

Honolulu Community College



1986



1987



University of Hawaii

Directory

	Building	Telephone Number
Admissions & Records	6	845-9112
Bookstore	2	845-9105
Business Office	6	845-9103
Campus Security Office	(daytime) 6	845-9142
	(nighttime) 2	845-9245
Career & Job Placement	6	845-9204
Counseling and Guidance	6	845-9130
Dean of Instruction	6	845-9135
Director of Student Services	6	845-9235
Extended Day—	2	845-9245
Apprenticeship		
Financial Aid	6	845-9116
Fujio Matsuda Technology	6	845-9296
Training and Education		
Center		
Instructional Resource Center	7	845-9125
Job Experience Program	71	848-0331
Kahili—Student Newspaper	5	845-9213
The Education Center		845-2908
879 N. King Street		
Learning Assistance Center	7	845-9217
Library	7	845-9220
Operations and Maintenance	6	845-9142
Project Assist—	6	845-9228
Services for Handicapped		
Provost	6	845-9225
Special Services	6	845-9122
Veteran Affairs Office	6	845-9278

University of Hawaii

**Honolulu
Community
College**

1986–1987

874 Dillingham Boulevard
Honolulu, Hawaii 96817
Telephone: (808)845–9211

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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1986–1987 Academic Calendar

FALL SEMESTER 1986

August 15, Friday	Admissions Day (Holiday)
August 18, Monday	Faculty Members Report
August 18–19, Monday–Tuesday	Program Advisement for Incoming Students
August 20–22, Wednesday–Friday	Registration
August 26, Tuesday	INSTRUCTION BEGINS
August 28, Thursday	Add period for students whose classes were cancelled
August 29–September 2, Friday, Tuesday	Late Registration, Add/Drop Period
September 1, Monday	Labor Day (Holiday)
September 2–November 18	Drop Period Continues
October 13, Monday	Discoverers' Day (Holiday)
October 15, Wednesday	Last Day to Apply for Fall Graduation
November 3, Monday	Last Day to Change Majors into Closed Programs
November 4, Tuesday	General Election (Holiday)
November 11, Tuesday	Veterans' Day (Holiday)
November 12, Wednesday	Last Day for Students to Submit Incomplete ("I") Make-up work from Spring 1986 and Summer 1986 to Instructors
November 18, Tuesday	Last Day to Drop Courses, Last Day to Completely Withdraw from College
November 26, Wednesday	Last Day for Instructors to Submit Students' Incomplete ("I") Make-up Grades from Spring 1986 and Summer 1986 to Admissions and Records Office
November 27, Thursday	Thanksgiving Day (Holiday)
November 27–28, Thursday–Friday	Students' Thanksgiving Recess
December 16, Tuesday	Instruction Ends
December 17–22, Wednesday–Monday	Evaluation Period
December 23, Tuesday	FALL SEMESTER ENDS
December 25, Thursday	Christmas (Holiday)

SPRING SEMESTER 1987

January 1, ThursdayNew Year's (Holiday)
January 5, MondayProgram Advisement
for Incoming Students
January 7-9, Wednesday-FridayRegistration
January 14, WednesdayINSTRUCTION BEGINS
January 16, FridayAdd period for students whose classes were cancelled
January 20-21, Tuesday-WednesdayLate Registration, Add Period
January 22-April 8Drop Period Continues
February 16, MondayPresidents' Day (Holiday)
March 6, FridayLast Day for Students to Submit Incomplete ("I")
Make-up Work from Fall 1986 to Instructors
March 16, MondayLast Day to Apply for Spring Graduation
March 20, FridayLast Day for Instructors to Submit Student's Incomplete
("I") Make-up Grades from Fall 1986 to Admissions and Records Office
March 23-27, Monday-FridayStudents' Spring Recess
March 26, ThursdayPrince Kuhio Day (Holiday)
April 8, WednesdayLast Day to Drop Courses, Last Day to Completely
Withdraw from College
April 17, FridayGood Friday (Holiday)
May 1, FridayLast Day to Change Major into Closed Programs
May 8, FridayInstruction Ends
May 11-14, Monday-ThursdayEvaluation Period
May 15, FridayGraduation
May 15, MondaySPRING SEMESTER ENDS
May 17, SundayFACULTY'S LAST DAY

SUMMER SESSION 1987*

June 9-10, Tuesday-WednesdayRegistration
June 11, ThursdayKamehameha Day (Holiday)
June 12, FridayINSTRUCTION BEGINS
July 3, FridayIndependence Day (Holiday)
July 24, FridayInstruction Ends
July 27, MondayEvaluation Day
July 27, MondaySUMMER SESSION ENDS
July 28, TuesdayFaculty's Last Day

*(Subject to change)

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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 has 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 two-year Associate in Science degree and shorter certificate programs in more than thirty vocational-technical 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 College also maintains an Airport Campus near Honolulu International Airport (for the Aviation Maintenance program) and a neighborhood outreach center, The Education Center.*

*A south campus is yet to be developed on a recently acquired 7-acre parcel across Dillingham Boulevard from the main Campus.

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 Schools and Colleges.

PHILOSOPHY

Honolulu Community College, recognizing its responsibilities as a cultural and educational center located in the Kalihi-Palama community, is committed to:

1. A comprehensive offering of vocational-technical and liberal arts programs
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—educationally and culturally

MISSION

- To broaden access to higher education in the State of Hawaii by providing open door opportunities for students to enter quality educational programs in local communities.
- To provide vocational and technical programs which both prepare students for immediate employment and provide the paraprofessional and trained work force needed by the State.
- To prepare students to advance toward upper division liberal arts and professional degree programs.
- To provide opportunities for personal enrichment, occupational upgrading, and career mobility through credit and non-credit courses and activities.
- To contribute to and stimulate the cultural and intellectual life of the community by providing a forum for the discussion of ideas; by providing leadership, knowledge, problem-solving skills, and general informational services in which the college has special competence, and by providing an opportunity for community members to develop their creativity and appreciate the creative endeavors of others.
- To provide educational and support services, including comprehensive assessments of all students, pre-vocational assessment and training, career development counseling, and job placement referral.

NON DISCRIMINATION AND AFFIRMATIVE ACTION

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.

Offices designated to coordinate the campuses' nondiscrimination and affirmative action programs are:

Rg Logiakis (Education, Title IX and Section 504 & related matters)

Peggy S. Hong (Employment matters)

Office of the Chancellor for Community Colleges

2327 Dole Street

Honolulu, Hawaii 96822

Phone: 948-7471

Valerie Evans, EEO/AA Coordinator

Title IX Coordinator, Section 504 Coordinator

Honolulu Community College

874 Dillingham Boulevard

845-9104 (*Valerie Evans*) 845-9235 Title IX Coordinator, Section 504 Coordinator

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 vocational-technical areas, and modern classrooms and laboratories have been built for liberal arts courses.

A trade-industrial complex, one of the most complete in the nation, 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 Airport Campus facility, located at 402 Aokea Street near Honolulu International Airport, includes completely equipped shops which meet Federal Aviation Agency requirement.





