically present in Hawaii for the 12 consecutive months prior to the first day of instruction, and subsequent to the demonstration of intent to make Hawaii his/her legal residency; and
C. The student, whether adult or minor, has not been claimed as a dependent for tax purposes by his/her parents or legal guardians who are not legal residents of Hawaii.
To demonstrate the intent to make Hawaii your legal residency, the following indicia apply:
A. Voting/registering to vote in the State of Hawaii.
B. Filing Hawaii Resident State Personal Income Tax Return.

NO SINGLE ACT IS SUFFICIENT TO ESTABLISH RESIDENCE IN THE STATE OF HAWAII. Having registered to vote in the State of Hawaii and filing Hawaii Resident Income Tax Returns are probably the two most important considerations for establishing intent. Other indicia, such as permanent employment or the leasing of a dwelling in Hawaii may apply, but no single act is sufficient to establish residency in the State of Hawaii. Other legal factors involved in making a residency determination include
A. The twelve months of continuous residence in Hawaii shall begin on the date upon which the first overt action (see indicia above) is taken to make Hawaii the permanent residence. While residence will be lost if it is interrupted during the twelve months immediately preceding the residence determination date, resident status derived from two or more successive sources may be combined to compute the twelve month period.
B. Residency in Hawaii and residency in another place cannot be held simultaneously.
C. Presence in Hawaii primarily to attend an institution of higher learning does not create resident status.
D. The residency of unmarried students who are minors follows that of the parents or of the legal guardian. Marriage emancipates a minor.
E. The residency of a married person may follow that of the spouse.
F. Resident status, once acquired, will be lost by future voluntary action of the resident inconsistent with such status. However, Hawaii residency will not be lost solely because of absence from the state while a member of the United States Armed Forces, while engaged in navigation, or while a student at any institution of learning.
Statutory Exemptions: Nonresidents may be allowed to pay resident tuition if they qualify as one of the following:
A. United States military personnel and their authorized dependents during the period such personnel are stationed in Hawaii on active duty.
B. Persons who are legal residents of a district, commonwealth, territory or insular jurisdiction, state or nation which provides no public institution of higher learning.
C. Employees of the University of Hawaii and their spouses and legal dependents.

## Misrepresentation

A student or prospective student who intentionally or willfully misrepresents any fact on any form or document intended for use in determination of resident status for tuition purposes will be subject to the regular disciplinary measures of the University of Hawaii.

## Appeal Process

Residency decisions may be appealed by contacting the residency officer for information on how to initiate an appeal before students register for classes.

Appeals are heard by the Committee on Resident Status only after the resident tuition is paid.

## Admission of Non-Resident Students

Once classified as a non-resident, a student continues in this status at the College until submitting satisfactory evidence to the Records Office that proves otherwise.

The maximum number of non-resident students that can be accepted by the College is limited by the Board of Regents policy. Students classified as non-residents are required to pay non-resident tuition, unless exempted from paying such tuition through one of the statutory exemptions listed previously.

## Admission of Foreign Students

Foreign applicants must comply with all regulations of the Immigration and Naturalization Service as well as with applicable policy of the Board of Regents of the University of Hawaii and the policies of Honolulu Community College. For the purposes of clarifying requirements for admission, foreign students who are not U.S. citizens and who have not been admitted to live in the U.S. permanently are designated as non-immigrants. Honolulu Community College is authorized under Federal law to enroll non-immigrant alien students.

They must meet the General Admissions Requirements as well as the following special admissions requirements:

1. Have their scores on the Test of English as a Foreign Language (TOEFL) submitted to the College. 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 to be sent to the College should be made by writing to TOEFL, Educational Testing Service, Princeton, New Jersey, 08540, or by contacting the American Consulate in the applicant's country. Applicants in the following categories are exempt from taking the test:
a. Applicants whose native language is English.
b. Applicants who have completed either three years of high school education or 30 semester credits of college level work ( 30 transfer semester credits for the Associate in Arts degree program) from an accredited college or university in the United States, Australia, Britain, Canada or New Zealand.
c. Applicants transferring from accredited colleges and universities in the United States, Australia, Britain, Canada or New Zealand, who have completed the equivalent of freshman level English (English 100) with a grade of "C" or better.
d. Applicants who have attended American, British or Canadian 'international schools" in foreign countries for three years may qualify for exemption upon request.
2. Fall within the limit for non-resident students as mandated by Board of Regents policy.
3. Submit a Supplementary Information Form for Foreign applicants.
4. Submit a completed Certificate of Health Form.
5. Submit evidence of ability to pay all expenses either personally or through a sponsor.
6. 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 Student Health Office has descriptive literature on several plans, and the student may choose one that meets his or her needs. Health and accident insurance is mandatory.
All documents and application material must be received by the priority deadline for the appropriate semester.

Foreign non-immigrant students should have an official notice of acceptance and Form l-20 before coming to Hawaii.

Foreign non-immigrant students will be accepted into a particular degree program which has not been already filled and will not be allowed a change of major. Such students will be expected to carry an academic credit load of at least twelve (12) credits per semester. These 12 credits must be required in the student's program. A students will normally not be allowed more than five semesters to complete a program.

Permission to work off campus will not be recommended for foreign non-immigrant students.

## Early Admission

With the approval of their high school counselors, high school students may enroll at Honolulu Community College while completing their high school graduation requirements. Students must complete the General Admission Requirements of the College and submit an "Early Admit'" form signed by their high school counselors. Students so admitted must submit a new 'Early Admit'" form each semester. Enrollment is on a space-available basis.

## Health Requirements for Admission

Tuberculosis Clearance. In compliance with public health regulations, all students prior to enrollment must show evidence that they are free of active tuberculosis. A report of a chest $x$-ray or skin test taken within 12 months of admission is acceptable. Skin tests and chest $x$-rays may be obtained at the Lanakila Health Center, 1700 Lanakila Avenue, Honolulu, telephone 847-6542. The Student Health Office at Honolulu Community College maintains a list of health agencies which administer free tuberculin skin tests.

Student Health Form. A student health form completed by the student is requested at the time of initial enrollment at the College.

The TB Clearance and the Student Health form should be submitted prior to enrollment.

Foreign non-immigrant students are required to submit a Certificate of Health Form with a chest $x$-ray clearance along with the application for admission. All nonresident foreign students must demonstrate proof of enrollment in a health and accident insurance program before any such student shall be permitted to enroll. The intent of this requirement is to protect foreign students against the high cost of unanticipated health care expenses resulting from accidents or illness.

In compliance with public health regulations, all students prior to enrollment must show evidence that they are free of active tuberculosis.

Honolulu Community College complies with all applicable requirements of other state health agencies and councils as may be required by law or by rules and regulations.

# REGISTRATION, WITHDRAWALS, AND OTHER CHANGES 

## Registration

Pre-registration for currently enrolled students is held the semester before.
New student Advance Registration for students who meet the priority deadline is held prior to regular on-time registration.

On-time registration is held in the 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 should also be used in planning the program of studies.

An incoming student is assigned a time to register for courses only after completing all the General Admissions Requirements and other related requirements.

Students are considered officially enrolled only after registering, paying tuition and fees, and attending the first two classes. Those students who are unable to attend classes during the first and second class session(s) of the semester must notify their instructors before the first class session, or they may be dropped.

## Late Registration

Students registering after the regularly scheduled registration period are called late registrants and are assessed a late registration fee of $\$ 2.00$. See the Academic Calendar for Late Registration dates.

## Concurrent Registration

Students at one campus within the University of Hawaii may register concurrently at another campus providing the course they wish to take is required for their academic program and is not available at their "home" campus. Such students must also be enrolled at the home campus for at least one-half of the courses they are taking that semester. Students who are academically suspended or dismissed at the second campus are not eligible to enroll concurrently at that campus.

Students must obtain an Application for Concurrent Registration Form signed by the advisor from their home campus. At Honolulu Community College this form is available from Academic Counselors. Students must file this form and the Common Admissions Forms at the campus they wish to attend. A new application for Concurrent Registration must be submitted for each semester the student wishes to enroll. Community College students concurrently registering at Manoa or Hilo with fewer than 24 transferable credits and a GPA of less than 2.0 may be asked to provide other admission documents.

Enrollment will be permitted only if there is space available in the course(s). If courses have established prerequisites, these must be met. Concurrent registrants may not register for more than two courses at the second campus unless certain required courses are available only at the second campus.

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".

## Auditing Courses

Auditors must complete all admission and registration requirements and procedures, including payment of tuition and fees. Students are permitted to audit certain classes with the written consent of the instructor. Auditors generally are not allowed
in laboratory science, mathematics, elementary and intermediate modern languages, English composition, speech courses, or in classes where they might take the place of credit students.

Arrangements to audit a class must be made during the first week of the semester. Instructors will immediately notify the Records Office in writing of all those students who are auditing their classes. 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.

If the audited class is the only course being taken, the student will not receive a report card.

## Class Attendance

Regular and prompt class attendance is expected of all students. It shall be the student's responsibility to inform the instructor(s) of anticipated or unavoidable absences and to make up work missed as a result of absences.

No-Show Policy-A student is responsible for attending both of the first two class sessions of the semester. If a student misses either one of the first two class sessions, he/she may be dropped by the instructor.

Disappearer Policy-Students who have ceased to attend class and do not officially drop the class are considered "Disappearers". Students who have stopped attending class and do not officially drop the class by the deadline date may receive the " $F$ " grade. A student who has a justifiable reason for temporarily not attending a class must notify the instructor or Division Chair or Assistant Dean. A student who has a justifiable reason for dropping a class must do so before the deadline.

## 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 has paid the required fee(s) to the Business Office. 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. Additional tuition and fees, if applicable, will also be charged at the time a student adds a class or classes.

Courses may be added only during the announced period which is usually during the first week of the semester.

Courses officially dropped during the first three weeks of instruction each semester will not appear on the student's academic record. Courses officially dropped after the first three weeks will be assigned a " $W$ " on the academic record. Students may drop courses and receive a "W" grade up to the deadline stated in the Academic Calendar. Any student who fails to drop a course officially by the deadline will be given any grade except the " $W$ ". If a student stops attending class, but does not officially drop the class by the deadline date, the instructor may assign the "F" grade.

## Complete Withdrawal From College

Students who wish to withdraw completely from the College should fill out a Complete Withdrawal Form available from the Records Office and obtain the necessary signatures as 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 the student's record. After this, the courses will be assigned a " $W$ " on the academic record.

The deadline dates for officially withdrawing are in the Academic Calendar. If a student stops attending class, but does not officially withdraw by the deadline date, the instructor may assign the "F" grade.

The refund policy for withdrawals is explained under "Tuition and FeesRefunds".

## Change of Major

ENTERING STUDENTS: All new, returning, transfer students who want to change a major and have the change effective for their first semester must contact the Admissions Office. No changes are permitted after the Admissions Office begins assigning registration appointments and determining program eligibility.
CONTINUING STUDENTS: Continuing students may request a change of major any time during the year, except during pre-registration and registration, as long as the program is still open. If the program is closed, students must request a change of major by April 2 for the Fall Semester, or by November 1 for the Spring Semester. No requests for change of major into programs that are filled will be accepted after these deadlines. A student who changes majors into a program that is filled is put on "standby" status. They may not register for major courses until after all students on "major" status have been registered. Students on standby status often have a one or more semester wait before major courses may be taken.

A student who is requesting a change of major must see a Career Counselor before the indicated deadlines and complete the required "Change of Major" form. No request for a change of major will be accepted during preregistration and registration regardless of whether the program is open or closed.

## Change of Personal Data or Address

Any changes of address, name, and citizenship must be reported to the Records Office. Out-of-state students should provide their local address upon arrival. Failure to do so will result in an inaccurate education record and/or failure to receive registration materials, grade reports 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 requires two hours of outside preparation for each hour of lecture. A laboratory course of semester duration usually 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 requirement for one-year programs or one-fourth of the total requirement for twoyear programs. A student may not register for more than 17 credits during any one semester except under special circumstances and with an Academic Counselor's approval. Counselor's approval is not needed in programs which require more than 17 credits per semester.

## Course Numbering

Courses numbered 100 and above transfer to all campuses within the University of Hawaii system, including the baccaulaureate degree campuses. Courses numbered below 100, however, generally do not transfer to baccaulaureate degree colleges. Students are advised to plan any transfer program in accordance with requirements of the intended baccaulaureate degree institution since each establishes its own regulations.

## Variable Credit Courses

Certain courses designated by "V'" in this catalog and in the Schedule of Classes, are offered for variable credit. The number of credits for which a student enrolls must be approved by the instructor prior to registration.

## Transcript Evaluations (Transferring Credits)

Credits earned with course grades of " C " or better in other regionally accredited colleges and universities may be accepted for credit at Honolulu Community College. Credits earned with course grades of "D" or better at colleges of the University of Hawaii may be accepted for credit. However, any credit for "D" grades must be offset by credit for grades of " $B$," or above. Only credits applicable toward the degree will be transferred. Grades, grade points and grade point averages will not be transferred.

It is the student's responsibility to have transcripts of previous work sent to the Records Office and to request that an evaluation be made. Failure to make this request may cause the student to repeat courses previously taken. Submit the Request for Transcript Evaluation form to the Records Office. Official evaluation will be made after acceptance to Honolulu Community College; the credits will be posted to the HCC transcript after the student has completed credits at Honolulu Community College.

## Course Waivers and Substitutions (Vocational Programs)

Recommendation for a course waiver is made by the Discipline Curriculum Liaison. For each course waiver there must be a recommended course substitution. At no time may a student graduate with fewer than the total number of required credits.

A student wishing to have a course waived or substituted must submit the Request for Course Waiver/Substitution form to the Records Office for transcripts. The Records Office will, in turn, submit the student's form and transcripts to the student's Discipline Curriculum Liaison. In all cases, the Discipline Curriculum Liaison will confer with the Division Chairs of the programs involved. If agreement is reached, the Division Chairs will recommend approval or disapproval, giving the reason for the recommendation. They will forward the form to the Assistant Dean of the student's program for approval. Notice will then be sent to the Records Office. If the waiver and substitution is approved or disapproved, it will be noted on the student's academic record and the student will be notified of the approval or disapproval.

## Course Waivers and Substititions (Liberal Arts)

The Registrar approves substitutions for Liberal Arts majors only if the substitution will receive full general education core credit at the college to which the student intends to transfer. A student wishing to have a course waived or substituted must submit a Request for Course Waivers/Substitution form to the Registrar along with documentation from the College to which he/she is transferring.

## Credit by Examination

Credit by examination is available in a few courses at Honolulu Community College. Interested students should contact the Division Chair to determine if this option is avalable in the particular course he or she wishes to challenge. To be eligible to earn credit by examination, students must be officially enrolled in the College. Eligible students who learned the course content through previous training or experience but did not receive college credit for the course may apply for credit by examination following the procedure outlined below:

1. The student obtains the application form at the Records Office.
2. The student presents the application to the Division Chair who interviews the student, approves or disapproves the application, and identifies an examiner.
3. If the application is approved, the student pays the necessary tuition and fees at the Business Office. Fees are charged in accordance with the College's tuition schedule.
4. Upon completion of the examination, the examiner reports the result to the Assistant Dean for final approval. Credits awarded are recorded on the student's academic record and designated as credits earned through examination.
Courses passed by examination do not carry letter grades; rather the "CR" grade is assigned.


Philosophy Professor Ronald C. Pine and Logic and Critical Thinking Lecturer Dan Petersen discuss instructional strategies for the classroom field testing of Pine's book, Essential Logic: Basic Reasoning Skills for The 21st Century. Photo by Elton Ogoso

## Repeating a Course

Students may repeat any course in which a $\mathbf{D}, \mathbf{F}$, or $\mathbf{N}$ was received. Credit is allowed only once for a repeated course. The first and all subsequent grades will remain on the student's record and all grades will be used to compute the grade point average.

Certain courses may be repeated for additional credits. The course description in the catalog indicates whether or not a course is repeatable for additional credits.

If a student inappropriately repeats a course (i.e., in circumstances other than those described above), neither the credits nor grade points will be reflected on the student's transcript.

## Repeating WI Courses

Courses are designated writing intensive according to course number and section number each semester. Students who receive a passing grade, C or higher, are not allowed to repeat a WI course previously not designated as WI. In these cases, students will receive transfer credit for the course, but not writing intensive credit for the course.

## Repeating Remedial English and Math Courses

(For purposes of this policy, remedial is defined as ELI, English 8-15, Math 1-22) Students may repeat a remedial course once without approval, and under the conditions in item 1 above. The student is strongly encouraged to consult with his or her Academic Counselor or previous Instructor prior to repeating the course.

When seeking to repeat a course for the second time, approvals are required.

- First, written approval from the Academic Counselor or the most recent Instructor for the course to be repeated.


#### Abstract

AND - Second, written approval from the receiving Instructor or a designated representative of the English or Math department to repeat the course.


## Final Examinations

Final examinations are given during the Evaluation Period, as published in the Academic Calendar in this catalog.

## Grade Reports

Grade reports are mailed to students at the end of each semester.
Each student is responsible for reporting any error on a grade report to the Records Office within ten days of receipt of the grade report.

## Grading

Students are assigned grades based on standards of achievement established by the instructor of each class. Students will be informed of these standards by the instructor. Written papers, participation in class discussion, performance on assigned projects, and mid-term and final examinations and other evaluative meth-
ods are used by instructors to assess achievement and assign grades. Instructors maintain office hours to provide special assistance to students outside of class.

## Grading System

The "Letter Grading System" is used to report student achievement or standing in most areas. The "Credit-No-Grade System" is used only in the courses in this catalog designated "Credit-No-Grade" (CR-N).

Letter Grading System

| Grade | Grade <br> 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 Grade |
| I | Not Computed | Incomplete |

Credit-No Grade Grading System

|  | Grade |  |
| :---: | :---: | :--- |
| Grade | Points | Interpretation |
| CR | Not Computed | Satisfactory Completion |
| $N$ | Not Computed | No grade |
| 1 | Not Computed | Incomplete |

## "CR" Grade

The "CR" grade is used to denote passing work deserving of credit for all courses taken on the credit-no-grade grading scheme. It is also used to denote passing of a course through credit by examination.

## Withdraw or "W" Grade

The " $W$ " is assigned to a course taken by a student who then formally withdraws from that course after the first three weeks of the semester but by the last day to withdraw from courses (see Academic Calendar).

## " $N$ " Grade

The " $N$ " grade indicates that the student has either a) not completed the requirements of the course or b) has not reached a level of accomplishment within a specified time period which will allow for an evaluation. This grade may also be used when a student fails to earn credit after challenging a course through "Credit by Examination" and may continue on the student's record indefinitely.

## Incomplete or "l"' Grade

The "l" grade may be given to a student who has yet to complete a small but important part of the work in the course. The " $l$ " will revert to the level of accomplishment obtained at the end of the course if the work is not made up. (For exam-
ple, "I/D' on the grade report means that, if the student takes no further action before the make-up deadline, the "I" grade will be changed to " D " after the makeup deadline.) In no case will "l" revert to a "W".

Instructors must submit make-up grades to the Records Office by the Spring recess for the Fall Semester and by Thanksgiving recess for the Spring Semester and Summer Session. Students' deadlines are two weeks prior to this. See Academic Calendar for specific dates. A student is advised to contact the instructor and make arrangements for completing and for subrnitting make-up work well before these deadlines.

## Grade Point Average (Ratio)

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", "'l", "CR", or "N" are assigned.

## How to Compute Your Grade-Point Average (Ratio)

| Grade |  | Points |
| :---: | :---: | :---: |
| A | $=$ | 4 |
| B | $=$ | 3 |
| C | $=$ | 2 |
| D | $=$ | 1 |
| F | $=$ | 0 |
| W |  | Not Computed |
| N |  | Not Computed |
| I |  | Not Computed |
| CR |  | Not Computed |

G.P.A. (G.P.R.) $=$ Divide $\frac{\text { Total no. of grade equivalents by }}{\text { Total no. of semester hours }}$

Current G.P.A. (G.P.R.) = grade point average (ratio) for the current semester Cumulative G.P.A. (G.P.R.) = grade point average (ratio) for all semesters at HCC combined

## Academic Probation and Suspension

The Academic Probation and Suspension Procedures serve to place a student on notice that academic performance is below minimum college standards. The intent of probation and suspension is to encourage a student to take necessary actions to become a successful student. Each student has an obligation to use the opportunity for publicly supported education effectively. Students on academic probation or suspension are strongly urged to seek the assistance of an Academic Counselor.

## Academic Probation

A student will be placed on academic probation at the end of any semester for any one of the following reasons:

1. Cumulative grade point average is below 2.00 .
2. Current semester grade point average is below 2.00

The student on probation may continue at the College but must achieve a current minimum grade point average of 2.00 for all credits attempted for each semester that the student is on probation to be allowed further registration.

A student on academic probation should see an Academic Counselor before or during the semester he/she is on probation. It is recommended that the student's credit load be limited to a maximum of 12 credits.

## Academic Suspension

A student who fails to achieve at least a 2.00 current grade point average in all credits attempted at the end of the semester of academic probation shall be suspended for one semester. Exceptions to the suspension policy related to non-academic causes may be made by an appeal to the Committee on Academic Standing. Regulations governing academic suspension will be applied at the end of each semester.

## Readmission after Suspension

A student may petition for readmission following suspension by completing a petition with an Admissions Counselor. The petition must contain a written plan for future success and a proposed list of classes for the coming semester. The Admissions Counselors will review the petition and possibly recommend changes in the plan for success or in the list of classes.

After readmission the student will be placed on probation until the minimum academic standards to clear probation, as outlined in the section on probation, are met.

## Summer Session Suspension

A student on suspension is permitted to attend Honolulu Community College's Summer Session and may register for 3-6 credits. If the student's Summer Session grade point average is 2.50 or above, the student may petition for readmission for the Fall Semester (see Readmission section).

Students should see an Academic Counselor in the semester they are readmitted. It is recommended that the students' credit load be limited to a maximum of 12 credits.

## Dismissal

During the first semester after readmission, if a student who has been suspended fails to earn a current grade point average of at least 2.00, the student may be dismissed. Such students will be readmitted only by decision of the Committee on Academic Standing. Regulations governing academic dismissal will be applied at the end of each semester.

## Scholastic Honors

Students who meet the following criteria will earn a place on the Dean's List:

1. The student must earn a CURRENT grade point average of 3.5 or better for the semester.
2. The student must have earned 12 credits at HCC.
3. Students must complete two-thirds ( $66 \%$ for statistical purposes) of courses registered for during the semester of eligibility. Legal repeats will not disqualify a student from being considered for the Dean's List. Because eligibility for the Dean's List must be established every semester, an "I" grade shall be considered a non-completion grade when calculating a student's completion rate.
4. No minimum enroilment per semester is required after 12 credits are completed.

Interested students may choose to join Phi Theta Kappa, a national honors society for community college students. Interested scholars should contact the Office of the Dean of Instruction.

To graduate with honors, students must earn at least 24 credits of work at Honolulu Community College and have a cumulative grade point average of 3.50 or better.

## Transcript Requests

A student must file a written request for official transcripts at the Records Office. A minimum of seven working days should be allowed for the processing of requests. See Transcript Fee.

## EDUCATIONAL RIGHTS <br> AND PRIVACY OF STUDENTS

Pursuant to Section 99.6 of the rules and regulations governing the Family Educational Rights and Privacy Act of 1974 (hereinafter the Act), students in attendance at Honolulu Community College are hereby notified of the following:

1. It is the policy of Honolulu Community College to subscribe to the requirements of Section 438 of the General Education Provision Act, Title IV, of Public Law 90-247, as amended, and to the rules and regulations governing the Act, which protect the privacy rights of students.
2. The rights of students under the Act include the following, subject to conditions and limitations specified in the Act:
a. The right to inspect and review education records.
b. The right to request to amend education records.
c. The right of protection from disclosure by Honolulu Community College of personally identifiable information contained in education records without permission of the student involved.
d. The right to waive certain rights under the Act.
e. The right to file complaints concerning alleged failure by Honolulu Community College to comply with the Act.
3. Students are advised that institutional policy and procedures required under the Act have been published as Administrative Procedure A7.022, Procedures Relating to Protection of the Educational Rights and Privacy of Students. Copies of AP A7.022 may be obtained from the Records Office, Honolulu Community College.
4. Directory Information

Students are advised that certain personally identifiable information listed below is considered by the College to be Directory Information and, in response to public inquiry, may be disclosed in conformance with State law, at the College's discretion, without prior consent of the student unless the student otherwise so informs the College not to disclose such information.
a. Name of student.
b. Local address and zip code maintained in the campus locator printout.
c. Local telephone number maintained in the campus locator printout.
d. Major field of study.
e. Educational level (e.g. freshman, sophomore, etc.)
f. Fact of participation in officially recognized activities and sports.
g. Weight and height of members of athletic teams.
h. Dates of attendance.
i. Degrees, academic honors, and awards received.
j. Educational level.

A student has the right to request that any or all of the above items not be designated Directory Information with respect to that student. Should a student wish to exercise this right, he or she must in person and in writing, not earlier than the first day of instruction nor later than fourteen calendar days from the first day of instruction for the academic term or semester, or the fourth day of a summer session, inform the Records Office which of the above items are not to be disclosed without prior consent of that student.
5. A parent or spouse of a student is advised that information contained in educational records, except as may be determined to be Directory Information, will not be disclosed to him/her without the prior written consent of the son, daughter or spouse.

## Tuition and Fees



Jon Blumhardt, Director of HCC's Educational Media Center, tunes in the world via satellite.

## 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 or registration will be cancelled. Students in need of financial aid may be assisted through the financial aid program of the College, or in unusual cases by short term emergency loans if available.

|  | Residents |  | Non-Residents |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1-11 Credits | 12 Credits <br> \& Above | 1-11 Credits | 12 Credits <br> \& Above |
| Tuition | \$19.00 per credit | \$220.00 | \$112.00 per credit | \$1,340.00 |
| Student <br> Activity Fee | \$0.50-\$5.00 | \$5.00 | \$0.50-\$5.00 | \$5.00 |
| Total | $\begin{aligned} & \$ 19.50- \\ & \$ 214.00 \end{aligned}$ | \$225.00 | $\begin{gathered} \$ 112.50- \\ \$ 1,237.00 \end{gathered}$ | \$1,345.00 |

Late Registration Fee - \$2.00

## Concurrent Registration Tuition

Concurrent registrants will be assessed tuition on the Manoa Campus as follows:
Residents $\quad \$ 56.00$ per credit hour in addition to the Manoa Campus fees.
Non-Residents $\$ 170.00$ per credit hour in addition to the Manoa Campus fees.
Note: Manoa Campus refund schedule is available on the Manoa Campus.
Concurrent registrants will be assessed tuition at West Oahu College as follows:
Residents $\quad \$ 36.00$ per credit hour in addition to West Oahu fees.
Non-Residents $\$ 112.00$ per credit hour in addition to the West Oahu fees.
Note: West Oahu Campus refund schedule is available on the West Oahu Campus.

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

Residents $\quad \$ 19.00$ per credit hour, up to a maximum of $\$ 220.00$ total tuition each semester.
Non-Residents $\$ 112.00$ per credit hour, up to a maximum of $\$ 1,340.00$ total tuition each semester.

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## Summer Tuition \& Fee Schedule

$\begin{array}{ll}\text { Residents } & \begin{array}{l}\text { Transfer-level courses- } \$ 57.00 \text { per credit. Other credit courses } \\ \\ \text { Non-residents } \\ \text { Transfer-level courses- }-\$ 114.00 \text { per credit. }\end{array} \\ \text { courses- } \$ 114.00 \text { per credit. }\end{array}$

## Deferred Payment of Tuition

University of Hawaii System policy forbids a student to register under a deferred payment of tuition arrangement. Students receiving Financial Aid from the college must pay their tuition first before receiving their checks.

## Student Activity Fee

1-9 credits- $\$ .50$ per credit
10 credits and above- $\$ 5.00$ (flat rate)

## Change of Registration Fee

A fee is charged for each time a student completes a Change of Registration Form to add or drop a class or classes (Academic year: \$1.00; Summer: \$2.00). In the event a student adds a course(s), there is the tuition balance in addition to the change fee, if applicable (see Schedule of Tuition).

## Credit by Examination Fee

The fee for Credit by Examination is based on the College's tuition schedule: $\$ 19.00$ per credit for part-time resident students or $\$ 112.00$ per credit for part-time non-resident students and a late registration fee of $\$ 2.00$. Full-time students must pay the $\$ 2.00$ late registration fee.

## Transcript Fee

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

## Fee for a Copy of an Educational Record

A fee of one dollar (\$1.00) is assessed a student who requests a copy of his or her educational record on each occasion a copy of such a record is requested. A student is charged $\$ 1.00$ for each copy of a fee statement, college transcript (except as noted above), or other educational records.

## Senior Citizens Tuition Exemption Program

Senior citizens may attend any institution of the University of Hawaii system on a tuition-exempt basis if they meet these conditions:

1. Sixty years of age or older at time of registration for the course.
2. Resident of the State of Hawail as prescribed by the University's definition of residency.
3. Meet the prerequisites for admission and for enrollment in a course. Specific
procedures for registering under the Senior Citizens Tuition Exemption program are announced in the students' registration packets.
4. Space is available in the course.

Senior citizens may also take the course as an auditor.
Admissions requirements are the same as for other applicants. The Senior Citizen Tuition Waiver program does not apply during the Summer Session.

## Hawaii National Guard and Reserve Force Tuition Waiver Program

Individuals participating as enlisted or commissioned personnel in the National Guard or Reserve Forces are eligible for tuition waivers provided that they

1. are in regular degree or certificate programs,
2. are bonafide Hawaii residents as defined by the Board of Regents' policies governing residency,
3. maintain satisfactory performance records with their guard of reserve units, and
4. are not receiving V.A. benefits under Chapter 106.

The College will make the necessary academic and residency determinations as part of its normal admissions procedures. Forms certifying satisfactory military performance are available at the individuals' units. The approval forms must be submitted on the day that the student registers. These certification forms are good for one semester and must be presented at registration in lieu of tuition payment. The waiver covers only tuition. The individual must pay the student activity fee when he or she registers. The tuition waiver program does not apply to summer session, continuing education courses, courses offered by the small business program, apprenticeship programs or other instructional programs not supported by state General Fund appropriations.

## Faculty/Staff Tuition Waiver

Faculty and staff may apply for a tuition waiver through the Dean of Instruction's office and register last on a space available basis. Those wishing to register at their regularly scheduled time may do so but must then pay full tuition and fees.

## Other Tuition Waivers

See Student Affairs.

## College Catalog

The College Catalog may be purchased at the College Bookstore. First class postage is added for mail order.

## Cost of Books, Tools, and Other Supplies

The cost for books can be estimated at approximately $\$ 150-\$ 200$ per semester for full-time Liberal Arts majors. The cost of textbooks, tools and other supplies for vocational majors varies with the program and is noted in the program description section of this catalog.

## Refunds

The following students are eligible to receive refunds:

1. Students withdrawing completely from College (see Complete Withdrawal from College)
2. Full-time students changing to part-time status.
3. Part-time students reducing credit load.
4. Students dropping classes because of administrative cancellations and students dropped as "No-Shows" by instructors.

Refunds of less than $\$ 1.00$ will not be made.

## Procedure

To obtain a refund, students must process a Change of Registration Form at the Records Office and at the Business Office by the times noted in the Refund Policies below. In addition, students completely withdrawing from College must also submit the Complete Withdrawal form. Refunds will be processed according to the schedules below. In no case shall a refund be made when a student fails to fill out an application for refund form.

Tuition and Special Course Fees Refund Policy-Regular Academic Semester:
In the event a student initiates before the fifth week of instruction a complete withdrawal from the College, change from full-time to part-time status, or change from one tuition rate to another, if applicable, tuition and special course fees are refunded as indicated below:

1. $100 \%$ refund for complete withdrawal only if made on or before the last day of regular registration.
2. $80 \%$ refund if complete withdrawal or change in status or a change from one tuition rate to another tuition rate is made within the first two weeks of instruction.
3. $40 \%$ refund if complete withdrawal or change in status or a change from one tuition rate to another tuition rate is made within the third and fourth week of instruction.
4. $0 \%$ refund if complete withdrawal or change in status or a change from one tuition rate to another tuition rate is made after the fourth week of instruction.
When changes by the College to the published schedule of classes precipitate a complete withdrawal, or a change from full-time to part-time status, or a change from one tuition rate to another rate, and the changes to the published schedule have occurred after the student registered, tuition and special course fees are refunded as indicated below upon approval of the Dean of Instruction or the Dean of Student Services.
5. $100 \%$ refund if complete withdrawal is necessary and if application for refund is made within two weeks of the date of the change(s) to the published schedule.
6. The difference between the amount assessed at registration at the start of the semester and the amount assessed due to change in status or tuition rate if such a change is necessary and if application for refund is made within two weeks of the date of the change(s) to the published schedule.
After the required approvals have been secured by the student, the application for refund must be submitted to the College's Business Office for payment. In no case shall payment of a refund be made when a student fails to make application for a refund within two weeks of date of withdrawal, change in status, or change in tuition rate.

Student Activity Fee Refund Policy:

1. $100 \%$ refund of student activity fee if complete withdrawal is made within the first two weeks of instruction.
2. No refund of the student activity fee if complete withdrawal is made after the second week of instruction.
3. No refunds of less than a dollar.

## Payment of Refunds

For a partial withdrawal, the student should receive the refund within four weeks following the end of the $40 \%$ refund period. For a complete withdrawal, the student should receive the refund within three weeks following the withdrawal date.

## Tuition and Special Course Fees Refund Policy-College of Continuing Education and Summer Session Courses

1. For credit courses with equal distribution of class meeting hours through the term of the course:
a. $100 \%$ refund for complete withdrawal if made on or before the last working day before the first day of instruction.
b. $80 \%$ or $40 \%$ refund in accordance with the schedule below which is based on the length of term of the course and the number of working days elapsed, including the first day of class instruction, when the withdrawal is made:

| TERM | $80 \%$ Refund | $40 \%$ Refund |
| ---: | :--- | :--- |
| 1 week | No refund | No refund |
| 2 weeks | 1st day | 2nd day |
| 3 weeks | 1st-2nd day | 3rd day |
| 4 weeks | 1st-2nd day | 3rd-4th day |
| 5 weeks | 1st-3rd day | 4th-5th day |
| 6 weeks | 1st-3rd day | 4 th-6th day |
| 7 weeks | 1st-4th day | 5 th-7th day |
| 8 weeks | 1st-4th day | 5th-8th day |
| 9 weeks | 1st-5th day | 6th-9th day |
| 10 weeks | 1st-5th day | 6th-10th day |
| 11 weeks | 1st-6th day | 7th-11th day |
| 12 weeks | 1st-6th day | 7th-12th day |
| 13 weeks | 1st-7th day | 8th-13th day |
| 14 weeks | 1st-7th day | 8th-14th day |
| 15 weeks | 1st-8th day | 9th-15th day |
| 16 weeks | 1st-8th day | 9th-16th day |

2. For credit courses with unique distribution of class meeting hours through the term of the course. The refund schedule will be based on the elapsed instructional time for that course as a percentage of the total instructional time for that course:
a. $100 \%$ refund for complete withdrawal if made on or before the last working day before the first day of instruction.
b. If not more than $10 \%$ of the course's instructional time has elapsed at time of withdrawal, an $80 \%$ refund will be made.
c. If more than $10 \%$ but not more than $20 \%$ of the course's instructional time has elapsed at time of withdrawal, a $40 \%$ refund will be made.
d. If the elapsed instruction time at time of withdrawal exceeds $20 \%$, no refund will be made.
3. For non-credit courses or workshops:
a. One to five weeks in length - $100 \%$ refund for complete withdrawal if made on or before the last working day before the first day of class meeting; thereafter no refund.
b. Six weeks or longer - $100 \%$ refund for complete withdrawal if made on or before fifth working day has elapsed after the first day of class instruction; thereafter no refund.


Older college students prepare for the future too. Older adults learn computer skills through tuition free programs at HCC's Emeritus College.

## Parking

1. Parking permits will be sold during registration. Specific dates and procedures are included in the registration information packet.
2. Student must present:
a) Current Fee Statement
b) Current Vehicle Registration
c) Current Proof of Insurance Coverage (No-Fault Card)
d) Current Safety Check Certificate
e) Current Driver's License
3. Students may purchase permits for the following zones:
a) High Demand Zone (1, 3, 5)
\$20.00/semester
b) Low Demand Zone (8) 15.00/semester
c) Evening on campus, 3:00 pm-10:00 pm 7.00/semester

See map inside the back cover for zone location
4. Multi-car or pool permits may be issued to applicants who expect to drive two motor vehicles or participate in a car pool for an additional charge of $\$ 1.00$ per semester per vehicle. Such permits will allow only one vehicle at a time to be parked on the campus. Violators will be issued a citation.
5. Students attending evening classes are encouraged to purchase evening parking permits and park in Zones (1, 2). Off-campus parking surrounding the campus is on poorly lit and isolated streets. Parking on campus closer to classrooms is strongly recommended.

## Financial Obligations to the College

See Student Affairs, Student Regulations.

## Fee for Dishonored Checks

A $\$ 7.50$ service charge will be assessed for checks that are made out to Honolulu Community College and returned for any cause.

## Graduation Fee

See Degrees and Certificates, Graduation Information.

## Non-Credit Course Fees

Fees for non-credit courses vary. See course announcements for details.

## Degrees and Certificates



PLC Instruction Prepares Students for the Future. Tom Mikulski, Associate
Professor in Electrical Installation and Maintenance Technology (EIMT), discusses programming techniques with EIMT student Clifford Fontanilla. Programmable Logic Controllers are revolutionizing automated processes from baking to manufacturing, raising levels of sophistication, speed, quality, and tolerances.

# Degrees and Certificates 

GRADUATION INFORMATION

## Eligibility for Graduation

Graduation requirements are based on 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/she first enrolled in this College, (2) the year he/she reenrolled, (3) the year of his/her graduation, (4) the year he/she changed majors, or (5) a year when he/she was enrolled at HCC and the program requirements changed.

In determining eligibility, the terms "major courses" and "courses in the major" and "credits in the major" refer to the following:
(1) Courses which are trade specific, i.e., the course title or the course description indicates that the course is specifically for students in the major (e.g., CHEM 55 for Cosme Majors),
(2) Courses which satisfy program requirements and have the Alpha associated with the major (e.g., WELD 20 for Welding program but not WELD 19).

## 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 ago in courses which have materially changed content or standards will be denied.

## Application For Graduation

Students should consult with their Academic Counselors for a graduation evaluation before registering for their final semester.

Candidates for the Certificate of Achievement, Associate in Arts, and Associate in Science degrees must file an application for graduation with the Records Office as follows:

Fall Semester graduates. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .ile by October 15
Spring Semester graduates . . . . . . . . . . . . . . . . . . . . . . . . . . . . .file by March 15
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 ordering and printing the diploma and cover. If the student does not graduate that semester, the fee will be applied to the semester he or she graduates. However, another application for graduation must be filed with the Records Office by the announced deadline.

Participants will be charged a fee if the Graduation Committee decides to require caps and gowns for graduation. Graduation ceremonies are conducted only during the Spring semester; however, the previous Fall semester graduates are eligible and are invited to participate in the ceremonies.

Candidates for the Certificate of Completion must file an application with the Records Office by the last day of the semester. No fee is charged and no graduation exercises accompany the award.

## CERTIFICATE OF COMPLETION

The Certificate of Completion is a credential awarded to students who successfully complete certain credit occupational courses or course sequences. Programs are designed primarily for students who need short-term training or job upgrading. The required number of credit hours shall not exceed 23 and may not be fewer than 3. There are no graduation exercises accompanying the award. A GPR of 2.00 or higher is required for the Certificate of Completion.

## CERTIFICATE OF ACHIEVEMENT

The Certificate of Achievement is a credential awarded to students who successfully complete a program of vocational-technical courses leading to an occupational skill. Requirements are as follows:

## Requirements for the Certificate of Achievement

a. Required credit hours: 24 credits minimum. Most programs require 24-45 credits, but several programs require more than 45 credits.
b. Minimum GPR: 2.0
c. Credits earned in MATH 1, ENG 8, 9; ELI 1, 4, 6, 9, 97, 97B, 97L, 98, 98B, SD97V may not be used to fulfill Certificate of Achievement requirements.
d. Students must demonstrate proficiency in Communications and Mathematics at the ENG 8,9 and MATH 1 levels, or levels specified by the program, whichever is higher. Proficiency may be demonstrated by successful completion of the appropriate course or by achievement of an acceptable score on a proficiency or placement examination. In most programs, demonstrated proficiency at a level higher than that required will satisfy the proficiency requirement. MATH 21 does not meet this requirement.
e. Residency: The final 12 credits in the major must be taken at Honolulu Community College. The residency requirement may be waived for cause at the option of the Dean of Instruction or Provost. The Provost may approve use of credit by examination to meet residency requirements at his discretion.

## ASSOCIATE IN SCIENCE DEGREE

The Associate in Science degree is granted to students successfully completing a program of technical-occupational and general education courses. While the A.S. degree program is designed to prepare students for gainful employment, its goal is to enable graduates to function effectively in adult society.

It is important that students consult with major program advisors when preparing their courses of study to insure that the proper sequence is followed. The responsibility for meeting program requirements rests with the student.

## Requirements for the Associate in Science Degree

a. Required credit hours: 60 credits minimum. Most programs require 60-65 credits, but several programs require more than 65 credits.
b. Minimum GPR: 2.0 (Specific programs may require a higher GPR.)
c. Credits earned in MATH 1, 22; ENG 8, 9, 10, 15; ELI 1, 4, 6, 9, 97, 97B, 97L, $98,98 \mathrm{~B}$, SD97V may not be used to fulfill degree requirements.
d. Students must complete ENG 10/15 or place higher than ENG 10/15 on the English placement test.
e. Students must complete MATH 1 or place higher than MATH 1 on the Mathematics placement test. MATH 21 does not meet this requirement.
f. Minimum general education requirements: 15 credits.
(1) Skills (must include one course from each category)
(a) Communications

DRAMA 20
ENG 22, 32, 48, 55, 60, 100
HUM 35
SP 20, 151, 200
(b) Quantitative or Logical Reasoning

BUS 55
EE 150
ICS 111, 151C, 211, 241
MATH 24, 25, 27, 50, 55, 58, 100, 115, 135, 140, 205, 206, 231, 232
PHIL 50, 110
QM 121, 122
(2) Other areas (must include courses from at least three of the categories listed below)
(a) Understanding the natural environment

ANTH 20, 215
ASTRO 110
BIOL 22, 100
BOT 101-101L, 130-130L
CE 113, 211, 271
CHEM 20, 100-100L, 151-151L, 152-152L, 161-161L, 162-162L
FNS 285
GEOG 101
GG 101, 200
HPER 200
IS 40
ME 213
MET 101
MICRO 125, 130-140
OCEAN 180, 190, 201, 230
PHYS 51V, 55, 56, 100-100L, 125, 151-151L,
152-152L, 170-170L, 272-272L, 274
SCI 101, 121, 122, 225
ZOOL 101, 200
(b) Functioning effectively in society

COMUN 50
ECON 18
ENG 51, 102, 210
FAMR 100, 130, 135, 296 (For non-HSERV majors)
FNS 19, 184
FT 111, 126 (For non-FT majors)
HE 153, 260
HUM 36
ICS 100, 100E, 100M, 100T, 113, 120
JOURN 205
JPNSE 30, 31

LSK 30, 100
MGT 20
POLSC 24
PSY 54, 170
SD 21, 85, 85B, 85C, 90B, 90C
SOC 22
SP 251, 253
SSCI 41, 42
SOSER 21, 22, 55
(c) Understanding the social environment

AMST 211, 212
ARCH 100
BUS 20
ECON 120, 130, 131, 211
ENT 120
FAMR 31, 105, 133, 134, 230, 231, 232, 234, 244, 297
(For non-HSERV majors)
GEOG 22, 102, 151
HPER 195
HUM 60, 151; JOURN 150
OSH 101 (For non-OSH majors)
POLSC 110, 120, 130, 171, 190, 271
PSY 100, 180, 240, 250
REL 151
SOC 22, 100, 200, 214, 218, 231, 251
SSCI 40, 120, 125
SW 200
WS 151
(d) Understanding and appreciating world cultures and values

ART 30, 100, 101, 104, 107, 113, 114, 115, 170, 180, 264
(CMART majors may only use ART 101 to satisfy this requirement.)
AMST 201, 202
ANTH 150, 200, 210
ASIAN 100, 297
CHNSE 101, 102
EALL 271, 272
ENG 250, 251, 252, 253, 254, 255, 256, 257
FR 101, 102
HAW 101, 102, 201, 202, 261
HAWNA 24, 231
HIST 23, 24, 27, 30, 32, 151-152, 182, 230, 241-242, 281-282, 284
HUM 20, 37
JPNSE 24, 101, 102; LING 102
MUS 106, 108
PHIL 100, 101, 102, 120, 200, 201, 255
REL 20, 150, 200, 201, 203, 204, 205, 210
SPAN 101, 102
SSCI 220, 221, 225
TAG 101, 102
THEA 101, 201

"Nothing better symbolizes our changing world than the fall of the infamous Berlin Wall in 1989. To commemorate the victory of freedom and peace in the world, students, faculty, and the community banded together to bring a 3-ton section of the Berlin Wall to Hawaii and to create a Freedom Monument, dedicated on February 10, 1992."
g. Courses required by major program (see Programs and Courses section of catalog).
h. Electives as needed to meet total credit hour requirements.
i. Residency: The final twelve (12) credits in the major must be earned from Honolulu Community College. The residency requirement may be waived for cause at the option of the Dean of Instruction or Provost. The Provost may approve use of credit by examination to meet residency requirements.

## ASSOCIATE IN ARTS DEGREE PROGRAM (LIBERAL ARTS)

Most of the Associate in Arts Degree requirements are applicable to the core at the University of Hawaii, Manoa Campus as well as to the first two-year general education requirements of many other baccalaureate degree programs.

Each college at UH, Manoa (Arts and Sciences, Business, etc.) and each campus in the University of Hawaii system has its own requirements. It is important that students consult Liberal Arts Academic Counselors or Faculty Advisors to help plan the selection and sequence of course work. Students can achieve their academic and professional career goals by a careful selection of courses.

Students majoring in Liberal Arts may substitute other courses for a specific requirement listed below if the Registrar agrees that the substitution will receive full core requirement credit at the college to which the student intends to transfer. Substitution approvals must appear on the student's record.

To be eligible for transfer to a baccalaureate campus of the University of Hawaii, students should successfully complete at least 24 credits in transfer-level courses. However, it is strongly recommended that students complete the 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 goals.

Students planning to transfer to the University of Hawaii at Manoa are advised that they will be expected to complete two to five Writing Intensive courses before receiving a baccalaureate degree. The number required varies depending on major and date of entry into the UH system. Check with an academic counselor for details.

Enrollment in most transfer level courses requires either completion of English 10/ 15 or placement into English 22/32 or higher.

Associate in Arts students are strongly encouraged to complete English 100 and the mathematical/logical reasoning requirement as early as possible in their Associate in Arts Program work.

Program Prerequisites: ENG 10/15 and MATH 22 or placement in higher level English and Math courses.

## Requirements for the Associate in Arts Degree

a. Required credit hours: 60
b. Minimum GPR: 2.0
c. All courses must be numbered 100 or above.
d. At least two courses must be Writing Intensive with a grade of " C " or higher. (Only one ENG course may be used for the requirement.) Note that ENG 100 is a prerequisite for all Writing Intensive classes.
e. Course requirements:

## HCC \& UH/M CORE COURSES

Courses in this column match UH Manoa core requirements.

HCC CORE COURSES
Courses in this column meet HCC AA core requirements but are not in the UH/Manoa core.
Courses in this column may satisfy requirements in some baccalaureate (Bachelor's degree) programs.

## I. BASIC SKILLS \& UNDERSTANDING

A. Written \& Oral English 100
Communication -
Two courses, 6 credits

Speech 151 or
Speech 200

Speech is required for completion of the HCC AA program. As such, it is the only required HCC AA course above and beyond the UHM core. Speech is required by some but not all colleges at Manoa.
B. Mathematical or Math 100, 140, 205 Logical ThinkingOne course, 3 credits
C. World Civilizations Two courses, 6 credits
II. AREA REQUIREMENTS
A. Arts and GROUP 1, THE ARTS

Humanities - (Mainly theory)
Three semester Art 101, 170, 180
courses, one Music 106, 108
selected from Theatre 101, 201
each of three (Mainly practice)
of the following Art 104, 107,113,115, four groups: 123

Music $\dagger 114,121 \mathrm{D}$, 122D
Speech 251
GROUP 2, HISTORY \&
CULTURE
American Studies 201, 202
History 241, 242; 281, 282; 288
Religion 210

Math 115, 135, 206, 231, 232
Quantitative Methods
121, 122

## HCC \& UH/M CORE COURSES

HCC CORE COURSES


## HCC \& UH/M CORE COURSES

HCC CORE COURSES
C. Social Sciences - American Studies 211-

Three semester 212
courses from Anthropology 150, 200
three Economics 120, 130,
different 131
disciplines. (9 FamR 230
credits) Geography 102, 151
Journalism 150
Political Science 110, Political Science 271

$$
120,130,171,190
$$

Psychology 100, 170
Sociology 100, 214,
218, 231, 251
Women's Studies 151
Social Science 120
$\dagger$ At UH Manoa, any combination of Music 114, 122, and other UH Manoa core practice Music courses that totals three credit hours will be considered the equivalent of one semester course.

## FOREIGN OR HAWAIIAN LANGUAGE

The UH Manoa General Education core includes a two-year foreign language requirement. HCC has not established a foreign language requirement as a part of the AA core. To assist students in meeting the Manoa requirement, the appropriate introductory courses are offered in the following foreign languages:

Chinese
French
Hawaiian
Japanese
Spanish
Tagalog
f. Residency: The final 12 credits toward the degree must be taken at Honolulu Community College. The residency requirement may be waived for cause at the option of the Dean of Instruction or Provost. The Provost may approve use of credit by examination to meet residency requirements at his discretion.

## Programs and Courses



Fashion is Computerized. Associate professors Lillian Zane and Clem Chun learn the art of computerized pattern-making in order to incorporate the new technology into the Fashion Technology program.

## Technical-Occupational Programs

ADMINISTRATION OF JUSTICE (AJ)
Faculty: Gareth Nitchman.
This program is designed to prepare the student academically for entry into the Administration of Justice career field; i.e., law enforcement, courts, corrections or private security. Courses are also provided to meet the training needs of the in-service professional.
A student at Honolulu Community College, who completes (6) units of Administration of Justice college work, may receive up to six (6) additional Administration of Justice credits for completing basic recruit training for law enforcement or corrections as required by government agencies.
Twenty-four units in Administration of Justice courses including the required core courses are needed to satisfy the major course requirements.
Cost for textbooks is approximately $\$ 175$ per semester.

| Program Prerequisite: ENG 22 or | Associate |
| :--- | :---: |
| Placement in ENG 100 | in Science |
|  | Degree |
|  | Credits |

## First Semester

AJ 101 Introduction to the Administration of Justice 3
Administration of Justice Elective 3
General Education Requirements* and Electives 9

## Second Semester

AJ $200 \quad$ Principles of the Hawaiian Justice System 3
Administration of Justice Elective 3
General Education Requirements* and Electives 9
Third Semester
AJ 221 Criminal Law 3
Administration of Justice Elective 3
General Education Requirements* and Electives 9
Fourth Semester
AJ 224 Rules of Evidence 3
Administration of Justice Elective 3
General Education Requirements* and Electives 9

Minimum Credits Required $\quad$| $\underline{\underline{15}}$ |
| :---: |
| $\underline{60}$ |

*General Education Requirements for the A.S. degree are listed under Degrees and Certificates.

A minimum of 15 general education credits are required. General education requirements for the A.S. Degree are listed under Degrees and Certificates and must be 100 level or above.

The following elective is highly recommended for Administration of Justice students: SP 151, Personal and Public Speech.

## ADVANCED AUITOMOTIVE TECHNOLOGY (AAT)

Faculty: Glenn Arakaki, Craig Ohta, Clifford Yamashiro
This is a one year certificate program which covers the advanced technological systems present on today's automobiles. Individuals who hold an Associate of Science degree from an accredited community college are potentially eligible for admission to the program. In addition, technicians currently working in industry who can benefit from the instruction may also be eligible for admission. Details on admission requirements can be obtained from an academic counselor or from program instructors. The program is offered only during the evening hours. Cost for textbooks is approximately 110.00 . Personal tools are required.

Program Prerequisites: 1) Instructor approval required; and
2a) AS degree in Automotive Technology from an accredited institution OR 2b) current employment as a technician in the automotive industry; and 3) satisfactory AAT test score. First Semester
AAT $100 \quad$ Automotive Control Systems 12
PHYS 56 Basic Electrical Theory
and Lab
Certificate
of
Achievement Credits

3
15

Second Semester
AAT 101 Advanced System Diagnostics 12
PHYS 67 Digital Logic and Microprocessors

Credits Required

NOTE: Students must meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.

## AERONAUTICS MAINTENANCE TECHNOLOGY (AERO)

Address: 402 Aokea Street, Honolulu International Airport
Faculty: Brian Isaacson, Norman Mello, Bill Rothe, Albert Stuhlmacher, Ken Sullivan, Robert Takamine.

The Aeronautics Maintenance Department is an approved aviation maintenance technician training facility operating under Federal Aviation Administration Air Agency Certificate No. D19T087R with Airframe, Powerplant, and combined Airframe and Powerplant ratings. It is the only such school in the Pacific Basin.

The program consists of the General Maintenance curriculum of 480 hours, the Airframe Maintenance curriculum of 750 hours, and the Powerplant Maintenance curriculum of 750 hours to meet the FAR Part 147 minimum required total of 1900 hours of theory and laboratory instruction in four (4) semesters. Students will not be allowed to enter the Airframe or Powerplant course without first completing the requirements of the General Maintenance course.

Classes are offered as both a day program and a night program. Students enrolling in either program will be committed to that program and will not be allowed to switch to the other without prior approval from the Aeronautics Maintenance Technology Department. Check the current Schedule of Classes for day or night program availability.

An Associate in Science Degree is awarded students who complete the Generai Education Requirements* and the Airframe or the Power plant curricula. Upon completion of the General and either the Airframe or the Powerplant curricula, the student is eligible to take the FAA written examination for the appropriate Airframe or Powerplant rating without waiting to complete the program.

Successful completion of each FAR Part 147 approved course requires at least a " $C$ " grade in each unit, with all absences made up or the course must be repeated. Completion of the college requirements for the Associate in Science degree does not necessarily qualify a student to be eligible to take the FAA examinations for licensing. No more than three days may be missed in each FAR Part 147 approved course or the course must be repeated.

Cost for textbooks and a required tool kit is approximately $\$ 2000$. As part of the preparation for working in the industry, during the last airframe class students will be expected to taxi an aircraft and communicate with ground control under the direction of a commercial flight school flight instructor at a flight school of their choice for an approximate cost of $\$ 25.00$.

Health and physical requirements vary with employers in the aviation maintenance industry so prospective students with questionable impairments or impediments should seek advice before enrollment. Prospective students with military aviation maintenance experience should refer to Federal Aviation Regulation 65.77 and the Flight Standards District Office for possible certification alternatives.

Program Prerequisites: ENG 10/15, MATH 1 or<br>Associate Placement in ENG 20-60, MATH 50<br>in Science Degree Credits

## First Semester

PHYS 51V Technical Physics 4

MATH 50 Technical Mathematics I 3
ENG 60 Technical Writing 3
Social Science or Humanities Elective* 3
ICS 100T Tools for an Information Age (Transportation) 3

## Second Semester

AERO 30 General Aircraft Maintenance I 7
AERO 31 Advanced General Aircraft Maintenance II 7

## Third Semester

AERO $32 \quad$ Powerplant Maintenance I 7
AERO 33 Airframe Maintenance I 7
14

Fourth Semester
AERO $34 \quad$ Powerplant Maintenance II 7
AERO 35 Airframe Maintenance II

Fifth Semester

| AERO 36 | Powerplant Maintenance III | 7 |
| :--- | :--- | :---: |
| AERO 37 | Airframe Maintenance III | 7 |
|  |  |  |
| Minimum Credits Required | $\frac{14}{72}$ |  |

*General Education Requirements for the A.S. program are listed under Degrees and Certificates.

## APPLIED TRADES (APTRD)

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 in Applied Trades.

Persons who have completed all the "work process hours" and "related instruction" necessary for journeyman status in their respective trades will receive up to 45 credits for this training, which will apply toward the "Major courses" requirements of their degree, 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 sufficient additional recommended courses to meet the minimum credit requirement for the degree. Apprenticeship textbooks cost up to $\$ 50$ each. General education texts average \$25-\$40 each.

Apprenticeship Training

| Associate in Science Degree |
| :---: |
| Credits |
| $30-45$ |
| 15 |
| $0-15$ |
| 60 |

General Education Requirements*15 Electives

60
*General Education Requirements for the A.S. degree are listed under Degrees and Certificates. For Pearl Harbor Naval Shipyard students, the following courses are required: ENG 60, SP 20, PHYS 51V, MATH 50, PSY 180.

## ARCHITECTURAL DRAFTING TECHNOLOGY (ADT)

Faculty: Mervin Chang, Gayle Cho, Chester Kato, Douglas Madden.
Architectural Drafting is an expanding field of employment and offers opportunities in related fields. The two-year program is designed to prepare students for immediate employment as architectural drafters. Some students use the program to prepare for employment in interior design drafting, building construction, construction supervision, and various related drawing fields. Program emphases include drafting fundamentals with a concentration on working drawings, materials and construction methods, and architectural graphics.

The program leads to the Associate in Science Degree. Students who have strong math, science, and English backgrounds and who are interested in continuing to a university program in architecture can receive up to 22 credits of transferlevel coursework. A certificate option is available for students who desire only draft-ing-intensive training rather than a program that includes the general education and elective courses required for the A.S. Degree.

Cost for essential supplies, instruments, and textbooks is approximately $\$ 300.00$. Students may find it beneficial to have drafting capabilities at home.

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

Lower division architecture courses are available for students who are planning to continue to a university program in architecture and who are not interested in obtaining an A.S. Degree or certificate. See "Special Courses" section in this catalog.

| Program Prerequisite: MATH 1 or Placement in MATH 50 | Certificate of Achievement Credits | Associate in Science Degree Credits |
| :---: | :---: | :---: |
| First Semester |  |  |
| ARCH 121 Design Drawing | 3 | 3 |
| DRAFT 20 Introduction to Drafting | 4 | 4 |
| DRAFT 26 Construction Materials | 3 | 3 |
| BLPRT 22 Blueprint Reading \& Drafting | 3 | 3 |
| ENG 60 or 100 |  | 3 |
|  | 13 | 16 |
| Second Semester |  |  |
| ARCH 122 Freehand Drawing | 3 | 3 |
| DRAFT 30 Wood Structural Design | 3 | 3 |
| DRAFT 36 Working Drawings I | 4 | 4 |
| MATH 50 Technical Mathematics I |  | 3 |
| General Education Requirement (Group C. |  |  |
| Rec: ARCH 100)* |  | 3 |
|  | 10 | 16 |
| Third Semester |  |  |
| DRAFT 38 Working Drawings II | 4 | 4 |
| DRAFT 42 Codes and Specifications | 3 | 3 |
| DRAFT 46 Systems Drafting | 2 | 2 |
| MATH 55 Technical Mathematics II |  | 3 |
| General Education Requirement (Group A or D) |  | 3 |
|  | 9 | 15 |

*General Education Requirements for the A.S. degree are listed under Degrees and Certificates.

## Fourth Semester

| DRAFT 32 | Steel \& Concrete Structural Design | 3 | 3 |
| :---: | :---: | :---: | :---: |
| DRAFT 40 | Working Drawings III | 4 | 4 |
| DRAFT 44 | Building Services | 3 | 3 |
| DRAFT 61 | Introduction to CADD | 3 | 3 |
| General Education Requirement (Group B)* |  |  | 3 |
|  |  | 13 | 16 |
| Minimum Credits Required |  | 45 | 63 |

*General Education Requirements for the A.S. degree are listed under Degrees and Certificates.
Note: Students must meet the minimum proficiency standards in communication established by the College to qualify for the Certificate of Achievement.

## AUTO BODY REPAIR AND PAINTING (ABRP)

Faculty: Alvin Cadelina, Stanley Oganeku, Milton Tadaki.
The curriculum is designed to prepare the students for employment in the Auto Body Repair and Painting industry and related areas. Classroom and laboratory work is offered in a modern and well-equipped facility.

Cost for the tools, supplies and textbooks is approximately $\$ 750$. Purchases of additional tools and textbooks may be required each semester.

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

Program Prerequisite: ENG 8/9, MATH 1; or Placement in ENG 10, MATH 50
Certificate
of

Achievement
Credits

Associate in Science
Degree
Credits

First Semester

| ABRP 20 | Introduction to Auto Body Repair | 3 | 3 |
| :--- | :--- | :--- | :--- |
| ABRP 21 | Auto Body Basics I | 4 | 4 |
| ABRP 22 | Auto Body Basics II | 5 | 5 |
| MATH 50 | Technical Mathematics I |  | 3 |
|  |  | 12 | 15 |

## Second Semester

| ABRP 30 | Introduction to Auto Body Painting | 3 | 3 |
| :--- | :--- | :--- | :--- |
| ABRP 31 | Introduction to Surface Preparation | 3 | 3 |
| ABRP 32 | Overall Refinishing | 3 | 3 |
| ABRP 33 | Spot Refinishing and |  |  |
|  | Panel Blending | 3 | 3 |
| PHYS 55 | Metallurgy and Plastics | 4 | 4 |
| ART 114 | Introduction to Color |  | 3 |
|  |  | 16 | 19 |

Third Semester

| ABRP 40 | Collision Repair | 6 | 6 |
| :---: | :---: | :---: | :---: |
| ABRP 41 ABRP 42 | Panel Adjustment and Alignment | 4 | 4 |
|  | Air Conditioning and Engine |  |  |
|  | Cooling Systems | 2 | 2 |
| $\begin{aligned} & \text { ENG } 60 \\ & \text { ICS } 100 \text { T } \end{aligned}$ | Technical English |  | 3 |
|  | Tools for an information Age (Transportation) |  | 3 |
|  |  | 12 | 18 |
| Fourth Semester |  |  |  |
| ABRP 50 | Suspension/Steering and Brakes | 5 | 5 |
| ABRP 51 | Auto Body Electrical Systems | 2 | 2 |
| ABRP 52 | Auto Body Drive Train and Fuel Systems | 2 | 2 |
| ABRP 53 | Auto Body Business and Industry Trends | 3 | 3 |
| PSY 180 | Psychology of Work |  | 3 |
| SP 20 | Speech Communication | 3 | 3 |
|  |  | 15 | 18 |
| Minimum Credits Required |  | 55 | 70 |

*General Education Requirements for this A.S. program are listed on the Advising Sheet which is available in the counseling office.
Note: Students must meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.

## AUTOMOTIVE MECHANICS TECHNOLOGY (AMT)

Address: 445 Kokea St.
Faculty: Glenn Arakaki, Kenneth Ige, Victor Lee, Zachary Miyasato, Henry Obayashi, Craig Ohta, George Ryusaki, Walter Uehira, Clifford Yamashiro.

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

Physical requirements include eye-hand coordination to make precise repairs and avoid substantial material losses or personal injury.

Cost of supplies, tools, and textbooks is approximately $\$ 1600$.
Recommended high school preparation: Mathematics, General Science and Industrial Arts.
Program Prerequisite: ENG 10/15, MATH 50 (MATH 24 may be substituted.) OR Placement in ENG 10, MATH 25 or higher
(Math Placement Test scores will not substitute. Credits in MATH 50 or appropriate substitute is needed to meet the General Education Requirement for the A.S. degree.)

|  |  | Certificate of Achievement Credits | Associate in Science Degree Credits |
| :---: | :---: | :---: | :---: |
| First Semester |  |  |  |
| AMT 30 | Engines | 6 | 6 |
| AMT 40 | Electrical Systems | 6 | 6 |
| PHYS 56 | Basic Electrical Theory and Lab | 3 | 3 |
| WELD 19 | Welding for Trades and Industry | 3 | 3 |
|  |  | 18 | 18 |
| Second Semester |  |  |  |
| AMT 53 | Brakes | 5 | 5 |
| AMT 55 | Suspension and Steering | 4 | 4 |
| AMT 43 | Air Conditioning | 3 | 3 |
| ICS 100 T | Tools for an Information Age (Transportation) |  | 3 |
|  |  | 12 | 15 |
| Third Semester |  |  |  |
| AMT 46 | Powertrain and Manual Transmissions | 6 | 6 |
| AMT 50 | Automatic Transmissions/ |  |  |
|  | Transaxles | 6 | 6 |
| SPEECH 20/151 | Speech Communication/ Personal and Public Speech |  | 3 |
|  |  | 12 | 15 |
| Fourth Semester |  |  |  |
| AMT 60 | Engine Performance | 12 | 12 |
| PSY 180 | Psychology of Work |  | 3 |
|  |  | 12 | 15 |
| Minimum Credits | Required | 54 | 63 |

Note: Students must meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.

## CARPENTRY TECHNOLOGY (CARP)

Faculty: Harvey Chun, Kenneth Watanabe.
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 and textbooks is approximately $\$ 460$ for the first year and $\$ 50$ for each succeeding year.


## COMMERCIAL ART (CMART)

Faculty: Harrison Budd Brooks, Michel Kaiser, Kit Kowalke, Marcia RobertsDeutsch, Sandra Sanpei.

The program is designed to provide graduates with entry level skills and knowledge necessary for employment in the field of commercial art. This includes design and illustration, the technical preparation for printing production, media, and photography. Part-time instructors are hired for their current professional involvement and expertise in commercial art and fine arts.

The two-year curriculum leads to the Associate in Science Degree.
Basic equipment including a camera will cost approximately $\$ 500$ to $\$ 1000$. Cost for supplies and books can vary depending on elective courses.

This is a recommended sequence of study: some courses may be taken in different sequence and semesters if prerequisites and corequisites are completed. The Commercial Art faculty assists each student in selecting electives related to demonstrated talents and interests.

| Program Prerequisites: ENG 10/15, MATH 1 or | Associate |
| :--- | :---: |
| Placement in ENG 22-60, MATH 22 or 50 | in Science |
|  | Degree |
|  | Credits |

## First Semester

ART 113 Introduction to Drawing 3
ART 115 Introduction to Design-2D 3
ART 101 Intro to the Visual Arts 3
CMART 20 Commercial Art I 4
General Education Requirement* 3
16

## Second Semester

ART 107 Introduction to Photography 3
ART 213 or 214 Intermediate Drawing or Life Drawing 3
ART 266 Intermediate Design - Typography 3
CMART 21 Commercial Art II 4
General Education Requirement* 3

Third Semester
CMART 32 Graphic Design (CMART 58 may be substituted) 3-4
Elective Art or Commercial Art * * 3-4
Elective Commercial Art or Graphic Arts** 3-4
General Education Requirements* 6

Fourth Semester
Elective Commercial Art** 4
Elective Commercial Art or Graphic Arts* * 3-4
Elective Art or Commercial Art ** 3-4
CMART 70 Portfolio Presentation and Review 3
Minimum Credits Required $\quad \frac{\overline{13-15}}{60}$
*General Education Requirements for the A.S. degree are listed under Degrees and Certificates.
**Electives - ART 100, 104, 112, 114, 116, 123, 170, 180, 207, 208, 209, 213, 214, $215,216,217,223,275$; CMART 28, 32, 33, 34, 36, 40, 47, 55, 58, 60V, 93V, 99V; GRAPH 23, 25.
Note: A maximum of 4 credits in on-the-job training, internship, and directed study.

## COMMERCIAL BAKING (BAKE)

Faculty: Isaac Tamada.
The curriculum is designed to prepare the graduate for employment in institutions or retail or wholesale establishments as a baker's helper, baker, pastry maker, or related occupation requiring a knowledge of commercial baking

Health Requirement: Tuberculin Skin Test clearance or chest x-ray.
Cost of uniform and textbooks is approximately $\$ 175$.

| Certificate | Associate |
| :---: | :---: |
| of | in Science |
| Achievement | Degree |
| Credits | Credits |

First Semester
$\begin{array}{ll}\text { BAKE 40 } & \text { Baking Industry I } \\ \text { MATH 50** } & \text { Technical Mathematics I } \\ \text { ENG 22-60, 100; SP 20, 151, 200; HUM 35; }\end{array}$
or DRAMA 20

| 10 | 16 |
| :---: | :---: |
| 10 | 10 |
|  | 3 |
|  | 3 |

Third Semester
$\begin{array}{llr}\text { BAKE } 50 & \text { Shop Practice I } & 10 \\ \text { ART } 30 & \text { The Visual Arts } & 10\end{array}$
ART 30 The Visual Arts
General Education Requirement*
$\frac{3}{10} \frac{3}{16}$

Fourth Semester
BAKE 51 Shop Practice II
MGT 20 Introduction to Management
10
10
Second Semester
BAKE $41 \quad$ Baking Industry II

10
10

Genera Education Requirenet ${ }^{\star}$ (Group A)
General Education Requirement*
16

CHEM 100-100L Chemistry and Man with Lab

Minimum Credits Required

| 10 |
| ---: |
| 40 |


| 4 |
| ---: |
| 17 |

*General Education Requirements for the A.S. degree are listed under Degrees and Certificates.
Note: Students must meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.
**Prerequisite for MATH 50: MATH 1 or equivalent.

## COSMETOLOGY (COSME)

Faculty: Nancy-Beth Au, Kathleen Kamakaiwi, Lorraine Okami.
The Cosmetology department offers a three-semester Certificate of Achievement program and a four-semester Associate in Science degree program. The curriculum
is designed to prepare the student for the State Board of Cosmetology Examination. Upon passing the examination the individual becomes a licensed cosmetologist.

The Cosmetology program will develop in the student a knowledge and appreciation in the theory of cosmetology and train students to the highest degree of the manipulative skills to meet the standards and requirements of the State Board of Cosmetology. This knowledge and ability is achieved first through lecture and demonstration followed by actual work in a salon atmosphere. Students receive a minimum of 1800 clock hours of lecture and clinical experience. A grade of " C " or higher is required to pass courses in the major and complete 1800 clock hours for both the Certificate of Achievement and the Associate in Science degree.

As stated in the Rules and Regulations of the Board of Cosmetology, students who resume their beauty culture courses after a lapse of three years or more shall not receive credit for previous course work.

Admission requirement: submit a high school diploma or its equivalent. Applicants without the high school diploma will be denied admission to the Program.

A basic cosmetology kit, uniform, and textbooks cost approximately $\$ 300$.
A Certificate of Attendance is avalable in Cosmetology Instructor Training. Requirements are 600 hours in COSME 80V and SP 151 ( 16 credits).

```
Program Prerequisites: ENG 8/9, MATH 1 or Placement in ENG 10/15, MATH 22/50; high school diploma or equivalent
```

First Semester

| COSME 20 | Elementary Cosme Theory |
| :--- | :--- |
| COSME 21L | Elementary Cosme Lab |
| COMUN 50* | Working with Clients |

Second Semester
COSME 30 Intermediate Cosme Theory
COSME 31L Intermediate Cosme Lab
CHEM 55* Fundamentals of Cosmetic Chemistry

Third Semester
COSME 40 Advanced Cosme Theory
COSME 41L Advanced Cosme Lab
General Education Requirement (Rec: ART 30 or BUS 20)**

| Certificate | Associate |
| :---: | :---: |
| in | in Science |
| Achievement | Degree |
| Credits | Credits |


| 3 | 3 |
| ---: | ---: |
| 10 | 10 |
| 3 | 3 |
| 16 |  |


| 3 | 3 |
| ---: | ---: |
| 10 | 10 |
|  | $-\frac{3}{3}$ |
| 16 | -16 |

3
3
10
10
3

16
Fourth Semester***
Elective
General Education Requirements**
Minimum Credits Required (See Note)
**General Education Requirements for the A.S. degree are listed under Degrees
and Certificates.
$* * *$ Students with fewer than 1800 hours of cosmetology must also take COSME
50V to accumulate required hours during the 4th term.
Note: Students must meet the minimum proficiency standards in communication and compu-
tation established by the College to qualify for the Certificate of Achievement.

## ELECTRICAL INSTALLATION AND MAINTENANCE TECHNOLOGY (EIMT)

Faculty: Thomas Mikulski, Gordon Pang.
The curriculum is designed to prepare the student to acquire entry level knowledge and manipulative skills for employment in the electrical industry. The program combines theory with laboratory activities as an effective means of developing the skills essential to the electrical trade. The student begins with the fundamentals of electricity and wiring of simple circuits, then progresses to residential interior wiring, three phase alternating current power, and wiring of more complex circuits and equipment. Safety is stressed as an integral part of each shop task. Emphasis is placed on wiring in accordance with the provisions contained in the National Electrical Code.

Cost for textbooks is approximately $\$ 150$. Required handtools cost approximately $\$ 100$.

Program Prerequisites: ENG 10/15, MATH 50
Placement in ENG 20-60, MATH 55

First Semester

| ELEC 30 | Electrical Installation Theory I | 4 | 4 |
| :--- | :--- | :---: | :---: |
| ELEC 32 | Electrical Installation I | 6 | 6 |
| BLPRT 22 | Blueprint Reading and Drafting | 3 | 3 |
| PHYS 53 | Fundamentals of Electricity | 4 | 4 |
|  |  | 17 | $\frac{17}{17}$ |

Second Semester
ELEC 44 AC/DC Systems and Equipment 4
ELEC 46 Electrical Maintenance and Repair 6
COMMUNICATION (Rec: ENG 60) 3
MATH 55 Technical Mathematics II 3

Third Semester

| ELEC $50 \quad$ Solid State Control | 4 | 4 |
| :---: | :---: | :---: |
| ELEC 52 Solid State Control Lab | 6 | 6 |
| General Education Requirements* |  | 6 |
|  | 10 | 16 |
| Fourth Semester |  |  |
| ELEC 40 Electrical Installation Theory II | 4 | 4 |
| ELEC 42 Electrical Installation II | 6 | 6 |
| General Education Requirement* |  | 3 |
|  | 10 | 13 |
| Minimum Credits Required | 47 | 62 |

*General Education Requirements for this A.S. program are listed on the Advising Sheet which is available in the counseling office.
Note: Students must meet the minimum proficiency standards in communication established by the College to qualify for the Certificate of Achievement.

## ELECTRONICS TECHNOLOGY (ET)

Faculty: Richard Inamine, Charles Shelton, Richard Sakamoto, Aaron Tanaka, Lawrence Torres.

The Electronic Technology curriculum is a two year program that addresses the technical and practical aspects of applied electrorics. The curriculum is designed to prepare the student for entry into a variety of areas in the field of electronics. Analyses using theory and mathematics provide the student a background that can be used as a foundation for future growth in the field. Classroom and laboratory assignments using appropriate test equipment allow students to gain hands-on experience required for competency. ETRON 11 is available for non-majors and for students investigating electronics as a career.

Cost of equipment and textbooks is approximately $\$ 500$.
Program Prerequisites: ENG 60 or ENG 100; MATH 58; PHYS 125
(English and Math Placement Test scores will not substitute. Credits in Prerequisite courses are needed to meet the General Education requirement for the A.S. degree.)
Second Semester
ETRON 32 Electronic Design \& Fabrication ..... 4
ETRON 36 Electronic Devices ..... 8
General Education Requirement (Group C or D) ..... 315
Third Semester
ETRON 45 Application of Microprocessors ..... 7
ETRON 49 Electronic Circuit Analysis ..... 6
FAMR 296 Working with People ..... 3
ETRON 93V Cooperative Education* ..... 3
orETRON $90 \quad$ Electronic Internship19Fourth Semester
ETRON 50 Consumer Products Servicing ..... 7
ETRON 56 Electronic Communications ..... 6
ETRON 58 Special Projects ..... 3

Minimum Credits Required | $\frac{16}{65}$ |
| :--- |

*This course may be taken in any one semester or combination of semesters within the program.

## ENGINEERING TECHNOLOGY (ENGT)

Faculty: Charles Yamamoto.
The Engineering Technology curriculum is a two-year program of study in the fundamental engineering theories, in basic industrial practices and in general education. This study includes courses in drafting (including computer-assisted draftingCAD), land surveying, statics, strength of materials, estimating and materials testing.

The student who successfully completes the curriculum will satisfy the requirements for graduation with an Associate in Science Degree. Maximum flexibility is availabie to persuade the student to enroll in supplementary courses, the levels of which are compatible with the degree of proficiency based on previous educational background and preparedness.

Graduates are qualified for employment as engineering technicians and aides in such areas as surveying, civil and structural drafting, solls and concrete testing, and quantity analyses and estimating.

The Engineering Technology curriculum has been approved by the State as meeting the educational requirements for the Hawaii State license as a land surveyor. This qualifies the graduate of the program to take the State Board of Registration examination for a registered land surveyor upon completion of seven years employment in the surveying field.

Cost for essential instruments and supplies is approximately $\$ 250$. The average cost of textbooks is approximately $\$ 210$ for one year.

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.
Program Prerequisites: ENG 10/15, MATH 24 or Associate Placement in ENG 22-60, MATH 25 in Science Degree Credits
First Semester
ENGT 20 Engineering Graphics ..... 4
ENGT 22 Intro to Engineering Computation ..... 3
ENGT 25 Survey \& Measurements I ..... 4
MATH 25 Elementary Algebra II ..... 3
General Education Requirement (ENG 22, 60, or 100) ..... 317
Second Semester
ENGT 32 Mechanics ..... 3
ENGT 34 Construction Materials \& Methods ..... 3
ENGT 35 Surveying \& Measurements II ..... 4
MATH 27 Intermediate Algebra ..... 3
General Education Requirement* ..... 316
Third Semester
ENGT $40 \quad$ Civil/Structural Drafting ..... 4
ENGT 45 Surveying \& Measurements III ..... 3
ENGT $60 \quad$ Design \& Drafting with CADD ..... 4
CHEM 151-151L Elementary Survey of Chemistry \& Lab or 161-161L General Chemistry I \& Lab ..... 4
Fourth SemesterENGT 52 Strength of Materials4
ENGT $54 \quad$ Construction Estimating \& Bidding ..... 3
ENGT 58 Soils and Foundations ..... 3
General Education Requirement* ..... 3
Elective ..... 3
Minimum Credits Required ..... 16 ..... 64
*General Education Requirements for this A.S. program are listed on the Advising Sheet which is available in the counseling office.

## FASHION TECHNOLOGY (FT)

Faculty: Jan Berman, Karen Hastings, Lillian Zane.
The curriculum is designed to provide occupational competency for a wide range of occupations. Theoretical knowledge and practical skills are provided in clothing construction, pattern drafting and designing, power machine operations, textiles, fashion sketching, visual merchandising and various fashion retailing operations.