The Education Center, housed in the renovated, historic Palama Fire Station is an integral part of the College and serves as a community outreach and education center. As a part of its community orientation, the center provides training leading to the GED diploma.

LEARNING RESOURCE CENTER

The Library occupies two floors of the Library/Classroom Building (Bldg. 7). It is carpeted and air conditioned and has many quiet areas for concentrated study as well as an Art Gallery.

The general book collection represents all major fields of knowledge and has been specifically designed to support the curriculum. The reference collection includes encyclopedias, indexes, bibliographies, and other tools to aid library users in their search for information.

In addition, there is a Hawaii/Pacific collection for research, a microfilm collection which includes the local newspapers, a wide variety of magazines that are received on a continuous basis, and a microfiche college catalog collection to aid students in selecting a school in Hawaii or on the Mainland.

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

The Instructional Resource Center is located on the third floor of the Library Building 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 among faculty members of all types of audiovisual instructional materials.

The Learning Assistance Center is a delivery system for campus-wide academic support services and alternative modes of learning/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 Assistance Center is located on the third floor of Building 7 adjacent to the Instructional Resource Center.

COMPUTER LAB FACILITIES

The College has various computer labs to support the development of computer literacy as well as a high level of computing skills. Separate laboratories are equipped with Apples (Bldg. 2, Room 501), Commodores (Bldg. 2, Room 509), UNIX-based MICRO PDP 11/73 (Bldg. 2, Room 503), as well as WANG and CPM-based word processors (Bldg. 2, Room 415).

FUJIO MATSUDA TECHNOLOGY TRAINING AND EDUCATION CENTER (Bldg. 2, Rm. 505; 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 looks in both directions simultaneously:

1. To the College with ideas to advance education and training related to applications of emerging technology.
2. To businesses and industries with similar ideas to enhance productivity and profitability.

Student Affairs



Student Affairs

STUDENT DEVELOPMENT CENTER

The Student Development Center offers students a wide range of counseling services and activities throughout the academic year and summer months. Students are encouraged to visit the Center for 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. Counselors will assist students in assessing their educational needs, personal interests, and academic qualifications. Information on the offerings and program requirements are provided to help the students in deciding which program to undertake at the College.

Orientation for New Students

Orientation is held prior to registration to help all new students to adjust successfully to their college milieu. All new students meet with counselors and other students to become familiar with the College offerings, services, and regulations. All new students are encouraged to see a counselor at least once during their first six weeks at Honolulu Community College.

Program Advising

Counselors and faculty advisors are available to assist students in planning their programs of study and in selecting courses. Information about course placement, prerequisites, course sequence, and registration and transfer information are provided.

Career Counseling

Counselors are available to work with students to explore career possibilities and training opportunities. Counselors will help student assess their skills, interests, and values in developing career/life plans. Workshops in career life planning and job search are offered to students through the Center.

Career Resource Library

A resource library is housed in the Student Development Center and has materials such as occupational information, college catalogues, job search information, personal development books, filmstrips, and videotapes.

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. Students may also receive job referrals from the Student Development Center personnel on federal, state, and county job lists.

Individual Assessment

Students interested in learning more about themselves may explore the option of various testing materials available in the Center, providing aptitude, interest, achievement, student development, and personality tests as aids in counseling.

Career Kokua

Career Kokua, a computerized career information system, is available to Honolulu Community College students. A computer terminal has been installed for students to access current local labor market, educational and career information.

Vocational Exploration Center

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

Services to Handicapped

Project Assist is a Student Services program initiated to meet the needs of students with handicapping conditions or special problems. It provides coordinated services to help students achieve their educational and vocational goals. The comprehensive counseling program helps students to adjust to the educational system, to set appropriate career goals, and to deal with community agencies with which they are involved. Support services such as tutoring, notetaking, mobility and laboratory aids, and interpreters for the deaf are arranged through the program. Maps showing building access locations (ramps, elevators) are available from the Admissions and Records Office and from Project Assist. Students may call 845-9279 or 845-9130 for more information.

Services to Veterans

Veterans are encouraged to work closely with the veterans counselor to insure that they will receive the maximum benefit under the law. Students may call 845-9278 for more information or meet with the veterans counselor located in the Student Development Center.

FINANCIAL AID

Financial Aid Services

Financial aid is available to assist eligible students to obtain a college education. Those with financial problems are encouraged to contact the Financial Aid Office in the Student Services Department of the Administration Building.

Financial assistance programs available to students attending Honolulu Community College include loans, grants, part-time employment, and scholarships.

Eligibility

In order to be eligible for financial assistance, a student must: (a) demonstrate financial need (a gap between college expenses and the student's financial resources), (b) make satisfactory academic progress, (c) meet enrollment require-

ments of specific aid programs (half-time or full-time status), and (d) be a United States citizen or be in the United States for other than a temporary purpose and intend to become a permanent resident, or be a permanent resident of the Trust Territories of the Pacific Islands. Specific programs may have additional requirements.

Application Procedures

By May 1 preceding the academic year for which aid is being requested, each applicant must complete and submit the Hawaii version of the Financial Aid Form (FAF) to the College Scholarship Service in California. The FAF may be obtained from high school counseling offices and from the Financial Aid Office on each campus of the University of Hawaii System. Other forms may be required depending on individual circumstances.

Early submission of applications is recommended because funds are limited. Late applicants will be considered only if funds are available, and award notification for these applicants will be delayed.

The College reserves the right to modify aid commitments at any time due to changes in an applicant's financial or enrollment status or changes in the availability of funds.

Satisfactory Progress Requirements for Financial Aid

A student enrolled at Honolulu Community College must be making satisfactory progress in accordance with the Department of Education's General Provisions Regulations, Federal Register Volume 48, No. 195, Subpart B, Section 668.16(e) Standards of Satisfactory Progress and **Honolulu Community College's Satisfactory Academic Progress Policy** before Title IV aid will be awarded. At the end of each academic year the institution will determine whether the student has made satisfactory progress according to the following standards.

A. Credit load and grade point average requirements

1. A student enrolled full-time (minimum of 24 credits attempted in an academic year) must complete a minimum of 20 credits with current and cumulative grade point ratios of at least 2.0 by the end of each academic year.
2. A student enrolled 3/4-time (minimum of 18 credits attempted in an academic year) must complete a minimum of 15 credits with current and cumulative grade point ratios of at least 2.0 by the end of each academic year.
3. A student enrolled 1/2-time (minimum of 12 credits attempted in an academic year) must complete a minimum of 10 credits with current and cumulative grade point ratios of at least 2.0 by the end of each academic year.
4. A student enrolled less than 1/2-time is not eligible for financial aid.
5. Should a student change his or her enrollment status from semester to semester (for example within an academic year attend Fall semester full-time and Spring semester half-time) the institution will average the full and part-time course load.

See Financial Aid Office for more details.