This broad background enables the student to select various occupations ranging from power sewing operator to designer and from custom dressmaker to shop managers and owners. Cost for textbooks is approximately $\$ 50-\$ 100$ per semester. The cost of supplies varies depending on projects ( $\$ 50-\$ 200$ per semester).

A Certificate of Completion in Merchandising is available-see Jan Berman.

| Certificate | Associate |
| :---: | :---: |
| of | in Science |
| Achievement | Degree |
| Credits | Credits |

## First Semester

| FT 111 | Esthetics of Clothing | 3 | 3 |
| :--- | :--- | :--- | :--- |
| FT 205 | Materials and Methods of Clothing |  |  |
|  | Construction | 4 | 4 |
| FT 215 | Block Pattern Designing | 3 | 3 |
| General Education Requirements* |  | $\frac{6}{10}$ | $\frac{16}{}$ |

## Second Semester

FT 27
Basic Pattern Drafting \& Clothing Construction

3
3
FT 28 Introduction to Industrial Sewing
3
3
FT 30 Basic Creative Designing 3
FT 40 Textiles 3
ISC 100M or FT elective

| 3 |
| ---: |

3
15
3
15

Third Semester
FT 36 Draping 3
FT 41 Apparel Design 3
FT 216 Fashion Design and Sketching 3
FT 237 Pattern Grading 3
General Education Requirement*

| 9 |
| :--- |
| 18 |

Fourth Semester

| FT 32 | Advanced Apparel Design | 3 | 3 |
| :--- | :--- | :--- | :--- |
| FT 38 | Draping \& Design | 3 | 3 |
| CMART 28 | Textile Art | 3 | 3 |
| FT 43 | Cutting Room Functions | 3 | 3 |
| FT 125V | Fashion Show Production |  | 1 |
| General Education Requirements* |  | $\frac{3}{16}-$ |  |
|  |  |  | $\frac{12}{65}$ |
| Minimum Credits Required |  |  |  |

*General Education Requirements for the A.S. degree are listed under Degrees and Certificates.
Note: Students must meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.

## FIRE SCIENCE (FIRE)

The curriculum is designed to provide occupational competency for:

1. Fire Service personnel,
2. High school graduates interested in Fire Service careers, and
3. Insurance adjustors, investigators, safety and building inspectors whose work overlaps the Fire Service area.
The cost of textbooks is about \$100-\$150 per semester.
A student should contact the Fire Science instructor or a counselor before starting the program, and periodically thereafter.

| Program Prerequisites: ENG 10/15, MATH 1 or | Certificate | Associate |
| :--- | :---: | :---: |
| Placement in ENG 20-60, MATH 50 | of | in Science |
|  | Achievement | Degree |
|  | Credits | Credits |


| First Semester |  |  |  |
| :--- | :--- | :--- | :--- |
| FIRE 22 | Essentials of Fire Suppression |  | 3 |
| FIRE 23 | Fundamentals of Fire Prevention |  | 3 |
| FIRE Electives |  | 9 | 3 |
| General Education Requirement (MATH 50) |  | 3 |  |
| General Education Requirement (Communications)* |  | 3 |  |
|  |  | 9 | 15 |

Second Semester
General Education Requirements* 6
PHYS 51V Technical Physics
FIRE Electives
$\frac{6}{6} \quad \frac{6}{16}$

Third Semester
$\begin{array}{lll}\text { CHEM 50 } & & \begin{array}{c}4 \\ \text { FIRE Electives } \\ \text { General Education Requirement * }\end{array} \\ & 9 & \begin{array}{r}9 \\ 3\end{array} \\ & & 9\end{array}$

| Fourth Semester |  |  |
| :--- | :---: | :---: |
| FIRE Electives | 6 | 6 |
| General Education Requirement* |  | 3 |
| Electives |  | $\frac{4}{3}$ |
|  |  | $\frac{13}{60}$ |
| Minimum Credits Required | $=$ |  |

*General Education Requirements for the A.S. degree are listed under Degrees and Certificates.
Note: Students must meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.

## HEAVY EQUIPMENT MAINTENANCE AND REPAIR (HEMR)

## Address: 445 Kokea St.

Faculty: Barney Metz, Paul Onomura.
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.

Cost of tools, supplies, and textbooks is approximately $\$ 880$.

Program Prerequisites: ENG 8/9, MATH 1 or Placement in ENG 10, MATH 50

| Certificate | Associate |
| :---: | :---: |
| of | in Science |
| Achievement | Degree |
| Credits | Credits |

First Semester
DIMCH 20
Diesel Engines
10
10
DIMCH 17 Hand and Shop Tools 2
MATH $50 \quad$ Technical Mathematics I
12
3
$12-15$

## Second Semester

| DIMCH 32 | Fuels I | 3 | 3 |
| :--- | :--- | ---: | ---: |
| DIMCH 34 | Fuels II | 3 | 3 |
| DIMCH 35 | Electrical Systems | 6 | 6 |
| WELD 19 | Welding for Trades \& Industry | 3 |  |
| General Education Requirement (Communications) |  | 3 |  |
|  |  |  | 3 |
|  |  | 15 | 18 |
| Third Semester |  |  |  |
| DIMCH 40 | Power Train |  |  |
| General Education Requirements* | 12 | 12 |  |
|  |  |  | 12 |

Fourth Semester

| DIMCH 45 | Fundamentals of Hydraulics | 2 | 2 |
| :---: | :---: | :---: | :---: |
| DIMCH 50 | Diagnostics | 10 | 10 |
| General Education Requirement* |  |  | 3 |
|  |  | 12 | 15 |
| Minimum Cr | Required | 51 | 66 |

*General Education Requirements for this A.S. program are listed on the Advising Sheet which is available in the counseling office.
Note: Students must meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.

## HUMAN SERVICES (HSERV)

Faculty: Gaynel Buxton, Doris Christensen, Joan Dykstra, Lorraine Frenza, Iris McGivern, Miles Nakanishi, Sharon Ota.

Child Care Specialist (Lab): Suzanne Cravalho, Sharon Tengan.
The Human Services curriculum is designed to prepare the student for a variety of occupations which involve working with children or adults. By carefully selecting
courses, students may plan their programs so that they will be prepared to transfer to professional training programs in education, human development, and other human service fields.

Field Experience (Work Practicum) is an important feature of the Human Services Program. Work practicum is supervised work experience related to the student's field of study and approved by the Work Practicum Coordinator. The field experience may be the student's regular job or a volunteer assignment. Work Practicum is controlled by Honolulu Community College and not by the officials of the field site. Through Work Practicum Discussion (HSERV 51) the Work Practicum student has weekly interaction with the Work Practicum Instructor/Coordinator. Appropriate assignments, as determined by the Instructor, are required for completion of Work Practicum and Work Practicum Discussion. The standard college grading system is utlized. Seventy-five hours of work per semester is required for each credit earned in Work Practicum. Course designations for Work Practicum are HSERV 91V (Practicum/Early Childhood) and SOSER 91V (Work Practicum/Community Service). Course descriptions are listed in the Course Description section of this catalog.

The cost of textbooks is approximately $\$ 75-\$ 150$ per semester.
Note: The following options will not be offered during the 1992-93 academic year: Corrections, Educational Assistant, Elderly Services.

## Early Childhood Option

Early Childhood is a field with many employment opportunities. The Certificate programs allow graduates to enter the early childhood field as pre-professionalsusually at assistant levels. Students interested in obtaining the national Child Development Associate (CDA) credential may take specific courses to fulfill their formal training requirements while getting their "on-the-job" experience and fulfilling their other requirements independently. The two-year Associate in Science degree program prepares students for immediate employment as teachers in private child care/education centers for infants and toddlers or preschoolers.

Variations to the basic requirements will accomodate: school age child care workers, family child care providers, nannies, home visitors, parent educators, special education assistants, or supervisors and directors of private early childhood programs. All courses required for the Certificate of Achievement will be required plus specific additions.

The two-year course of study meets the National Association for the Education of Young Children (NAEYC) guidelines. It is developmentally-based and emphasizes observation and opportunities to participate in programs with children through class assignments and practicum experiences, both on campus and in the community. The outlined courses offer candidates an in-depth understanding of the field and the opportunity to develop their skills working with children.

The Certificate of Completion in Early Childhood Education requires a minimum 16 credit sequence designed to give the candidate the most basic skills to work with children from infancy through eight years of age. To obtain the Certificate, students must also demonstrate proficiency at ENG 9 and MATH 1 levels. Courses required for the Certificate of Completion are designated by a dagger ( $\dagger$ ) and a double dagger ( $\ddagger$ ). The Certificate of Completion fulfills formal training requirements for the national CDA credential and many of the DHS licensing requirements. Courses designated by a double dagger ( $\ddagger$ ) are highly recommended for the Direct Assessment CDA credential if assessment is planned after July 1, 1992.

## Early Childhood Education Option

|  |  | Certificate of Achievement | Associate in Science Degree |
| :---: | :---: | :---: | :---: |
| COURSES | TITLE | Credits | Credits |
| ED 110 | Developmentally Approp. Prac. | $3 \ddagger$ | 3 |
| ED 111V | Beg. Child Devipmt Lab | $1 \ddagger$ | 1 |
| ED 267V | Preschool Child Development <br> Laboratory <br> (Note: Final Semester course-take <br> w/ED 266 or ED 258) |  | 3 |
| FAMR 31 OR | Infancy and Early Childhood Development | $3 \ddagger$ | 3 |
| FAMR 231 | Human Development I | 3 | 3 |
| FAMR 100 | Personal and Professional Development | 3 | 3 |
| FAMR 105 | Early Childhood: Prof. Overview | 3 | 3 |
| FAMR 130 OR | Child Management and Guidance | $3 \ddagger$ | 3 |
| FAMR 135 | Nurturing and Guiding Young Children |  |  |
| FAMR 134 | Introduction to Observation of Children | $1 \ddagger$ | 1 |
| FAMR 232 | Human Development II |  | 3 |
| FAMR 234 | Observation and Assessment |  | 2 |
| FAMR 245 | Families and Communities | 3 | 3 |
| FAMR 296 | Working with People | 3 | 3 |
| HPER 200 | Healthy Children | $3 \dagger$ | 3 |
| HSERV 51 | Work Practicum Discussion | 1 | 1 |
| HSERV 91V | Practicum/Early Childhood | 3 | 3 |
| Select Either Preschool or Infant \& Toddler Group (Take all courses in the group you select) |  |  | 10 |
| PRESCHOOL GROUP |  |  |  |
| ED 162 | Curriculum 1: Physical (2) |  |  |
| ED 163 | Curriculum II: Creative (2) |  |  |
| ED 164 | Curriculum III: Communication (2) |  |  |
| ED 165 | Curriculum IV: Cognitive (2) |  |  |
| ED 266 | Integrating Developmentally <br> Appropriate Curriculum (2) <br> (Note: Final Semester Course-Take with ED 267V) |  |  |
| INFANT \& TODDLER GROUP |  |  |  |
| ED 152 | Intro. to Working with Inf/Toddler (3) |  |  |
| ED 252 | Prenatal and Perinatal Development (2) |  |  |
| ED 254 | Working with infants (2) |  |  |
| ED 255 | Working with 1-Year Olds (2) |  |  |


| COURSES | TITLE Ac | Certificate of Achievement Credits | Associate in Science Degree Credits |
| :---: | :---: | :---: | :---: |
| ED 256 | Working with 2-Years Olds (2) |  |  |
| ED 257 | Adv. Infant-Toddler Child |  |  |
|  | Development Laboratory (3) |  |  |
| ED 258 | Infant-Toddler Lab Seminar (1) (Note: Final Semester Course-Take with ED 267V) |  |  |
| GENERAL EDUCATION REQUIREMENTS* Human Services Electives (For CDA Candidates, ED 149. For others, select courses from FAMR, HSERV, ED, VOC, SOSER, or HPER) ELECTIVES |  | 2-3† | 15 |
|  |  |  |
|  |  |  |
|  |  | 3 |
| MINIMUM CA | ITS REQUIRED |  | 32 | 66 |
|  | Community Service Option |  |  |
| COURSES |  |  |  |
| SOSER 21 | Family Dynamics \& the Social Work Interview |  | 3 | 3 |
| SOSER 22 | Social Work with Groups |  | 3 | 3 |
| SOSER 91V | Work Practicum/Community Service | 3 | 6 |
| HSERV 51 | Work Practicum Discussion | 1 | 2 |
| FAMR 231 | Human Development I | 3 | 3 |
| FAMR 232 | Human Development II | 3 | 3 |
| HPER 195 | Modern Health: Personal and Community | 2 | 2 |
| SOSER 55 | Individual Counseling | 3 | 3 |
| FAMR 100 | Personal \& Professional Development | t 3 | 3 |
| FAMR 296 | Working with People | 3 | 3 |
| ED, FNS, FAMR, HSERV, HLTH, SOSER, or SW electives |  | S 3 | 1-14 |
| General Education Requirements* |  |  | 15-30 |
| Minimum Credits Required |  | 30 | 60 |

[^1]
## INDUSTRIAL EDUCATION (IED)

A coordinated undergraduate program of preparation for Industrial Arts teachers has been established between the University of Hawaii, College of Education, and Honolulu Community College. Graduates can transfer to the College of Education to complete general education, professional education, and teaching field requirements for the Bachelor's Degree. The cost of textbooks and materials will depend upon the teaching field.

Program Prerequisites: ENG 22, 48, 55, or 60; MATH 25; or
Placement in ENG 100, MATH 100

1. General Education Core Semester Credits (25)

Communications: 1 semester course in English and 1 semester course in Speech.

English 100
Speech 200
Quantitative and Logical Reasoning: 1 semester course
Mathematics 100 or higher, PHIL 110
World Civilization: 2 semester courses
History 151, 152
Humanities: 1 semester course
American Studies 201, 202
Art 101, 107, 108, 170, 180; Drama 101, 201
English 250, 251, 252, 253, 254, 255, 256, 257
History 241, 242, 281, 282; Linguistics 102
Music 106, 108; Philosophy 100, 101, 102, 200, 201; Religion 150, 151, 200, 201, 203, 204
Natural Sciences: 1 semester course (including lab)
Chemistry 100-100L, 151-151L, 161-161L, 162-162L, 171-171L;
Physics 100-100L, 151-151L, 152-152L, 170-170L
Social Sciences: 1 semester course
Anthropology 150, 200;
Economics 120 or 130, 131; Geography 102, 151;
Psychology 100, 170, 240; Political Science 110, 220, 245, 271;
Sociology 100, 200, 214, 218, 231, 251.
II. Technology Core* Semester Credits 36

The Technology Core consists of programs of courses in seven areas.
Courses in six areas are offered at Honolulu Community College.

1. Drafting Technology

IEDDD 101 (3)
IEDDD 102 (3)
IEDDD 201 (3)
2. Electrical/Electronic Technology

IEDET 101 (3)
IEDET 103 (3)
IEDET 102 (3)
3. Graphics Technology

ART 207 (3) (HCC instructor approval required)
GRAPH 23 (4) (HCC instructor approval required)
GRAPH 25 (4) (HCC instructor approval required)
4. Metals Technology

Mixed combination of courses in two or more different metal areas:
IEDW 102 (3) or WELD 19 (3)
IEDMS 101 (3) or MACHS 22 (3), IEDMS 102 (3), IEDMS 201 (3),
IEDMS 202 (3)
IEDSM 103 (3)
5. Power Technology

IEDPT 102 (3)
IEDPT 201 (3)
IEDPT 202 (3)
6. Construction (Wood) Technology

IEDWC 101 (3)
IEDWC 102 (3)
IEDWC 202 (3)
Courses offered at the University of Hawaif
7. Industriai Crafts Technology
(See Manoa Advisor)
EDIE 300 (2) (Manoa only)
EDIE 301 (2) (Manoa only)
EDIE 302 (3) (Manoa only)
The Industrial Education major requirement may be met in one of three options:
Option A-9 credits in two areas and 6 credits in each of three additional Techriical Areas.
Option B-9 credits in each of four Technical Areas.
Option C-18 credits in one area and 6 credits in each of 3 additional Technical Areas. (This option is for those students who have an Associate degree in one Technical Area.)
*All courses are not offered every semester-check the semester schedule for the term's offerings.
III. A total of at least 61 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 Assistant Dean.

## MACHINE SHOP TECHNOLOGY (MST)

Faculty: 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, industrial plants, shipyards, machine industries and other businesses where persons trained in machine tools are needed.

Cost of tools and textbooks is approximately $\$ 500$.
In addition to the program shown in the catalog, two specializations are also available: Shipyard and Engine Machining. The shipyard specialization includes a cooperative education segment conducted at the Pearl Harbor Naval Shipyard during the summer and prepares students for employment by the Shipyard. The engine machining specialization prepares students for employment in automotive engine machine shops. Details on these specializations can be obtained from the program instructor and the division academic counselor.
Program Prerequisite: MATH 1 or
Placement in MATH 50
First Semester
MACHS 20
MACHS 24
BLPRT 23
Math 50
Benchwork
Lathe I
Blueprint Interpretation \&
Sketching
Technical Mathematics I
Lathe II
Grinding
PHYS 51V or Technical Physics or
PHYS 55 Metallurgy and Plastics
ENG 60 Technical Writing
Third Semester
MACHS 32
MACHS 31
ICS $100 \mathrm{M} \quad$ Tools for an Information Age (Manufacturing)
4
4
Welding for Trades \& Industry
$\frac{3}{13} \frac{3}{16}$
Fourth Semester
$\begin{array}{ll}\text { MACHS } 34 & \text { Cutter Grinding } \\ \text { MACHS } 40 & \text { Advanced Machin }\end{array}$

| 3 |  | 3 |
| :---: | :---: | :---: |
| 9 |  | 9 |
|  | 3 <br> 12 | 15 |

*General Education Requirements for the A.S. program are listed on the Advising Sheet which is available in the counseling office.

## OCCUPATIONAL SAFETY AND HEALTH (OSH)

## Faculty: Chulee Grove.

The two-year Occupational Safety and Health program leading toward a Certificate of Achievement or an Associate in Science degree trains students at the paraprofessional level to work in government agencies, insurance companies, and private industry.

The cost of supplies and textbooks is approximately $\$ 75-\$ 150$ per semester.

Program Prerequisites: ENG 10/15, MATH 24 or Placement in ENG 22-60, MATH 25

| Certificate | Associate |
| :---: | :---: |
| of | in Science |
| Achievement | Degree |
| Credits | Credits |

First Semester
OSH 101 Introduction to Occupational Safety and Health
$\begin{array}{lll}\text { OSH } 145 & \text { OSH in Construction } & 3 \\ \text { CHEM } 50 & \text { Introduction to Chemistry } & 4\end{array}$
ENG 60 Technical Writing
MATH 25
$-\quad 3$
10
16

## Second Semester

OSH 102 Sa

| OSH 103 | Human Factors in Safety | 3 | 3 |
| :--- | :--- | :--- | :--- |
| OSH 150 | Industrial Fire Protection | 3 | 3 |
| PHYS 51V | Technical Physics |  | 4 |
| PSY 54 | Industrial Psychology and |  |  |
|  | Personal Adjustment | $-\frac{3}{16}$ |  |

Third Semester

| OSH 105 | Introduction to Industrial Hygiene | 3 | 3 |
| :---: | :---: | :---: | :---: |
| OSH 147 | Electrical Safety | 3 | 3 |
| OSH 153 | Accident Investigation Techniques | 3 | 3 |
| OSH 200 | Managing Workers' Compensation | 3 | 3 |
| General Education Requirement (Group C or D)*** |  |  | 3 |
|  |  | 12 | 15 |
| Fourth Semester |  |  |  |
| OSH 205 | Physical Hazards Control | 3 | 3 |
| OSH 208 | Techniques of Industrial Hygiene | 3 | 3 |
| OSH 210 | Safety Program Management | 3 | 3 |
| Electives |  |  | 6 |
|  |  | 9 | 15 |
| Minimum Credits Required |  | 40 | 62 |

Note: Students must meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.

## REFRIGERATION AND AIR CONDITIONING TECHNOLOGY (RAC)

Faculty: Julian Carpenter, Derek Oshiro.
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 cost of textbooks, supplies, meters, and tools is approximately $\$ 500$.

| Program Prerequisites: ENG 8/9, MATH 1 | Certificate | Associate |
| :--- | :---: | :---: |
| or Placement in ENG $10 / 15$, MATH 22/50 | of | in Science |
|  | Achievement | Degree |
|  | Credits | Credits |

## First Semester

| RAC 20 | Fundamentals of Refrigeration | 5 | 5 |
| :--- | :--- | ---: | :---: |
| RAC 22L | Refrigeration Laboratory I | 5 | 5 |
| BLPRT 22 | Blueprint Reading \& Drafting | 3 | 3 |
| MATH 50 | Technical Mathematics 1 | 3 | 3 |
|  |  | 16 | 16 |

## Second Semester

| RAC 23 | Advanced Refrigeration | 5 | 5 |
| :--- | :--- | :--- | :--- |
| RAC 24L | Refrigeration Laboratory II | 5 | 5 |
| RAC 27 | Electrical Fundamentals I | 5 | 5 |
| General Education Requirement (Communications) |  |  |  |
|  |  |  | 3 |
|  |  | 15 | 18 |

## Third Semester

| RAC 28 | Electrical Fundamentals II | 5 | 5 |
| :--- | :--- | :--- | :--- |
| RAC 41 | Psychrometry and Cooling Load | 5 | 5 |
| RAC 42L | Air Conditioning Machinery Lab I | 5 | 5 |
| General Education Requirement (PHYS 51V) |  | 4 |  |
|  |  | 15 |  |
|  |  | 19 |  |

Fourth Semester
$\left.\begin{array}{lccc}\text { RAC 43 Air Distribution and Air Conditioning } \\ & \begin{array}{c}\text { Systems }\end{array} & 5 & 5 \\ \text { RAC 44L } & \text { Air Conditioning Machinery } \\ \text { Laboratory II }\end{array}\right)$

[^2]
## SHEET METAL AND PLASTICS TECHNOLOGY (SMP)

Faculty: Albert Chun.
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 ducts; architectural metal work; welding and fabricating plastics and pattern development.

The cost of tools, instruments, and textbooks is approximately $\$ 200$.

|  |  | Certificate of Achievement Credits | Associate in Science Degree Credits |
| :---: | :---: | :---: | :---: |
| First Semester |  |  |  |
| SMP 20 | Hand Tool and Machine Processes | 4 | 4 |
| SMP 21 | Shop Problems | 3 | 3 |
| SMP 22 | Fabrication Processes (Architectural) | 4 | 4 |
| SMP 23 | Introduction to Surface |  |  |
|  | Development | 2 | 2 |
| MATH 50 | Technical Mathematics I |  | 3 |
|  |  | 13 | 16 |


| Second Semester |  |  |  |
| :---: | :---: | :---: | :---: |
| SMP 24 | Advanced Fabrication Processes (Architectural) | 4 | 4 |
| SMP 25 | Air Conditioning Fabrication | 4 | 4 |
| SMP 26 | Pattern Development I | 2 | 2 |
| Communications* | (Rec: HUM 35 or SP 20) |  | 3 |
| ENG 51 | Technical Reading | 3 | 3 |
|  |  | 13 | 16 |


| Third Semester |  |  |  |
| :--- | :--- | :--- | :--- |
| SMP 41 | Advanced Air Conditioning |  |  |
|  | $\quad$ Fabrication | 4 | 4 |
| SMP 42 | Plastic Fabrication | 4 | 4 |
| SMP 43 | Pattern Development II | 2 | 2 |
| SMP 47 | Plastic Welding and Fabrication I | 1 | 1 |
| HLTH 31 | First Aid \& Safety | 1 | 1 |
| WELD 17B | Gas Welding | 1 | 1 |
| General Education Requirement* |  | 3 |  |

## Fourth Semester

| SMP 44 | Blow Pipe Fabrication | 4 | 4 |
| :--- | :--- | :--- | :--- |
| SMP 45 | Advanced Fabrication (General) | 4 | 4 |
| SMP 46 | Pattern Development III | 2 | 2 |
| SMP 48 | Plastic Welding \& Fabrication II | 1 | 1 |
| SMP 49 | Advanced Shop Problems | 2 | 2 |
| WELD 17C | Arc Welding | 1 | 1 |
| General Education Requirement |  | 3 |  |
| Minimum Credits Required |  | -14 | -17 |

*General Education Requirements for the A.S. degree are listed under Degrees and Certificates.
Note: Students must also meet the proficiency requirements in communication established by the College to qualify for the Certificate of Achievement.

## SHIP REPAIR

The Program is designed to provide a multifacted introduction to the basic skills which will allow students to embark on a successful career at the Pearl Harbor Naval Shipyard. Courses must be taken in the sequence and semester scheduled. Students must obtain a security clearance to be accepted by PHNSY for on the job training in WORK 94V.

The cost of textbooks is approximately $\$ 500$.

Program Prerequisites: ENG 10, MATH 1 or Placement in ENG 22-60, MATH 22

Associate in Science
Degree
Credits

## First Semester

ENG 51
MATH 50
BLPRT 22
nnical Reading
3

WELD 19
Blueprint Reading \& Drafting
3

WELD 19
Welding for Trades \& Industry 3

IEDMS 101
Machine Shop for Industrial Education
Intro to Cooperative Education
3
SHIP 20
1
1
16

## Second Semester

HLTH 31
First Aid \& Safety
1
ENG 60
Technical Writing
3
PHYS 51 V
Technical Physics
4
BLPRT 45
SHIP 30
Naval Blueprint Reading
2
SHIP 31
Ship Painting
3
Fabric Work

Work Cycle: First Summer
WORK 94V
Federal Work Cycle

## Third Semester

PSY 180 Psychology of Work 3
SPEECH 151 Personal \& Public Speech 3
SHIP 40*
IEDSM 103
Sheet Metal I
3
Sheet Metal for Industrial Education 3
Tools for an Information Age
(Manufacturing)

## Fourth Semester

SHIP 50*
IEDWC 101
IEDIE 102
General Education
Elective
Elective

Sheet Metal II 3
Hand \& Portable Tools/Material \& Hardware 3
Electrical Building Construction 3
Group D** - Understanding World
Cultures
Course(s) in Field of Specialization
3-4
15-16

Work Cycle: Second Summer
WORK 94V Federal Work Cycle
Minimum Credits Required
*Courses to be developed.
**General Education Requirements for the A.S. degree and listed under Degrees and Certificates.

## WELDING TECHNOLOGY (WELD)

Faculty: Charles Kim, Jeffery Lane, Stanley Torricer.
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 tools is approximately $\$ 425$.

| Certificate | Associate |
| :---: | :---: |
| of | in Science |
| Achievement | Degree |
| Credits | Credits |

First Semester
WELD 20
Introduction to Welding
10
10
WELD 21 Hand and Shop Tools
2
2
BLPRT 22 Blueprint Reading \& Drafting
PHYS 55
Metallurgy and Plastics

| 3 |
| ---: |
| 4 |


| Second Semester |  |  |  |
| :---: | :---: | :---: | :---: |
| WELD 30 | Advanced Arc Welding | 5 | 5 |
| WELD 31 | Fabrication Techniques | 5 | 5 |
| WELD 32 | Oxyacetylene Welding | 3 | 3 |
| BLPRT 30B | Blueprint Reading for Welders | 3 | 3 |
|  |  | 16 | 16 |
| Third Semester |  |  |  |
| WELD 40 | Tungsten Inert Gas (TIG) |  | 3 |
| WELD 41 | Metallic Inert Gas (MIG) |  | 3 |
| WELD 51 | Advanced Fab Techniques |  | 5 |
| MATH 50 | Technical Mathematics I |  | 3 |
|  |  |  | 14 |
| Fourth Semester |  |  |  |
| WELD 50 | Work Exploration |  | 5 |
| WELD 42 | Welding Qualifications Procedures and Test |  | 5 |
| General Education Requirement* |  |  | 6 |
| ENG $22,32,48,55,60$ or 100 |  |  | 3 |
|  |  |  | 19 |
| Minimum Credits Required |  | 35 | 69 |

[^3]
# Liberal Arts Departments, Disciplines \& Staff 

## HUMANITIES

Faculty: Stanley Andrychowicz, Dewey Caldwell, R. Page Edmundson, Norman Hallett, Terrence Haney, Doric Little, Omar Nassery, David Panisnick, Barbara Peterson, Ronald Pine, Cynthia Smith, David Wong, Alan Yonan, Richard Ziegler.

The Humanities Department offers courses in American Studies, Asian Studies, Communications, Drama, History, Humanities, Learning Skills, Music, Philosophy, Religion, Speech, Theatre, and Women Studies.

## INFORMATION AND COMPUTER SCIENCE

Faculty: Kenneth Hensarling, Richard Poole, Samuel Rhoads, Dallas Shiroma, Timothy Wilson.

Although the College does not offer a major in Computer Science, it does offer several courses designed to acquaint students with computer fundamentals and computer programming. The College offers courses that support the Liberal Arts and Pre-business programs. It also offers the introductory computer courses for students planning to transfer to Manoa's Electrical Engineering or Information and Computer Science programs.

## LANGUAGE ARTS

Faculty: Sonia Chess, Keith Crockett, George Dixon, Dolores Donovan, Howard Driver, Joan Gagnon, Sally Hall, Joyce Henna, Lei Lani Hinds, Gloria Hooper, Gary James, Edith McKinzie, Janice Petersen, Nobuko Pugarelli, Sandra Wong.

The Language Arts Department offers courses in English as a Second Language, Reading, Composition, Literature, Linguistics and Journalism. It also offers Chinese, French, Hawaiian, Japanese, Spanish and Tagalog language courses.

## MATHEMATICS

Faculty: Alice Bertram, Roy Fujimoto, Michael Kaczmarski, Joanne Libarios, John Lilienthal, Frank Mauz, James Reeder, Faye Tamakawa, Timothy Wilson, Arlene Yee, Sheila Yoder, Chiping Zhou.

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, a schematic is presented in the "course descriptions" section of the catalog under Mathematics. Specific prerequisites also are listed in the course descriptions section. A grade of " C " or higher in prerequisite courses is required.

## NATURAL SCIENCES

Faculty: Richard Brill, Robert Eddinger, Kakkala Gopalakrishnan, Phil Hubbard, Theodorus Hufen, Siu Lung Kwok, Mark Schindler, John Shen, Dallas Shiroma, Vern Takabayashi, Ron Takata, Kerry Tanimoto.

The Natural Sciences Department offers courses in Astronomy, Biology, Botany, Chemistry, Engineering, Geology and Geophysics, Microbiology, Oceanography, Physics, General Science and Zoology.

## SOCIAL SCIENCES

Faculty: David Cleveland, Katey Kocel, Lena Low, Omar Nassery, Thomas Ohta, Wesley Teraoka, Reginald Wood.

The Social Sciences Department offers courses in Anthropology, Economics, Geography, Political Science, Psychology, Social Science, and Sociology.

## THE LEARNING CENTER

Coordinator: Beng Poh Yoshikawa.
Faculty: Claire Herold, Joanne Libarios, Lianne Nagano, Earl Nakahara, Michael Scafuri.

Specialists: Mary Kau, Ed Ketz, Charles Miller, Sheryl Settle, Ken Thern.
The Learning Center offers basic skills courses.

## Special Programs \& Community Service

## APPRENTICESHIP/JOURNEYWORKER TRAINING

Coordinators: Wilfred Arakaki, Richard Brown.
The Apprenticeship Training program provides related classroom instruction for persons on Oahu who are apprenticing in the Construction and Mechanical trades. In addition, training is offered for upgrading journeyworkers who desire selfimprovement in their respective trades.

The Apprenticeship program may be applied to an associate degree. See Applied Trades.

Courses are offered during the late afternoons, evenings, and Saturday mornings in the following areas:

| Asbestos Worker | Heavy Equipment Repairs |
| :--- | :--- |
| Bricklayer Mason | Ironworker (Structural) |
| Building Maintenance | Ironworker (Fabrication) |
| Carpentry | Lather |
| Cement Finishers | Operating Engineer |
| Ceramic Tile | Painting \& Decorating |
| City and County Water Supply | Plasterer |
| City and County Waste Water | Plumber |
| Community Antenna Television | Refrigeration and Air Conditioning |
| System | Reinforcing Steel |
| Drywall | Roofer |
| Electrician | Sheet Metal |
| Floor Layer | Taper |

Glaziers

Note: All courses may not be offered every year. Offerings are scheduled in response to industry demand. New courses are added as needed.

## PEARL HARBOR APPRENTICESHIP TRAINING

Pearl Harbor Naval Shipyard (PHNSY) Apprenticeship may also be available as determined by employment needs. PHNSY apprenticeships include Honolulu Community College related instruction and may be applied to an associate degree. See Applied Trades.

## COMMUNITY SERVICE

Director: Valerie Evans
Phone: 845-9122
The Office of Special Programs and Community Service offers a wide range of non-credit programs, courses and services to meet the needs of business and industry as well as the community and special groups.

Training for business and industry is customized to meet specific needs. The training is short, flexible, convenient and effective. Training courses can be delivered on-campus or on-site through a fee per student basis or through a contract between the College and the company or organization. Generally, these courses are designed to upgrade the skills and knowledge of individuals currently employed in the technical, occupational and professional fields related to the more than 25 programs offered at the College.

In addition, this Office provides specific, short-term programs and services that are responsive to community and special groups.

## EMERITUS COLLEGE

Coordinator: Walter Chun
Phone: 845-9267
Honolulu Community College has established the Emeritus College to respond to the special educational needs and requirements of senior citizens and of persons near retirement. The Emeritus College offers a continuing series of non-credit workshops and serves as a center of support and assistance for senior students wishing to enroll in any of the College's programs, either credit or non-credit.

The Emeritus College is also the first SeniorNet site in Hawaii. SeniorNet is a nonprofit organization established to create and support a national community of com-puter-using seniors. SeniorNet offers computer literacy workshops designed specifically for older adults and operates an on-line telecommunications network that allows local site participants to communicate with others throughout the United States and Canada and to gain access to information of interest. SeniorNet is cosponsored by the Kokua Council of Senior Citizen's Education Fund and the Hawaiian Eye Foundation.

## FUJIO MATSUDA TECHNOLOGY TRAINING \& EDUCATION CENTER

Manager: Walter Chun
Phone: 845-9296
Endowed by a significant gift to the UH Foundation, The Fujio Matsuda Technology Training and Education Center (Matsuda Technology Center) serves as the technological bridge connecting Honolulu Community College with appropriate businesses and industries in Hawaii. The Center introduces emerging technologies and techniques to the community through faculty consultants, workshops, seminars and non-credit ciasses.

Through the Office of Special Programs and Community Service, the Matsuda Technology Center regularly conducts short-term non-credit classes in wordprocessing, database management, spreadsheet, computer assisted design and drafting, computer art, typesetting, and publishing using Macintosh and IBM-DOS Compatible computers.

## MILITARY EDUCATION <br> (SOCAD)

Coordinator: Charles Anderson
Phone: Schofield Barracks (624-5060), Hickam Air Force Base (423-2038)
Honolulu Community College is a member of the Servicemembers Opportunity Colleges Associate Degree (SOCAD) and Navy (SOCNAV) Programs. SOCAD includes 77 colleges and SOCNAV includes 40 colleges which are linked in networks to offer associate degrees on more than 270 army and 100 navy installations. Through its Office of Special Programs and Community Service, the College offers liberal arts and technical/occupational courses at Schofield Barracks, Hickam Air Force Base, and Pearl Harbor Subase.

## MOTOR VEHICLE CERTIFICATION AND INSERVICE TRAINING PROGRAM

Director: Valerie Evans
Phone: 845-9174
Honolulu Community College administers the Motor Vehicle Certification Program for the State of Hawaii. This program includes the coordination of the National Institute for Automotive Service Excellence (ASE) certification test, the administration of the State of Hawaii Motorcycle certification examination, and the offering of noncredit ASE preparatory courses.

The College also offers a wide range of non-credit skill upgrading courses for the inservice automotive technician, the collision repair specialist and the diesel technician throughout the year.

## THE EDUCATION CENTER (ED CENTER)

Address: 879 North King Street
Phone: 845-2908
The Education Center has been an integral part of Honolulu Community College since January 1972.

The Center provides educational services including ESL training for non-native speakers of English and Immigrant Services.

## Special Courses

## WRITING INTENSIVE COURSES

In keeping with the effort to improve writing skills, Honolulu Community College requires entering students (as of Fall 1988) to complete two Writing Intensive courses for the Associate in Arts degree. Only one English course may be used to fulfill the requirement.

English 100 must be completed prior to taking a writing-intensive course. A grade of "C" or higher must be earned in a writing-intensive course for it to satisfy part of the Writing Intensive requirement.

Writing Intensive classes are identified in the schedule of classes by the "WI-" in front of the title.

## COOPERATIVE EDUCATION

Faculty: Kenneth Johnson, Ronald Kaneshiro, Donald Yanagihara.
Cooperative Education is offered in both vocational-technical and liberal arts areas. Written instructor approval is required for registration.

Cooperative Education is controlled by Honolulu Community College and not by the officials of the field site. There is regular interaction between the Cooperative Education Coordinator and the student. Appropriate assignments, as determined by the Cooperative Education Coordinator, are required for completion of the course. The standard college grading system is utilized. Five hours per week or sev-enty-five hours of work per semester are required for each credit earned except for WORK 94V.

Cooperative Vocational/Technical Education will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction. The relevance of classroom instruction to the real world of work is emphasized. The cooperative employer pays a fair wage for each hour of work performed in the Cooperative Education Program.

Courses available in Cooperative Vocational Education are ABRP 93V, AERO 93V, AJ193V, AMT 93V, BAKE 93V, BUS 93V, CARP 093V, CMART 93V, DIMCH 93V, DRAFT 93V, ELEC 93V, ENGT 93V, ETRON 93V, FT 93V, MACHS 93V, OSH 93V, PIPE 93V, RAC 093V, SMP 093V, and WELD 93V. (Repeatable for credit.)

Students accepted in a Federal Cooperative Education program may receive up to 24 credits in WORK 94 V ( 12 credits is equivalent to at least 26 weeks of work, 1040 hours). During the Work Cycle, students are assigned work experiences related to academic studies or career goals. Repeatable for credit with instructor approval.

Cooperative Arts and Sciences Education will provide practical work experience in specific liberal arts areas to investigate various types of jobs. Students are placed in employment situations in the private and public sectors of the business-industrial community. Emphasis is on job experience, but equal importance is attached to the development of social and personal habits, attitudes, and skills which are essential for job entry and advancement.

Courses available in Cooperative Arts and Sciences Education are HUM 193V, SCI 193V, and SSCI 193V. (1-4 credits per term. Repeatable for credit.) These
courses do not fulfill general education requirements for the AS degree nor do they fulfill AA core requirements.

See Cooperative Vocational Education and the Cooperative Education coordinator for information about Cooperative Arts and Sciences Education.

## LOWER DIVISION ARCHITECTURE COURSES

Honolulu Community College offers some of the Architecture courses and most of the courses required for the core requirements for architecture and at the University of Hawaii at Manoa. These offerings include the following courses:

ARCH 100, 121, 122
ARCH 271 and 272 are taken at the UH campus during enrollment in lower division architecture courses
Writing Intensive elective course, ENG 100 (composition), 250-257 (literature)
HIST 151, 152
PHYS 151 \& 151L, 152
MATH 140
SP 251
Foreign Language elective 101, 102
Biological sciences, social sciences, and humanities core courses
The lower division architecture courses do not lead to an A.S. degree at Honolulu Community College. Students who desire an A.S. degree may enroll in the Architectural Drafting Technology program and receive, depending upon their scholastic backgrounds, from five to 22 credits of transfer-level courses.