- B. A student enrolled *only one* semester within an academic year will have his/her academic progress determined at the end of the academic year based upon one semester of attendance. The following requirements apply:

1. A student enrolled full-time for one semester must complete a minimum of 10 credits with current and cumulative grade point ratios of at least 2.0 for that semester.
 2. A student enrolled 3/4-time for one semester must complete a minimum of 7 credits with current and cumulative grade point ratios of at least 2.0 for that semester.
 3. A student enrolled 1/2-time for one semester must complete a minimum of 5 credits with current and cumulative grade point ratios of at least 2.0 for that semester.
- C. Incomplete ("I") grades are calculated at the level of accomplishment obtained at the end of the course until the work is made up or the grade improved. Grades of "F", "W", and "N" will be considered as unsuccessfully completed courses.

Financial Aid Probation

Grades will be monitored at the end of each academic year. A student whose grade point average falls below 2.0 during the Fall semester of an academic year, will have the opportunity to raise his/her current and cumulative grade point ratios to a 2.0 during the subsequent Spring semester.

Financial Aid Suspension

A student's financial aid will be suspended when:

1. At the end of any academic year, the student completes less than the above mentioned minimum earned credit hours or fails to achieve current and cumulative grade point ratios of at least 2.0.
2. A full-time student does not complete four or more credits by the end of the Fall semester.
3. A student does not complete any credits or receives a 0.0 Grade Point Average in a particular semester.

Reinstatement

- A. To be eligible for financial aid in future semesters, a student whose aid eligibility has been terminated, must without financial assistance, demonstrate satisfactory progress. Students should apply for reinstatement through the Financial Aid Office. A student must enroll for at least 6 credits during the semester in which a student attempts to re-establish eligibility and complete at least half of the credits attempted with current and cumulative grade point ratios of at least 2.0.
- B. A student who attempts to re-establish eligibility during the summer session must complete at least 3 credits with current and cumulative grade point ratios of at least 2.0. Reinstatement based upon summer session enrollment is only allowed once.

Appeal of Financial Aid Suspension (Exceptions to the Progress Policy)

A student may appeal determination of ineligibility by submitting a written appeal which includes the nonacademic reasons for nonachievement of minimum academic requirements.

The Coordinator of Financial Aid will review the appeal and determine whether the Financial Aid Suspension is justified. The student will be advised in writing of the decision.

Repeats, Incompletes, and Unsuccessful Course Outcomes

- A. A student may repeat a course once in which a grade lower than a "C" was received and still receive financial aid. Credit is allowed only once for a course, but the student will receive the higher grade and grade points.
- B. Incomplete ("I") grades are calculated at the level of accomplishment obtained at the end of the course until the work is made up or the grade improved.
- C. The following will *not* be considered as credits successfully completed:
 - 1. "F" Grades
 - 2. "W" Withdrawals
 - 3. "N" No Grade

Limitation

Completion of a student's educational objective must be accomplished in a satisfactory progression. Specific timeliness for satisfactory progress are available in the Financial Aid Office. If a student changes majors or seeks a degree/certificate in more than one program, the same limitations apply.

Financial Aid Programs*

PELL GRANTS are outright assistance grants which require no repayment.

COLLEGE WORK-STUDY PROGRAM (CWSP) provides part-time employment on the campus.

NATIONAL DIRECT STUDENT LOAN (NDSL) is a long-term loan program. Repayment begins six months after the borrower leaves school or drops below half-time status.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS (SEOG) provide financial assistance with no repayment.

STATE HIGHER EDUCATION LOAN (SHEL) is a long-term loan program for full-time resident students.

HAWAII STATE SCHOLARSHIPS (HSS) AND HAWAII STUDENT INCENTIVE GRANTS (HSIG) cover tuition for resident students who are enrolled at least halftime.

STATE TUITION WAIVERS are available to resident and nonresident students who are in need of financial assistance or who merit assistance because of achievement or service to the College.

GUARANTEED STUDENT LOAN (GSL) are loans from private lenders, such as banks and credit unions.

SHORT-TERM LOANS students may borrow \$50 to meet emergency educational expenses while attending college at least half-time.

*All financial aid programs are subject to changes due to legislative action.

Scholarship Programs

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 (selection by department).

The AUTOMOTIVE BODY-PAINTING ASSOCIATION OF HAWAII SCHOLARSHIP is granted to an undergraduate 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).

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.

For information on other scholarships contact the Financial Aid Office.

Veterans Administration Benefits

The College is an approved educational institution for education and training under the Veteran's Educational Assistance Act (GI 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 counselor on campus or the Veterans Administration Regional Office.

Military Selective Service Act (P.L. 97-252) requires that beginning on July 1, 1983, any student who is required to register with the Selective Service System 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, National Direct Student Loans, Guaranteed Student/PLUS 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 include citizens and non-citizens eligible to receive Federal financial aid except permanent residents of the Trust Territory of the Pacific Islands and the Commonwealth of the Northern Marianas. For further information contact the *Financial Aid Officer*, Jan Jinavar at 845-9116.

HEALTH SERVICES

The Health Center located on the first floor of Building 2, is open Monday through Friday from 7:45 am-4:30 pm and provides emergency first aid assistance, non-emergency care and health education counseling.

Educative and treatment services and activities are provided by a registered nurse for students currently enrolled at the College. These services include T.B. skin tests, blood pressure monitoring, pregnancy testing, visual acuity, first aid, weigh-in and other similar services. The services at the Health Center are free; however, non-college services, such as ambulance and emergency room fees, are not covered by the College.

Because health care is limited, 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 beginning of each semester.

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

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 Activities maintains an off-campus housing information list. For information contact the Student Activities Office.

FOOD SERVICE

The College's cafeteria is operated by SAGA Food Services, Inc. Breakfast, snack and lunch are available at reasonable prices. Food vending machines are located throughout 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. Hours are extended during registration period and the first week of each semester. The main items for sale are required textbooks and supplies.

STUDENT ACTIVITIES

Honolulu Community College recognizes the need for active student involvement in college governance and the necessity for out of classroom enrichment experience for the total development of the student. Student 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 Building includes offices for the Campus Activities Board, a large conference room, a club meeting room, a student lounge, a gameroom, the Bookstore and the Health Center. The Student Activities 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 Honolulu Community College (ASHCC) (see also Tuition and Fees).

The Student Senate represents the ASHCC on most College committees, Faculty Senate committees and University councils and committees. It is through this important student organization that students play a prominent role in the governance of the college and 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 leadership 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 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 and theatrical offerings, athletics*, dances, films, concerts, lectures, informal gatherings and special interest clubs. For more information contact the CAB office in Bldg. 2, Rm. 216.

*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 Activities Office.

Publications

The Board of Student Publications is responsible for the formulation of policies, bylaws and procedures as are applicable for 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 familiarize 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 Director 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 to satisfy an academic requirement any document 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; submitting 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 (tuition and fees, traffic violations, library 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 Office of the Director of Business Affairs.

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

Alcoholic Beverages: Copies of policies governing the possession, consumption, serving and sale of alcoholic beverages on the University of Hawaii, Honolulu Community College campus are available in the Office of the Provost and the Chancellor's Office.

All organizations planning activities on campus that involve either the serving or selling of alcoholic beverages must follow CCCM #8000 "Liquor Sales, Service, and Private Consumption in the University of Hawaii Community College".

Lethal Weapons: Firearms, spear guns, and bows and arrows are prohibited on campus except with specific prior permission.

Academic Grievances: The process of addressing allegations of misconduct and redressing academic grievances is described in the Academic Grievance Procedures. Copies are available at the Office of the Dean of Instruction.

Illicit Drugs: Students are not permitted to be under the influence of, possess, manufacture, distribute or sell illicit drugs, as prohibited by state law, at University sponsored or approved events, on University property or in buildings used by the University for its educational or recreational programs.

Academic Regulations



Academic Regulations

CLASSIFICATION OF STUDENTS IN CREDIT PROGRAMS

Classified Student: A student who is enrolled for credit in an organized 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 organized 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 less than 25 credits towards the Associate Degree or Certificate of Achievement or Certificate of Completion.

Sophomore: A student who has earned 25 credits or more towards the Associate Degree or Certificate of Achievement.

REGISTRATION STATUS

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

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

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

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

FULL-TIME AND PART-TIME STUDENTS

Full-time Student: A student who registers for 12 semester 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 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 an application for admission* with the Admissions Office.
2. *File the Residence Information forms included in the application.*
3. *Submit official transcripts of all accredited colleges you have attended. Transcripts must be mailed from the college directly to the Admissions Office at Honolulu Community College.*
4. *Applicants applying for the Cosmetology program must submit proof of graduation from high school.*
5. *Submit other information, forms, and documents as requested by the College. Request for additional forms if you fall in the following categories:*
 - *Foreign (Non-Immigrants)*
 - *Military personnel (or dependents) stationed in Hawaii*

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 assigned a time for placement testing and orientation.

If accepted, the student must:

1. Take placement tests at the time assigned unless exempt.
2. Attend Orientation and New Student Advising.
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) when accepted into a program. If the placement test has not been officially waived, the Program Status will be determined after the placement test has been taken. Student will be notified of the final status at Program Advisement.

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.

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

If a student does not wish to attend Honolulu Community College after being accepted, he 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

Beginning courses are offered in the fall semester in ALL PROGRAMS, but not all programs begin in the spring semester. The asterisk (*) means that beginning courses start both in the fall *and* spring semesters.

*Administration of Justice (AJ)	Fire Science (FIRE)
*Art, Commercial (CMART)	Heavy Equipment Maintenance and Repair (HEMR)
*Applied Trades (APTRD)	*Human Services (HSERV)
Architectural Drafting (ADT)	*Industrial Education (IED)
*Auto Body Repair and Painting (ABRP)	†Interpreting for Deaf People (INTRP)
*Automotive Mechanics (AMT)	*Liberal Arts (LBART)
Aviation Maintenance (AVMAT)	*Machine Shop Technology (MST)
Baking, Commercial (BAKE)	Marine Pipefitting (MPIPE)
Carpentry (CARP)	‡Occupational Safety and Health (OSH)
*Clerical, General (CLERC)	Refrigeration and Air Conditioning (RAC)
*Cosmetology (COSME)	*Secretarial Science (SSCI)
Electrical Installation & Maintenance Technology (EIMT)	Sheet Metal and Plastics (SMP)
*Electronics (ET)	*Stenography (STENO)
Engineering Technology (ENGT)	*Welding (WELD)
*Fashion Technology (FT)	

†Programs may be discontinued. Check with Admissions if still offered.

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 Director of Student Services at Honolulu Community College, 845-9235.

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 Admissions & 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. This school 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 applicants 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 Health Center has descriptive literature on several plans, and the student may choose one that meets his or her needs. Health and accident insurance is mandatory.

Foreign non-immigrant students should have an official notice of acceptance and Form I-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 to change their major, except under unusual circumstances. 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. Students will normally not be allowed more than five semesters to complete their programs.

Permission to work on campus will not be recommended for foreign non-immigrant students, except in cases in which the student must work due to unforeseen circumstances.

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 Health Center at Honolulu Community College also administers free tuberculin skin tests.

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

The TB Clearance and the Student Health form are to 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 their application for admission. All foreign students must demonstrate proof of enrollment in a health insurance plan before they will be allowed to register.

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

Registration is held one or two weeks 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 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 in the Student Development Center. 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.

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 Admissions and 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 and must submit a new Common Application form for the next semester.

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 department head. 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 fourth and fifth day of a semester. Students must present their pink fee statements and any pink change of registration forms at the time they add a class or classes.

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. The deadline for dropping a course is November 17 for the Fall Semester, and April 8 for the Spring Semester. *Any student who fails to drop officially a course 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 Counseling 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 November 17 for the Fall Semester, and April 8 for the Spring Semester. 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 Fees—Refunds".

Change of Major

ENTERING STUDENTS: All new, returning, transfer students who want to change their majors and have it effective for their first semester must do so by July 1 if entering or returning for Fall Semester, or by December 1 if entering or returning for Spring Semester. No changes are permitted after that date, even if the program is still open, until after registration.

CONTINUING STUDENTS: Continuing students may request a change of major any time during the year, except for the week of registration, as long as the program is still open. If the program is closed, students must request a change of major by May 1 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. *Students who change majors into programs that are filled are put on "standby" status.* They may not register for their major courses until after all students on "major" status have been registered. Students on standby status usually have a one semester wait before major courses may be taken.

A student who is requesting a change of major must see a counselor before the indicated deadlines and complete the required "Change of Major" form. No request for a change of major will be accepted during the weeks of 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 Admissions and 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 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 two-year programs. A student may not register for more than 17 credits during any one semester except under special circumstances. Registration for more than 17 credits in any one semester must have a 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 4-year campuses. Courses numbered below 100, however, generally do not transfer to 4-year colleges. Students are advised to plan any transfer program in accordance with requirements of the intended 4-year 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 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 so the student's cumulative grade point average is not below "C" or 2.0. Only credits applicable toward the degree will be transferred. Grades, grade points or grade point average will not be transferred.

It is the student's responsibility to have transcripts of previous work sent to the Admissions and Records Office and to request that an evaluation be made. Failure to make this request may cause the students to unnecessarily repeat courses previously taken. Submit the Request for Transcript Evaluation form to the Admissions and Records Office. Official evaluation will be made only after a student registers. After transcripts have been officially evaluated, the credits will not be granted until the student has completed a total of 12 credits at Honolulu Community College.

Course Waivers and Substitutions (Vocational Programs)

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

A student wishing to have a course waived or substituted must submit the Request for Course Waiver/Substitution form to the program head. In all cases, the program head will first confer with the department head or instructor of the department offering the course. If agreement is reached, the program head will then recommend approval or disapproval, giving the reason for the recommendation. The form will be forwarded to the Assistant Dean for approval. Notice will then be sent to the Admissions and Records Office. If the waiver and substitution is approved, it will be noted on the student's academic record.

Course Waivers and Substitutions (Liberal Arts)

The Coordinator of Admissions and Records 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 Coordinator.