Presently one full-time faculty member serves as an advisor to students interested in architecture. Interested students should contact Douglas Madden at 845-9409.

"Stage Set-Mise en Scène" by Laura Ruby was created especially for its neighborhood location. It incorporates local features such as the Kapalama Canal and Dillingham Bridge and the Iwilei pineapple watertower. Commissioned by the Hawaii State Foundation on Culture and the Arts. Photo by Elton Ogoso.

## PRE-BUSINESS ADMINISTRATION COURSES

Honolulu Community Coilege offers all of the courses required for the first two years of the business administration degree program at the University of Hawaii at Manoa. These offerings include the following courses:

ENG 100 (English Composition)
ENG 209 (Business English)
ENG 250-257 (Literature)
SP 151 (Speech)
MATH 205 (Calculus)
QM 121-122 (Quantitative Methods)
ACC 201 (Intro to Financial Accounting)
ACC 202 (Intro to Management Accounting)
BLAW 200 (Business Law)
ECON 130 (Intro to Microeconomics)
ECON 131 (Intro to Macroeconomics)
All required liberal arts courses.
Presently three full-time faculty members serve as advisors to any student interested in business. Interested students should contact Sharon Lanz, Lena Low, or Ed Schell.

## LOWER DIVISION ENGINEERING COURSES

Honolulu Community College offers all of the courses required for the first two years of civil, mechanical, and electrical engineering at the University of Hawaii at Manoa. In most instances, after successful completion of the lower division engineering courses at HCC, a student may transfer to the University of Hawaii at Manoa with full junior status.

## FALL SEMESTER OFFERINGS

CHEM 161-161L*
MATH 205, 206, 231, 232
PHYS 170-170L, 272-272L
EE 150, 211*, 266*
CE 271*, ME 213*

SPRING SEMESTER OFFERINGS
CHEM 162-162 **
MATH 205, 206, 231, 232
PHYS 170-170L, 272-272L, 274**
EE 120**, 150, 213**
CE 270**, CE 113**, CE 211**
*Indicates course is only offered Fall semester
**Indicates course is only offered Spring semester
Presently three full-time faculty members serve as advisors to any students interested in engineering. Interested students should contact either Mark Schindler, Dallas Shiroma, or Kerry Tanimoto.

## LOWER DIVISION INFORMATION AND COMPUTER SCIENCE

Honolulu Community College offers the same lower division courses as offered by the University of Hawaii at Manoa for the Bachelor's degree in Computer Science. A student at HCC can take all of the required lower division courses in Computer Science as well as the required core courses before transferring to Manoa. This will prepare a student to transfer to Manoa with full junior status. The HCC ICS courses that are also offered at Manoa are: ICS 111, ICS 211, and ICS 241.

## EXPERIMENTAL COURSES

Experimental courses are designated by the numbers $97,98,197,198,297$, or 298.

## SPECIAL STUDIES

99V/199V/299V 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 discipline departmental name. e.g. POLSC 199 V and ENGT 99V.)

## NON-CREDIT COURSES

An array of non-credit special interest courses is offered by the Special Programs and Community Service Office. Fees vary, depending on the length of the course. Details are published in special announcements and brochures.

## Course Descriptions



Tools for Learning Now and in the Future. Librarian Diane Sakai and Technical Writing Instructor Dolores Donovan orient techrical occupational students in Infotrac and computer catalog methods of research in the HCC library. The PC lab is used for technical writing assignments.

## Course Descriptions

All courses offered at Honolulu Community College are listed alphabetically in this section acccording to the discipline. (Exceptions: see Special Programs, Special Courses.)

## ACCOUNTING (ACC)

## 24 Principles of Accounting I (3) <br> Prerequisite: MATH 1 and ENG 10/15.

An introductory course of basic accounting procedures in a service and retail enterprise to introduce cash and merchandise accounting. Includes the accounting cycle, general and special journals, general and subsidiary ledgers, financial statements, payroll, petty cash and banking transactions. (3 hrs. lect.)

## 25 Principles of Accounting II (3)

Prerequisite: Completion of ACC 24 with a "C" or better.
A continuation of financial accounting with emphasis on accounting for purchases, sales, and note transactions; inventories; plant and equipment; intangible assets; investments; long-term liabilities; owner's equity for partnerships and corporations; preparing the statement of changes in financial position. (3 hrs. lect.)

## 201 Elementary Accounting I (3)

Prerequisite: Placement in ENG 100 or concurrent enrollment. ENG 102 recommended.
This course introduces the student to accounting theory and the methods used to record and report financial information. It analyzes methods for valuing the assets, liabilities and ownership of an organization. (3 hrs. lect.)

## 202 Elementary Accounting II (3)

Prerequisite: ACC 201
This course introduces the student to managerial methods for evaluating financial performance including cost accounting, budgeting break-even analysis, ratio analysis, and sources and uses of funds. (3 hrs. lect.)

## ADMINISTRATION OF JUSTICE (AJ)

## 101 Introduction to the Administration of Justice

(Formerly AJ 121)
Prerequisite: ENG 22 or placement in ENG 100
This is a comprehensive course on crime and its causes including the history and philosophy of the administration of justice in America, the development of crimi-
nal justice, identification of the various subsystems, role expectations and their interrelationships. Theories of crime, punishment, adjudication and rehabilitation and training for professionalism in the entire system are also explored. (3 hrs. lect.)

## 103 Criminal Investigation

(Formerly AJ 123)
Prerequisite or Co-requisite: AJ 101
This course covers the basic principles of criminal investigation including; the human aspects of dealing with the public, case preparation, the collection and preservation of physical evidence, crime scene search, fingerprints, casts, photographs and laboratory assistance. (3 hrs. lect.)

## 120 Constitutional Law

(Formerly AJ 150)
Prerequisite or Co-requisite: AJ 101
The US constitution is examined as a basis of arrest, search, seizure and disposition. Cases are examined to illustrate the court's interpretive process. (3 hrs. lect.)

## 137 Patrol Procedures

(Formerly AJ 127)
Prerequisite or Co-requisite: AJ 101
This course will cover the duties and responsitilities of the patrol divisions of law enforcement agencies. The organization, operation and effectiveness of patrol will be examined and evaluated. The student will become familiar with the various methods departments use to accomplish the patrol mission such as team policing, beat plans and unique solutions like bicycles, all terrain vehicles and aircraft. (3 hrs. lect.)

## 138 Report Writing Process

(Formerly AJ 128)
Prerequisite or Corequisite: AJ 101
This course will introduce the student to the methods of producing accurate, concise and detailed reports of events common to the administration of justice practitioner. (3 hrs. lect.)

## 139 Computer Application in Criminal Justice

(Formerly AJ 160)
Prerequisite or Corequisite: AJ 101
The student will become familiar with the modern technological advances and applications of the computer relative to investigation, recordkeeping, crime analysis, trends and patterns. The importance and significance of statistics is stressed and computer aided dispatch is examined. (3 hrs. lect.)

## 170 Introduction to Private Security

(Formerly AJ 122)
Prerequisite or Co-requisite: AJ 101
This course is an overview of the private security industry. Topics such as; retail, hotel, hospital, industrial and many other types of security are covered. Also examined are security methods such as electronic surveillance, perimeters and patrol. (3 hrs. lect.)

## 173 Hotel Security

(Formerly AJ 125)
Prerequisite or Co-requisite: AJ 101
This course is an overview of the hotel security industry. The student is presented with the responsibilities and methods of providing security to guests, staff and premises in a hotel setting. Also covered are the role of security personnel in handling day to day problems and special events occurring in a hotel environment. (3 hrs. lect.)

## 175 Hospital Security

(Formerly AJ 129)
Prerequisite or Co-requisite: AJ 101
This course is an overview of the hospital security industry. Topics such as; patient, visitor and staff protection are examined along with drug control, fire protection and concerns unique to security in a hospital setting. (3 hrs. lect.)

## 200 Principles of the Hawaiian Justice System

(Formerly AJ 244)
Prerequisite or Co-requisite: AJ 101
Using the State of Hawail's justice system as an example, the judicial procedures are examined from arrest, through the court process and final disposition. (3 hrs. lect.)

## 210 Juvenile Delinquency

(Formerly AJ 126)
Prerequisite or Co-requisite: AJ 101
This course provides the administration of justice student with a basic and practical understanding of the legal principles involved in juvenile delinquency problems. Analysis of legislative and judicial responses to juvenile behavioral problems provide realistic and meaningful insights into the functioning of the juvenile justice processes. (3 hrs. lect.)

## 221 Criminal Law

(Formerly AJ 227)
Prerequisite or Co-requisite: AJ 101
The history and philosophy of criminal law are examined along with definitions and classifications of crimes. This course also covers the basics of legal research and the application of the concept of law as a social force. (3 hrs. lect.)

## 224 Rules of Evidence

(Formerly AJ 130)
Prerequisite or Co-requisite: AJ 101
This course is a thorough study of the evidence rules with specific emphasis on the application of these rules in preparing and presenting evidence. This includes a discussion of the history and approach to the study of evidence, proof by evidence and substitutes. General admissibility tests, evidence by witness testimony, documents and real evidence are examined. Rules of evidence are cited by decisions and students are required to brief cases. (3 hrs. lect.)

## 230 Principles of Police Supervision

(Formerly AJ 240)
Prerequisite or Co-requisite: AJ 101
This 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, and personnel complaint investigation and techniques. (3 hrs. lect.)

## 233 Police Organization and Management

(Formerly AJ 245)
Prerequisite or Co-requisite: AJ 101
The principles of organization and administration in the law enforcement commurity are examined along with such topics as organizational structures, managerial philosophies, personnel issues and leadership. (3 hrs. lect.)

## 234 Community Relations

(Formerly AJ 246)
Prerequisite or Co-requisite: AJ 101
This course acquaints the student with the role of law enforcement in government and the critical importance of effective community relations. The dynamics of race relations and other current social problems directly related to the law enforcement community are explored. This course focuses on attitudes of the public and the law enforcement officer, why these attitudes exist and what can be done to improve the situation. (3 hrs. lect.)

## 280 Current Issues in the Administration of Justice (3)

Prerequisite or Co-requisite: AJ 101
This course is an exploration of issues related to the study of the administration of justice. Students will define, select, research, and examine these issues, then discuss the various viewpoints thereby conducting a thorough probe of important and controversial issues facing the justice professions. (3 hrs. lect.)

## 283 Substance Abuse in Society

Prerequisite or Co-requisite: AJ 101
This course covers the historical development of drug enforcement in relation to changing social mores. Emphasis is placed on the detection and identification of illegal drugs and their suppression through enforcement and investigation. Tactics of enforcement will be presented along with a study of pertinent statutory and case law. The effects of rehabilitation and treatment will be explored. (3 hrs. lect.)

## ADVANCED AUTOMOTIVE TECHNOLOGY (AAT)

100 Automotive Control Systems (12)
Prerequisite: Instructor Approval Required
Interpretation of complex schematics; electrical accessories; timers, clocks, and counters; computer control sub-systems; entertainment and climate controls; computer controlled power train; other selected topics as appropriate. (8 hrs. lect., 12 hrs. lab)

## 101 Advanced System Diagnostics (12)

Prerequisite: AAT 100
Advanced fuel control systems; advanced ignition systems; driveability symptoms; self-diagnosis systems; working with shop track; other selected topics as appropriate. (8 hrs. lect.; 12 hrs. lab.)

## AERONAUTICS (AERO)

## 30 General Aircraft Maintenance I (7)

Blueprint reading, mechanical drawing, aircraft weight and balance procedures, nondestructive testing, basic heat treating, use of technical manuals and other maintenance functions as specified by Federal Aviation Regulation Part 147. ( 240 hrs . total over 8 wks .)

## 31 Advanced General Aircraft Maintenance II (7)

Prerequisite: AERO 30
Fundamentals of direct and alternating current electricity, fundamentals of applied mathematics, fundamentals of applied physics; calculate and measure electrical power volts, amps, resistance, start, ground operate and move aircraft, overhaul piston and turbine engine ignition systems in accordance with Federal Aviation Regulation Part 147. (240 hrs. total over 8 wks .)

## 32 Powerplant Maintenance I (7)

Prerequisites: AERO 30, 31
Fundamentals of piston engine construction and operation, basic powerplant indicating systems; inspect and repair opposed and radial piston engines, perform powerplant inspections, inspect engine indicating systems as specified by Federal Aviation Regulation Part 147. (250 hrs. total over 8 wks.)

## 33 Airframe Maintenance I (7)

Prerequisites: AERO 30, 31
Principles of aircraft sheetmetal structures, identification of aircraft fasteners, aircraft sheetmetal layout and fabrication; install special rivets and fasteners, inspect and repair sheetmetal structures, fabricate tubular structures and other aircraft structural maintenance functions as specified by Federal Aviation Regulation Part 147. (250 hrs. total over 8 wks.)

## 34 Powerplant Maintenance II (7)

Prerequisites: AERO 30, 31, 32
Fundamentals of turbine engine construction and operation, piston and turbine engine fuel metering systems; inspect and service turbine engines, repair engine fuel metering components as specified in Federal Aviation Regulation Part 147. ( 250 hrs . total over 8 wks .)

## 35 Airframe Maintenance II (7)

Prerequisites: AERO 30, 31, 33
Principles of construction of aircraft wooden structures, repair of aircraft synthetic material, principles of rigging fixed and rotary winged aircraft; application of aircraft covering material, aircraft painting, rig rotary and fixed winged aircraft as specified by Federal Aviation Regulation Part 147. (250 hrs. total over 8 wks.)

36 Powerplant Maintenance III (7)
Prerequisites: AERO 30, 31, 32, 34
Theory and operation of engine fire detection and control systems, theory of operation and construction of aircraft propellers and related components; inspect and repair engine exhaust and cooling systems, repair and balanced propellers as specified in Federal Aviation Regulation Part 147. (250 hrs. total over 8 wks .)

## 37 Airframe Maintenance III (7)

Prerequisites: AERO 30, 31, 33, 35
Theory of operation of aircraft hydraulic, pneumatic, oxygen and auto-pilot systems; inspect and repair aircraft hydraulic, fuel, pneumatic and instrument systems and other aircraft components as specified by Federal Aviation Regulation Part 147. (250 hrs. total over 8 wks.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Administration of Justice. Repeatable 4 times for credit up to a maximum of 12 credits. (5 hrs. of work experience per week per credit).

## AEROSPACE STUDIES (AS)

Office: 1460 Lower Campus Drive, UH Manoa, Tel: 956-7734
Professor: Farmer
Assistant Professors: Costello, Penning
Administration: Murdock, Ramos
Aerospace Studies (AS) is part of the Air Force Reserve Officers Training Corps AFROTC) program. Men and women who successfully complete all requirements are commissioned as second lieutenants in the US Air Force. They then serve on active duty or may in some cases obtain educationazl delay for graduate studies. Academic courses are open to any student without obligation to the Air Force. Fouryear and two-year program options are available.

The four-year program is divided into two phases, the general military course (GMC-freshman and sophomore years) and the professional officer course (POCjunior and senior years). Students who have participated in JROTC or who have had more than two months active duty may have a portion or all of the GMC waived. Students are under no obligation to the Air Force until they enter the POC at the beginning of their junior year. Between their sophomore and junior years, students will attend an expense-paid four-week field training at a Mainland Air Force base. In addition, candidates receive field training pay of approximately $\$ 600$. Students receive a $\$ 100$ tax-free monthly allowance while in the POC.

The two-year program consists of the POC plus a six-week expense-paid field training on the Mainland before students enter their junior year. No obligation is incurred as a result of attending field training and the candidate is paid approximately $\$ 700$ while on the Mainland. Usually juniors and seniors are enrolled but sophomores and graduate students may also qualify for the POC.

Pilot candidates receive up to 13 hours of free flight instruction at the Flight Screening Program on the Mainland following field training. The opportunity to attend parachute jump school is made available to members of the POC. Various four-, three and a half-, three-, two and a half-, and two-year scholarships covering tuition, fees, and books are available on a competititve national basis. All scholarship students must complete one year of college instruction in a major Indo-European or Asian language prior to commissioning.

Interested students may obtain information from the director at 1460 Lower Campus Drive, Honolulu 96822, phone number 956-7734.

Leadership laboratory required for 101-102, 201-202. Conducteed within framework of organized cadet corps with progression of experiences designed to develop leadership potential. Involves Air Force customs and courtesies, drill, career progression.

101-102 U.S. Air Force (1-1)
Comment: A weekly one-hour Leadership Lab of Air Force customs and courtesies, Air Force Environment and drill ceremonies is required. Tuition is waived, classed held at UH-Manoa LCD-2. For more information, call AFROTC at 9487734/7735.
Air Force in the contemporary world; total force structure; strategic offensive/ defensive forces; general purpose forces. (1 hr. lect.; 1.5 hr . lab.)

## 201-202 The Development of Air Power (1)

Comment: A weekly one-hour leadership lab of Air Force customs and courtesies, Air Force Environment and drill ceremonies is required. Tuition is waivered, classes held at UH-Manoa LCD-2. For more information, call AFROTC at 9487734/7735.
Study of air power from balloons and dirigibles through the jet; air power employment in age; historical review of military and non-military operations in support of national objectives; the evolution of air power concepts and doctrine. ( 1 hr . lect.; 1.5 hr lab.)

## AMERICAN STUDIES (AMST)

## 201 The American Experience (3)

Prerequisite: ENG 22
Dominant American values and institutions; influence of political, social and environmental factors; ideas of individualism, success and national character. (3 hrs. lect.)

## 202 Diversity in American Life (3)

Prerequisite: ENG 22
Variety and diversity in American life; creation of a multicultural, multiracial society; distinctive outlooks shaped by ethnicity, gender, race, age and other factors. (3 hrs. lect.)

211 Contemporary American Issues: Domestic (3)
Prerequisties: ENG 100 or Instructor Approval
Exploration of current issues such as discrimination, jobs, family life, criminal justice, economic trends, health care, environmental protection and national security. (3 hrs. lect.)

## 212 Contemporary American Issues: World (3)

Prerequisite: ENG 100 or Instructor Approval
Exploration of current issues such as Soviet-American tensions, foreign trade, conventional and nuclear weaponry, global environmental issues and Third World relations. (3 hrs. lect.)

## ANTHROPOLOGY (ANTH)

## 20 Survey of Anthropology (3)

This course examines the development of the human species, 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 nontransfer students. (3 hrs. lect.)

## 150 Human Adaptations (3)

Human variation, physical and cultural, examined for its possible survival value under particular conditions from prehistoric times to present. How various ways of life and physical characteristics are adaptive or maladaptive. Implications for the future. (3 hrs. lect.)

## 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 cultural change. (3 hrs. lect.)

## 210 Archaeology (3)

An introduction to the methods and problems of archaeology. The course covers methods of excavation and examines famous prehistoric sites and the contributions they have made to an understanding of the origins and development of civilization. (3 hrs. lect.)

## 215 Physical Anthropology (3)

An introduction to human evolution, heredity, primatology, early human populations, human growth and development, differences in modern people, and the development and differentiation of culture. (3 hrs. lect.)

## ARCHITECTURE (ARCH)

## Also see DRAFTING (DRAFT)

100 Introduction to Man's Built Environment (3)
Prerequisite: ENG 22-60 or Placement in ENG 100
A wide-ranging course that covers the philosophical development of society's physical fabric as revealed by the range of representative physical designs. Form and function, symbolism, behavioral influences, theories of aesthetics, design and progress, and design and economics, commerce, war, and religion are some of the subjects of this course. (3 hrs. lect.)

## 121 Design Drawing (3)

Prerequisite or co-requisite: DRAFT 20
Introduction to types and methods of architectural solid and spatial representation. Topics include orthographics, isometrics, mechanical projection of perspectives, graphical problem analyses, dimensional conceptualizing, shades and shadows, and descriptive geometry. (1 hr. lect.; 6 hrs. lab.)

## 122 Freehand Drawing (3)

Prerequisite: ARCH 121
Basic freehand drawing in black and white media. Contour, gesture, perspective, and value delineation based on careful observation of actual subjects. Emphasis is placed on the use of drawing as a tool for visualization and communication. (2 hrs. lect.; 4 hrs. lab.)

## ART (ART)

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30 The Visual Arts (3)
An introduction to the visual ideas and materials of art for non-majors. (3 hrs. lect.)
100 Arts and Crafts (3)
A basic course designed to provide the opportunity to explore several of the various arts and crafts. Visiting artists will participate on selected projects. (2 hrs. lect.; 4 hrs. lab.)
101 Introduction to the Visual Arts (3)
Prerequisite: ENG 10
Nature of visual art and its expression in various forms. Lectures, demonstrations. (3 hrs. lect.)
104 Introduction to Printmaking (3)
An introduction to the materials and techniques of major printmaking processes in historical and contemporary application. (2 hrs. lect.; 4 hrs lab.)
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## 107 Introduction to Photography (3) (formerly ART 207)

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Lectures, demonstrations, and projects. Elements are principles of photography. Assumes no prior knowledge of photography. Students must have camera with adjustable shutter speeds, aperture settings, and light meter. Students must purchase required lab supplies. (3 hrs. lect.; 3 hrs. lab.)
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112 Introduction to Computer Art (3) (formerly ART 110)
Prerequisite: ENG 10/15, MATH 1; Eligible for CMART Program
Introduction to the technology, vocabulary, and procedures of computer produced images; the use of the computer graphics as an artist's tool. ( 2 hrs. lect.; 4 hrs. lab.)
113 Introduction to Drawing (3)
Prerequisite: ENG 10/15
Two-dimensional visualization and rendering of forms, spaces, and ideas through a variety of approaches and media. ( 2 hrs . lect.; 4 hrs lab.)
114 Introduction to Color (3)
Prerequisite: MATH 1, ENG 10/15
A study of color with emphasis on fundamental objective and subjective aspects and theories of color and their practical application. (2 hrs. lect.; 4 hrs. lab.)
115 Introduction to Design-2D (3)
Prerequisite: MATH 1, ENG 10/15
Basic design concepts, elements and principles of organization. Emphasizes problem-solving and technical skills with introduction to computer. (2 hrs. lect.; 4 hrs. lab.)
123 Introduction to Painting (3)
Prerequisite: ENG 10/15
Theory and practice of painting; basic material and technical procedures will be addressed. (2 hrs. lect.; 4 hrs. lab.)
170 History of Western Art (3)
Prerequisite: ART 101
Major developments of the Arts of Europe and the Americas. (3 hrs. lect.)
180 History of Asian Art
Prerequisite: ART 101
Major developments of the Arts of Asia. (3 hrs. lect.)

## 207 Intermediate Photography: B/W Studio (3) (formerly CMART 50) <br> Prerequisites: ART 107. <br> Black and white photography emphasizing communication and self expression. Lectures, demonstrations and projects. (3 hrs. lect.; 3 hrs. lab.)

## 208 Intermediate Photo: Color Studio (3)

Prerequisite: ART 107
Color in photography emphasizing communication and self-expression, lectures, demonstrations, and projects. Students must supply camera and materials. (2 hrs. lect.; 4 hrs. lab.)

## 209 Image in Motion (3)

Prerequisites: ART 207 or instructor approval
Multi-media studio course in communication with visual equipment. Includes sequencing of images, use of single and multiple imagery, and slide/tape presentations. Must have 35 mm adjustable camera and light meter. Repeatable one time only. (2 hrs. lect.; 4 hrs. lab.)

## 213 Intermediate Drawing (3)

Prerequisite: ART 113.
Extension of ART 113; drawing concepts unique to this century. (2 hrs. lect.; 4 hrs. lab.)

## 214 Life Drawing (3)

Prerequisites: ART 113 or instructor approval
Prerequisite or Co-requisite: ART 213
Study of the figure. Repeatable once for credit. (2 hrs. lect.; 4 hrs. lab.)

## 215 Printmaking-Intaglio (3)

Prerequisites: ART 101, 113 or instructor approval
Basic intaglio techniques of printmaking, including etching, engraving, drypoint, aquatint, plus perceptual and conceptual exercises in composition and pictorial structure. ( 2 hrs. lect.; 4 hrs. lab.)

## 216 Printmaking—Lithography (3)

Prerequisites: ART 101, 113 or instructor approval
Technical controls; development of concepts and techniques of lithography on stones and plates. ( 2 hrs. lect.; 4 hrs. lab.)

## 217 Screen Printing (3)

Prerequisites: ART 101, 114
Co-requisites: ART 113, 115, Recommend GRAPH 25
Basic screenprinting techniques from open screen to photographic methods will be addressed. (2 hrs. lect.; 4 hrs. lab.)

## 223 Intermediate Painting (3)

Prerequisites: ART 123 or instructor approval
Survey of late 19th and 20th century studio practice with emphasis on abstraction and non-representational painting. (2 hrs. lect.; 4 hrs. lab.)

264 Intermediate Design-3D (3) (formerly 116)
Prerequisite: ART 115
Basic three-dimensional design concepts emphasizing the elements and principles of art. (2 hrs. lect.; 4 hrs. lab.)

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266 Intermediate Design - Typography (3) (formerly CMART 35)
Prerequisites: ART 115, CMART 20, alphanumeric keyboard (computer option only.)
Principles of typography. Historical and contemporary information and skills include a computer typesetting option. ( 2 hrs . lect.; 4 hrs . lab.)
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## 275 Women in Art (3)

Prerequisites: ENG 100; WS 151 and ART 101; SOC 100 or PHIL 100 OR Instructor Approval.
An interdisciplinary survey of the role of women as subject/object in the visual arts, their activity as creators of art and as participants in the art world. (3 hrs. lect.)
This course is crosslisted as WS 275 and credit may be received only for ART 275 OR WS 275 but not both.

## ASIAN STUDIES (ASIAN)

## 100 Cross Culture Perception and Awareness (3)

Recommended Preparation: Students should be able to read and write at a college level. Students who feel they do not meet this requirement are advised to take the necessary English course (English 100, etc.) either prior to or concurrently with ASIAN 100.
The purpose of this course will be to raise the student's awareness and understanding of the operation and composition of non-American cultures and societies. The skills of observation and analysis that the students will acquire through this course should enable them to confront and interact with any other non-American culture. (3 hrs. lect.)

## ASTRONOMY (ASTRO)

## 110 Survey of Astronomy (3)

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

## AUTO BODY REPAIR AND PAINTING (ABRP)

## 20 Introduction to Auto Body Repair (3)

This course prepares the student for the program. It orients the student to the safety practices, tools, and equipment which will be required by the program. Students will gain an understanding of the program requirements, college policies, and occupational/industry expectations. Specific content will include: steel and aluminum sheet metal; basic shapes and reinforcements; elasticity of sheet metal; stress and strain of sheet metal; and the expansion and contraction of metal. The students will also be introduced to body chassis nomenclature. (2 hrs. lect.; 3 hrs. lab.)

## 21 Auto Body Basics I (4)

Prerequisite: ABRP 20
This course will give the student the opportunity to learn, practice, and demonstrate their skills as they relate to light gauge metal, the use of basic hand tools and power equipment, working with a variety of materials, and the techniques associated with auto body sheet metal roughing out and disc sanding. Basic oxyacetylene welding and cutting will be introduced. The preparation of the vehicle for repair will also be introduced with an emphasis on the fundamental procedures in the removal and replacement of parts such as hardware, trim, upholstery, etc. (2 hrs. lect., 6 hrs. lab.)

## 22 Auto Body Basics II (5)

Prerequisite: ABRP 21
This course will introduce the student to several skills required of the auto body repair industry. While a particular shop may specialize in a specific type of repair, most shops require entry-level employees to have skills in basic MIG welding, plasma cutting, and plastic filler. The course will allow the student to learn, practice, and demonstrate his/her skills as they relate to light gauge metal welding and the techniques associated with auto body repair, such as composite and rust repair. (2 hrs. lect., 9 hrs. lab.)

## 30 Introduction to Auto Body Painting (3)

Prerequisite: ABRP 20
This course will orient the student to paint shop safety, equipment, tools, abrasives, and the glossary of terms commonly used in painting. Students will also be introduced to the occupation/industry expectations with regard to painting. (2 hrs. lect.; 3 hrs. lab.)

## 31 Introduction to Surface Preparation (3)

Prerequisite: ABRP 30
This course will introduce the student to several facets of the auto body refinishing industry. While a particular shop may specialize in a specific type of finish, most shops require entry-level employees to have basic skills in surface preparation for refinishing, application of undercoats, proper chemical selection and proper reduction. This course will allow the student to learn, practice and demonstrate his/her skills as they relate to surface preparation. (2 hrs. lect.; 3 hrs. lab.)

## 32 Overall Refinishing (3)

Prerequisite: ABRP 31
This course introduces the student to the use of various materials for overall refinishing, color identification, and selection. The student will learn to identify specific paint application problems and the steps necessary to solve these problems. (1 hr. lect., 6 hrs. lab.)

## 33 Spot Refinishing and Panel Blending (3)

Prerequisite: ABRP 32
This course introduces the student to the different techniques and various top coats used for spot refinishing; with emphasis on panel blending, application techniques to different base materials, and polishing processes for finish. (1 hr. lect., 6 hrs. lab.)

## 40 Collision Repair (6)

Prerequisite: ABRP 22
This course introduces the student to the auto body collision repair environment. While a particular shop may have only one type of frame repair equipment, most shops look for entry-level employees to have basic skills and/or an understanding in collision repair. The unibody of the late model collision damaged vehicle will be the focal point of instruction. The student will receive instruction in the use of equipment consistent with the repair of the unibody vehicle. Specific areas to be covered relate to the identification and analysis of damage, measuring and fixturing of systems, and straightening systems and techniques. (3 hrs. lect., 9 hrs. lab.)

## 41 Panel Adjustment and Alignment (4)

Prerequisites: ABRP40
This course introduces the student to the adjustment and alignment of door, hood, decklid, and front fender. Also introduced is the service of structural and cosmetic panels. ( 2 hrs. lect.; 6 hrs. lab.)

## 42 Air Conditioning and Engine Cooling Systems (2)

Prerequisite: ABRP 41
Automobiles are equipped with various mechanical and electrical components. In some collisions, these components become damaged. Even if undamaged, however, these components may have to be removed from the vehicle to faclitate repair. This course is a basic introduction to automobile air conditioning and cooling systems. (1 hr. lect., 3 hrs. lab.)

## 50 Suspension/Steering and Brakes (5) Prerequisite: ABRP 42

This is an introductory course to suspension/steering and brakes. While a particular shop may not require proficiency of entry-level employees in mechanical repair, they do look for entry-level employees to have a basic understanding of these components. This course specifically allows the student to learn, practice, and demonstrate his/her skills as they relate to suspension/steering and brakes. (2 hrs. lect., 9 hrs. lab.)

## 51 Auto Body Electrical Systems (2)

Prerequisite: ABRP 50
This course is an introductory course to electrical systems as they relate to auto body repair. While a particular shop may not require proficiency of entry-level employees in electrical repair, they do look for entry-level employees to have a basic understanding of electrical components. This course specifically allows the student to learn, practice and demonstrate his/her skills as they relate to basic electrical repair. (1 hr. lect., 3 hrs. lab.)

## 52 Auto Body Drive Train and Fuel Systems (2) <br> Prerequisites: ABRP 51

This course is an introductory course to drive train and fuel systems as they relate to auto body repair. While a particular shop may not require proficiency of entrylevel employees in these areas, they do look for entry-level employees to have a basic understanding of drive train and fuel systems. This course specifically allows the student to learn, practice and demonstrate his/her skills as they relate to basic drive train and fuel repair. (1 hr. lect.; 3 hrs. lab.)

## 53 Auto Body Business and Industry Trends (3) Prerequisite: ABRP 52

This course is divided into two general areas. The first area deals with shop management, estimating, and industry relations. Though many shops do not require these skills of entry-level employees, they are highly recommended for the auto body technician. This part of the course will allow the student to learn, practice, and demonstrate his/her skills as they relate to shop management, estimating and industry relations. The second area of study deals with the current and future trends of the industry. This segment of the course is intended to introduce students to the latest technological advances in the industry, and to expose them to future predicted changes. ( 2 hrs . lect., 3 hrs . lab.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Autobody Repair and Painting. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs . work experience per week per credit.)

## UPHOLSTERY

ABRP courses numbered 60 and above are a series of courses designed to teach the fundamentals of upholstery. Students completing this series of courses will acquire entry level skills for the upholstery industry. Costs of tools, supplies, and textbooks is approximately $\$ 360$.
60 Upholsteryl (12)
Prerequisite: Placement in ENG 8/9, MATH 1
Introduction to general and specific subjects of auto upholstery. Theory and practice in utilizing a compound walking foot industrial sewing machine. Emphasis on various materials, stitch, and seam types. Theory and practice in removing, repairing, and replacing auto seats. (This course is equivalent to ABRP 60B, 60C, 60D) (6 hrs. lect.; 18 hrs. lab.)

60B Industrial Sewing Machine (4)
Prerequisite: Placement in ENG 8/9, MATH 1
Training in safety, care, and use of hand tools, power equipment, and industrial sewing machine; materials and terms of the trade. Principles and practices in the operation and control of a high speed single needle compound walking-foot sewing machine. ( 2 hrs . lect.; 6 hrs. lab.)

## 60C Basic Pattern Drafting \& Stitching (3)

Prerequisite: ABRP 60B
Introduction of types of material and care of material. Theory and practice in industry methods of marking, laying up and cutting. Also different sewing techniques. (2 hrs. lect.; 3 hrs. lab.)

## 60D Auto Seats (5)

Prerequisite: ABRP 60C
Introduction to general and specific subjects of automobile seat; repair or replacement of padding and springs. Assembly and disassembly of seats and seat covers. (2 hrs. lect.; 9 hrs. lab.)

## 61 Upholstery II (12)

Prerequisite: ABRP 60 or ABRP 60D
This course is designed particularly for the automobile upholsterer. The latest information and techniques to make and install carpet, headliner, door panel, and rear decking are covered. Several different types of custom upholstery are also covered. (This course is equivalent to ABRP 61B, 61C, 61D) (6 hrs. lect.; 18 hrs. lab.)

61B Door Trim Panels \& Package Tray (4)
Prerequisite: ABRP 60 or ABRP 60D
Training and practice in removing, repairing, and replacing door trim panels and armrest. Principles and practices in drafting patterns and covering door trim panels. (2 hrs. lect.; 3 hrs. lab.)

61C Carpets (3)
Prerequisite: ABRP 61B
Introduction to types of carpets. Principles of pattern drafting, repairing, sewing and installing carpets in domestic cars. Theory in identification and removal of stains on carpets. (2 hrs. lect.; 3 hrs. lab.)

## 61D Headliner (5)

Prerequisite: ABRP 61B
Theory and practice in fabricating several types of headliners. Various factors in removing, repairing, replacing, and installing headliners and sun visors. (2 hrs. lect.; 9 hrs. lab.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Autobody Repair and Painting. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs . work experience per week per credit.)

## AUTOMOTIVE MECHANICS TECHNOLOGY (AMT)

## 30 Engines (6)

Prerequisite: ENG 10/15, MATH 24/50
Co-requisite: PHYS 56
This course will cover shop safety, tools and all components found in the modern internal combustion engine. The course is designed to provide students with an understanding of the fundamental operation and construction of internal combustion engines. Instruction will include theory and laboratory (shop) activities in which students will learn how to inspect, service, maintain, diagnose, and repair automobile engine malfunctions. ( 2 hrs . lect.; 12 hrs . lab.)

40 Electrical Systems (6)
Prerequisites: AMT 30
This course will cover shop safety, applicable tools and equipment. It is also designed to provide students with the essential theories and practical skills in servicing and repairing: batteries, starting, charging, and lighting system. Various other electrical accessories and circuitry will also be covered and the application of solid state semiconductors. (4 hrs. lect.; 6 hrs. lab.)

## 43 Air Conditioning (3)

Prerequisites: AMT 40; PHYS 56
Co-requisites: AMT 53, 55
This course covers shop safety, specialty tools, fundamental theories, diagnostics, service, and repair practices to automotive air conditioning and climate control systems. Presented in the course are the operation and function of the vacuum, electrical, refrigeration circuits, and computer controls. Training is provided in the use of manifold gauges, leak detectors, and approved recovery/charging systems. ( 1 hr. lect.; 6 hrs. lab.)

46 Powertrain and Manual Transmissions (6)
Prerequisites: AMT 55; PHYS 56
Co-requisites: AMT 50
In this class, students will learn shop safety, proper use of related tools and equipment. The various designs of manual transmissions, differentials, and transaxles are covered in this course along with the many drive line components found in the undercarriage of the automobile. Each major component is covered in detail, including such topics as purpose, application, operation, inspection, diagnosis, and repair. (3 hrs. lect.; 9 hrs. lab.)

50 Automatic Transmissions/Transaxles (6)
Prerequisites: AMT 55; PHYS 56
Co-requisites: AMT 46
This course explains the fundamental principles of automatic transmission design and operation found on both Front Wheel Drive (FWD) and Rear Wheel Drive (RWD) automobiles. Service and overhaul procedures are given on various import and domestic automatic transmissions according to manufacturer's standards. Shop safety, related tools and equipment will also be covered. (3 hrs. lect.; 9 hrs. lab.)

## 53 Brakes (5)

Prerequisites: AMT 40; PHYS 56
Co-requisites: AMT 43, 55
This course covers shop safety, related tools, fundamental principles of operation and practical application needed to perform repairs to automotive braking systems. Various mechanical, hydraulic, vacuum, electrical, and computer devices incorporated in the automobile's braking system will be covered. They include an introduction to Anti-lock Braking Systems manufactured by Teves, Bosh, Delco, and Kelsey-Hayes along with established troubleshooting and service procedures. (3 hrs. lect.; 6 hrs. lab.)

55 Suspension and Steering (4)
Prerequisites: AMT 40
Co-requisites: AMT 43, 53
This course will cover shop safety, related tools and activities designed to meet the training needs of today's automotive suspension system specialist. Presented throughout the course is a balance of fundamental information, repair procedures and current service practices. All types of suspension and steering components found in the automobile are covered with the steering geometry and wheel alignment of 2 and 4 wheel steering automobiles. ( 2 hrs . lect.; 6 hrs. lab.)

## 60 Engine Performance (12) <br> Prerequisite: First three semesters of program; PHYS 56 <br> Engine Performance will deal with the systematic diagnostic approach to isolate malfunctions of computerized engine control systems. In this course students will be introduced to various components and their relationship to others in system functions. The course covers accessing service codes, analysis of driveability symptoms, and pin point test procedures to electronic sensors and actuators. Subject areas include: electronic ignition, fuel injection, emission control, and related electronics. Fundamentals of fuel system \& ignition system will also be covered. Shop safety, proper utilization of tools and equipment will be incorporated through-out this class. ( 7 hrs . lect.; 15 hrs lab.)

93V Cooperative Education (1-4)
Prerequisite: Instructor approval required
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. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs . work experience per week per credit.)

## AVIATION MAINTENANCE (AVIAT)

The Aviation Maintenance courses $(50,52, \& 53)$ are intended for those individuals who have qualified to take the General, Airframe and/or Powerplant written tests as authorized by Federal Aviation Regulation Part 65.77 experience requirements. These courses do not apply towards certification under Part 147 of the Federal Aviation Regulations. Refer to the section titled AERONAUTICS MAINTENANCE TECHNOLOGY (AERO) for the courses required for Part 147 certification of aircraft maintenance technicians.