Credit by Examination

Credit by examination is available in a few courses at Honolulu Community College. Interested students should contact the department head to determine if this option is available 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 Admissions and Records Office.
2. The student presents the application to the department head. The department head interviews the student and approves or disapproves the application.
3. If the application is approved, the student pays the necessary fees at the Business Office. Fees are charged in accordance with the College's tuition schedule. (\$12.00/credit for residents, \$79.00/credit for non-residents, \$.50 per credit for student activity fee, and \$2.00 late fee)
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 grade or grade points; rather the "CR" grade is assigned. An "N" grade may be used if the student fails to earn credit after challenging a course through "Credit by Examination".

Repeating a Course

A student may repeat a course in which a grade lower than a "C" was received. Credit is allowed only once for a course, but the student will receive the higher grade and grade points. The original grade will remain on the student's record, but will not be used in computing the grade point average.

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

All other courses may not be repeated.

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 Admissions and Records Office. Errors noted are to be reported 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 methods 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 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
I	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 "I" Grade

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

Instructors must submit make-up grades to the Admissions and Records Office by the Spring recess for the Fall Semester and by Thanksgiving recess for the Spring Semester and Summer Session.

The deadline dates for a student to remove the "I" grade for a course taken Spring Semester 1986 or Summer 1986 is November 12, 1986. March 6, 1987 is the deadline for a course taken Fall Semester 1986. A student is advised to contact the instructor and make arrangements for completing and for submitting make-up work well before these deadlines.

Grade Point Average

A student's grade point average is computed by dividing the student's total grade points earned by the total credits attempted, excluding credits for which grades of "W", "I", "CR", or "N" are assigned.

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.

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 2.0.
2. Current semester grade point average is below 2.0.

The student on probation may continue at the College but must achieve a current minimum grade point average of 2.0 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 a 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 2.0 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 (see Dismissal section). 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 submitting a petition to the counseling staff by November 1 for Spring readmission and April 1 for Fall readmission. The petition must contain a written plan for future success

and a proposed list of classes for the coming semester. The 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 and Probation and 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 2.5 or above, the student may petition for readmission for the Fall Semester (See Readmission section). Submit the petition to the counseling staff by July 15.

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 2.0, the student may be dismissed. Such students will be readmitted only by decision of the Committee on Academic Standing. The members of this Committee are the Coordinator of Admissions and Records, the Coordinator of Counseling and Guidance, and the Chairperson of the Faculty Council Executive Committee, or their designated alternates. Regulations governing academic dismissal will be applied at the end of each semester.

Scholastic Honors

Students who earn a grade point average of 3.5 or better for 12 or more credits in a semester at Honolulu Community College earn a place on the Dean's list.

Interested students may also 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 3.5 or better.

Transcript Requests

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

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

THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974

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 administrative 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 Business Manual Instruction 1614, *Policies and Procedures Relating to the Family Educational Rights and Privacy Act of 1974 for Students Enrolled in Postsecondary Programs of the University of Hawaii*. Copies of BMI 1614 may be obtained from the Office of the Director of Student Services, Honolulu Community College.
4. *Directory Information*
 Students are advised that certain personally identifiable information is considered by the College to be Directory Information and, in response to public inquiry, may be disclosed 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. Fact of participation in officially recognized activities and sports.
 - f. Weight and height of members of athletic teams.
 - g. Dates of attendance.
 - h. Degrees and awards received.
 - i. 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 Admissions and 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



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 & Above	1-11 Credits	12 Credits & Above
Tuition	\$12.00 per credit	\$135.00	\$79.00 per credit	\$940.00
Student Activity Fee	\$0.50-\$5.00	\$5.00	\$0.50-\$5.00	\$5.00
Total	\$12.50-\$137.00	\$140.00	\$79.50-\$874.00	\$945.00

Late Registration Fee - \$2.00

Concurrent Registration Tuition

Concurrent registrants will be assessed tuition on the Manoa Campus as follows:
Residents \$40.00 per credit hour, up to a maximum of \$470.00 total tuition in addition to the Manoa Campus Center Fee and Activity Fee.

Non-Residents \$141.00 per credit hour, up to a maximum of \$1,685.00 total tuition in addition to the Manoa Campus Center Fee and Activity Fee.

Note: Manoa Campus refund schedule is available on the Manoa Campus.

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

Residents \$12.00 per credit hour, up to a maximum of \$135.00 total tuition each semester.

Non-Residents

\$79.00 per credit hour, up to a maximum of \$940.00 total tuition each semester.

Summer Tuition & Fee Schedule

To be announced.

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

Change of Registration Fee

A \$1.00 fee is charged for each time a student completes a Change of Registration Form to add or drop a class or classes. In the event a student adds a course(s), there is the tuition balance in addition to the \$1 change fee, if applicable (see Schedule of Tuition on p. 38).

Credit by Examination Fee

The fee for Credit by Examination is based on the College's tuition schedule: \$12.00 per credit for part-time resident students or \$79.00 per credit for part-time non-resident students and a late registration fee of \$2.00. Full-time students must pay only 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. 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

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

1. 60 years of age or older
2. A resident of the State of Hawaii
3. Has completed the General Admissions Requirements of the College.

Enrollment for classes will be on a space-available basis. Procedures for registering under the Senior Citizens Tuition Exemption program will be announced in the students' registration packets.

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, and
3. maintain satisfactory performance records with their guard or reserve units.

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 should 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.

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.

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 \$80–\$100 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 their credit load.
4. Students dropping classes because of administrative cancellations and students dropped as "No-Shows" by instructors.

Procedure

To obtain a refund, students must process a Change of Registration Form at Admissions and Records Office and then to 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 working day before the first day of instruction.
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 College Dean of Instruction or Director of Student Services.

1. 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.
2. 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. Refunds of less than a dollar will not be refunded.

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

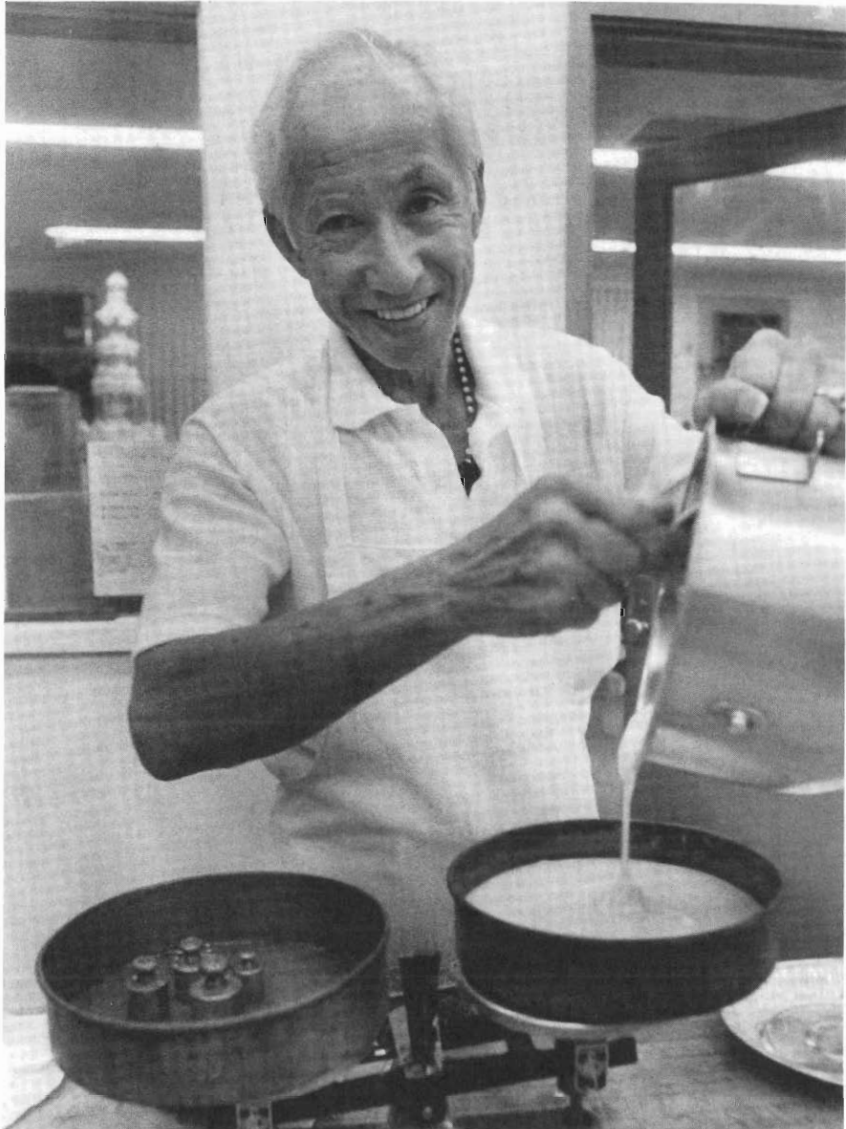
1. For credit courses with equal distribution of class meeting hours through the term of the course:
 - a. 100% refund for complete withdrawal if made on or before the last working day before the first day of instruction.
 - b. 80% or 40% refund in accordance with the schedule below which is based on 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	4th-6th day
7 weeks	1st-4th day	5th-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.

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–9:30 pm	7.00/semester
d) Daily parking, Zone (8), space availability	.35/hour

See map on page 192 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

Students who have financial obligations to the College (such as unreturned library books, unpaid loans, fines, parking tickets, tuition and fees, etc.) are subject to any or all of the following sanctions:

1. Denial of registration.
2. Cancellation of registration.
3. Transcripts, diplomas and/or grade reports withheld.

Sanctions are imposed under rules and regulations adopted by the Board of Regents governing delinquent financial obligations. A copy of these rules and regulations is available for review in the Business Office.

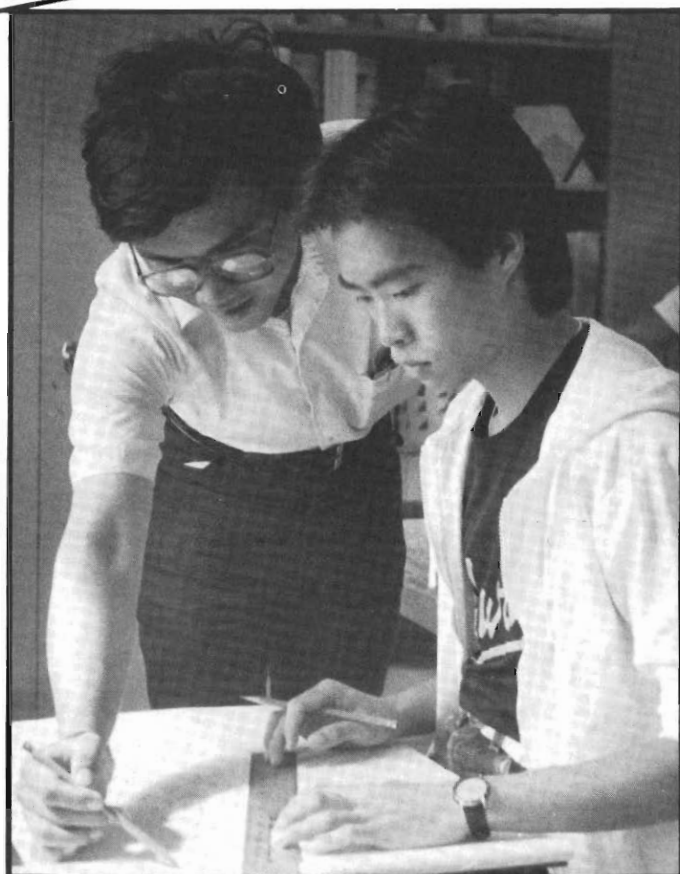
Special Fees and Charges

There will be a \$7.50 charge on checks tendered to the University or any department therein returned for any cause.

Graduation Fee

See page 48.

Degrees and Certificates



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 re-enrolled, (3) the year of his/her graduation, (4) the year he/she changed majors, or (5) the year the requirements for the program changed.

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 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 Admissions and Records Office as follows:

Fall Semester graduates.file 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 Admissions and Records Office by the announced deadline.

Participants will be charged a fee if the Graduation Committee decides to require caps and gowns for graduation.

Candidates for the Certificate of Completion must file an application with the Admissions and 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 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. There are no graduation exercises accompanying the award.

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 9; ELI 1, 6, 9 may not be used to fulfill Certificate of Achievement requirements.
- d. Students must demonstrate proficiency in Communications and Mathematics at the ENG 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.
- 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 Dean or Provost may also approve use of credit by examination to meet residency requirements at their discretion.

ASSOCIATE IN SCIENCE DEGREE

The Associate in Science degree is granted to students successfully completing a two-year program of vocational-technical 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 9, 10; ELI 1, 6, 9 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.
- 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 23
 - EE 150, 151
 - ICS 101
 - MATH 24, 25, 27, 50, 55, 58, 100, 115, 123, 127, 205, 206, 231, 232
 - PHIL 50, 210
- (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, 60, 130
 - BOT 101–101L, 130–130L
 - CHEM 20, 100–100L, 151–151L, 161–161L, 162–162L, 171–171L
 - GEOG 101
 - GG 101
 - IS 40
 - MICRO 125, 130–130L
 - OCEAN 180, 190, 201, 230
 - PHYS 51; 51-B, C, D, E; 55; 55-B, C, D, E; 57; 58; 100–100L, 151–151L, 152–152L, 170–170L, 272/272L, 274
 - SCI 20, 50 all modules, 121, 122
 - ZOOL 101, 200, 230, 240
 - (b) Functioning effectively in society
 - COMUN 50
 - ECON 18
 - ENG 21B, 21C, 102, 210
 - FNS 19, 184, 285
 - HD 130, 296 (For non-HSERV majors); 69, 85
 - HE 153, 260
 - HUM 36
 - JOURN 205
 - JPNSE 30, 31
 - LSK 30
 - MGT 20
 - POLSC 24
 - PSY 54, 69, 110
 - SOC 22
 - SP 251, 253
 - SSCI 41, 42
 - VOC 89
 - (c) Understanding the social environment
 - AJ 100 (For non-AJ majors)
 - AMST 211, 212
 - BUS 20 (For non-BUS majors)
 - ECON 120, 150, 151, 211
 - GEOG 22, 102, 151
 - HD 31, 133, 201, 230, 231–232, 244 (For non-HSERV majors)

HPER 195
 HUM 60, 151
 JOURN 150
 OSH 101 (For non-OSH majors)
 POLSC 110, 220, 271
 PSY 100, 220, 222, 230
 REL 151
 SOC 100, 200, 214, 218, 231, 251 (formerly 220)
 SSCI 40, 120, 125
 WS 130

(d) Understanding and appreciating world cultures and values

ART 30, 60, 100, 101, 107, 108, 113, 114, 115, 116, 270, 280

(CMART majors may only use ART 101 to satisfy this requirement.)