These are survey courses for experienced uncertificated aircraft technicians intended to increase their theoretical and practical understanding of the subjects listed in the course descriptions prior to taking the written and practical exams. The courses may also be beneficial to those individuals planning to enter the Part 147 program and other individuals interested in aircraft maintenance technologies.
50 General Aviation Maintenance (3)
The general course is a non-certification course including Federal Aviation Administration regulations as applicable to maintenance, drafting, precision measurement, weight and balance, electricity, ground operations and servicing, hardware, materials and processes, fluid lines and fittings, non-destructive testing, and physics (3 hrs. lect.)
52 Airframe Maintenance (4)
The airframe course is a non-certification course including aerodynamics, wood work, composite materials, fabric and finishes, sheet metal construction and repair, welding, rigging for fixed and rotary wing aircraft, airframe systems, avionics, hydraulics, landing gear, tires, brakes, and inspections. (3 hrs. lect.; 3 hrs. lab.)

## 53 Powerplant Maintenance (4)

The powerplant course is a non-certification course including reciprocating engine overhaul and maintenance, engine systems, propeller operation and maintenance, accessory systems, gas turbine operation and maintenance, fuel metering systems, and powerplant electrical systems. (3 hrs. lect.; 3 hrs lab.)

## BAKING (BAKE)

40 Baking Industry I (10)
An introduction to baking. 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 the introductory level. A study of wheat, milling, and flour. An introduction to the mathematics associated with formula construction and product control. Practical work in retail store operation and customer service. ( 5 hrs . lect.; 15 hrs . lab.)

## 41 Baking Industry II (10)

Prerequisite: BAKE 40
A continuation of BAKE 40 to more advanced practices. Technology and practice in the production of basic types of bakery products on a commercial scale. Basic cake decorating. Practical work in 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.)

## 50 Shop Practice I (10)

Prerequisite: BAKE 41
Practical application of theories learned and skills acquired in BAKE 40, BAKE 41. (5 hrs. lect.; 15 hrs. lab.)

## 51 Shop Practice II (10)

Prerequisite: BAKE 50
A continuation of BAKE 50 with emphasis on more advanced techniques in the production, handling, decoration and storage of specialty items. (5 hrs. lect.; 15 hrs. lab.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
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. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs. work experience per week per credit.)

## BIOLOGY (BIOL)

## 22 Human Anatomy \& Physiology (3)

The structure and function of the human body. The organization of the body from cells through organ-systems with particular emphasis on the ten organ-systems. This non-laboratory course is designed for students with no previous work in chemistry or physics. (3 hrs. lect.)

## 100 Human Biology (3)

An introduction to the structure and function of cells, tissues, organs, and organ systems of the body. In addition, there will be selected topics on nutrition, infectious diseases and immunity, the nature of cancer, reproductive biology, and human genetic disorders. (3 hrs. lect.)

## BLUEPRINT READING (BLPRT)

## 15 General Blueprint Reading (3)

A basic course primarily for students majoring in the construction trades. Principles of graphic presentation and interpretation of working drawings will be emphasized. May be taken on a cr/n basis. (3 hrs. lect.)

## 22 Blueprint Reading \& Drafting (3)

A basic course designed primarily for students in Industrial Electricity, Architectural Drafting, Welding Technology and Refrigeration and Air Conditioning. Principles of graphic presentation, interpretation of working drawings, and building specifications will be emphasized. (3 hrs. lect.)

## 23 Blueprint Interpretation and Sketching (3) Co-requisites: MACHS 20, 24 <br> A basic course in graphic presentation designed primarily for Machine Shop Technology and Marine Pipefitting majors. Topics include basic principles, terminology and nomenclature, interpretation of working drawings and the sketching of shop drawings. (3 hrs. lect.)

## 30B Blueprint Reading for Welders (3)

Prerequisite: BLPRT 22
A basic course in blueprint interpretation designed primarily for Welding Technology majors. Emphasis will be placed on welding symbols and their significance. Basic instruction in structural shapes and estimating will also be covered. (3 hrs. lect.)

## 30F Blueprint Reading for Carpenters (4)

The interpretation of symbols, conventions, legends, abbreviations, dimensioning techniques, visualization of subject projects, techniques and procedures for extraction from a set of construction drawings, information for accurate construction and the preparation of necessary drawings and sketches as required by the carpenter. ( 2 hrs. lect.; 6 hrs. lab.)

## 45 Naval Blueprint Reading (2)

A course designed primarily for students enrolled in the Marine Machinist, Marine Pipefitting and Inside Machinist Cooperative Education Programs. Emphasis is on shipbuilding terminology and nomenclature, interpretation of naval plans and specifications and the preparation and use of shop sketches. (1 hr. lect.; 3 hrs. lab.)

## BOTANY (BOT)

## 101 General Botany I (3)

Co-requisite: BOT 101L
Lectures in this course will explore plant growth and development by means of a study of plant structure and function. There will be a consideration of evolution and classification and the interaction between plants and the environment. (3 hrs. lect.)

## 101 L General Botany I Laboratory (1)

Co-requisite: BOT 101
Laboratories will involve specific application of lecture material and several field trips to various parts of Oahu. (3 hrs. lab.)

## 130 Plants in the Hawaiian Environment (3)

Co-requisite: BOT 130L
This course is a study of some of the plants which grow in Hawaii. Plants will be identified and discussed in regard to their form and structure. Evolution and ecology of the plants will also be considered. (3 hrs. lect.)

## 130L Plants in the Hawaiian Environment Laboratory (1)

Co-requisite: BOT 130
Laboratories will involve specific application of lecture material and several field trips to various parts of Oahu. (3 hrs. lab.)

## BUSINESS (BUS)

## 20 Introduction to Business (3) <br> Prerequisites: ENG 8/9

A survey course in the fundamental principles of economics and management. Types of business organizations, managerial controls and records, money and banking, insurance, investments, marketing, consumer movement, business responsibility and the environment, business-government relations, and multinational business. (3 hrs. lect.)

55 Computational Problems in Business Math (3) (formerly BUS 23) Prerequisites: ENG 8/9, MATH 1
A course designed to provide students with fundamental principles, concepts, and skills necessary in problem-solving as applied to business and to develop proficiency on the 10-key electronic calculator by touch. (3 hrs. lect./lab.)

## 93 V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Business. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs . work experience per week per credit.)

## BUSINESS LAW (BLAW)

## 200 Legal Environment of Business (3)

Prerequisites: ENG 100; MATH 25
Introduction to the legal environment of business operations with particular attention to principles of law relating to contracts, agency, partnerships, and corporations. (3 hrs. lect.)

## CARPENTRY (CARP)

20 Introduction to Carpentry (11)
Prerequisite: ENG 8/9, MATH 1
This course is designed to introduce students to basic occupational information in Carpentry: the care, use, operation and maintenance of hand and power tools; basic materials and hardware and fastening materials. Safety is stressed. ( 5 hrs . lect.; 18 hrs. lab.)

## 22 Concrete Form Construction (11)

Prerequisite: " C " or higher in CARP 20
This course is designed to familiarize students with concrete form construction. Topics include the construction terms, materials, methods used in construction, techniques in heavy concrete construction, uses of the builder's transit for leveling, setting grade lines, sighting overhead points, and plumbing columns. (5 hrs. lect.; 18 hrs lab.)

## 41 Rough Framing and Exterior Finish (11) <br> Prerequisite: " C " or higher in CARP 22 <br> This course is designed to show the student the basics of good house construction. Topics include layout and construction techniques of the various parts of a building-footings, foundations, wall and roof framings, roofings, exterior sidings, and door and window frames. City and County of Honolulu and Uniform Building Code regulations are introduced. ( 5 hrs . lect.; $18 \mathrm{hrs}$. lab.)

## 42 Finishing (11)

Prerequisite: " C " or higher in CARP 41
This course is designed to show the student the methods and materials used to finish the interior of a house. Topics include the reading of plans, preparation and application of the various ceiling materials, partition layout, wall and partition panels, door frames, hanging doors, closets, bathroom linings, kitchen cabinets, interior trims, finishing hardware, and material estimating. (5 hrs. lect.; 18 hrs. lab.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in carpentry. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs. work experience per week per credit).

## CHEMISTRY (CHEM)

## 20 Beginning Chemistry (3)

Introductory survey course dealing with basic principles of chemistry and their applications to biochemical processes and analysis. (3 hrs. lect.)

## 50 Introduction to Chemistry (4)

Co-requisite: MATH 50 or equivalent credit
Introductory applied chemistry relating basic concepts to fire science topics. Coordinated class and laboratory activities in basic chemistry, hazardous materials, organic fuels, combustion, biochemistry, and radiation. (3 hrs. lect.; 3 hrs. lab.)

55 Fundamentals of Cosmetic Chemistry (3)
Prerequisite: Credit or concurrent registration in COSME 30, 31L
Application of chemical principles to cosmetology. The course content will include: atomic structure, chemical bonding, acids and bases, hair structure, shampoos, bleaches and tints, waving and hair straightening. (3 hrs. lect.)

## 100 Chemistry and Man (3)

Co-requisite: CHEM 100 L
A non-mathematical descriptive overview designed to give the nonscience 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.)

100L Chemistry and Man Laboratory (1)
Co-requisite: CHEM 100
Experiments illustrating the role of chemistry in society to the nonscientist. ( 3 hrs . lab.)

151 Elementary Survey of Chemistry (3)
Prerequisite: High school algebra or MATH 25
Co-requisite: CHEM 151L
Intended to provide the beginning student with a non-rigorous but adequate background in the fundamentals of chemistry. Suitable for students preparing for training in the life sciences and for those seeking a practical approach to chemistry. (3 hrs. lect.)
151L Elementary Survey of Chemistry Laboratory (1)
Prerequisite: High school algebra or MATH 25
Co-requisite: CHEM 151
Experiments introducing laboratory techniques and illustrating chemical principles. (3 hrs. lab.)
152 Survey of Organic \& Bioorganic Chemistry (3)
Prerequisite: CHEM 151/151L, 162, or 171
Co-requisite: CHEM 152 L
Structure, nomenclature, properties, reactions of organic compounds emphasizing those of practical importance in related fields. (3 hrs. lect.)
152L Survey of Organic \& Bioorganic Chemistry Laboratory (1)
Prerequisites: CHEM 151L or 171L
Co-requisite: CHEM 152
Techniques of preparation, purification, identification of organic compounds. (3 hrs. lab.)

161-162 General Chemistry I \& II (3-3)
Prerequisite: MATH 27 for CHEM 161
CHEM 161 and MATH 135 for CHEM 162
Co-requisite: CHEM 161L with CHEM 161; CHEM 162 L with CHEM 162
A two-semester transfer level course for health/science majors and for engineering majors. Basic principles of chemistry. Introduction to electronic structure, chemical bonding, solutions, kinetics, equilibrium, phases, and energy changes in matter. (3 hrs. lect.)
161L-162L General Chemistry I \& II Laboratory (1-1)
Prerequisite: MATH 27 for CHEM 161 L
CHEM 161 L and MATH 135 for CHEM 162 L
Co-requisite: CHEM 161 with CHEM 161L; CHEM 162 with CHEM 162 L Laboratory experiments illustrating concepts of chemistry discussed in CHEM 161 \& CHEM 162. (3 hrs. lab)

## CHINESE (CHNSE)*

101-102 Elementary Mandarin I-II (4-4)
Prerequisite: ENG 10/15 or instructor approval for 101; CHNSE 101 or instructor approval for 102
Development of listening, speaking, reading, writing. Laboratory work is required. (4 hrs. lect.; 1 hr lab.)
*Native speakers may not take language courses for credit.

## CIVIL ENGINEERING (CE)

## 113 Introduction to Computers and Design (3) <br> Prerequisite: Engineering Drawing or IEDDD 101 <br> introduction to various application software relevant to the study of civil engineering. Subdisciplines in civil engineering are also introduced through design problems. (3 hrs. lect.)

## 211 Surveying I (3)

Prerequisites: MATH 140 and EE 150
Basic principles of plane surveying including reference planes and surfaces; use of instruments for distance and angular measurements; traverse adjustment; heights; measurement theory; computer applications; topographic surveying. (2 hrs. lect.; 3 hrs. lab.)

## 270 Applied Mechanics I (3)

Prerequisites: PHYS 170
The study of equilibrium of rigid bodies under the action of forces and the application of the principles of mechanics to solve static problems in engineering. Vectors, force systems, friction, centroids and moment of inertia. (3 hrs. lect.)

## 271 Applied Mechanics II (3)

Prerequisites: A "C' or higher in CE 270 and MATH 206
Dynamics of particles and rigid bodies; force-acceleration; impulse-momentum; work-energy. (3 hrs. lect.)

## COMMERCIAL ART (CMART)

## 20 Commercial Art I (4)

Prerequisites: MATH 1, ENG 10/15
Instruction in basic graphic art skills to include the techniques and media for layout, comps, and mechanicals. Preparation of art for printing in a variety of black and white and color projects. ( 3 hrs . lect.; 3 hrs. lab.)
21 Commercial Art II (4)
Prerequisite: CMART 20
Continuation of traditional graphic art skills in Commercial Art I as well as an introduction to computer page layout for mechanicals. (3 hrs. lect.; 3 hrs. lab.)

## 28 Textile Art (3)

Commercial and individual approaches to design, color and printing techniques used in textiles. (2 hrs. lect.; 3 hrs. lab.)

## 32 Graphic Design (4)

Prerequisites: ART 113, 115, 266, CMART 21
Graphic design solutions for various communications applications such as posters, brochures, trademark and corporate design. Client related problems, visiting lecturers and field trips. (3 hrs. lect.; 3 hrs. lab.)

## 33 Advertising Design (4)

Prerequisites: ART 113, 115, CMART 20, 58
Planning of concept images and layout for newspapers, magazines, television and related printed pieces. Development of an advertising campaign from concept through comps. Field trips and visiting lecturers. (3 hrs. lect.; 3 hrs. lab.)

## 34 Product Illustration (4)

Prerequisites: ART 113, 115, CMART 20, 58
Drawing techniques and skills in illustration of products and objects. Emphasis on black and white mediums and progession from layout to finished art. ( 3 hrs . lect.; 3 hrs. lab.)

## 36 The Figure in Illustration (4)

Prerequisites: ART 113, 214, CMART 21 or instructor approval
Drawing the human figure in commercial illustration emphasizing fashion illustration and general illustration, includes study of figure proportion in fashion illustration, how to represent fabrics and styles, plus the effective use of figure drawing with sales of products and pictorial narratives with introduction to various professional media. (3 hrs. lect.; 3 hrs. lab.)

## 40 General Illustration (4)

Prerequisites: CMART 20, ART 113; or instructor approval
Introduction to illustration. Media skills and image development for advertising, editorial, book, and institutional projects. (3 hrs. lect.; 3 hrs. lab.)

## 47 Introduction to Video (4)

Prerequisites: ENG 10/15, MATH 1, Art 107; or instructor approval
Basic introduction to video using camcorders, editing equipment, character generator, and other technology. Emphasis on VHS. (3 hrs. lect.; 3 hrs. lab.)

## 55 Commercial Photography (4)

Prerequisites: ART 107
Introduction to Photo studio. Lectures, slides, demonstrations on basic studio methods including tungsten lights, electronic flash. Emphasis on fashion, portrait and product. (3 hrs. lect.; 3 hrs. lab.)

## 58 Advertising Copy \& Business Practice (3)

Prerequisite: ENG 10/15 or required placement test score or instructor approval A survey of newspaper, magazine, radio, TV, direct mail, outdoor, transit and specialty advertising and the advantages/disadvantages relative to each. The course provides experience in using demographic information, planning ad placements, writing ad, sales promo and publicity copy, understanding rate cards, and figuring advertising costs and agency service charges. Designed primarily for Commercial Art majors. (3 hrs. lect.)

60 V Commercial Art Internship (2-4)
Prerequisite: Completion of 3 semesters of CMART Program or Equivalent and instructor approval
A volunteer work experience providing on-the-job training and seminar discussion of education as related to employment in the area of Commercial Art. (10 hrs. min.; 20 hrs. max. at internship job, plus 1 hour class per week.)

# 70 Portfolio Presentation and Review (3) <br> Prerequisites: Instructor approval. Required for students in final semester of CMART program. <br> Preparation and presentation of a professional portfolio required for locating employment in Commercial Art and related fields. Presentations to local high schools, the art faculty, and a review by a professional from the industry representing the CMART Advisory Board. Graded on a CR/N basis. (3 hr. lect.) <br> <br> 93V Cooperative Education (1-4) <br> <br> 93V Cooperative Education (1-4) <br> Prerequisite: Instructor approval required <br> This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Commercial Art. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs . work experience per week per credit.) 

## COMMERCIAL BAKING (BAKE)

See BAKING (BAKE)

## COMMUNICATIONS (COMUN)

## 50 Working with Clients (3)

Includes knowledge and skills in communicating with and helping people in professional and personal relationships. Techniques of communicating and helping will be discussed and practiced in class. (3 hrs. lect.)

101 Manual Communication Techniques (3)
An overview of various forms of manual communication to include Ameslan, See Signs, Manual English, \& Finger Spelling; brief introduction to the psychology of deafness. (3 hr. lect.)
263C Broadcasting Laboratory (Television) (3)
A basic "hands on" course in the operation of equipment necessary to produce a television program and to record and playback same. (3 hrs. lect.; lab arranged.)

## 263D Broadcasting Laboratory (Performance) (3)

Principles of the drama emphasized in writing, acting, and producing via audio visual tapes development. The course offers an introduction to drama through participation. (3 hrs. lect.)

## COSMETOLOGY (COSME)

20 Elementary Cosmetology Theory (3)
Prerequisites: ENG 8/9, MATH 1, High School diploma or equivalent Co-requisites: COSME 21L, COMUN 50
Basics of hygiene, sanitation and sterilization, structure and chemistry of hair, skin and scalp, personal grooming, safety and the Hawaii State Board Rules and Regulations. (3 hrs. lect. min.)
21L Elementary Cosmetology Laboratory (10)
Prerequisites: ENG 8/9, MATH 1, High School diploma of equivalent Co-requisites: COSME 20, COMUN 50
A basic foundation of practical skills in shampooing, hair cutting, styling, hair coloring, permanent waving, manicuring, facials and scalp treatments. (30 hrs. iab. min.)

## 30 Intermediate Cosmetology Theory (3)

Prerequisites: COSME 20, 21 L
Co-requisites: COSME 31L, CHEM 55
Basic scientific theory that acquaints the student with disorders of the skin, scalp and hair. Also a correlation of basic practical skills and salon management. (3 hrs. lect. min.)
31L Intermediate Cosmetology Laboratory (10)
Prerequisites: COSME 20, 21L
Co-requisites: COSME 30, CHEM 55
The student engages in intermediate manipulative training and practices the manipulative skills on patrons from the community in a beauty salon atmosphere. This also provides the student an opportunity to develop an understanding of patron-operator relationship. ( 30 hrs . lab. min.)
40 Advanced Cosmetology Theory (3)
Prerequisites: COSME 30, 31L
Co-requisite: COSME 41L
Theory as applied to the principles of hair styling, hair cutting, hair coloring, permanent waving, facials and make-up. (3 hrs. lect. min.)
41L Advanced Cosmetology Laboratory (10)
Prerequisites: COSME 30, 31L
Co-requisite: COSME 40
The student engages in advanced manipulative training and practices these manipulative skills on patrons from community in a beauty salon atmosphere; learns new techniques and up-dated procedures in hair cutting, coloring, salon styling, hot iron, and blow dryer work. (30 hrs. lab. min.)
50 V Cosmetology Theory and Practice (1-6)
Prerequisite: COSME 40, 41L or instructor approval
Continuation of cosmetology theory and lab. Hours apply toward the 1800 hours required to qualify for the State Board examination. (33 hrs. lect./lab. min.)

## 80 V Cosmetology Instructor Training (1-13)

Prerequisites: ENG 10/15 or placement in ENG 22.
Valid Cosmetology license and one year cosmetology full-time work experience. Must meet all Hawaii State Cosmetology Board Teacher Training requirements. Instructor Approval Required.
The application of teaching principles in the area of cosmetology with the development of communication skills in theoretical and technical knowledge acquired from experience in the field of cosmetology. Techniques of individual and group instruction in laboratory and related classes; evaluation of various methods. Student may meet criteria to take Hawaii State Cosmetology Board teachers exam for license. Repeatable until 13 credits are earned. ( 40 hrs . per week lect./lab. maximum)

## DIESEL MECHANICS (DIMCH)

DIMCH 20B, 20C, 20D, 20E, 20F equivalent to DIMCH 20 (10)
17 Hand and Shop Tools (2)
Co-requisite: DIMCH 20
Instruction in the use, care and safety of hand tools, power tools, lifting equipment, precise measuring equipment to include operations of the fork lift. (1 hr. lect.; 3 hrs. lab.)

## 20 Diesel Engines (10)

Co-requisite: DIMCH 17
A study of the operation of two- and four-cycle diesel engines; the assembly, maintenance, and repair of their integral systems, such as lubrication, cooling, air and exhaust, and starting. (5 hrs. lect.; 15 hrs. lab.)

## 20B Engine Theory and Terminology (1)

A study of the diesel engine; its history, design characteristics, performance, problems and future. (1 hr. lect.)

## 20C The Cylinder Head and Components (2)

Prerequisite: DIMCH 20B
This unit covers the functions, overhaul, measurement, and adjustments of all units mounted on the head. ( 1 hr. lect.; 3 hrs. lab.)

## 20D The Engine Block and Components (3)

Prerequisite: DIMCH 20C
The function, maintenance, measurement, and overhaul of the engine block and its related components are covered in detail in this study unit. ( 1 hr lect.; 6 hrs. lab.)

20E Air Intake System (2)
Prerequisite: DIMCH 20D
The importance of clean air, the proper functioning and adjustments of air system components and trouble shooting methods are covered in this block of study. (1 hr. lect.; 3 hrs. lab.)

## 20F Cooling System and Controls (2)

Prerequisite: DIMCH 20E
How to properly maintain, service, and overhaul cooling system components so as to maximize engine performance are covered in unit. (1 hr. lect.; 3 hrs . lab.)

32 Fuels I(3)
Prerequisites: DIMCH 17, 20
Co-requisites: DIMCH 34, 35
The purpose, design, theory and operating principles of fuel injection devices are covered in this course with special emphasis on developing the skills required to service, repair, adjust and test the components and associated systems. (1.5 hrs. lect.; 4.5 hrs. lab.)

34 Fuels II (3)
Prerequisites: DIMCH 17, 20
Co-requisites: DIMCH 32, 35
Continuation of DIMCH 32. (1.5 hrs. lect.; 4.5 hrs . lab.)
35 Electrical Systems (6)
Prerequisites: DIMCH 17, 20
Co-requisites: DIMCH 32, 34
The purpose, design, construction, theory and operating principles of electrical systems are covered in this course with special emphasis on developing the skills required to test, adjust, service and repair the components and associated systems. (3 hrs. lect.; 9 hrs. lab)

## 40 Power Train (12)

Prerequisites: DIMCH 32, 34, 35
A study of the major components of the heavy equipment chassis including power trains, steering systems, differentials, final drives and undercarriage. Emphasis is on theory, operations, diagnosis of trouble, inspection and measurement, disassembly and reassembly. (6 hrs. lect.; 18 hrs. lab.)
45 Fundamentals of Hydraulics (2) (Formerly 98)
Prerequisites: DIMCH 40
Co-requisite: DIMCH 50
A course covering the fundamentals of hydraulic theory. Combined with exposure to the service, repair and overhaul of hydraulic circuits and components used on stationary and mobile machinery. (1 hr. lect.; 3 hrs. lab)
50 Diagnostics (10)
Prerequisites: DIMCH 40
Co-requisite: DIMCH 45
A course covering Heavy Equipment systems including hydraulic, pnuematic, and special power systems. Theory, operation, troubleshooting, repair and maintenance are covered in detail. ( 5 hrs . lect.; 15 hrs lab.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
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. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs . work experience per week per credit.)

## DRAFTING (DRAFT)

## Also See ARCHITECTURE (ARCH)

20 Introduction to Drafting (4)
This course introduces the fundamentals of drafting, residential building construction, and common architectural drawings. Topics include drafting equipment, lettering, linework, symbolizing, dimensioning, foundations, floor plans and elevations, framing, and detailing. It orients students to the nature and scope of the architectural drafting occupation. ( 2 hrs . lect.; 6 hrs . lab.)
26 Construction Materials (3)
Prerequisite or co-requisite: DRAFT 20
A broad survey of materials and products used in the building industry, their nature, characteristics, variety, and uses. Covered in the course are materials and methods of light building construction, lumber grades and species, millwork, cement and plaster, roofing, flashing, types of foundations, wall, floors, material and product availability, warranties, prefabrication and on-site fabrication, and information resources. ( 2 hrs . lect.; 3 hrs . lab.)
30 Wood Structural Design (3)
Prerequisites: DRAFT 20, 26
Co-requisite: DRAFT 36
Introduction to the basic principles of statics and structural mechanics and to the effects of loads on wood building frame components. Methods are presented for determining preliminary sizes and types of certain key building elements, knowledge of which is essential to proper building design and drawing development. (1 hr. lect.; 6 hrs. lab.)

## 32 Steel and Concrete Structural Design (3)

Prerequisites: DRAFT 30, 38
Co-requisite: DRAFT 40
Introduction to lightweight metal and heavy steel structural framing and concrete building systems, design, and detailing. Terminology, typical details and shop drawings, fire protection, integration of steel and concrete with wood, and framing systems are some of the topics covered. (1 hr. lect.; 6 hrs. lab.)
36 Working Drawings!(4)
Prerequisites: DRAFT 20, 26
Co-requisite: DRAFT 30
This course introduces students to complete-building drawings, to the application of materials and methods of construction, light wood construction principles and practices, and detail drawings, and to basic residential planning. The student completes a number of construction drawing sets. ( 1 hr . lect.; 9 hrs lab)
38 Working Drawings II (4)
Prerequisites: DRAFT 30, 36
Co-requisites: DRAFT 42, 46
Advanced residential drawing with greater emphasis on creativity, complexity, and municipal standards and restrictions. Site planning, excavating, residential planning and design presentation, architectural finishes, furnishings, application of codes studied in DRAFT 42 and of systems drafting processes studied in DRAFT 46, and selection and sequencing of drawings are some of the topics of this course. The student completes a number of construction drawing sets. (1 hr. lect.; 9 hrs. lab.)
40 Working Drawings III (4)
Prerequisites: DRAFT 38, 42
Co-requisites: DRAFT 32, 44
An introduction to planning and construction drawings for commercial buildings. Application of steel and concrete structural design studied in DRAFT 32 and of building services equipment and facilities studied in DRAFT 44, team approaches in drafting and design, commerical glazing systems, curtain wall design, and project coordination are topics addressed. The student completes a number of construction drawing sets. (1 hr. lect.; 9 hrs. lab.)

## 42 Codes and Specifications (3) <br> Prerequisites: DRAFT 30, 36

Co-requisite: DRAFT 38
This course introduces local, regional, and specialized building codes, specifications, and office organization. It includes the study of various codes, code restrictions and standards, legal documents governing construction of buildings, specifications interpreting and writing, contracts, estimates, feasibility studies, and bidding procedures. ( 2 hrs . lect.; 3 hrs . lab.)
44 Building Services (3)
Prerequisites: DRAFT 38, 42
Co-requisites: DRAFT 32, 40
Preliminary and detail planning of service and mechanical equipment and facilities in multi-family, commerical, industrial, and municipal buildings. Topics include energy, thermal control, acoustics, large capacity plumbing and electrical systems, fire protection equipment, vertical transportation equipment, security systems, and service accesses. (2 hrs. lect.; 3 hrs. lab.)

## 46 Systems Drafting (2)

Prerequisite: DRAFT 36
Co-requisite: DRAFT 38
This course introduces time-saving devices and processes in drafting and involves students in the creation of portfolios. Mechanical and electronic lettering, registration drafting, splicing, "sticky-back" and transfer processes, photo drafting, portfolio organization and composition, and bindings and jackets are some of the topics covered. (1 hr. lect.; 3 hrs . lab.)

61 Introduction to Computer-Aided Drafting and Design (CADD) (3) Prerequisite: DRAFT 20
This course is designed to introduce students to the use of computers in producing architectural design and detall drawings. Topics include equipment components, terminology, the CADD menus, drawing with the computer, storing and retrieving drawings, and printing and plotting. The hands-on course uses industry standard computer-aided drafting and design packages. (2 hrs. lect.; 3 hirs. lab.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
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. Repeatable 4 times for credit up to a maximum of 12 credits. (5 hrs. work experience per week per credit.)

## DRAMA (DRAMA)

## Also See THEATRE (THEA)

20 Discovering Theatre (3)
An introduction to the theater with emphasis on the participatory elements of acting, script, and production. (3 hrs. lect.)

## EAST ASIAN LANGUAGE AND LITERATURE (EALL)

271 Japanese Literature in Translation (Traditional) (3)
Prerequisite or Co-requisite: ENG 22 or equivalent. No knowledge of JPNSE language is required.
Survey of traditional Japanese literature with emphasis on analysis and comparison. (3 hrs. lect.)

## 272 Japanese Literature in Translation (Modern) (3)

Prerequisite or Co-requisite: ENG 22 or equivalent. No knowledge of JPNSE language is required.
Survey from mid-nineteenth century to the present. Major emphasis on fiction. (3 hrs. lect.)

## ECONOMICS (ECON)


#### Abstract

18 Consumer Economics (3) A study of the basic problems faced by consumers in today's economy. Course covers the nature of the U.S. economic system, personal money management (purchases, banking, insurance, taxation), and current issues in consumer protection. (3 hrs. lect.)


#### Abstract

120 Introduction to Economics (3) Prerequisites: MATH 22 or 50; and ENG 22 A broad introduction to understanding the functioning of economic systems and the problems of national economic performance in the United States. The problems of resource allocation in a market economy are also considered. Maximum of 6 credits transferable to UH Manoa for any 2 of the following 3 courses: ECON 120, 130, 131. Note: This course does not satisfy requirements for Economics or Business majors at UH Manoa. (3 hrs. lect.)


## 130 Principles of Economics I: Microeconomics (3) (Formerly 151)

Prerequisite: MATH 25 or 55; and ENG 22
Economic behavior of individuals and of business firms in a market economy. Analysis of how commodity and factor prices are determined. Examination of current problems in resource allocation. Maximum of 6 credits transferable to UH Manoa for any 2 of the following 3 courses: ECON 120, 130, 131. Note: This course satisfies requirements for Economics and Business majors at UH Manoa. (3 hrs. lect.)

## 131 Principles of Economics II: Macroeconomics (3) (Formerly 150)

Prerequisite: MATH 25 or 55; and ENG 22.
Analysis of economic systems with emphasis on the forces determining levels and changes of national income in the U.S. economy. Describes basic economic institutions within the context of government policies concerning unemployment, inflation and growth. Maximum of 6 credits transferable to UH Manoa for any 2 of the following 3 courses: ECON 120, 130, 131. Note: This course satisfies requirements for Economics and Business majors at UH Manoa. (3 hrs. lect.)

## 211 Hawaii's Economy (3)

Prerequisite: English 22 or equivalent placement
Recommended preparation: ECON 120
Examination of the major economic trends in Hawaii since the coming of the Polynesians to the current period. Coverage of key institutions and economic relationships, and key forces causing change. Discussion of relationship between economic system and political or social problems. (3 hrs. lect.)

## EDUCATION (ED)

110 Developmentally Appropriate Practices (3)
Prerequisite: FAMR 31 or 231
Co-requisite: ED 111
An overview of basic awareness, knowledge and skills necessary for working with children birth through age eight. (3 hrs. lect.)

## 111 Beginning Child Development Laboratory (1)

Prerequisites: First Aid Certificate \& CPR Certificate
Co-requisite: ED 110
Supervised practicum in campus child development lab. A variety of on-the-job experiences working with children ages $0-8$ years. The students are expected to continually increase their level of achievement working with children and adults.
Repeatable five times or until 6 credits are earned. (3 lab hours)

## 149 CDA Fuctional Areas and Assessment Preparation (4)

Under revision. See Doris Christensen or Miles Nakanishi.
152 Introduction to Working with Infants and Toddlers (3)
Overview to basic skills in working with infants and toddlers in groups. Focus on interactive aspects of child development, infant-toddler caregiving routines \& environments, caregiver roles, ways to enrich experiences and to promote strong relationships with families. (3 hrs. lect.)
162 Curriculum I: Physical (2)
Prerequisites: ED 110, 111, FAMR 31 or 231, and FAMR 134 or instructor approval
Developmentally appropriate foundations and practice in designing, planning, implementing and evaluating activities that enhance the physical development of young children. ( 2 hrs . lect.)
163 Curriculum II: Creative (2)
Prerequisites: ED 110, 111, FAMR 31 or 231, FAMR 134 or instructor approval Developmentally appropriate foundations and practice in designing, planning, implementing and evaluating activities that enhance creativitiy in young children. (2 hrs. lect.)
164 Curriculum III: Communication (2)
Prerequisites: ED 110, 111, FAMR 31 or 231, FAMR 134 or instructor approval Developmentally appropriate foundations and practice in designing, planning, implementing and evaluating activities tha enhance development of language and literacy in young children. ( 2 hrs . lect.)

## 165 Curriculum IV: Cognitive (2)

Prerequisites: ED 110, 111, FAMR 31 or 231, FAMR 134 or instructor approval Developmentally appropriate foundations and practice in designing, planning, implementing and evaluating activities tha enhance cognitive development in young children. (2 hrs. lect.)
219 Introduction to Children's Literature (3)
Introduces the student to a variety of children's books and methods of presenting stories, writing stories, and program planning. Emphasis is on presentation skills. (3 hrs. lect.)

## 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. (3 hrs. lect.)

## 252 Prenatal and Perinatal Development (2)

Prerequisites: ENG 22, FAMR 31/231, ED 110, 111V, 152 or instructor approval Physical development and psychological changes during pregnancy and the first weeks of life are examined. The emphasis is on total family unit and stresses it from personal, cultural, and societal perspectives. ( 2 hrs . lect.)

## 254 Working with Infants (2)

Prerequisites: FAMR 31 or 231, FAMR 134, ED 110, 111, 152 or instructor approval
Advanced course in specific techniques of working with infants in groups (birth to 12 months). Includes theoretical and research base, observation \& assessment, enhancing environment, adult roles, caregiving routines and developmentally appropriate programming. (2 hrs. lect.)

255 Working with 1 -Year Olds (2)
Prerequisites: FAMR 31 or 231, FAMR 134, ED 110, 111, 152 or instructor approval
Advanced course in specific techniques of working with one year olds in groups ( 12 to 24 months). Includes theoretical and research base, observation \& assessment, enhancing environment, adult roles, caregiving routines and developmentally appropriate programming. ( 2 hrs . lect.)

## 256 Working with 2-Year Olds (2)

Prerequisites: FAMR 31 or 231, FAMR 134, ED 110, 111, 152 or instructor approval
Advanced course in specific techniques of working with one year olds in groups ( 24 to 36 months). Includes theoretical and research base, observation \& assessment, enhancing environment, adult roles, caregiving routines and developmentally appropriate programming. (2 hrs. lect.)

## 257 Adv. Infant-Toddler Child Development Laboratory (3)

Supervised practicum in campus infant-toddler childe development lab. A variety of on-the-job experiences working with children ages $0-3$. Students are expected to increase their level of achievement to planninglimplementing a fullday program. ( 9 hrs lab.)

## 258 Infant-Toddler Lab Seminar (1)

Prerequisites: ED 254, 255, 256 or instructor approval
Co-requisite: ED 267 V
Seminar to accompany Advanced Child Development Lab for Infants/Toddlers. Designed to give students an opportunity to integrate knowledge and skills developed in prior and concurrent courses. ( 1 hr . lect.)

266 Integrating Developmentally Appropriate Curriculum (2)
Prerequisites: ED 110, 111, FAMR 31 or 231, FAMR 134, ED 162-165 or instructor approval
Co-requisite: ED 267V
Final course in curriculum sequence to be taken concurrently with the advanced laboratory course. Knowledge and skills developed in prior curriculum and other early childhood courses utilized to plan and implement developmentally appropriate, integrated curricula. (2 hrs. lect.)

267 Preschool Child Development Laboratory (3)
Prerequisites: ED 110, 111, FAMR 31 or 231 \& 134, ED 162-165 or instructor approval
Co-requisite: ED 266
Supervised practicum in campus child development lab. A variety of on-the-job experiences working with children ages $0-5$. Students are expected to continually increase their level of achievement to planning/implementing a full day program. (9 hrs. lab.)

## ELECTRICAL ENGINEERING (EE)

## 120 Introduction to Microprocessors and Logic Design (4)

Prerequisite or Co-requisite: MATH 140 or instructor approval Introduction to digital/logic design process using combinational and sequential logic circuits. Computer architecture, microprocessors and microcomputers. (3 hrs. lect.; 3 hrs. lab.)

150 Introductory Computer Programming Methods (3)
Prerequisites: MATH 135, ICS 111 or instructor approval
Comment: Recommended for science/pre-engineering students
Introductory course in computer programming. Emphasis is on planning, writing, debugging of programs together with basic applications. (3 hrs. lect.)

## 211 Basic Circuit Analysis (4)

Prerequisites or Co-requisites: Math 231 \& Physics 272
Linear circuits, time-domain analysis, transient and steady-state responses, phasors, impedance and admittance; network or system functions, frequency response and filtering, resonance. (3 hrs. lect.; 3 hrs. lab.)

## 213 Basic Lab Measurements \& Techniques (4)

Prerequisites: C or better in EE 211
Prerequisite or Co-requisite: Math 232
This is the second semester course in circuit analysis. It incorporates lecture and a lab to cover topics in advanced circuit analysis and in measuring instruments and techniques. (3 hrs. lect; 3 hrs. lab.)

## 266 Computer Organization and Programming Techniques (3)

Prerequisites: ICS 111 or instructor approval
Organization and machine language of typical computers. Machine and assembly language programming techniques. Introduction to operating systems and data structures. This course is cross-listed as ICS 266 and credit may be received for only EE 266 or ICS 266. (3 hrs. lect.; 3 hrs. lab.)

## ELECTRICITY (ELEC)

## 20 Electrical Fundamentals (4)

Prerequisites: ENG 10/15, MATH 1
Co-requisite: ELEC 22
A course designed to introduce students to the concepts and theories of electricity. Topics include basic physics of the electron; electrical units and nomenclature; law and formulas; circuit computations; basic circuit configurations; magnetism and electromagnetism. (5 hrs. lect.)

## 22 Wiring Materials and Methods (6)

Prerequisites: ENG 10/15, MATH 1
Co-requisite: ELEC 20
A lab course to develop knowledge and manipulative skills in use of basic hand tools, power tools, equipment, and various hardware encountered in electrical work. Laboratory exercises to provide the hands-on experiences and skills to solve applied problems in electrical installations. ( 18 hrs lab.)

## 30 Electrical Installation Theory I (4)

Prerequisites: ENG 10/15, MATH 50
Co-requisite: ELEC 32
This course is designed to develop knowledge of basic and advanced residential wiring with emphasis on the National Electrical Code and the principles of residential blueprint reading. (5 hrs. lect.)
32. Electrical Installation I (6)

Prerequisites: ENG 10/15, MATH 50
Co-requisite: ELEC 30
This course is designed to provide the basic and advanced knowledge in residential wiring techniques. Laboratory exercises are desiged to give students practical experience in different wiring techniques. ( 18 hrs lab.)

40 Electrical Installation Theory II (4)
Prerequisites: ELEC 30, 32
Co-requisite: ELEC 42
This course will take the student into the more complex commercial and industrial wiring techniques with emphasis on the National Electrical Code and the principles of commercial and industrial blueprint reading. (5 hrs. lect.)

42 Electrical Installation II (6)
Prerequisites: ELEC 30, 32
Co-requisite: ELEC 40
A course designed to advance the student to a higher level of electrical installation skills. This course will take the student into the more complex commercial and industrial wiring techniques. ( 18 hrs . lab.)

## 44 AC/DC Systems and Equipment (4)

Prerequisites: ELEC 30, 32
Co-requisite: ELEC 46
This course is designed to advance the student into electrical principles of directcurrent and alternating-current circuits and equipment. Emphasis is placed on the theory, operating characteristics and control of AC and DC machinery. (5 hrs. lect.)

## 46 Electrical Maintenance \& Repair (6)

Prerequisites: ELEC 30, 32
Co-requisite: ELEC 44
This course consists of supervised lab activities combining trade practices and related technical instruction to provide the most effective means of developing the student's mechanical, manipulative, and troubleshooting skills. Emphasis is placed on methods of installation, maintenance, troubleshooting and repair of electrical machinery and related control equipment. (18 hrs. lab.)

## 50 Solid State Control (4)

Prerequisites: ELEC 44, 46
Co-requisites: ELEC 52
This is a course designed to introduce students to the principles and application of solid state control. The topics to be covered include the fundamentals of solid state devices; digital logic; solid state fire alarm and security systems; solid state motor control; programmable controllers. (5 hrs. lect.)

## 52 Solid State Control Lab (6)

Prerequisites: ELEC 44, 46
Co-requisites: ELEC 50
This is a lab course designed to give students a working knowledge and hands on experience with solid state control devices and systems. Students will learn how to install, maintain, troubleshoot, and repair a variety of solid state components and systems. (18 hrs. lab.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Electricity. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs . work experience per week per credit.)

## ELECTRONICS (ETRON)

11 Introduction to Electronics (3)
Prerequisites: MATH 22/50, ENG 10
A course to introduce students to the subject of electronics, the industry and the job market. The laboratory experiments provide the student with experience in using electronic test equipment. (2 hrs. lect.; 3 hrs. lab.)

## 26 Fundamentals of Electronics (8)

Prerequisites: MATH 58, ENG 60
Co-requisite: ETRON 37
Basic theory of electricity from the atomic theory to filter circuits; includes Ohms Law, DC and AC circuits, network analysis, sinusoidal and non sinusoidal voltages, and currents and resonant circuits. Laboratory experiments to verify concepts. ( 5 hrs. lect.; 9 hrs. lab.)

## 26B Fundamentals of Electronics I (4)

Prerequisites: MATH 58, ENG 60
Basic DC theory. Concepts of voltage, current and resistance, Ohm's law, series and parallel circuits, network theorems, electrostatics, magnetism, inductance and capacitance. Laboratory assignments. Available only for military on-base classes. (3 hrs. lect.; 3 hrs. lab.)

## 26C Fundamentals of Electronics II (4)

Prerequisite: ETRON 26B
Basic AC theory. Instantaneous voltage, period and frequency, inductive and capacitive reactance, $A C$ networks, series and parallel resonance, transformers and filter circuits. Laboratory assignments. Available only for military on-base classes. (2 hrs. lect.; 6 hrs. lab.)

27 F.C.C. (3)
Prerequisite: ETRON 22 or consent of instructor
This course covers specialized communication theory supplementing the electronic fundamentals studied in ETRON 20 and ETRON 22. Prepares the student to take the Federal Communications Commission Radio-Telephone Second Class license examination. (3 hrs. lect.)

## 32 Electronic Design \& Fabrication (4)

Prerequisites: ETRON 26, 37
Co-requisites: ETRON 36
An introductory course in the design and fabrication of electronic prototype projects utilizing CAE/CAD and basic shop tools. (2 hrs. lect.; 6 hrs. lab.)
33 Biomedical Electronics I (3)
Introduction to all aspects of biomedical instrumentation. Fundamental principles and methods of measurements to obtain physiological data, including electrical safety in the hospital are stressed. (3 hrs. lect.)
34 Biomedical Electronics II (3)
The application, operation, repair and calibration of medical electronic equipment in critical care areas. Content includes the basic study of appropriate physiology and procedural discipline in each application. (3 hrs. lect.)

## 34L Biomedical Electronics II Laboratory (1)

This laboratory portion provides the student with an opportunity to work with circuits and components which demonstrate the principles studied in ETRON 34. (3 hrs. lab.)

## 35 Biomedical Electronics III (4)

Practical application of theoretical concepts and skills gained in ETRON 33 and ETRON 34-34L to electronic medical instruments. Students will serve as technical interns in participating hospitals a minimum of 12 hours per week. A weekly seminar will be held to discuss problems encountered while in training. (12 hrs. lab.)

## 36 Electronic Devices (8)

Prerequisite: ETRON 26, 37
Co-requisites: ETRON 32
Comprehensive study of solid state devices including semiconductor diodes, bipolar and field effect transistors. Applications of semi-conductor devices in power supplies and audio amplifiers. The laboratory experiments are designed to demonstrate these devices. (5 hrs. lect.; 6 hrs. lab.)
36B Electronic Devices I (4)
Prerequisites: ETRON 26B, ETRON 26C
Application of semiconductor diodes in power supplies and voltage regulation. Power supply filters. Bipolar transistor biasing techniques. Application of bipolar transistors in audio amplifiers. Laboratory assignments. Available only for military on-base classes. (3 hrs. lect.; 3 hrs. lab.)
36C Electronic Devices II (4)
Prerequisite: ETRON 36B
Field effect transistor biassing techniques. Operational amplifier characteristics. Applications of FET's and operational amplifiers in amplifiers. Characteristics and applications of SCR's. Laboratory assignments. Available only for military onbase classes. (2 hrs. lect.; 6 hrs. lab.)
37 Digital Logic (4)
Prerequisite: ENG 60, MATH 58
Co-requisites: ETRON 26
Topics include binary, octal, and hexadecimal number systems, combinational logic using boolean algebra and De Morgan's theorem, multivibrators, converters and instruments. (3 hrs. lect.; 3 hrs. lab.)

## 45 Applications of Microprocessors (7)

Prerequisites: ETRON 36 and 37
This is an introductory course in microprocessor/hardware, interfacing and applications. Material covered will include microprocessor architecture, memory interface, I/O systems, interrupt processed I/O, DMA, microprocessor-based communications, machine language and applications. (5 hrs. lect.; 6 hrs. lab.)

## 49 Electronics Circuit Analysis (6)

Prerequisite: ETRON 36
A study of a wide variety of electronics circuits which serve as the fundamental building blocks for electronic systems. Topics include operational amplifiers, nonlinear circuits, oscillators, regulated power supplies, RC circuits, diode and transistor switching, and schmitt triggers. (4 hrs. lect.; 6 hrs. lab.)

## 50 Consumer Product Servicing (7)

Prerequisites: ETRON 45, 49
Co-requisites: ETRON 56
A study of the operation, circuits and troubleshooting techniques used in servicing Black \& White and Color TVs, Video Cameras, Video Recorders, and DeskTop Computers. The students obtain experience in measuring waveforms and troubleshooting on actual equipment. (5 hrs. lect.; 6 hrs. lab.)

## 52 Industrial Electronics (3)

Prerequisite: ETRON 22-22L
Theory and operation of gaseous and vapor filled tubes and control of thyratrons, phototubes and photoelectric devices, relays and time delay action, semiconductors, magnetic devices, light and heat control, meter controls, welding controls, RF heating commercial devices, computers, synchros, selsyns, servomechanism and test equipment used in industrial electronics. (3 hrs. lect.)

## 56 Electronic Communication (6)

Prerequisites: ETRON 45, 49
Co-requisites: ETRON 50
A study of electron communications systems. Analog and digital transmission techniques and multiplexing. Electromagnetic transmission methods including two wire, cable, waveguide, antenna, fiber optic and satellite. Laboratory experiments for above. (4 hrs. lect.; 6 hrs. lab.)

## 57 Computer Systems (4)

Prerequisites: ETRON 46, 47
Co-requisites: ETRON 50, 56
A systems course based on microprocessors. The interaction of both hardware and software in the performance of system functions, peripherals, data communications, and system troubleshooting are also examined. (3 hrs. lect.; 3 hrs lab.)

## 58 Special Projects (3)

Prerequisites: completion of 3 semesters of the Electronics Technology Program or Instructor Approval
Under the guidance of an instructor the student will create, design and build an electronics project. The student will be responsible for gathering the required schematics, components and other devices for the project. The student will also have the option to repair or restore and existing electronic device. (9 hrs. lab.)

## 60 Introduction to Television (3)

Introduction to the history, development and fundamentals of television. Includes the theory and operation of television systems, such as monochrome, color, portable, and recording systems and the application of television in educational, industrial and home use. (3 hrs. lect.)

## 80 Telecommunications (3)

An introduction to telecommunication systems. Topics covered include the telephone system, data communications, and record communications. Transmission methods covered include wire, radio, microwave, satellite, and optical fibers. (3 hrs. lect.)

## 90 Electronic Internship (3)

Prerequisite: Completion of 2 semesters of the Electronics Technology Program or Instructor Approval
A volunteer work experience to provide the student with on the job, hands-on training at a preapproved electronics work site. This course requires ten hours of on-the job training and one hour of seminar per week. ( 11 hours per credit)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
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. Repeatable 4 times for credit up to a maximum of 12 credits. (5 hrs. work experience per week per credit.)

## ENGINEERING TECHNOLOGY (ENGT)

## 20 Engineering Graphics (4)

Prerequiste: MATH 24
Co-requisite: ENGT 22
Topics include 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. ( 2 hr . lect.; 6 hrs. lab.)

## 22 Introduction to Engineering Computations (3)

Prerequisite: MATH 24
Co-requisite: ENGT 20
A study of the basic engineering concepts and engineering mathematics and the development of the mathematical models of typical engineering related problems. Methods of determining the solutions of engineering technology problems in a step-by-step, logical, and concise manner using programmable calculators and computers. (2 hrs. lec., 3 hrs. lab.)

## 25 Survey \& Measurements I (4)

Co-requisite: ENGT 22
Introduction to the concepts of plane surveying, including the use, adjustment, and maintenance of the engineer's transit, theodolite, and level. The art of measuring distances and angles in the transit-tape surveys, and the art of determining elevations through leveling. ( 2 hrs . lect., 6 hrs. lab.)

## 32 Mechanics I (3)

Prerequisites: ENGT 22 and MATH 25
The study of the basic concepts of forces and the effects of forces upon rigid bodies at rest. The principles of force equilibrium and their application in the solution of engineering problems. (3 hrs. lect.)

34 Construction Materials \& Methods (3)
The basic materials and methods of construction; light construction (frame); heavy construction (reinforced concrete); as used in Hawaii and in the Western U.S.; introductions to structural steel, precast concrete, and other methods. (3 hrs. lect.)

## 35 Survey \& Measurements II (4)

Prerequisite: ENGT 25
Principles of the rectangular coordinate system. Adjustment of azimuths, traverse, and level circuits. Office computation of land areas and omitted measurements. Computation and stakeout of horizontal and vertical curves. ( 2 hrs . lect.; 6 hrs. lab.)

## 40 Civil/Structural Drafting (4)

Prerequisites: ENGT 20, 35
A study of drafting room procedures, terminology, conventions and dimensioning. Emphasis civil and structural drawings. Drawing details, profiles, cross-sections and contour sketching. Also drawing foundation plans and details, and working drawings in structural steel and reinforced concrete buildings. (2 hrs. lect.; 6 hrs. lab.)

## 45 Survey \& Measurements III (3)

Prerequisite: ENGT 35
Principles of topographic, construction and land surveying. Topographic surveying, including contouring and plotting details, profiles, and cross-sections. Construction surveying, including staking out pipeline, grades, buildings and highways. Land surveying, including location of property line, research and subdivision. (2 hrs. lect.; 3 hrs. lab.)

## 52 Strength of Materials (4)

Prerequisite: ENGT 32
Elastic stress-strain relationship and behavior of structural systems under axial, flexural, and torsional loading conditions. Shear and moment diagrams determination; analysis and design of structural members. (3 hrs. lect.; 3 hrs. lab.)

## 54 Construction Estimating \& Bidding (3)

Prerequisites: ENGT 35, 40
Construction contracts, types of estimates. Cost accounting, purposes, and functions. Construction costs. Estimating and cost account precepts. Measurement of construction work from drawings. Pricing work in estimates. (2 hrs. lect.; 3 hrs. lab)

58 Soils and Foundations (3)
Prerequisite: ENGT 32
Study of basic soil mechanics, terminology, soil test methods and procedures. Visits to various materials testing laboratories. (2 hrs. lect.; 3 hrs. lab.)

## 60 Design \& Drafting w/ CADD (4)

Prerequisites: ENGT 20 and ENGT 35
An introduction to the fundamental principles and operation of computerassisted drafting and design. A step-by-step approach in using CADD software as a tool in creating civil and structural drawings. (2 hrs. lect./6 hrs. lab)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
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. Repeatable 4 times for credit up to a maximum of 12 credits. (5 hrs. work experience per week per credit.)

## ENGLISH (ENG)

8 Reading Fundamentals for Non-Native Speakers of English (NSE) (3) Prerequisite: EL/ 9 or required placement score
Specifically designed for the non-native speaker of English, this course focuses on developing the student's vocabulary, reading skills, and reading rate. Nonnative speakers may substitute ENG 8 for ENG 9 ( 3 hrs . lect.)

9 Reading Fundamentals (3)
Prerequisite: ELI 9 or required placement test score
This course is designed 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. (3 hrs. lect.)

10 Writing Fundamentals (3)
Prerequisite: ENG 8/9 or required placement test score
A practical workshop in the elements and types of writing. Emphasis is placed on understanding the way sentences can be made to communicate the writer's ideas. (3 hrs. lect.)
15 Writing Fundamentals for Non-Native Speakers of English (NSE) (3)
Prerequisite: ENG 8/9 or required placement test score
Specifically designed for the non-native speaker of English, this course focuses on grammar, capitalization, punctuation, and sentence structure. The main goal is getting the student to write complete sentences that communicate well. Nonnative speakers may substitute ENG 15 for ENG 10. (3 hrs. lect.)

21 Developmental Reading (3) (Formerly Intermediate Reading)
Prerequisite: ENG 8/9 or equivalent
Designed to develop reading skills needed for college level reading. Emphasis is on vocabulary and comprehension of expository reading material. Study skills needed for effective reading are handled. ( 3 hrs . lect.)

## 22 Introduction to Expository Writing (3)

Prerequisite: ENG 10/15 or required placement test score
Intensive study of structure, usage, and vocabulary of English as a necessary prelude to effective writing. Emphasis is placed on the development of paragraph to communicate ideas in short papers. Students are encouraged to exercise critical thinking and clear, correct language in their written communications. (3 hrs. lect.)


## 32 Introduction to Expository Writing for Non-Native Speakers of English (NSE) (3)

Prerequisite: ENG 10/15 or required placement test score
This course, designed primarily for the non-native speaker of English, provides a thorough introduction to combining sentences into simple paragraphs. The student learns to write model paragraphs: narrative, descriptive, and forms of analysis. Non-native speakers may substitute ENG 32 for ENG 22. (3 hrs. lect.)

## 48 Literary Fundamentals (3)

Prerequisite: ENG 10/15 or required placement test score
Study of literature: novels, short stories, plays, poetry, and essays. Emphasis is placed on enjoyment, enrichment, and communicating this experience in short pieces of writing. (3 hrs. lect.)
51 Technical Reading (3) (Formerly 21C)
Prerequisite: ENG 8/9 or equivalent
Designed to develop reading skills needed for college level reading. Emphasis is on vocabulary and comprehension of technical reading material. Study skills needed for effective reading are handled. ( 3 hrs . lect.)

## 55 Business Communications (3)

Prerequisite: ENG 10/15 or required placement test score
An analysis of business styles of writing with emphasis placed on letter writing, report writing, preparing self-descriptive job dossiers. (3 hrs. lect.)
60 Technical Writing (3)
Prerequisite: ENG 10/15 or required placement test score
Study of effective ways of writing straightforward paragraphs of technical information. Emphasis is placed on writing technical information clearly, concisely, accurately and precisely. Includes units on using visuals for clear written communication. (3 hrs. lect.)

## 100 Expository Writing (3)

Prerequisite: Placement in ENG 100 or "C" or higher in ENG 22-60
Practice in representative forms of expository writing: descriptive and narrative exposition, autobiographic writing, interpretations of completed events, and presentation of arguments on social or cultural issues; readings in professional writing in each form. (3 hrs. lect.)

## 102 College Reading Skills (3)

Prerequisite: Placement in ENG 100 or "C" or higher in ENG 22-60
Improvement in college and adult level reading with emphasis on increasing reading rate and comprehension through techniques of phrase reading, skimming, and vocabulary development. ( 3 hrs . lect.)

## 209 Business and Managerial Writing (3)

Prerequisite: ENG 100
A study of business and managerial writing; practice in writing letters, memos, procedures and reports, including a recommendation report requiring research, problem definition and solution proposals. (3 hrs. lect.)

## 210 Writing Term Papers (3)

Prerequisite: ENG 100
Practice in the skills needed in writing research papers and "term" papers: methods of gathering and evaluating primary and secondary evidence and of presenting arguments in convincing and logical expository prose. (3 hrs. lect.)

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250 American Literature (3)
Prerequisite: ENG 100
A study and analysis of major works of American literature with equal emphasis placed upon works created before and after 1900. Novels, short stories, poems, and modern drama are studied. (3 hrs. lect.)
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251 British Literature to 1800 (3)
Prerequisite: ENG 100
Study of major British works from the Middle ages to 1800. (3 hrs. lect.)
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## 252 British Literature after 1800 (3)

Prerequisite: ENG 100
Study of major British works from 1800 to the present. (3 hrs. lect.)
253 World Literature to 1600 (3)
Prerequisite: ENG 100
Study of representative works of Classical, Oriental, and European literature from ancient times to the 17th century. (3 hrs. lect.)

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254 World Literature after 1600 (3)
Prerequisite: ENG 100
Study of representative works of Oriental, European, and American literature from 1600 to present. ( 3 hrs . lect.)
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## 255 Short Story \& Novel (3)

Prerequisite: ENG 100
Study and criticism of short stories and novels and how they are created. (3 hrs. lect.)

256 Poetry \& Drama (3)
Prerequistie: ENG 100
Study and criticism of drama, biography, and poetry, their evolution and form. (3 hrs. lect.)

## 257 Themes in Literature (Women in Literature) (3)

Prerequisite: ENG 100
A thematic study of women in literature. Readings from various types of literature: novels, plays, short stories, and poetry. Focuses include women in various cultures, traditional myths and roles of women, contemporary alternatives, and famous women writers. (3 hrs. lect.)

## ENGLISH LANGUAGE INSTITUTE PROGRAM (ELI)

1 Beginning ESL (9)
Prerequisite: Placement in ELI 1
A beginning course in listening, speaking, reading/vocabulary, and writing/ grammar for non-native speakers of English. Lab required. (9 hrs. lect., 3 hrs. lab.)

4 Intensive Intermediate/Advanced ELI (15)
Prerequisite: ELI 1 or placement by ESL test score.
An intensive intermediate/advanced course in listening/speaking, reading/ vocabulary and writing/grammar for non-native speakers of English. DAILY LAB REQUIRED. (17.5 hrs. lect., 5 hrs . lab.)


#### Abstract

6 English Language Institute Program II (3) Prerequisite: Placement on the basis of English as a Second Language (ESL) test scores or satisfactory completion of ELI 1 An intermediate course in reading, writing, speaking and listening for non-native speakers of English. Although the course does not satisfy degree requirements, it does help visa-holding foreign students satisfy their requirement to take a full academic load. Non-native speakers with low ESL test scores will be required to complete ELI before they enroil in any other English courses. Lab required. (3 hrs. lect., 3 hrs. lab.)

\section*{9 English Language Institute Program III (3) <br> Prerequisite: Placement on the basis of English as a Second Language (ESL) test scores or satisfactory completion of ELI 6}

Co-requisite: Enrollment in HUM 60 An advanced course in reading, writing, speaking and listening for non-native speakers of English. Although the course does not satisfy degree requirements, it does help visa-holding foreign students satisfy their requirement to take a full academic load. Non-native speakers with low ESL test scores will be required to complete ELI before they enroll in any other English courses. Lab required. (3 hrs. lect., 3 hrs. lab.)


## ENTREPRENEURSHIP (ENT)

## 100 Starting a Business (3) (formerly BUS 25)

Prerequisite: ENG 22, MATH 22
Introductory course in entrepreneurship, focusing on methods of marketing research, demand measurement, basic business analysis and startup strategies. ( 7 hrs . lect. per wk. for 7 wks .)

## 110 Developing a Product (3)

Prerequisite: ENT 100
This course fully develops the student's product or service that was researched in ENT 100. Introduces the students to product design, production management, costing, staffing and make or buy decisions. Course concludes with product prototype and business plan preparation. ( 7 hrs . lect. per wk. for 7 wks .)

## 120 Managing a Small Business (3)

Prerequisite: ENT 110 or Instructor Approval
This class covers all the essentials of running a business, from order processing to managing people and basic accounting. The students will gain experience in preparing a camera-ready brochure on their product or service. (3 hrs. lect.)

## FAMILY RESOURCES (FamR)

31 Infancy and Early Childhood Development (3) (Formerly HD 31)
Principles of development from conception through early childhood. Focus on the interrelation of physical, cognitive, emotional and social aspects of the individual during this period and how this information of development affects one's expectations and relationship to the individual child. (3 hrs. lect.)

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100 Personal and Professional Development (3)
Prerequisite: ENG 9
Co-requisite: ENG 10
Intended for college students of any age who wish to expand their self-awareness and explore choices available. Topics include personal style of learning, challenges of adulthood, and clarity in education/career goals. (3 hrs. lect.)
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## 105 Early Childhood: A Professional Overview (3)

Prerequisite: ENG 9
Co-requisite: ENG 10
A basic introductory course which explores historical roots and fundamental principles in early childhood, variety and scope of programs in the community, issues confronting the field, career options. ( 3 hrs . lect.)

## 130 Child Management and Guidance (3) (Formerly HD 130)

Exploration of five approaches to child management. Major focus is on developing skills needed to communicate successfully with and guide children, including techniques for preventing and solving behavior problems. (3 hrs. lect.)

## 133 Dynamics of Child Abuse and Neglect (3) (formerly HD 133)

An intensive course in the dynamics of child abuse and neglect. Course includes profile of abusive parent, profile of abused child, normal child development, community resources, Hawaii child abuse law, androle of helping person in child abuse prevention. (3 hrs. lect.)

## 134 Introduction to Observation of Children (1)

Prerequiste: ENG 22
Co-requisite: FAMR 31 or FAMR 231
Basic skills in observing and recording children's behavior. (1 hr. lect.)

## 135 Nurturing and Guiding Young Children (3)

Prerequisite: ENG 9
Co-requisite: ENG 10
Prerequisite or Co-requisite: FAMR 31 or 231 plus FAMR 134
Basic course addressing positive ways to support children's social-emotional development from birth to age eight. Focus on adult-child and child-child interactions and relationships. ( 3 hrs . lect.)

## 230 Human Development (3) (formerly HD 201)

Prerequisite: ENG 22
Basic concepts and issues of development from conception to death. Interactions of biological and environmental factors considered from a multidisciplinary systems approach. (3 hrs. lect.)
231 Human Development I (3) (formerly HD 231)
Prerequisite: ENG 22 or equivalent
Principles of development from conception to puberty. Focus on the interrelation of physical, cognitive, and social-emotional aspects of the individual during this period. (3 hrs. lect.)
232 Human Development II (3) (formerly HD 232)
Prerequisite: ENG 21 or equivalent
Principles of development from puberty to death. Focus on the interrelation of physical, cognitive, and social-emotional aspects of the individual during this period. FAMR 231 and FAMR 232 need not be taken in sequence. (3 hrs. lect.)

## 234 Observation and Assessment (2)

Prerequisite: FAMR 134
Advanced skills in methods of observing \& recording behavior and assessing children. (2 hrs. lect.)

## 244 Aging (3) (formerly HD 244)

Prerequisite: ENG 10 or Placement in ENG 22 or equivalent
Basic course in study of developmental process and problems of aging. Students will be guided to llok at aging from a systems approach. Sociological, biological, and cognitive development of the aging individual will be discussed. (3 hrs. lect.)

245 Families and Communities (3) (formerly HD 235)
Prerequisites: FamR 231, FamR 232 or Instructor Approval
Central focus is on developing skills for establishing effective relationships between the early childhood professional and families of the children with whom the professional is working. ( 3 hrs . lect.)

## 296 Working with People (3) (formerly HD 296)

Focuses on knowledge and skills needed in working with people. Topics include communication barriers and enhancers, conflict management, procrastination, stress and anger management, and group problem-solving skills. (3 hrs. lect.)

297 Dynamics of Family Violence (3)
Overview on family violence which includes physical and sexual abuse of children, spouse assault, violence between siblings, abuse of the disabled, physical abuse and neglect as well as financial abuse of the elderly. Cultural/political trends to "criminalized"' family violence. (3 hrs. lect.)

## FASHION TECHNOLOGY (FT)

16 Clothing Construction I (2)
Garment construction for the individual using commercial patterns. Recommended for non-majors. (1 hr. lect.; 3 hrs. lab.)

## 17 Clothing Construction II (2)

Basic stitchery with emphasis on standards and construction techniques. Recommended for non-majors. ( 1 hr . lect.; 3 hrs . lab.)

## 27 Basic Pattern Drafting and Clothing Construction (3)

Prerequisite: FT 21 or 205, 215
Technical methods of making a flat pattern. Application of principles of style, color, line and fabric for the custom design. (2 hrs. lect.; $3 \mathrm{hrs} . \operatorname{lab}$.)

## 28 Introduction to Industrial Sewing (3)

An introduction to apparel manufacturing with emphasis on various stitch and seam types utilizing industrial machines and attachments. Career opportunities and industry terminology will also be covered in this course. (3 hrs. lect.)

## 30 Basic Creative Designing (3)

Prerequisite: FT 21 or 205, 215
Continuation of pattern making using basic slopers to produce and alter a variety of garments to fit the figure. Creative design is encouraged. (2 hrs. lect.; 3 hrs. lab.)

## 32 Advanced Apparel Design (3)

Prerequisites: FT 27, 41, 215
Co-requisite: FT 38
Design and creation of garments for customers. Integration of all phases of apparel production. Includes individual design, pattern drafting, cutting, fabrication, fitting, and finishing. ( 2 hrs. lect.; 3 hrs. lab.)
36 Draping (3)
Prerequisite: FT 27 or instructor approval
Co-requisite: FT 41
Basic fundamentals of draping with standard and individual forms. (2 hrs. lect.; 3 hrs. lab.)
38 Draping and Design (3)
Co-requisite: FT 32
Integration of draping and llat pattern designing for actual customers with the use of individual forms or standard forms. (2 hrs. lect.; 3 hrs. lab.)
40 Textiles (3)
A study of the fibers and fabrics used in apparel and related products. Practical applications of yarns, construction, finishes on fabrics. Simple physical and chemical tests will be demonstrated. ( 3 hrs . lect.)
41 Apparel Design (3)
Prerequisites: FT 27, 215
Co-requisite: FT 36
Translating design sketches into flat patterns and constructing the finished garments. (2 hr. lect.; 3 hrs. lab.)
43 Cutting Room Functions (3)
Prerequisite: FT 21 or FT 205
Develops an understanding of industry methods and techniques of marking, laying up, and cutting garments in quantity with emphasis on fabric yield. (3 hrs. lect.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Fashion Design and Merchandising. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs. work experience per week per credit.)
100 Fashion Modeling (1)
Prerequisite: FT major or FT instructor approval required
Students will acquire the skills and knowledge necessary to model fashion on the fashion runway. The course includes informal modeling and the presentation of the total fashion look. ( 1 hr . lect.)
111 Esthetics of Clothing (3)
Factors involved in clothing selection. Principles of line, color, design for individual figures. Consumer buying for wardrobe. (3 hrs. lect.)
120 Fashion Industry Survey (3)
Prerequisite: ENG 22 or Instructor Approval
A survey of the fashion industry, fashion marketing trends, and retailing organizations. Career options will be explored. (3 hrs. lect.)

## 124 Fashion History (3)

A study of historical and cultural fashions, including clothing, textiles, accessories, cosmetics, and hair styles. (3 hrs. lect.)

## 125V Fashion Show Production (1-3)

Comprehensive practical experience including all factors required for the preparation and production of fashion shows, clinics, and other fashion promotions. Projects vary in degrees of complexity. Variable credit (1-3) and may be repeated for variable credit to 6 credit hours. (1-3 hrs. lect.)

## 126 Wardrobe Coordination (3)

Prerequisite: FT 111
The planning and coordination of the wardrobe elements to meet the demands of various lifestyles and figure types. (3 hrs. lect.)
127 Fashion Selling (3)
This course is designed to help students develop skills in selling fashion merchandise. Emphasis will be on the development of positive retailing attitudes and sales techniques. (3 hrs. lect.)
128 Visual Merchandising (3)
This course is designed to examine the visual approach to selling fashion merchandise with an emphasis on effective exterior and interior store displays. (3 hrs. lect.)

## 129 Merchandise Planning and Control (3)

Prerequisite: MATH 1 or Instructor Approval
Fundamentals of mathematics used in merchandise planning and daily operations of a fashion operation. Essential practices, procedures, and interpretations of profit factors. Use of computers in fashion merchandising. (3 hrs. lect.)

130 Fundamentals of a Small Fashion Business (4)
Prerequisite: MATH 1, ENG 22 or Instructor Approval
Principles and procedures in organizing a small fashion enterprise. Application of decision-making techniques. Students will develop and evaluate a model plan for a small fashion store. (4 hrs. lect.)

131 Fashion Supervision (3)
Prerequisite or Co-requisite: FT 127, FT 130
A survey of the principles, theories and strategies of communication with and managing people in groups or as individuals. Strong emphasis on human relations. Supervisor's role in employee recruitment, selection, training and evaluation. (3 hrs. lect.)

145 Fashion Buying and Merchandising (3)
Prerequisites: MATH 1, ENG 22 or Instructor Approval
A study of the buying/selling functions of fashion and accessories, the buyer's role in selecting merchandise and merchandising a store for profitable fashion retailing. (3 hrs. lect.)

150 Sales and Promotion of Fashion (3)
Prerequisites: MATH 1, ENG 22 or Instructor Approval
A survey of techniques used to promote and sell fashion merchandise. Students will gain hands-on experience in executing promotional events and displays. (3 hrs. lect.)

## 205 Materials and Methods of Clothing Construction (4)

Prerequisites: ENG 8/9, MATH 1
Principles, concepts and procedures for quality construction and custom fitting of clothing. (3 hrs. lect.; 3 hrs. lab.)

## 215 Block Pattern Designing (3)

Prerequisite or Co-requisite: FT 21 or FT 205 or instructor approval
Principles of pattern making for women's apparel through manipulation of quarter size pattern blocks. (2 hrs. lect.; 3 hrs. lab.)

## 216 Fashion Design and Sketching (3)

Development of apparel design through sketching the fashion figure. (2 hrs. lect.; 3 hrs. lab.)

## 237 Pattern Grading (3)

Prerequisite: FT 215
Training in increasing and decreasing the pattern size of various styles. Practice includes methods currently used in industry. (2 hrs. lect.; 3 hrs. lab.)
Note: The following courses have been accepted at the University of Hawaii at Manoa in the Human Resources Department. These are subject to change without prior notice.

| HCC | UHM |
| :--- | :---: |
| FT 111 | TxCl 111 |
| FT 205 | TxCl 205 |
| FT 215 | TxCl 215 |
| FT 216 | TxCl 216 |
| FT 237 | TxCl 237 |
| FT 36 and FT 38 | TxCl 315 |

## FIRE SCIENCE (FIRE)

## 22 Essentials of Fire Suppression (3)

A study of the fire suppression organization, apparatus, and equipment, character and behavior of fires, fire hazard properties of ordinary materials, extinguishing agents, fire ground activities, and basic firefighting operations. (3 hrs. lect.)

## 23 Fundamentals of Fire Prevention (3)

A study of the fire prevention organization and its function, types of construction and occupancies, inspection techniques, fire hazards, surveying and mapping, and public relations as affected by fire prevention. (3 hrs. lect.)

## 30 Emergency Care and Rescue (3)

Prerequisite: FIRE 22 or instructor approval
A study of the human body; proper handling, care and transporting of emergency victims; and rescue control essentials. (3 hrs. lect.)

## 32 Building Construction for Fire Protection (3)

Prerequisites: FIRE 22 and FIRE 23 or instructor approval
A study of building design, materials and construction as it relates to fire hazards and protection; structural integrity and movement of smoke, heat and fumes during a fire; evaluating structural damages; and building codes and standards. (3 hrs. lect.)

## 34 Hazardous Materials I (3)

Prerequisites: FIRE 22 and FIRE 23 or instructor approval
A practical study of chemical properties, characteristics and reactions of ordinary combustible materials, plastics and oxidizing materials; the handling, transportation and storage of these materials; fire control and safety. (3 hrs. lect.)
36 Fire Tactics and Strategy (3)
Prerequisite: FIRE 22 or instructor approval
A practical approach to pre-fire planning, strategic concepts and their applications in firefighting, post-fire analysis, command post procedures, and special types of fires. (3 hrs. lect.)
38 Fire Safety Codes (3)
Prerequisites: FIRE 22 and FIRE 23 or instructor approval
An evaluation of fire codes that covers construction, protection and occupancy features that lessen the danger to life, smoke, fumes, or panic before a building is evacuated, and related codes for special situations. (3 hrs. lect.)
40 Water Related Fire Protection Systems (3)
A study of basic concepts and principles involved with the design and function of standpipe, spray and sprinkler systems, and the fire department use of these systems. (3 hrs. lect.)
42 Special Fire Suppression and Detection Systems (3)
Prerequisites: FIRE 22 and FIRE 23 or instructor approval
A study of principles involved in the design and operation of special portable, mobile and fixed fire suppression and detection systems found in most occupancies. (3 hrs. lect.)

## 48 Aircraft Crash Rescue (3)

Prerequisites: ENG 10 and MATH 1
Basic Aircraft Crash Rescue course offers aircraft types, apparatus and equipment, airfield operation and planning as well as communications. (3 hrs. lect.)
50 Fire Apparatus and Equipment (3)
Prerequisites: FIRE 22 or instructor approval
An in-depth study of fire apparatus and equipment design, specifications, performance capabilities and maintenance; heavy vehicle driving; and effective use of apparatus and equipment in fire service emergencies. (3 hrs. lect.)
52 Fire Hydraulics (3)
Prerequisites: FIRE 22 and FIRE 23 or instructor approval
An overview of applied technical mathematics and measurements, theoretical fire service hydraulics and its application to practical field situations, and water supply problems. (3 hrs. lect.)
54 Fire Investigation (3)
Prerequisites: FIRE 22 and FIRE 23 or instructor approval
A study of fire causes and detection with emphasis on arson; interview techniques; developing technical reports; criminal evidence and procedures; and prevention through investigation. (3 hrs. lect.)
56 Legal Aspects of Fire Protection (3)
Prerequisites: FIRE 22 and FIRE 23 or instructor approval
A critical study of duties, responsibilities, legal rights and liability concerns of the fire service and its members, and legal problems arising from working situations of personnel. (3 hrs. lect.)

## 60 Fire Company Management (3)

Prerequisites: FIRE 22 and FIRE 23 or instructor approval
An insight into the fire company organization, procedures and functions, and managerial duties and responsiblities of the holder of that office. (3 hrs. lect.)

## 106 Fundamentals of Fire Protection (3)

Prerequisite: ENG 22
History and philosophy of fire protection. Topics include statistics of loss of life and property due to fire, introduction to fire agencies; current fire legislation, career orientation, recruitment and training programs, classification and pay systems, employee organization, and discussion of current fire problems and topics. (3 hrs. lect.)

## FOOD AND NUTRITIONAL SCIENCES (FNS)

## 19 Nutrition for Fitness (2)

Emphasis on carbohydrates, fats, proteins, vitamins, minerals and water as nutrients for maintaining a healthy body. Calories and their effect on diet and weight control. The nutritional needs of athletes, sedentary and active people for healthier lives. (2 hrs. lect.)

## 24 Diet and Nutrition for Pre-Primary Child (2)

Basic food groups and related factors in planning meals suitable for the very young child in the home, food buying tips, hygenic food handling techniques, pleasant mealtimes; varied and nutritious snacks; avoiding possible problems in feeding babies and young children. This course is especially designed for family daycare home operators and parents who care for children at home. (2 hrs. lect.)

## 26 Meal Planning and Budgeting (3)

The planning and preparation of nutritious, esthetic, and economical meals, including special diets, using a variety of food patterns. Use and care of equipment, management of time, energy and money. (3 hrs. lect.)

## 184 Contemporary Issues in Foods and Nutrition (2)

Lectures on some widely discussed subjects related to human nutrition. Topics include world food crisis, protein alternatives, food additives, methods in food advertising, and nutritional labeling. Primarily for non-majors. Students wishing further understanding of basic nutrition concepts should also enroll in 285. (2 hrs. lect.)

## 285 The Science of Human Nutrition (3)

Integration of natural science concepts basic to study of human nutrition. Emphasis on nutrient requirements of healthy individuals throughout life cycle, food sources, functions and interrelationships of nutrients. Lectures supplemented with individualized instructional activities. (3 hrs. lect.)
Note: FNS 285 is equivalent to FSHN 285, offered at the University of Hawaii at Manoa.

## FRENCH (FR)*

101-102 Elementary French I-II (4-4)
Prerequisite: ENG 10/15 or instructor approval for 101; FR 101 or instructor approval for 102
Development of listening, speaking, reading, writing. French daily life and cutture is given some attention. Laboratory work required. (4 hrs. lect.; 1 hr lab.)
*Native speakers may not take language courses for credit.

## GEOGRAPHY (GEOG)

22 Geography of Hawaii (3)
A non-transfer course designed to enable the student to better understand and appreciate the Hawaiian environment. Hawaii's volcanic landforms, coastal features, climate and vegetation will be covered. Economic geography will be examined as well as population, land use, and urban analysis of Honolulu. (3 hrs. lect.)

## 101 The Natural Environment (3)

Prerequisite: Recommended placement in ENG 22
An introduction to physical geography: distribution and interrelationships of climates, vegetation, soils, landforms-with special emphasis on Hawaii. Fulfills Natural Sciences core requirement. (3 hrs. lect.)

## 102 World Regional Geography (3)

Prerequisite: ENG 10 or placement in ENG 22 or higher
Survey of the world's major geographic regions with focus on the interrelationships between the physical and human elements of these regions. Geographic aspects of contemporary economic, social, and political conditions will be studied. (3 hrs. lect.)

## 151 Geography and Contemporary Society (3)

Prerequisite: Recommended placement in ENG 22 or higher
Elements of economic geography and resource management; study of populations and food problems; energy; ecosystems; and pollution; application to current problems of developed and underdeveloped nations. (3 hrs. lect.)

## GEOLOGY AND GEOPHYSICS (GG)

## 101 Introduction to Geology (3)

The study of Earth, man's natural physical environment, landscape, rocks and minerals, rivers and oceans, volcanos, earthquakes, plate tectonics and other internal processes; the effects of man's actions on Planet Earth. (3 hrs. lect.)