AMST 201, 202

ANTH 150, 200, 210

ASIAN 100, 297

BOT 105

CHNSE 101, 102

DRAMA 101, 201

EALL 271, 272

ENG 250, 251, 252, 253, 254, 255, 256, 257

FR 101, 102

HAW 101, 102, 261

HAWNA 24, 231

HIST 23, 24, 27, 30, 32, 151–152, 224, 230, 241–242, 281–282

HUM 20, 37

JPNSE 24, 101, 102

LING 102

MUS 106, 108

PHIL 100, 101, 102, 200, 201, 255

POLSC 245

REL 20, 150, 200, 201, 203, 204, 205

SP 231

SSCI 220, 221, 225

TAG 101, 102

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 Dean of Instruction or the Provost may approve use of credit by examination to meet residency requirements.

ASSOCIATE IN ARTS DEGREE PROGRAM

The Liberal Arts courses leading to the Associate in Arts Degree are applicable to the first two year requirements of most baccalaureate degree programs at the University of Hawaii, Manoa Campus. Program requirements for the Associate in Arts degree are shown below. A minimum of fourteen (14) courses distributed

among the various disciplines is required. The number of courses required in each area is specified.

It is important that program advisors be consulted to help plan the selection and sequence of course work, because each of the 4-year colleges in the University of Hawaii has specified area requirements for junior standing. Students entering Honolulu Community College who have already determined their professional career goals can achieve such standing by a judicious selection of elective courses.

Students majoring in Liberal Arts may substitute other courses from within the University of Hawaii system for a specific requirement listed below if the Coordinator of Admissions and Records 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 the University of Hawaii, Manoa or Hilo, 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 goal.

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. Minimum general education requirements: 42 credits
 - (1) Communications—two courses:
 - (a) English 100
 - (b) Speech 151 or 200
 - (2) Quantitative or logical reasoning—one course chosen from the following two groups:
 - (a) Mathematics 100, 115, 123, 127, 205, 206, 231, 232
 - (b) Philosophy 210

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

(3) World Civilization Requirement

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

(4) Other Requirements

The courses listed below had been certified for acceptance in the Arts and Sciences core at the University of Hawaii at Manoa prior to the printing deadline for this catalog. Additional courses may have been certified since the catalog's publication. An updated list of certified courses may be obtained from your program advisor.

Humanities—Three courses distributed among three of the following four groups:

Group A

DRAMA 101

EALL 271, 272

ENG 250, 251, 252, 253, 254, 255, 256, 257

HAW 261

Group B

PHIL 100, 101, 102, 200, 201, 255

REL 150, 151, 200, 201, 203, 204

Group C

AMST 201-202

ART 101, 270, 280

DRAMA 201

HIST 241, 242, 281, 282

LING 102

MUS 106, 108

Group D

ART 107, 108

Natural Sciences—Three natural sciences courses are required. One course must be a 3 or 4 credit lab science.* It is recommended that students choose courses from both physical and biological sciences.

Biological Sciences

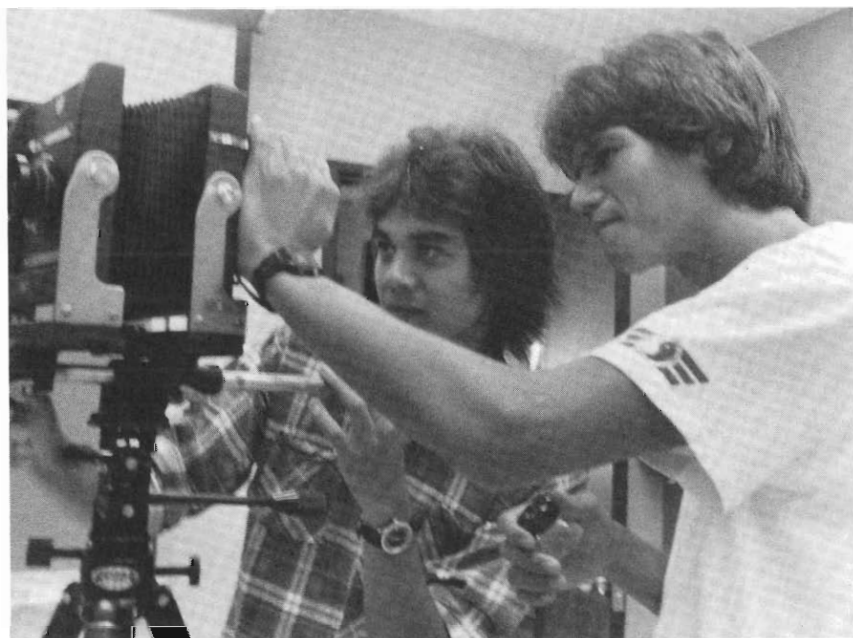
BOT 101-101L*, 130-130L*

MICRO 125, 130, 130L*

OCEAN 201

SCI 121*

ZOOL 101*, 200*, 230*



Physical Sciences

ASTRO 110

CHEM 100–100L*, 151–151L*, 161–161L*, 162–162L*, 171–171L*

GEOG 101

GG 101*

ICS 101

PHYS 100–100L*, 151–151L* 152–152L*, 170–170L*, 272/272L*, 274*

SCI 122*

*Each combination of lecture and lab is here considered one course.

Social Sciences—Three courses including at least one course from each group:

Group A

AMST 211, 212

ANTH 150, 200

BOT 105

JOURN 150

PSY 100, 110, 220, 222, 230

SOC 100, 200, 214, 218, 231, 251 (formerly 220)

SSCI 120

Group B

ECON 120, 150, 151, 211 (ECON 211 students may not repeat ECON 311 at UH Manoa)

GEOG 102, 151

POLSC 110, 220, 245, 271

- (5) Electives: Minimum 17 credits selected from Liberal Arts courses numbered 100 and above.

Electives may include Hawaiian or Foreign Language and Culture courses which are not required for the AA degree at Honolulu Community College but are required for the BA degree offered by the College of Arts and Sciences at UH Manoa. The following Honolulu Community College courses have been accepted for College of Arts and Sciences core in the Language and Culture category.