## 101L Introductory Geology Laboratory (1)

Prerequisite: GG 101 or GG 200 or concurrent registration in GG 101 or GG 200
The study of rocks and minerals, topographic and geologic maps and cross sections. ( 3 hrs. lab.)

## 200 Geology of Hawaii (3)

Prerequisite: ENG 10
Survey of Hawaiian rocks, minerals, volcanism, erosion, sedimentation, landscape evolution, geologic history, and regional geology. (3 hrs. lect.)

## GRAPHIC ARTS (GRAPH)

## 23 Offset Printing (4)

Prerequisite: CMART 21 or instructor approval
Production procedures in commercial offset printing. Operation and maintenance of smail press equipment. Includes stripping, platemaking, and makeready for printing. (3 hrs. lect.; 3 hrs. lab.)

## 25 Process Camera (4)

Prerequisite: CMART 21 or instructor approval
Technical skills related to preparation of line art, half-tones, duotones, color keys, and stripping for offset printing. Preparation of stats and veloxes using diffusion transfer process. (3 hrs. lect.; 3 hrs lab.)

## HAWAIIAN (HAW)*

101-102 Elementary Hawaiian I-II (4-4)
Prerequisite: ENG 10/15 or instructor approval for 101; HAW 101 or instructor approval for 102
Development of listening, speaking, reading, writing. Drill and practice emphasized. Laboratory work required. (4 hrs. lect.; 1 hr . lab.)

## 201-202 Intermediate Hawaiian (4-4)

Prerequisite: HAW 102 for 201, 201 for 202
This course is an Intermediate level course for students with Elementary knowledge of Hawaiian language. Language learning requires competence in four areas of skill, including listening, speaking, reading, and writing. ( 4 hrs . lect.; 1 hr . unsupervised lab.)
261 Hawaiian Literature in English (3)
Prerequisite or Co-requisite: ENG 100
A course for students who desire a literary and cultural experience of the indigenous Hawaiian culture through reading and analyzing selected major works in English translations. (3 hrs. lect.)
*Native speakers may not take language courses for credit.

## HAWAIIAN STUDIES (HAWNA)

24 Hawaiian Culture (3)
Nature of Hawaiian arts and crafts, their expression in various forms and their relationship to Hawaiian culture. (3 hrs. lect.)

## 231 Hawaiian Culture (3)

This course is intended to give the student a comprehensive knowledge of the traditional Hawaiian culture. There will be a strong emphasis in presenting the culture as an ongoing, living entity in which the students will become involved. (3 hrs. lect.)

## HEALTH (HLTH)

## 31 First Aid and Safety (1)

The student will gain new and useful information for application to healthy daily living, with emphasis on the prevention of accidents and first aid care. Includes cardiopulmonary resusicitation (CPR). Graded on a CR/N basis. (1.5 hr. lect.)

## HEALTH, PHYSICAL EDUCATION \& RECREATION (HPER)

## 31 Cardiovascular Training (1)

Prerequisite: Medical physical clearance
For students who wish to improve cardiovascular endurance. Through improvement in cardiovascular endurance, students will improve the efficiency of their hearts, discover the value of aerobic exercise and be able to endure their occupations and daily activities for a longer period of time. (3 hrs. lab.)

## 32 Flexibility and Agility (1)

Prerequisite: Medical physical clearance
For students who wish to increase flexibility and agility. Comparison and contrast of flexibility and agility. How to improve flexibility and agility for better performance in occupations and daily activities. (3 hrs. lab.)

## 152 Weight Training (2)

Prerequisite: Medical physical clearance to be presented at registration
For non-traditional students and other students who desire to increase physical fitness levels for better performance of physical tasks required in vocational fields and daily activities. (1 hr. lect.; 3 hrs. lab.)

## 195 Modern Health: Personal and Community (2)

Mental-emotional health, family living and scientific health information for personal and community health. (2 hrs. lect.)

## 200 Healthy Children (3)

Prerequisites: FAMR 231 \& FAMR 134 or Instructor Approval
Basic course which provides student with essential elements of health, safety and nutrition for the young child. Application to group settings as well as individual child. (3 hrs. lect.)

## HEAVY EQUIPMENT MAINTENANCE AND REPAIR

See DIESEL MECHANICS (DIMCH)

## HISTORY (HIST)

23 Contemporary Civilization/World Issues (3)
A study of world civilization which will examine the manner in which historians look at human problems. The emphasis will be on the relationship of present and past world issues and events in human civilization. (3 hrs. lect.)

24 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.)

## 27 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.)

## 30 Introduction to Hawaiian History (3)

A study of the historic political and social development of the Hawaiian Islands. The course will examine the various cultures and their migrations to Hawaii in both ancient and modern times, from before the time of Captain Cook, through the processes of European and American colonialism, tracing the Monarchy and Territorial growth to the time of Statehood, and the current problems of social modernization. (3 hrs. lect.)

32 History of the Pacific Islands (3)
A study of the historic political and social development of the islands of the Pacific. The course will examine culture and migration patterns in the ancient times throughout the areas of Micronesia, Melanesia, and in the Polynesian Triangle, the influence of European and American colonialism, and current problems of social modernization. (3 hrs. lect.)

## 151-152 World Civilization I \& II (3-3)

Recommended Placement: ENG 22
Development of civilization from its prehistoric origins to the present. (3 hrs. lect.)

## 182 Women in Hawaii (3)

An introduction to Hawaii's outstanding women in history with focus on the alii, the monarchs, the founders of schools, churches, and hospitals. Course includes women from all ethic groups in Hawaii, all classes and educational backgrounds. (3 hrs. lect.)

## 230 Contemporary Europe (3)

Introduction to the history and civilization of Europe since World War II. The emphasis will be on regional developments rather than on the histories of individual countries in Europe. The changing relationship of Europe to the rest of the world will also be examined. (3 hrs. lect.)

## 241-242 Civilizations of Asial \& II (3-3)

Historical survey of the major civilizations of Asia from the earliest times to the present. (3 hrs. lect.)

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

284 History of the Hawaiian Islands (3) (formerly HIST 224)
Prerequisite: ENG 100
Survey of the social, political, and economic history of Hawaii from the earliest times to the present. (3 hrs. lect.)

288 History of Pacific Islands History (3)
Prerequisite: ENG 100
Development from precolonial to modern times; early settlement, cultural contact, colonization, contemporary problems. (3 hrs. lect.)

## HOME ECONOMICS (HE)

## 153 Management of Family Resources (3)

Introduction to family management that includes identification and use of some family resources and the implication for family and social welfare. (3 hrs. lect.)

## 260 Family Management and Decision Making (3)

Integrated approach to management in the family, emphasizing values and goals of family functioning and use of resources. Management and decision making in different socio-economic settings. (3 hrs. lect.)

## 267 Home Furnishings (3)

Selection, arrangement, and coordination of the various aspects of home furnishings to meet family needs. Topics include development, general features, and design. (3 hrs. lect.)
Note: HE 267 has been accepted in the Human Resources Department at the University of Hawail at Manoa. Acceptance subject to change without prior notice.

HUMAN DEVELOPMENT (HD) - See Family Resources (FamR)

## HUMAN SERVICES (HSERV)

## 30 Work with Senior Citizens (3)

Survey of jobs involving work with elderly. Students will be exposed to community resources designed to meet the needs of senior citizens and will learn the nature of elderly services work in various agencies which serve the older person. Basic approaches utilized by elderly services workers will be discussed. Rewards and problems in work with the aged. ( 3 hrs . lect.)
40-43 Series Special Topics in Human Services (Number of credits depends on topic \& may vary from semester to semester.)
Special topic courses. A variety of contemporary topics, workshops, projects, or readings in methods or problems in human services. May be repeated for credit. (Class hours depend on topic \& may vary from semester to semester.)
47 Home Visitor Special Projects (6)
This course prepares students for positions in agencies utilizing home visitors as service providers for families with children ages 0 to 5 years of age. It covers issues essential to home visits with at-risk families. (5 hrs. lect.; 1 hr . lab.)
51 Work Practicum Discussion (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 Work Practicum. (1 hr. lect.)
79 Introduction to School-Age Programs and Child Care (1)
An introduction to school-age concepts, background, and skills necessary for working with children from five to twelve years of age. ( 1 hr . lect.)
80 Developmentally Appropriate Practice: School-Age (9-12 years) (2)
An overview of theoretical knowledge and practical skills integral to the planning, implementation, and evaluation of developmentally appropriate school-age programs. (2 hrs. lect.)
81V Lab Experience for School-Age (1-3)
Co-requisite: HSERV 80
Supervised lab experience in school-age practice. Students will be able to engage in a variety of activities and assignments related to HSERV 80: Developmentally Appropriate Practice: School-Age, as well as to develop competency in observation, planning, implementation, and evaluation. (3-9 lab hrs.)

## 91V Practicum/Early Childhood (1-3) (formerly ED 91V)

Supervised work experience. Individualized in-service training in early childhood programs. May be repeated until 9 credits are earned. Responsibilities to increase with each repeat. Concurrent enrollment in HSERV 51 is recommended. (5-15 hrs. practicum)

## HUMANITIES (HUM)

20 Introduction to Humanities (3)
This course is a study of the fundamental principles of art, music and literature in order to increase appreciation. Contemporary media, e.g. television and cinema will be studied in order to develop critical skills. May be taken on a CR/N basis. (3 hrs. lect.)

## 35 Critical Thinking (3)

Prerequisite: ENG 10/15 or placement in ENG 22
This is an interdisciplinary course which addresses the question "How can I evaluate and express my own ideas clearly and confidently?' The emphasis is upon developing critical judgment as a basis of listening, speaking, reading, and writing. Group processes may be used to increase self awareness. May be taken on a CR/N basis. (3 hrs. lect.)

## 36 Problem Solving (3)

This is an interdisciplinary course designed to develop in the individual the technique and understanding necessary for successful problem solving. The understanding involves developing a critical appreciation of competing personal and social values. May be taken on a CR/N basis. (3 hrs. lect.)

## 37 The Twentieth Century: Values and Issues (3)

This course will define, explore, and analyze selected value issues which are part of the human experience of the twentieth century. An interdisciplinary approach will be used and the student will be encouraged to examine his/her own values. (3 hrs. lect.)
60 American Culture for Immigrants and Foreign Students (3)
Prerequisite: ELI 1 and 6
Co-requisite: Enrollment in EL/ 9 or instructor approval
This course is designed to help foreign and immigrant students to appreciate important concepts in American culture while they learn the basic vocabulary surrounding each concept. It will be taught through small group discussions and require extensive participation. ( 3 hrs . lec.)
151 Science Fiction and Human Values (3)
A study of science fiction and its implications for society-past, present and future. Films, videotapes, and printed materials will be used to explore the relationship between people, machines, and environment. (3 hrs. lect.)

## 193V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Humanities. Repeatable 4 times for credit up to a maximum of 12 credits. ( $5-20 \mathrm{hrs}$. work experience per week.)

## INDUSTRIAL EDUCATION

## IED - DRAFTING (IEDDD)

## 101 Basic Drafting and Design for Industrial Education (3)

A basic mechanical drawing course including the care and use of drafting instruments, principles of orthographic projection, and isometrics; application of principles to solving design problems. (5 hrs. lect./lab.)

## 102 Drafting and Design for Industrial Education (3)

Prerequisite: IEDDD 101 or DRAFT 24
Continuation of 101. Major focus is on machine and assembly drafting, auxiliary and sectional views, and technical illustration. ( 5 hrs. lect./lab.)

## 201 Advanced Drafting and Design (3)

Prerequisites: IEDDD 101, 102 or DRAFT 24, 26
This course covers the fundamentals of architectural drafting, including lettering, projections, sections, details, and pictorial and working drawings. (5 hrs. lect./ lab.)

## IED - ELECTRONICS (IEDET)

## 101 DC/AC Fundamentals (3)

A study of the fundamentals of electricity. Topics include 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.)

## 103 Electronic Devices (3)

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

## IED - ELECTRICITY (IEDIE)

## 102 Electrical Building Construction (3)

An elementary electrical installation course designed to meet the Department of Education's requirements for the electrical building construction technology program. This course covers the applications of electrical installation theory and techniques as applied to building construction. (5 hrs. lect./lab.)

## IED - MACHINE SHOP (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 presented. Some skill is developed in the use of hand tools, lathes, the drill press, and layout techniques. ( 5 hrs . lect./lab.)

## 102 Machine Shop for Industrial Education (3)

Prerequisite: IEDMS 101 or department head approval
An advanced course in metalworking lathe operation, including taper and angular turning, boring, cutting internal and external acme screw threads, and face plate set-up. Stress is placed on precision measurements through the use of micrometers and vernier calipers. (5 hrs. lect./lab.)

## 201 Machine Shop for Industrial Education (3)

Prerequisite: IEDMS 102 or department head approval
A course in the operation of the milling machine, including methods of tooling, job set-up, and speeds and feeds for commonly used metals. Students develop skills in plane and face milling, keyway cutting, gear cutting, and job setup on jobs performed on the vertical and horizontal milling machines. ( 5 hrs . lect./lab.)

## 202 Machine Shop for Industrial Education (3)

Prerequisite: IEDMS 201 or department head approval
An advanced course in the operation of lathes, drill presses, milling machines, grinding machines utilizing technical handbooks and data publications to complete projects and special shop assignments. ( 5 hrs . lect./lab.)

## IED - POWER TECHNOLOGY (IEDPT)

102 Internal Combustion Engines (3)
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 adjustments. (5 hrs. lect./lab.)
201 Electrical Systems (3)
Theory and laboratory work in automotive electrical systems and components. (5 hrs. lect./lab.)
202 Power Train (3)
Theory of and practice in servicing clutches, transmissions, overdrives, drive lines, rear axles, and differentials, hydraulic and power brake systems, mechanical and power steering systems, wheel alignment and balance, and suspension systems. (5 hrs. lect./lab.)

IED - SHEET METAL (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 use and care of sheet metal equipment in the layout and fabrication of sheet metal projects. (5 hrs. lect./lab.)

IED - WELDING (IEDW)
102 Welding for Industrial Education (3)
This course will provide a general overview of various welding processes, including practical instruction for the development of specific welding skills. (1 hr. lect., 6 hrs. lab.)

IED - WOOD CONSTRUCTION (IEDWC)
101 Hand and Portable Tools/Materials and Hardware (3)
This course is designed to orient students in the use and care of wood construction hand and portable power tools. Instruction includes purchasing practices, cost and usage of various building materials and hardware. ( 5 hrs. lect.//lab.)
102 Machinery and Joinery (3)
Prerequisite: IEDWC 101 or equivalent
This course is designed to provide each student with a complete understanding of the power equipment most commonly used in construction. It also includes the operation of these machines as well as the specific tasks for which each is used. (5 hrs. lect./lab.)

## 202 Cabinet Making (3)

Prerequisite: IEDWC 102
This course is designed to give basic working knowledge and skill in cabinet making. (5 hrs. lect./lab.)

## INFORMATION AND COMPUTER SCIENCE (ICS)

Also see Electrical Engineering (EE) and Learning Skills (LSK 100) for computer courses.

## 100 Tools For An Information Age (3)

Prerequisite: ENG 22 or Instructor Approval
This course is a computer literacy course. It provides those basic concepts and skills related to computers and computing that are needed in today's information age. The students will acquire an understanding of concepts in word processing, spreadsheet management, database management, elementary computer graphics, desk top publishing, electronic mail and telecommunications. They will also learn some of the history of computers and an awareness of the process of creating a computer program.
(Credit may be received for only ICS 100, 100E, 100M or 100T) (3 hrs. lect.)

100E Tools For An Information Age (Electricity/Electronics) (3)
Prerequisite: ENG 22 or instructor Approval
This course is a computer literacy course. It provides those basic concepts and skills related to computers and computing that are needed in today's information age, and, in particular, in the general area of electricity and electronics. The students will acquire an understanding of concepts in word processing and basic skills in other applications appropriate to the electricity and electronics industry. (Credit may be received for only ICS 100, 100E, 100M or 100T) (3 hrs. lect.)

100M Tools For An Information Age (Manufacturing) (3)
Prerequisite: ENG 22 or Instructor Approval
This course is a computer literacy course. It provides those basic concepts and skills related to computers and computing that are needed in today's information age, and, in particular, in the general area of manufacturing. The students will acquire an understanding of concepts in word processing and basic skills in other applications appropriate to the manufacturing industry.
(Credit may be received for only ICS 100, 100E, 100M or 100T) (3 hrs. lect.)

100T Tools For An Information Age (Transportation) (3)
Prerequisite: ENG 22 or Instructor Approval
This course is a computer literacy course. It provides those basic concepts and skills related to computers and computing that are needed in today's information age, and, in particular, in the general area of transportation. The students will acquire an understanding of concepts in word processing and basic skills in other applications appropriate to the transportation industry.
(Credit may be received for only ICS 100, 100E, 100M or 100T) (3 hrs. lect.)

## 111 Introduction to Computer Science I (4) (formerly ICS 167)

Prerequisite: MATH 27 or instructor approval
This is an introductory course in programming. Emphasis is on structured pro-gramming-which implies the use of algorithms and structured constructions such as, 'if then else,' while loops, until loops, and the use of procedures. The computer language used to illustrate these concepts and to develop the programs is Pascal. (4 hrs. lect.)

## 113 Database Fundamentals (3)

Prerequisite: ENG 22
This course examines file organization and the use of computer databases. A substantial part of the course develops an understanding of the data processing building blocks: files, records and fields. Techniques to report and maintain data are also covered. (3 hrs. lect.)

## 120 Spreadsheet Fundamentals (3) (formerly ICS 197 and ICS 100)

Prerequisite: ENG 10/15
Students will design and develop spreadsheets and templates for problem solving on IBM PC compatible computers. This course is designed to prepare students for the UH Manoa College of Business Administration Computer Competency Examination. (3 hrs. lect.)

## 151C Programming in C (3) (formerly ICS 171)

Prerequisite: ICS 111 or instructor approval
This is a course in the C programming language. Students will solve systems and scientific problems using $C$. The emphasis is on the $C$ language syntax and good programming style. The students should already have taken a beginning programming course. (3 hrs. lect.)

211 Introduction to Computer Science II (3)
Prerequisite: ICS 111 or instructor approval
A second course in computer programming. Programming consists of data structures and algorithms together. The first course covers algorithms; this course emphasizes data structures: lists, stacks, queues, binary trees. The course conforms with the ACM (Association of Computing Machinery) description of CS-2. The language used is Pascal. (3 hrs. lect.)

## 241 Discrete Mathematics for Computing Science (3)

Prerequisites: MATH 135 or equivalent and ICS 111 or instructor approval.
This course covers that discrete mathematics needed in computing science. It includes propositional logic and methods of proof, sets and relations, combinatorics, graphs, Boolean algebras and discrete probability. (3 hrs. lect.)

## 266 Computer Organization and Programming Techniques (3)

Prerequisite: ICS 111 or instructor approval
Organization and machine language of typical computers. Machine and assembly language programming techniques. Introduction to operating systems and data structures. This course is cross-listed as EE 266 and credit may be received for only ICS 266 or EE 266. (3 hrs. lect.; 3 hrs. lab.)

## INTERDISCIPLINARY STUDIES (IS)

## 40 Hawaii's Environment: Field Studies of Hawaii (3)

This course is a community-oriented, non-transfer, team-taught course designed to expose the student to Hawaii's environment through field trips. Students will meet once a week for three (3) hours and through field trip experiences, will be exposed to three aspects of Hawaii's environment: its physical geography, biology, and history. (3 hrs. lect.)

## JAPANESE (JPNSE)*

24 Japanese Culture (3)
An introduction to Japanese culture through folklore and related arts and crafts. (3 hrs. lect.)

30 Elementary Conversational Japanese I (3)
A beginning course for students who want to learn practical Japanese conversation. Emphasis is on pronunciation and accuracy. This course may be taken concurrently with JPNSE 101 or 102. (3 hrs. lect.)

31 Elementary Conversational Japanese II (3)
Prerequisite: JPNSE 30 or instructor approval
A second semester course for students who have successfully completed JPNSE 30. This course is also for students who have taken conversational Japanese at another institution. It may be taken concurrently with JPNSE 101-102. (3 hrs. lect.)

## 101-102 Elementary Japanese I-II (4-4)

Prerequisites: ENG 10/15 or instructor approval for 101; JPNSE 101 or instructor approval for 102
Development of listening, speaking, reading, writing. Structural points introduced inductively. Laboratory work is required. (4 hrs. lect.; 1 hr. unsupervised lab.)
*Native speakers may not take language courses for credit.

## JOURNALISM (JOURN)

## 150 The Press and Society (3)

## 205 News Writing (3)

Prerequisite: ENG 100 or instructor approval
Fundamentals of news style, reporting, etc. (3 hrs. lect.)

## 206 News Editing (3)

Prerequisite: ENG 100 or instructor approval
News and photo editing, headline writing, publications makeup. (3 hrs. lect.)
285 V Newspaper Laboratory (1-3)
Prerequisite or Co-requisite: JOURN 205 or 206 or instructor approval
Complete production of the campus newspaper including writing, editing, photography, layout, etc. May be repeated for credit. (3-9 hrs. lab.)

## LEARNING SKILLS (LSK)

## 30 College Study Skills (3)

This is a study refresher course designed to meet the study needs of transfer and non-transfer students. Emphasis will be on development of ability to organize ideas, self-awareness, improvement of basic study skills, utilization of the library, research paper preparation including use of the word processor. (3 hrs. lect.)
50 Computer Skills (3)
Prerequisite: ELI 6 or Placement in ELI 9
This is a first computer course for students with minimal computer and study skills. This "hands-on" course is an introduction to the use of the computer as a tool in the college setting. Students will work with word processing, spreadsheet and database software. (3 hrs. lect.)

## 100 Computer Applications and Skills (formerly LSK 110)

Prerequisite: ENG 22
A basic introduction to computer concepts and applications relevant to academic success at college. This course includes daily hands-on experience with word processing, database, spreadsheet, and other applications as they apply to the successful completion of college level projects, such as term papers, note taking, bibliographies, research through remote access of information, and quantitative analysis. (3 hrs. lect./demo. plus open lab.)

## LINGUISTICS (LING)

102 Introduction to the Study of Language (3)

## MACHINE SHOP (MACHS)

## 20 Benchwork (3)

Co-requisites: MACHS 24, BLPRT 23
Skill is developed 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.)
22 Machine Processes (3)
This course is designed primarily as a survey course to enable students to develop a basic technical knowledge of common processes used in metalworking. An overview of the entire machine shop is presented. Some skill is developed in the use of hand tools, layout techniques, lathes, and the drill press. (2 hrs. lect.; 3 hrs. lab.)
24 Lathe I (6)
Co-requisites: MACHS 20, BLPRT 23
An introductory course in the principles of engine lathe operation, cutting tool geometry, speeds and feeds, turning, facing, drilling, reaming and screw thread changing. (4 hrs. lect.; 6 hrs. lab.)
26 Lathe II (6)
Prerequisites: MACHS 20, 24
An advanced course in metalworking lathe operation, including taper and angular turning, boring, cutting internal and external Acme screw threads and face plate job setup. Stress is placed on precision measurements using micrometer and vernier calipers. (4 hrs. lect.; 6 hrs. lab.)

30 Grinding (3)
Prerequisities: MACHS 20, 24
This is 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 abrasivebelt machine to gain skill and proficiency. (2 hrs. lect.; 3 hrs lab.)

## 31 Special Machining Process (4)

Prerequisites: MACHS 20, 24 for MST Majors; MACHS 22 for Non-Majors
A course designed to cover special machining process used in engine reconditioning and rebuilding such as surfacing of cylinder heads, blocks, flywheels and manifolds, honing of pistons and wrist pins, reconditioning of valves, valve seats and guides, and boring of honing of engine blocks. (2 hrs. lect.; 6 hrs. lab)
32 Milling Machine (6)
Prerequisites: MACHS 20, 24
This is a course in the concepts and operations of the milling machine, including methods of tooling, setup, and feeds and speeds for commonly used metals. Students develop skills in plane and face milling, keyway cutting, gear cutting, and job setup on jobs performed on vertical and horizontal milling machines. (4 hrs. lect.; 6 hrs. lab.)

## 34 Cutter Grinding (3)

Prerequisites: MACHS 20, 24
This is an advanced course in the use of grinding machines with emphasis on sharpening milling machine cutters. ( 2 hrs . lect.; 3 hrs. lab.)

## 36 Engine Machining (8) <br> Prerequisite: MACHS 31

Engine machining practices. Emphasis on machining techniques and the use of automotive and diesel engine machining equipment for meeting entry-level requirements in the field of engine machining. ( 4 hrs . lect.; 12 hrs . lab)

## 40 Advanced Machine Tool Practice (9) (formerly MACHS 40V) <br> Prerequisite: MACHS 32

Complex operations in the set-up and tooling on various machines such as the engine lathe, vertical and horizontal milling machines, shaper, drill press, surface grinder and universal grinder with stress on the use of technical handbooks and date publications in performing practical work on projects, assignments and live jobs. (5 hrs. lect.; 12 hrs. lab.)
53 Introduction to Shipboard Machinery (3)
Prerequisites: MACHS 20, 24
Provides instruction in the identification and use of hand tools, precision measuring tools, fasteners, flanges, gaskets, packing and seals utilized on naval ships; installation of fasteners, seals, gaskets and flanges; overhaul gate and globe valves. (2 hrs. lect.; 3 hrs. lab.)

## 55 Repair of Shipboard Machinery (3)

Prerequisite: MACHS 53
Provides advanced instruction in the application and skills developed in introduction to shipboard machinery. Skill is developed in aligning of machinery, use of portable tools and repair of marine machinery. An understanding of basic steam, hydraulics, shafting and other areas of the trade is included. ( 2 hrs . lect.; 3 hrs. lab.)

## 57 Repair, Alignment, and Testing of Shipboard Machinery (3)

Prerequisite: MACHS 55
Application of skills and techniques required to repair, align and test machinery and equipment found in Naval ship systems. (2 hrs. lect.; 3 hrs. lab.)

## 60 CNC Lathe (4)

Prerequisites: MACHS 24, 22
Course in numerical control programming, machine operation, and CNC machine methods, with emphasis on program development, manuai data input, tooling application, setup and operation of a CNC Lathe. ( 2 hrs . lect.; 6 hrs. lab)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Machine Shop Technology. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs . work experience per week per credit.)

## MANAGEMENT (MGT)

20 Introduction to Management (3)
Prerequisite: ENG 8/9
A study of small business operations and the economic and social environment within which they function. An examination will be made of major forms of business organizations, with emphasis placed upon management systems that are unique to small firms. (3 hrs. lect.)

## MARINE BIOLOGY

See ZOOL 200

## MARINE PIPEFITTING (MPIPE)

See PIPEFITTING (PIPE)

## MATHEMATICS (MATH)

1 Basic Mathematics (3)
A course in operations on whole numbers, fractions, decimal numerals, ratio and proportion, percents and applications. Graded on a CR/N basis. ( 3 hrs. lect.) or (3 hrs. lect.; 2 hrs. lab arranged for AIMS sections)
21 Selected Topics in Mathematics (1)
Prerequisite: Instructor approval
A short course on one topic of special interest to students; for example, the use of calculators or a study of the metric system. Students or faculty may suggest topics. Graded on a CR/N basis. (1 hr. lect.)
22 Pre-Algebra Mathematics (2)
Prerequisite: MATH 1 or Placement in MATH 22
Measurement, geometry, the use of signed numbers, the concept of a variable, and the language, basic ideas and applications of elementary algebra. Graded on a CR/N basis. ( 3 hrs . lect.) or ( 3 hrs . lect.; 2 hrs . lab arranged for AIMS sections)

## 24 Elementary Algebra I (3)

Prerequisite: MATH 22 or equivalent
This course is the first half of a standard one-year course in elementary algebra.
Topics to be covered include the concept of a variable, signed numbers, evaluation of expressions, solution of equations and inequalities, exponents, polynomials, and factoring. (3 hrs. lect.)
TECHNICAL
MATHEMATICS

GENERAL MATHEMATICS

Math 1

(Tech. Math II)
Terminal

Math 58
(Advanced Tech Math)

Math 24 (Elem. Algebra I)

Math 25
and Analytic
Geometry)

(Calculus I)
Math 206
(Calculus II)

(Calculus III)
In addition, Math 21
(special topics) will be offered if there is sufficient interest.

(Calculus IV)

TRANSFER MATHEMATICS

Math 135
(Pre-Calculus:
Elem. Functions)
Math 140
(Pre-Calculus:
Trigonometry
Math 100
$\frac{\text { (Survey of Math) }}{\text { Terminal }}$

Math $27 \longrightarrow \quad$ QM 121

(Decision Making il)
$\qquad$





## 25 Elementary Algebra II (3)

Prerequisite: "C" or higher in MATH 24 or equivalent
This course is the second half of a standard one year course in elementary algebra. Topics to be covered include algebraic fractions, inequalities, graphing, systems of equations, radicals, Pythagorean Theorem, quadratic equations. (3 hrs. lect.)
27 Intermediate Algebra (3)
Prerequisite: "C" or higher in MATH 25 or equivalent
Brief review of elementary algebra, introduction to functions, including linear and quadratic functions; fractional exponents, logarithms. (3 hrs. lect.)

## 50 Technical Mathematics I (3)

Prerequisite: Math 1 or equivalent
Basic algebra and basic geometry as applied to shop problems. Intended for students interested in vocational-technical programs. (3 hrs. lect.)

## 55 Technical Mathematics II (3)

Prerequisite: "C" or higher in MATH 50 or equivalent
Basic numerical trigonometry and further applications of algebra and geometry to shop problems. Intended for students interested in vocational-technical programs. (3 hrs. lect.)
58 Advanced Technical Mathematics (3)
Prerequisite: "C" or higher in MATH 25 or equivalent
Functions and their graphs; systems of equations; topics in trigonometry; fundamental operations with complex numbers; vectors; logarithmic and exponential functions with emphasis on applications in electronics. (3 hrs. lect.)

## 66 Applied Mathematics I (3)

An elementary course in the fundamentals of mathematics designed to provide students with skills in applying equations and formulas to trade and technical situations. Offered as needed for Pearl Harbor Naval Shipyard apprentices. (3 hrs. lect.)

100 Survey of Mathematics (3)
Prerequisite: "C" or higher in MATH 25 or equivalent
A general survey of mathematics, with emphasis on its historical development and the role it plays in modern society. (3 hrs. lect.)
115 Statistics (3)
Prerequisite: "C'" or higher in MATH 25 or equivalent
A basic introduction to topics in statistics, with a brief look at probability. Emphasis on applications to physical and social sciences. (3 hrs. lect.)
135 Pre-Calculus: Elementary Functions (3)
Prerequisite: "C" or higher in MATH 27 or equivalent
A study of elementary functions, including linear, quadratic, polynomial, rational, exponential, and logarithmic functions. Emphasis is placed on those topics which will prove useful to students who plan to take calculus. (3 hrs. lect.)
140 Pre-Calculus: Trigonometry and Analytic Geometry (3)
Prerequisite: "C" or higher in MATH 135 or equivalent
A study of angles; trigonometric and circular functions; solution of triangles; graphical representation; identities; inverse trigonometric functions; polar coordinates; conic sections; graphs of exponential and logarithmic functions. (3 hrs. lect.)

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205 Calculus I (4)
Prerequisite: "C" or higher in MATH 140 or equivalent
Basic concepts, techniques and applications of differentiation; introduction to integration. (5 hrs. lect.)
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## 206 Calculus II (4)

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Prerequisite: "C" or higher in MATH 205 or equivalent
Differentiation and integration of trigonometric, exponential, and logarithmic functions; introduction to hyperbolic functions; techniques and applications of integration; infinite sequences and series. (5 hrs. lect.)
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231 Calculus III (4)
Prerequisite: "C" or higher in MATH 206 or equivatent
Functions of several variables; vectors and 3-dimensional analytic geometry; partial differentiation; multiple integrals with applications. (5 hrs. lect.)
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## 232 Calculus IV (4)

Prerequisite: "C" or higher in MATH 231 or equivalent
Multiple integrals, line integrals, surface integrals, and applications, introduction to ordinary differential equations. (5 hrs. lect.)

## MECHANICAL ENGINEERING (ME)

## 213 Introduction to Engineering Design (3)

Prerequisites: High school physics, mechanical drawing or IEDDD 101 and MATH 205
Introductory experience in analysis, synthesis, computer-aided drafting and communication in engineering. Other topics include professional ethics and social responsibility. (3 hrs. lect.)

## METEOROLOGY (MET)

101 Introduction to Meteorology (3)
Prerequisite: ENG 10
Meteorology 101 studies the physical principles governing the behavior of Earth's atmosphere, describes the characteristics of major weather systems and forecasting, sun-Earth-ocean-atmosphere interactions, and the impacts of weather on man and vice-versa, with special emphasis on Hawaii. For nonscience majors and prospective science teachers. (3 hrs. lect.)

## MICROBIOLOGY (MICRO)

## 125 Origin of Life (3)

Prerequisite: SCI 121 or MICRO 130 or ZOO 101 or CHEM 151
A review of current theories of stellar and planetary evolution, chemical evolution and the origin of life, and the exploration of the possibilities of extraterrestrial life. (3 hrs. lect.)

## 130 General Microbiology (3)

An introductory course to the world of micro-organisms, with emphasis on bacteria, but including algae, fungi, protozoa, and viruses; their structure, growth and development, reproduction, and classification; and their effects on people and their environment. Also included are selected topics in medical microbiology, immunology, and applied microbiology including food, industrial, sanitation, and public health microbiology. (3 hrs. lect.)

140 General Microbiology Laboratory (2)<br>Prerequisite or Co-requisite: MICRO 130<br>Laboratory illustrating fundamental principles and techniques of microbiology. (4 hrs. lab.)

## MILITARY SCIENCE (MSCI)

## 105 Introduction to Military Science I (2)

Introduction to the Army ROTC program provides instruction in military-related subjects which are of general student interest, i.e., writing, introduction to small arms firing, introduction to survival skills, adventure hiking, rappelling and rope knots, confidence building events, developing an individual exercise program, basic soldiering skills and customs and courtesies of the Army. (2 hrs. lect.)

105L-106L Introduction to Military Science I-II Lab (1)
Prerequisite or Co-requisite: MSCI 105 for 105L, 106 for 106 L.
Practical application in adventure training, one rope bridges, rifle marksmanship, land navigation, drill and ceremonies, physical training. (1.5 hrs. lab.)

## 106 Introduction to Military Science II (2)

Continuation of MS 105. Provides instruction in military-related subjects which are of general student interest, i.e., small arms marksmanship, basic survival skills, introduction to helicopter assault operations, introduction to water survival, introduction to water assault operations (rubber boating), confidence building field trips, supervising an individual exercise program, development of individual soldiering skills, and leadership and professional ethics for the military. (2 hrs. lect.)

## 205 Intermediate Military Science I (3)

Basic concepts of military leadership. Familiarization with the informal contract, the concept of leadership, the five types of leadership power, the decision-making process, and the styles of leadership. Involves military skills and related adventure-type training and basic individual survival skills. Leadership Laboratory required 1.5 hours per week, consisting of practical application of leadership skills, drill and ceremonies, land navigation, first aid, and Army Physical Readiness Training (APRT). (2 hrs. lect.; 1.5 hrs . lab.)

206 Intermediate Military Science II (3)
Individual and small unit military skiils. Practical applications include combat first aid, basic wilderness survival skills, land navigation and a knowledge of key military jobs, duties and responsibilities. Involves field training to provide hands-on experience. Leadership Laboratory required 1.5 hours per week, consisting of practical application of leadership skills, drill and ceremonies, land navigation, first aid, and Army Physical Readiness Training (APRT). (2 hrs. lect.; 1.5 hrs. lab.)

## MUSIC (MUS)

## 106 Introduction to Music Literature (3)

This is a music appreciation course with an emphasis on developing listening skilis. Music of all periods is surveyed. Concert attendance supplements discussion of various styles of music. (3 hrs. lect.)

## 108 Fundamentals of Western Music (3)

This is a music theory course. The emphasis is on learning the basic concepts necessary for reading and writing music. Students apply these concepts by learning simple skills involved in playing two musical instruments. (3 hrs. lect.)

## 114 College Chorus (1)

Performance of choral literature from Renaissance to present. Previous choral experience not required. May be repeated. May be taken on a CR/N basis. (2 hrs. lect.)

## 121D-122D Guitar (1-1)

Prerequisite: MUS 121D is prerequisite to MUS 122D
Basic principles of classical guitar performance. Relevant problems in guitar literature at elementary level. May be taken on a CR/N basis. (2 hrs. lect./lab.)

## 204 Beginning Stage Band (1)

Prerequisite: Prior music training in band or instructor approval
Study and performance of literature for a jazz ensemble. Music of the early big bands will be covered. May be taken on a CR/N basis. May be repeated for credit. (2 hrs. lect./liab. min.)

## OCCUPATIONAL SAFETY AND HEALTH (OSH)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Occupational Safety and Health. Repeatable 4 times for credit up to a maximum of 12 credits. (5 hrs. work experience per week per credit.)

## 101 Introduction to Occupational Safety and Health (3)

An overview of the development and implementation of basic safety and health principles and techniques; identification of factors of causation, techniques of investigation and reporting and environment effects; survey of regulations and professional guidelines. (3 hrs. lect.)

## 102 Safety and Health Standards, Codes and Regulations (3)

Prerequisite: OSH 101
History of the enactment of OSHA and other implementing legislation; an overview of professional trends and career opportunities in occupational safety and health; occupational injuries and illness-scope of the problem, cost factors and causal factors of safety; the sociology of work accident investigation; concepts and techniques of inspections. (3 hrs. lect.)

## 103 Human Factors in Safety (3)

Prerequisite: OSH 101 or instructor approval
Co-requisite: OSH 102 or instructor approval
An introduction to the influence of the work environment on the worker. Subjects covered are: The biology of work; human error and accident causation; man-machine-environment interface; the behavioral sciences and occupational safety and health; mental hygiene and occupational stress; physical and environmental stress; and application of human factors in occupational safety and health programs. (3 hrs. lect.)

## 105 Introduction to Industrial Hygiene (3)

Prerequisites: PHYS 51V, CHEM 50, and OSH 102, or instructor approval
This course will acquaint students with the recognition, evaluation and control of hazards related to air contaminants, skin irritants, noise, temperature extremes, illumination and radiation. Emphasis on occupational safety and health programs, codes and standards; and training techniques. (3 hrs. lect.)

## 145 Occupational Safety and Health in Construction (3)

Co-requisite: OSH 101 or instructor approval
Comprehensive overview of techniques and procedures to insure effective control of hazards and accidents in construction and allied industries; with emphasis on the applicable OSHA and HOSHL standards and related codes. (3 hrs. lect.)

## 147 Electrical Safety (3)

Prerequisite: OSH 102 or instructor approval
Overview of the hazards, safe practices and methods in working with electrical energy; including the review and application of OSHA and HOSHL standards. (3 hrs. lect.)

## 150 Industrial Fire Protection (3)

Prerequisites: OSH 102 or instructor approval
Basic fire protection-prevention course for industry. Includes planning, managing and training for fire emergencies. ( 3 hrs . lect.)

## 153 Accident Investigation Techniques (3)

Prerequisite: OSH 102 or instructor approval
Professional and scientific approach to accident investigation; including accident causation, discovering hazardous conditions and practices, how to establish relevant facts. Case studies. (3 hrs. lect.)

## 200 Managing Workers Compensation (3)

Prerequisite: OSH 101 or instructor approval
An introduction to the principles of Workers Compensation and Management of this responsibility. Survey course covering the principles and techniques of Workers Compensation. Required for OSH majors and suitable for management and supervisory certificates. (3 hrs. lect.)
205 Physical Hazards Control (3)
Prerequisite: OSH 105 or instructor approval
Scope and application of systems safety; application of human engineering concepts and techniques with emphasis on human reliability and error; application of occupation safety and health requirements in purchasing and contracting, plant and job layout; principles and application of electrical and electronic safety; principles and application of manual and mechanical equipment, elevators, chemical safety; high pressure and compressed gas system; hand and portable
power tools; shop production, tools and equipment; introduction to construction safety; special industry hazards unique to the Hawaiian industrial environment; and, clinical and field experience utilizing facilites of the College and cooperating business facilities. (3 hrs. lect.)

## 208 Techniques of Industrial Hygiene (3)

Prerequisite: OSH 105
A review of the basic principles of industriai hygiene monitoring; comprehensive overview of the range of monitoring instruments and the principles governing their selection and use; practical applications under professional supervision. (3 hrs. lect.)

## 210 Safety Program Management (3)

Prerequisite: OSH 102 or instructor approval
Course will acquaint the student with the fundamentals of management and their application to safety program development and organization. Emphasis will be given to the concepts of responsibility, accountability and authority as applied to occupational safety and health. (3 hrs. lect.)

## OCEANOGRAPHY (OCEAN)

## 180 Introduction to Aquaculture \& Aquarium Management (3)

This course introduces students into two fields of fish culture: aquaculture which is the farming of aquatic organisms for increasing food production and aquarium management which will help aquarium hobbyist to keep ornamental fishes healthy for long period of time. Topics include fish cultivation, biology and lifecycle of species cultivated, aquatic ecosystem, pond and aquarium construction and management and filtration techniques. (3 hrs. lect.)

## 190 World Aquaculture (3)

OCEAN 190 is designed to provide a general background in aquaculture methods and systems as practiced in different parts of the world. The course will examine the old and new systems of cultivation on a country by country and species by species basis. The course will provide information on scientific and economic aspects of aquaculture. A discussion on biology, life-history and nutrition of cultivated species is provided. (3 hrs. lect.)

## 201 Science of the Sea (3)

This course offers a descriptive and nonmathematical survey of geological, physical, chemical and biological oceanography, providing the student with a broad understanding of the sea floor and its features; chemical properties of sea water and its motions; life in the sea and its interaction with the environment. (3 hrs. lect.)

## 230 Ocean Resources and Ecology (3)

Prerequisite: OCEAN 201
Ocean 230 deals with the application and extension of oceanographic principles to problems of marine ecology, resource management and environmental conservation. This course will examine a variety of potentially available ocean resources such as food, energy, minerals, oil and natural gas. Methods of extraction of these resources and their impact on marine environment will be analyzed. (3 hrs. lect.)

## PHILOSOPHY (PHIL)

50 Introduction to Reasoning (3)
Learning to avoid black and white thinking with special emphasis on persuasive appeals and scientific conclusions popularized by the mass media. (3 hrs. lect.)

## 100 Introduction to Philosophy: Survey of Problems (3)

Great philosophical issues, theories, and controversies. (3 hrs. lect.)

## 101 Introduction to Philosophy: Morals and Society (3)

Social and individual values, obligations, rights, and responsibilities. (3 hrs. lect.)

## 102 Introduction to Philosophy: Asian Tradition (3) <br> Universal themes and problems, from Asian perspective. (3 hrs. lect.)

## 110 Introduction to Logic (3) (formerly PHIL 210)

Development of basic techniques of analysis and an understanding of the principles and concepts involved in clear thinking. Emphasized will be logical validity, deductive and inductive reasoning, fallacious arguments, symbolic logic, and scientific method as applied to criteria of reasonable evidence. (3 hrs. lect.)

## 120 Science, Technology, and Values (3)

Prerequisite: ENG 100
An Introductory course addressing the relationship between science, technology, and human values with a focus on contemporary problems posed by developments in modern science. ( 3 hrs . lect.)
200 History of Philosophy (To 1600) (3)
Western Philosophy from the Greeks to the Renaissance. (3 hrs. lect.)
201 History of Philosophy (From 1600) (3)
Western Philosophy from Renaissance to present. (3 hrs. lect.)
255 Cosmology: Science and the Human Prospect (3)
Prerequisites: ENG 100 or instructor approval
An interdisciplinary study of science and philosophy from a humanistic perspective. A scientific description of the Universe and its constituents and its implications for human life will be discussed. Also, the central philosophical problems of cosmology will be discussed: the problem of understanding the world-including ourselves, and our knowledge, as part of the world. (3 hrs. lect.)

## PHYSICS (PHYS)

51V Technical Physics (2-4)
Prerequisite: MATH 1 or Placement in MATH 22/50 or higher
Introductory applied physics (computer-based). Subjects covered will vary with the student's major and may include measurements, simple machines, rotary motion, hydraulics and fluids, statics and equilibrium, force and motion, energy, thermodynamics and gases. Credit varies with student's major. (2 hours lecture/ tutorial; 4 hours computer time. Length of course varies with number of credits.)

## 53 Fundamentals of Electricity (4)

Prerequisites: Eng 10/15, Math 24 or Math 50
Fundamentals of AC and DC electricity. Topics include: physics of the electron; Ohm's law; electrical nomenclature; circuit laws and computations; electrical energy and power; magnetism and electromagnetic induction; chemical energy of batteries. (3 hrs. lect; 3 hrs. lab.)

## 55 Metallurgy and Plastics (4)

Introductory lecture/lab course covering the basic science of metallurgy \& plastics. Topics will vary with student's major. Topics include shop identification, classification, properties, structures, effects \& usage of metals \& plastics in industry. (3 hrs. lect., 3 hrs. lab.)

## 56 Basic Electrical Theory and Lab (3)

Prerequisite: MATH 50
A comprehensive study of the fundamentals of electrical and electronic principles, covering basic laws that describe electrical phenomena to principles of semiconductor devices like transistors and diodes. Use of meters and oscilloscope are also covered. Course is designed for Automotive majors. (2 hrs. lect.; 3 hrs lab.)

## 67 Digital Logic \& Microprocessors (4)

Prerequisite: PHYS 56
Intended for 3rd year, advanced AMT students. Introduces digital logic and devices leading up to the microprocessor. Fundamentals of a microprocessor system, interfacing, A/D \& D/A conversion, as well as examples of microprocessor systems in automobiles. (3 hrs. lect.; 3 hrs. lab.)

## 100 Survey of Physics (3)

Co-requisite: PHYS 100L
An introductory course in physics for the nonscience 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.)

## 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 nonscientist. (3 hrs. lab.)

## 125 Physics for Electronics (5)

Prerequisite: ENG 10
Prerequisite or Corequisite: MATH 58
One-semester college Physics for Electronics majors (4 hrs. lect.; 3 hrs. lab.)

## 151-152 College Physics (3-3)

Prerequisite: MATH 58 or MATH 135 or equivalent. PHYS 151 is prerequisite for 152. MATH 140 highly recommended.

Co-requisite: PHYS 151L with PHYS 151; PHYS 152L with PHYS 152.
A noncalculus, two-semester, transfer level course for preprofessional or nonengineering 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.)

## 151L-152L College Physics Laboratory (1-1)

Co-requisite: PHYS 151L with PHYS 151; PHYS 152L with PHYS 152. (3 hrs. lab.)

## 170 General Physics I (4)

Prerequisite: Credit or registration in Math 206
Mechanics of particles and rigid bodies; wave motion; thermodynamics and kinetic theory. (4 hrs. lect.)

## 170L General Physics I Lab (1)

Prerequisite: Credit or registration in 170
A lab course designed to complement PHYS 170. (3 hrs. lab.)

## 272 General Physics II (3)

Prerequisites: PHYS 170, PHYS 170L
Electricity and magnetism; geometrical optics. (3 hrs. lect.)

## 272L General Physics II Lab (1)

Prerequisites: Credit or registration in PHYS 272
Experimental analysis in electricity and magnetism and optics. (3 hrs. lab.)

## 274 General Physics III (3)

Prerequisites: PHYS 272-272L or PHYS 152-152L; credit or registration in Math 231
Relativity, introduction to quantum mechanics, atomic and nuclear physics, physical optics. (3 hrs. lect.)

## PIPEFITTING (PIPE)

20 Introduction to Marine Pipefitting (4)
Co-requisite: MACHS 20, 24
A basic introduction to marine pipefitting including ship's nomenclature, material nomenclature, terminology, and identification. (4 hrs. lect.)

30 Marine Pipefitting I (4)
Prerequisite: PIPE 20
The course covers the theory and application of trade tools and equipment and the requirements and applications of various types of pipefitting joints. (2 hrs. lect.; 6 hrs. lab.)
40 Marine Pipefitting II (4)
Prerequisite: PIPE 30
The course covers templating, targeting, and sketching; principles of grinding; bending theory and techniques. ( 2 hrs. lect.; 6 hrs. lab.)

## POLITICAL SCIENCE (POLSC)

24 Issues of Hawaiian 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, civill 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.)
110 Introduction to Political Science (3)
An introduction to political problems, systems, ideologies and processes. (3 hrs. lect.)
120 Introduction to World Politics (3) (formerly POLSC 220)
Prerequisite: ENG 10 or placement in ENG 22
Power and contemporary world politics since 1945 with emphasis on the U.S. role. (3 hrs. lect.)

## 130 Introduction to American Politics (3)

Prerequisite: ENG 10 or placement in ENG 22
American political processes and institutions as seen through alternate interpretations. Emphasis on opportunities and limitations for practical political participation. (3 hrs. lect.)

171 Introduction to Political Futures (3)
introduction to political futures studies. Using science fact and fiction shows how past and present images of the future influence people's actions. (3 hrs. lect.)

## 190 Media and Politics (3)

Influences and effects of media on politics. Setting public agendas, interpreting events, manipulating the political process, political learning through popular culture. (3 hrs. lect.)

271 Political Design \& Futuristics (3)
Possible social and political alternatives for the future. Conditions likely if present trends continue, formulation of visions of better futures, means for their achievement. (3 hrs. lect.)

## PSYCHOLOGY (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.)

100 Survey of Psychology (3)
Principles of human behavior, individual differences, motivation, emotion, perception, learning. ( 3 hrs . lect.)

170 Psychology of Adjustment (3) (formerly PSY 110)
Understanding, evaluating and improving adjustment. Ideas and techniques concerning behavior change and personal growth. (3 hrs. lect.)

180 Psychology of Work (3) (Formerly 197)
Prerequisite: ENG 22 or equivalent
Introduction to psychological aspects of work-related phenomena with emphasis on importance of human relations in work settings. Focuses on application of industrial organizational theory to understanding problems in worker morale, impression management, career assessment, organizational vs. individual goals. (3 hrs. lect.)

240 Developmental Psychology (3) (formerly PSY 220)
Prerequisite: PSY 100
Emotional, mental, physical, social development from infancy to adulthood; interests and abilities at different age levels. (3 hrs. lect.)

## 250 Social Psychology (3) (formerly PSY 222)

Prerequisite: PSY 100
Cognitive, behavioral and emotional effects of people: interpersonal relations, attribution, attitudes, group behavior, stereotypes, social roles, aggression, helping, self-concept; and applications. (3 hrs. lect.)

## QUANTITATIVE METHODS (QM)

121 Mathematics for Decision Making I (3)
Prerequisite: "C" or higher in MATH 27 or equivalent
Precalculus mathematical operations related to business and economics; functions, equations and inequalities in one and two variables, interest formulas, systems of equations, matrix operations, linear programming. (3 hrs. lect.)

122 Mathematics for Decision Making II (3)
Prerequisite: "C" or higher in QM 121 or MATH 135
Applications of calculus to business and economics; limits, derivatives, definite integrals and indefinite integrals, partial derivatives, Lagrange multipliers. (3 hrs. lect.)

## REFRIGERATION AND AIR CONDITIONING (RAC)

## 20 Fundamentals of Refrigeration (5)

Co-requisites: RAC 22 L
Principles of physics applicable to mechanical and absorption cycles. Heat energy, heat transfer, properties of matter, change of state, laws of gases, tem-perature-pressure relationship, thermodynamic principles in the mechanical cycle, compressors, condensers, receivers, refrigerant controls, evaporators and accessories. (5 hrs. lect.)

## 22L Refrigeration Laboratory 1 (5)

Co-requisites: RAC 20
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.)

23 Advanced Refrigeration (5)
Prerequisite: RAC 20
Co-requisites: RAC 24L, 27
Commercial systems: application, installation, servicing, heat loads and piping. Absorption principles and special refrigeration devices and application. (5 hrs. lect.)

24L Refrigeration Laboratory II (5)
Co-requisites: RAC 23, 27
A continuation of RAC 22L. Advanced maintenance, troubleshooting and repair of domestic and commercial units. (15 hrs. lab.)

## 27 Electrical Fundamentals I (5)

Prerequisites: RAC 20, 22 L
A course designed to introduce students to the concepts, theories and application of electricity as they apply to refrigeration and air conditioning. (5 hrs. lect.)

## 28 Electrical Fundamentals II (5)

Prerequisite: RAC 27
This course is the second half of a one-year course in electrical fundamentals. Topics include motors, control devices, control systems and troubleshooting. (5 hrs. lect.)

41 Psychrometry and Cooling Load (5)
Prerequisite: RAC 23
Co-requisite: RAC 28, 42L
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.)

## 42L Air Conditioning Machinery Lab I (5)

Co-requisite: RAC 28, 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.)
43 Air Distribution and Air Conditioning Systems (5)
Prerequisite: RAC 42 L
Co-requisite: RAC 44L
Duct sizing, duct devices, system design, system balance, control systems, dou-ble-duct systems, hydraulic systems, centrifugal systems, and heat pumps. (5 hrs. lect.)

44L Air Conditioning Machinery Lab II (5)
Co-requisite: RAC 43
A continuation of RAC 42L. Advanced maintenance, troubleshooting, system balance, control setup, water testing and engineering studies on central station chill water air conditioning system and operation of a maintenance shop. (15 hrs. lab.)

## 93V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Refrigeration and Air Conditioning. Repeatable 4 times for credit up to a maximum of 12 credits. (5 hrs. work experience per week per credit.)

## RELIGION (REL)

## 20 Religious Themes (3)

Basic exploration of the significance of religion in the development of values within our cultural heritage. Emphasis on familiarizing the student with the essential vocabulary and conceptual formats necessary for a knowledge and an articulation of religious studies. (3 hrs. lect.)
150 Introduction to the World's Major Religions (3)
Introduction to the world's living religions: Hinduism, Buddhism, Shintoism, Confucianism, Taoism, Judaism, Christianity, Islam. (3 hrs. lect.)
151 Religion and the 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.)
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. (3 hrs. lect.)

## 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. (3 hrs. lect.)

## 203 Understanding Chinese Religions (3)

Taoist, Confucian, Buddhist, Maoist and folk beliefs and practices in social and historical context. (3 hrs. lect.)

## 204 Understanding Japanese Religions (3)

A survey of major aspects of Japanese religion including Shinto, Buddhism and modern new religions. The various traditions will be viewed within their historical and social contexts. Emphasis will be placed on issues of contemporary significance. (3 hrs. lect.)

## 205 Understanding Hawaiian Religion (3)

Major Hawaiian religious teachings and practices from ancient times to the present. Cultural influence of Hawaiian religious beliefs; analysis of religious texts. Relation to other traditions of Oceania and to Christianity. (3 hrs. lect.)

## 210 Understanding Christianity (3)

History of Ideas concentrating on those events, persons, and issues which have had the greatest impact on the evolution of Christianity. May be graded on a CR/NC basis. (3 hrs. lect.)

## SCIENCE (SCI)

## 60 Introduction to Materials Science (4)

This course introduces the student to the basic understanding of the chemical and physical principles underlying the nature and behavior of materials. It seeks to give answers to questions such as why glass is transparent and brittle while steel is opaque and strong, or why copper conducts heat and electricity while plastic and rubber do neither but are elastic. (3 hrs. lect.; 3 hrs. lab.)

## 101 Environmental Science (4)

Prerequisite: ENG 10 or above
This course will introduce students into principles of ecology and ecosystem dynamics in order to understand how our biosphere works and how the environmental pollution deteriorates the delicate balance of nature. A survey will be made on ali current pollution problems resulting from over-population, urbanization and technology that use our finite natural energy resources and produce excessive amount of wastes. The course will also analyze current national and international policies developed to curb all environmental pollution problems. (3 hrs. lect.)

121 Introduction to Science-Biological Sciences (4)
Scientific approaches, life characteristics, ecological principles, people and environment, science and society. (3 hrs. lect.; 3 hrs. lab.)

## 122 Introduction to Science-Physical Sciences (4)

Science and modern society. A survey of physics, astronomy, chemistry, and geology, with greater emphasis on the first two disciplines. (3 hrs. lect.; 3 hrs. lab.)

## 193V Cooperative Education (1-4) <br> Prerequisite: Instructor approval required <br> This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Science. Repeatable 4 times for credit up to a maximum of 12 credits. (5-20 hrs. work experience per week.) <br> 225 Earth and Universe (3) <br> Prerequisite: Any 100 level Physical Science course or Instructor Approval <br> Explores origins, structures, processes and interactions from the Big Bang to the present. Emphasizes interrelationships and unity of the physical and chemical properties among the Earth and Universe, including life and its effects. (3 hrs. lect.)

## SHEET METAL AND PLASTICS TECHNOLOGY (SMP)

## 20 Hand Tool and Machine Processes (4)

Co-requisites: SMP 21, 22, 23
Develop 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.)

## 21 Shop Problems (3)

To provide the student with the essential principles and concepts related to sheet metal work to enable him/her to understand and solve everyday problems encountered in the shop. The student will develop the necessary skills and knowledge through the study and practice of actual sheet metal shop problems using terminologies and standards in current use throughout the country. (3 hrs. lect.)

## 22 Fabrication Processes (Architectural) (4)

Co-requisites: SMP 20, 21, 23
Emphasis on variously 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.)

## 23 Introduction to Surface Development (2)

Co-requisites: SMP 20, 21, 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. ( 1 hr . lect., 3 hrs . lab.)

## 24 Advanced Fabrication Processes (Architectural) (4)

Prerequisite: SMP 23
Co-requisites: SMP 25, 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.)

## 25 Air Conditioning Fabrication (4)

Co-requisites: SMP 24, 26
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.)


#### Abstract

26 Pattern Development I (2) Co-requisites: SMP 24, 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 commonly used. Standard installation practices. ( 1 hr . lect., 3 hrs lab.)


41 Advanced Air Conditioning Fabrication (4)
Prerequisite: SMP 26
Co-requisites: SMP 42, 43, 47
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.)

42 Plastic Fabrication (4)
Co-requisites: SMP 41, 43, 47
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.)

43 Pattern Development II (2)
Prerequisite: SMP 26
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. (1 hr. lect., 3 hrs. lab.)

44 Blow Pipe Fabrication (4)
Co-requisites: SMP 45, 46, 48, 49
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.)

## 45 Advanced Fabrication (General) (4)

Prerequisite: SMP 41
Co-requisites: SMP 44, 46, 48, 49
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.)

46 Pattern Development III (2)
Co-requisites: SMP 48, 49
Pattern development, emphasizing complex, intersecting problems and shortcut methods that are practical in industry. ( 1 hr . lect., 3 hrs lab.)

47 Plastic Welding and Fabrication I (1)
Prerequisite or Co-requisite: SMP 42
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. (3 hrs. lab.)

48 Plastic Welding and Fabrication II (1)
Co-requisites: SMP 46,49
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. (3 hrs. lab.)

## 49 Advanced Shop Problems (2)

To provide the second-year sheet metal majors with the specialized technical knowledge and problem solving techniques to be able to understand and find effective solutions to advanced shop problems expected to be encountered in the sheet metal industry. ( 2 hrs . lect.)

## 93V Cooperative Education (1-9)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Sheet Metal and Plastics. Repeatable for credit. ( 5 hrs . work experience per week per credit.)

## SHIP REPAIR (SHIP)

20 Introduction to Cooperative Education (1) (formerly SHIP 97)
Prerequisite: Ship Repair Major or instructor approval
Orientation to Pearl Harbor Naval Shipyard. This course focuses on qualifying for career entry and conversion into noncompetitive employment at the Shipyard. (1 hr. lect.)

## 30 Ship Painting (3)

Prerequisite: Placement in ENG 9/10
The curriculum is designed to prepare students for employment in the shipyard paint trade at Pearl Harbor. Basic processes include knowledge of safety, materials, tools and equipment, paint preparation and refinishing procedures. (2 hrs. lect., $3 \mathrm{hrs.lab}$.)

31 Fabric Work (3)
Prerequisite: placement in ENG 9/10
The course is designed specifically for the shipyard fabric work. To design and create covers for ship equipment. Includes individual design, pattern drafting, culting, fabrication, fitting and finishing. (2 hrs. lect.; 3 hrs. lab.)

## SOCIAL SCIENCES (SSCI)

## 40 Technology and American Society (3)

An interdisciplinary course that will examine the social effects of technological change in American Society-on our values, family life, jobs and world view. Emphasis will be on the period since the Industrial Revolution and on the world of work. Current social problems relating to technology--pollution, future shock, etc. will be discussed. (3 hrs. lect.)

41 Labor and American Society (3)
An introductory course that will deal with the role of the worker in the changing American economy, with a special emphasis on the historical development of the labor movement, the growth of modern industrialism and unionism, and the Hawaiian labor experience. Current problems facing workers-automation, alienation, etc. will be covered as well. (3 hrs. lect.)

## 42 Community and American Society (3)

This course will help students understand themselves, others, and the broader community. The first part of the course will center on the individual and his/her community. How can people better identify their own needs and work toward maximization of their own potential? Skills to help students understand how problems in their families, work groups, and on the job arise and can be solved will then be discussed. The final part of the course will be devoted to the study of various aspects of the larger community. Major social problems such as crime, unemployment, land use and racism will be examined on a practical level with an emphasis on what people in the community can and are doing to solve these dilemmas. (3 hrs. lect.)

## 120 Hawaii's People (3)

A survey of ethnic subcultures in America, with emphasis on Hawaii's ethnic mosaic. The critical framework covers dominant-subordinant relationships in both a historical and modern setting. The processes of prejudice, discrimination, identity, cyclical patterns of ethnic relations, acculturation, assimilation, contention, submission, revitalization and the psychology of racism will be applied to the major ethnic minorities of Hawaii. (3 hrs. lect.)

## 125 Pacific Island Peoples (3)

Prerequisite: Placement in ENG 22 or higher
This course is a survey of Pacific Island Societies, using social science perspectives to analyze the effects of environmental constraints, cultural tradition, historical experience, political and economic development, and social change upon the peoples of Melanesia, Micronesia, and Polynesia. It will give students an understanding of the major problems and alternative futures which Pacific island communities now face. (3 hrs. lect.)

## 130 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.)

## 193V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in the Social Sciences. Repeatable 4 times for credit up to a maximum of 12 credits. (5-20 hrs. work experience per week.)

## 220 Japanese-American Studies (3)

A survey of Japanese-American experience, with particular emphasis on the application of social theory to analyze the frustration, anxiety, resolve, depression, success, failure, and inspiration of the Japanese Americans of Hawaii. (3 hrs. lect.)

## 221 Hawaiian-Americans (3)

Prerequisites: Completion of ENG 22 or placement in ENG 100; completion of 100 level social science course
The course is designed to give the individual an understanding of Hawaiians and their sociocultural world. Significant contributions of the anthropological, demographic, political, psychological and sociological perspectives will be utilized to present a holistic social science approach. Topics covered include the group position of Hawaiians in the class structure, learning strategies, family structure, lifestyle, land issues, and political and cultural revitalization. (3 hrs. lect.)

## 225 Filipino-American Studies (3)

An analysis of the history, culture, and major problems of the Filipino-American community, with special emphasis on Hawaii. The course covers the process of immigration, cultural transition and acculturation, family and social organizations, educational problems and achievements, housing and job availablity, and conflict with existing ethnic communities. A historical analysis of the transition from plantation paternalism to urban competition will also be included. (3 hrs. lect.)

## SOCIAL SERVICES (SOSER)

21 Family Dynamics and the Social Work Interview (3)
Provides an introductory overview of social work and the roles of paraprofessionals. Focuses on understanding family dynamics and on developing basic social work interviewing skills. (3 hrs. lect.)

22 Social Work with Groups (3)
Relates social work group principles and practice for practical application for paraprofessionals in human services programs. Previous and/or current group work experience is helpful. (3 hrs. lect.)

55 Individual Counseling (3) (Formerly VOC 55)
Focuses on developing basic individual counseling and problem-solving skills, potential and limitations of paraprofessionals in counseling. (3 hrs. lect.)

## 91V 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 HSERV 51 is recommended. (5-15 hrs. practicum.)

## SOCIAL WORK (SW)

## 200 The Fieid of Social Work (3) (formerly HSERV 200)

Prerequisite: ENG 22
Orientation to the profession of social work; the nature and scope of social work, historical development, values and philosophy, methods of practice, and selected fields of practice. (3 hrs. lect.)

## SOCIOLOGY (SOC)

## 22 Introduction to Marriage and Family (3) <br> This is a course about you, sex, love, dating, marriage and family formation. It will help you understand yourself, your relationship with others whether they are your parents, your friends, or your children. It will help you understand where our values about family life come from and where the family is going as an institution. What does the increasing divorce rate mean, and what effects will such life styles as "living together" and "communalism" have on family life? Finally, the class will talk about your situation in your family and give you the ability to place your experiences in a sociological perspective. (3 hrs. lect.)

## 100 Survey of General Sociology (3)

Basic social relationships, norms, social structures and processes affecting social change. (3 hrs. lect.)

## 200 Introduction to the Principles of Sociology (3)

Introduction to basic theory, methods and analytic techniques used in sociology. (3 hrs. lect.)
214 Introduction to Race and Ethnic Relations (3)
Prerequisite: Any 100 level Social Science course or ENG 22
This course will acquaint the student with the problems and dynamics of race and ethnic relations in comparative local, national, and world perspectives. Theory and research related to the social, economic, and political problems of ethnic and racial groups, and their existence and accomodation within societies will be reviewed and analyzed. (3 hrs. lect.)

## 218 Introduction to Social Problems (3)

Introduction to social problems will acquaint the student with the variety of social problems facing our society today. Local social problems will be emphasized. Sociological research and theories related to crime and delinquency, drug and alcohol abuse, sexual deviance, ethnic relations, economic disruption and unemployment, social consequences of sexism, and family disorganization will be discussed and students will be required to conduct a small research project in a selected area. (3 hrs. lect.)

## 231 Introduction to Juvenile Delinquency (3)

Prerequisite: Placement in ENG 100 or completion of ENG 22 or higher
Forms of juvenile deviance; conditions and processes that result in the alienation and deviance of youth. Juvenile corrections as an institutionalized societal response. (3 hrs. lect.)
251 Introduction to Sociology of the Family (3)
Family patterns, mate selection, parent-child interaction, socialization of roles, legal sanctions, and current trends in family organization and functions. (3 hrs. lect.)

## SPANISH (SPAN)*

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101-102 Elementary Spanish I-II (4-4)
Prerequisite: ENG 10/15 or instructor approval for 101; SPAN 101 or instructor approval for 102
Development of listening, speaking, reading, writing. Drill and practice emphasized. Laboratory work required. (4 hrs. lect.; 1 hr. lab.)
*Native speakers may not take language courses for credit.
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## SPECIAL STUDIES

See Special Courses, Special Studies.

## SPEECH (SP)

## 20 Speech Communication (3)

Prerequisite: ENG 10/15 or placement in ENG 22/32
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.)

## 151 Personal and Public Speech (3)

Prerequisite: ENG 10/15 or placement in ENG 22
This basic course introduces students to the principles of communication. in addition to discussing theoretical materials, students have opportunities to experience speech in a variety of informal and formal activities, including person-toperson, small group, and public address situations. ( 3 hrs . lect.)
200 Speaking Skills for Prospective Teachers (3)
Prerequisite: ENG 10/15 or placement in ENG 22
Theory and activities for competence in the speaking skills useful in the classroom, especially interview, discussion and lecture. (3 hrs. lect.)

## 251 Principles of Effective Speaking (3)

Prerequisite: SP 151 or instructor approval
Designed to help students prepare and present speeches; the steps necessary and the rhetorical theory behind public speaking. (3 hrs. lect.)

## 253 Argumentation and Debate (3)

Prerequisite: SP 151 or instructor approval
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.)

## STUDENT DEVELOPMENT (SD)

## 21 Orientation to College (1)

Orientation to college life. This course focuses on information, skills and attitudes needed for a successful college career. ( 1 hr . lect.)

## 85 Career/Life Planning (3)

Prerequisite: ELI 9 or placement in ENG 8/9 or instructor approval
A course utilizing a variety of processes to assist in the formulation and attainment of career goals. Students have the opportunity to evaluate their interests, skills, personality traits, and values as a basis for occupational choice. Students are exposed to a variety of occupations and are made aware of labor market trends and projections. Effective job search skills, interview techniques, and resume writing are covered. (3 hr. lect.)
85B Career Decision Making (2)
Prerequisite: EL/ 9 or placement in ENG 8/9 or instructor approval
Personal evaluation of interest, skills, personality traits and values as a basis for self-awareness in career/life planning and decision-making. Survey of occupational groups including non-traditional career opportunities. Develop familiarity with career information resources. Primarily for the "undecided" student. (2 hrs. lect.)

## 85C Vocational Exploration (1)

Prerequisite: EL/ 9
Exploration of selected occupations through "hands-on" experience utilizing work samples, class lectures, psychometric testing, field interviews and viewing of Career Directions videotapes. ( 1 hr . lect.)

## 90B Job Preparation (2)

Prerequisite: ELI 9 or placement in ENG 8/9 or instructor approval
Course will focus on career preparation through labor market exploration and job search planning. Special topics to include: local labor market, national labor outlook, world of work trends, labor laws, employee/employer rights and responsibilities, non-traditional employment, unions, work adjustment, career development, career change and future world of work issues. (2 hr. lect.)

## 90C Job Placement (1)

Prerequisite: EL/ 9 or placement in ENG 8/9 or instructor approval
Preparation for job seeking through the development of job search skills and job retention skills. Module will include training in application procedures, interviewing, resume and letter writing and competitive job placement. Designed for all job seekers regardless of work history or experience. ( 1 hr . lect.)

## TAGALOG (TAG)*

101-102 Elementary Tagalog I-II (4-4)
Prerequisite: ENG 10/15 or instructor approval for 101; TAG 101 or instructor approval for 102
Development of listening, speaking, reading, writing. Drill and practice emphasized. Laboratory work required. (4 hrs. lect.; 1 hr . lab.)
*Native speakers may not take language courses for credit.

## THEATRE (THEA)

## Also see DRAMA (DRAMA)

101 Introduction to Drama and Theatre (3) (formerly DRAMA 101)
Representative plays studied as illustrative of changing forms in the theatre and dramatic literature. (3 hrs. lect.)

## 201 Introduction to the Art of the Film (3) (formerly DRAMA 201)

Introduction to aesthetic aspects of silent and sound movies. Technical subjects analyzed only as they relate to theme and style. (3 hrs. lect.)

## VOCATIONAL (VOC)

## 55 Individual and Group Counseling (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. (3 hrs. lect.)

## WELDING (WELD)

## 17B Gas Welding (1) (For Non-majors)

Basic oxyacetylene welding. Introduction to the safe operation of oxyacetylene 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 oxyacetylene cutting. ( 2 hrs . demo/lab.)

17C Arc Welding (1) (For Non-majors)
Basic arc welding. Safe operations of machines and equipment. Fundamentals of arc welding ferrous metals. Introduction to oxy-acetylene cutting. ( 2 hrs . demo/ lab.)

## 18 Introduction to Metal Sculpture (3)

Theory and practices of gas and electric welding toward practical application to creative designs. ( 2 hrs . lect.; 3 hrs. lab.)
19 Welding for Trades and Industry (3) (For Non-majors)
Comment: Can be substituted for WELD $17 B$ and/or WELD 17 C
Introduction to the various methods of welding, including electric, oxyacetylene, and oxyacetylene cutting. ( 1 hr . lect.; 6 hrs. lab.)

## 20 Introduction to Welding (10)

Fundamentals of oxycetylene cutting and arc welding. Proper use and operation of oxyacetylene equipment. Operation and use of various types of arc welding machines. Electrode identification and basic arc welding terminology. Welding of ferrous metals in flat, horizontal, vertical and overhead positions. (5 hrs. lect.; 15 hrs. lab.)

## 20G Introduction to Welding I (2)

Introduction to the safe operation of oxyacetylene equipment. Fundamentals of oxyacetylene cutting of ferrous metals by various methods. Available only for military on-base classes. ( 1 hr . lect.; 3 hrs lab.)
20H Introduction to Welding II (3)
Prerequisite: WELD 20G
Safe operation of metal shears, abrasive cutter, sanders and grinders. Introduction to various methods of arc welding of ferrous metals in flat and horizontal positions. Available only for military on-base classes. (1 hr. lect.; 6 hrs. lab.)
201 Introduction to Welding III (5)
Prerequisites: WELD 20G, 20H
Continuation for WELD 20H. Introduction to vertical and overhead positions in arc welding. Introduction to basic pipe welding. Available only for mlitary onbase classes. (3 hrs. lect.; 6 hrs. lab.)
21 Hand and Shop Tools (2)
Instruction in the care and use of hand and power tools. Safe operation of metal shears, abrasive cutters, sanders, grinders, and hydraulic benders. (1 hr. lect.; 3 hrs. lab.)
30 Advanced Arc Welding (5)
Prerequisite: WELD 20
Advanced techniques in arc welding in the vertical and overhead positions. Introduction to basic pipe welding. ( 3 hrs . lect.; 6 hrs lab.)
31 Fabrication Techniques (5)
Introduction to layout and fabrication of welded structures, jigs, and fixtures. Interpretation and practical applications of blueprints and sketches. Miter cuts and the identification and processing of metals. (3 hrs. lect.; 6 hrs. lab.)
32 Oxyacetylene Welding (3)
Special processes in gas fusion welding and braze welding of ferrous metals on light gage mild steel in various positions. Gas welding of cast iron and pipe. (1 hr. lect.; 6 hrs. lab.)

40 Tungsten Inert Gas (TIG) (3)
Prerequisite: WELD 20 or instructor approval
Theory, practice and applications of TiG welding processes including safety and manipulative skills. Welding of stainless steel and aluminum. (1 hr. lect.; 6 hrs. lab.)

41 Metallic Inert Gas (MIG) (3)
Prerequisite: WELD 20 or instructor approval
Theory, practice, and applications of MIG welding processes including safety and manipulative skills. Welding of mild steel and aluminum. (1 hr. lect.; 6 hrs. lab.)

42 Welding Qualifications Procedures and Test (5)
Prerequisite: WELD 30
Introduction to qualifications procedures. Testing of weld specimens by the guided bend test and other methods. (3 hrs. lect.; 6 hrs. lab.)

50 Work Exploration (5)
Prerequisites: WELD 30, WELD 31
Exposure to actual industry working conditions in pipe welding, structural erection, rigging, and welding in confined work areas. (3 hrs. lect.; 6 hrs. lab.)

## 51 Advanced Fabrication Techniques (5)

Prerequisite: instructor approval
Advanced topics in the use of hand and power tools, metal shears, abrasive cutters, sanders, grinders, and various welding processes. Emphasis on the use of various types of equipment together with the interpretation of blueprints and sketches to perform practical work assignments, projects, and live jobs. (3 hrs. lect.; 6 hrs. lab.)

55 Computations with Smoley Tables (3)
Prerequisite: MATH 1
An introduction to the use and application of the Smoley Tables by the carpentry and ironworker trades. The Smoley tables will be used to determine slopes, rises, rivet spacing, bevels, circumferences, squaring and decimal equivalents in designing and constructing trusses, rafters, railings, stairs, and other structural layouts. (3 hrs. lect.)

## 93 V Cooperative Education (1-4)

Prerequisite: Instructor approval required
This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Welding. Repeatable 4 times for credit up to a maximum of 12 credits. ( 5 hrs. work experience per week per credit.)

## WOMEN'S STUDIES (WS)

## 151 Introduction to Women's Studies (3) (formerly WS 130)

Prerequisite: Placement in ENG 22 or higher
This is an introduction to Women's Studies, an interdisciplinary study of the world of women. The concept of gender permits the examination of various facets of women and men's experiences, corrects misconcepts and assists thinking about the future of women. ( 3 hrs . lect.)

## 275 Women in Art (3)

Prerequisite: ENG 100; WS 151 and ART 101; SOC 100 or PHIL 100 or Instructor Approval
An interdisciplinary survey of the role of women as subject/object in the visual arts, their activity as creators of art and as participants in the art world. (3 hrs. lect.)
This course is crosslisted as ART 275 and credit may be received for only WS 275 OR ART 275 but not both.

## WORK CYCLE (WORK)

94V Federal Work Cycle (1-12)
Prerequisite: Instructor approval required Comment: Acceptance in Federal Coop Ed Program required
This course is for students accepted in a full-time Federal Cooperative Education program. During the Work Cycle, students are assigned work experiences related to academic studies or career goals. Repeatable 3 times for credit with instructor approval, up to a total of 24 credits. (12 credits is equivalent to at least 26 weeks of work, 1040 hours).

## WORD PROCESSING (WPRO)

## 20 Keyboarding (1)

Prerequisite: ENG 8/9 or concurrent enrollment in ENG 8/9
A course to develop skills on the computer keyboard including alphabets, numbers, and symbols as applicable to computer terminals, word processors, and keypunch machines. To be taken CR/N. Recommended for non-Business majors. This module may be followed by the WPRO 21 and WPRO 22 modules during the same semester. ( 3 hrs . lect./lab, 5 weeks)

## ZOOLOGY (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.)

## 200 Marine Biology (3)

Lectures in this course provide an introduction to the marine flora and fauna, including those of the Hawaiian waters. A knowledge of the physical, biological and ecological characteristics of the marine environment is important for understanding the life systems of the ocean. The course will cover coral reef organisms, deep sea life, fisheries, farming the ocean, marine resources and the effects of pollution on marine life. ( 2 hrs . lect.; 3 hrs lab.)
See also Oceanography.

## Administration, Faculty, and Staff



Theo Hufen
Chemistry, 1985


Harvey Chun
Carpentry, 1986

Cosmetology, 1984
English, 1983

Beng Poh Yoshikawa Learning Assistance Center, 1987


David Cleveland Sociology, 1988

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[^0]:    *Tuition and fees subject to change.

[^1]:    $\dagger$ \& $\ddagger$ Certificate of Completion requirements.
    $\ddagger$ Highly recommended for the direct assessment CDA credential if assessment is planned after July 1, 1992.
    *General Education Requirements for the A.S. degree are listed under Degrees and Certificates.
    Note: 1. Students must meet the proficiency standards in communication at the ENG 10 level and computation at the MATH 1 level to qualify for the Early Childhood Education Certificate of Achievement.
    2. Current certificates in Accident Prevention Emergency Response (APER) and CPR must be completed while taking advanced child development lab (ED 267V) and before receiving A.S. degree. Demonstrated proficiency at the ENG 22 and MATH 1 levels is required for the A.S. degree.

[^2]:    *General Education Requirements for this A.S. program are listed on the Advising Sheet which is available in the counseling office.
    Note: Students must meet the minimum proficiency standards in communication established by the College to qualify for the Certificate of Achievement.

[^3]:    *General Education Requirements for the A.S. degree are listed under Degrees and Certificates.
    Note: Students must also meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.