CHNSE 101, 102

EALL 271, 272 (only for students taking Japanese Language)

FR 101, 102

HAW 101, 102

HAW 261 (only for students taking Hawaiian Language)

HIST 224 (only for students taking Hawaiian Language)

JPNSE 101, 102

REL 205 (only for students taking Hawaiian Language)

TAG 101, 102

- (6) 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 Dean or Provost may also approve use of credit by examination to meet residency requirements at their discretion.

Programs and Courses



Vocational Programs

ADMINISTRATION OF JUSTICE (AJ)

Department Head and Instructor: Robert Lansing.

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

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

Twenty-seven units in Administration of Justice courses (incl. AJ 121 and 128) are needed to satisfy the major course requirements.

Cost for textbooks is approximately \$50–\$75 per semester.

Program Prerequisite: ENG 9 or Placement in Eng 10		Associate in Science Degree Credits
First Semester		
AJ 121	Introduction to Law Enforcement	3
AJ 128	Police Reporting	3
Administration of Justice Elective (Recommended: AJ 123, 127)		3
General Education Requirements*		6
		<hr/> 15
Second Semester		
Administration of Justice Electives (Recommended: AJ 124, 126, 150, 245)		3
General Education Requirements*		9
		<hr/> 15
Third Semester		
Administration of Justice Electives (Recommended: AJ 227, 244)		9
SP 20 or Sp 151		3
Electives**		3
		<hr/> 15

Fourth Semester

Administration of Justice Electives (Recommended: AJ 228, 240, 246)	6
Electives**	9
	<hr/> 15
Minimum Credits Required	<hr/> 60

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

**Electives must be Administration of Justice or Liberal Arts courses. In addition, a maximum of 3 credits from the following areas: HLTH, HD, HSERV, OSH, HPER, TYPW or LSK 110.

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

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 \$40 each. General education texts average \$15–\$20 each.

	Associate in Science Degree Credits
Apprenticeship Training	30–45
General Education Requirements*	15
Electives*	0–15
Minimum credits required	<hr/> 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 22, SP 20B/C, PHYS 61, 62B/C, MATH 66, PSY 54.

ARCHITECTURAL DRAFTING TECHNOLOGY (ADT)

Department Head: Gerald Lee.

Instructors: Mervin Chang, Chester Kato, Gerald Lee, Douglas Madden.

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

Cost for essential supplies, instruments, and textbooks is approximately \$150.00.

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

Program Prerequisite: MATH 1 or Placement in MATH 50		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
DRAFT 20	Introduction to Drafting	4	4
DRAFT 24	Descriptive Graphics	3	3
DRAFT 26	Construction Materials	3	3
General Education Requirement (MATH 55)			3
(MATH 58 or 123 may be substituted)			
ENG 22–60, 100; SP 20, 151, 200; HUM 35; or DRAMA 20			3
		10	16
Second Semester			
DRAFT 36	Architectural Drafting I	4	4
DRAFT 30	Architectural Construction I	4	4
CARP 50	Carpentry for Trades & Industry	3	3
SMP 29	Sheet Metal Architectural Design	2	2
General Education Requirement*			3
		13	16
Third Semester			
DRAFT 38	Architectural Drafting II	5	5
DRAFT 42	Codes and Specifications	4	4
BLPRT 22	Blueprint Reading & Drafting		3
PHYS 51B, 51C, 51E; PHYS 57; PHYS 151/151L;			
GEOG 101; IS 40; or OCEAN 201			3–4
		9	15–16
Fourth Semester			
DRAFT 44	Building Services	3	3
DRAFT 40	Architectural Drafting III	4	4
DRAFT 32	Structural Drafting	3	3
WELD 17B or	Gas Welding or		
WELD 17C	Arc Welding		1
General Education Requirement*			3
		10	14
Minimum Credits Required		42	61–62

*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)

Department Head: Stanley Oganeku.

Instructors: Walter Becklund, Stanley Oganeku, Samuel Uchida.

The curriculum is designed to prepare the students for employment in the Auto

Body Repair and Painting trade. Classroom and laboratory work is offered in a modern and well-equipped facility.

Cost for the tools, supplies and textbooks is approximately \$380.

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

Program Prerequisite: Placement in ENG 9		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
ABRP 20	Basic Auto Sheet Metal	12	12
MATH 50	Technical Mathematics I		3
		12	15
Second Semester			
ABRP 22	Auto Body Refinishing	12	12
(Communication)			3
General Education Requirement (PHYS 55B and E)			4
		12	19
Third Semester			
ABRP 40	Auto Body Minor Repairs	12	12
General Education Requirement*			3
		12	15
Fourth Semester			
ABRP 41	Auto Body Major Repairs	12	12
General Education Requirement*			3
		12	15
Minimum Credits Required		48	64

*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)

Department Heads: Victor Lee and George Ryusaki.

Instructors: Victor Lee, Dennis Miyano, Henry Obayashi, 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 institutions of higher learning.

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

Cost of supplies, tools, and textbooks is approximately \$350.

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

Program Prerequisite: Placement in ENG 9 First through Third Semester Alternatives may be taken in any order.		Certificate of Achievement Credits	Associate in Science Degree Credits
Entry Semester Alternative 1			
AMT 17	Machine Tools & Industrial Materials	2	2
AMT 20	Introduction to Automotive Mechanics	1	1
AMT 23	Lubrication & Cooling Systems	1	1
AMT 30B	Engines I	3	3
AMT 30C	Engines II	3	3
HLTH 31	First Aid and Safety	1	1
(Communication)			3
		11	14
Entry Semester Alternative 2			
AMT 40B	Automotive Fuel Systems	3	3
AMT 40C	Basic Automotive Electricity and Battery	2	2
AMT 40D	Starter and Charging Systems	2	2
AMT 40E	Tune Up Ignition System	3	3
WELD 17B	Gas Welding	1	1
MATH 50	Technical Mathematics I		3
General Education Requirement*			3
		11	17
Entry Semester Alternative 3			
AMT 43**	Automotive Air Conditioning	3	3
AMT 46	Power Train	3	3
AMT 50	Automatic Transmission	3	3
AMT 53	Brake Systems	2	2
AMT 55	Suspension and Steering	2	2
General Education Requirement*			3
		13	16
Fourth Semester			
AMT 57	Emission Control	2	2
AMT 60B	Diagnostic Tune Up	4	4
AMT 60C	Diagnostic Transmission, Brakes, Suspension	2	2
AMT 60D	Diagnostic Engine, Electrical Cooling and Lubrication Systems	4	4
General Education Requirement*			3
		12	15
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.

****Prerequisite:** AMT 40B Fuel Systems and AMT 40C Electrical Systems.

Note: First semester students may select any of the 3 alternatives.

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

AVIATION MAINTENANCE TECHNOLOGY (AVMAT)

Address: 402 Aokea Street

Department Head: Robert Whittinghill.

Instructors: Clement W. S. Chun, Robert S. Whittinghill.

The AVMAT Department is an approved aviation maintenance technician training facility operating under Federal Aviation Administration Air Agency Certificate No. 4618 with Airframe, Powerplant, and combined Airframe and Powerplant ratings. It is the only such school in the Pacific Basin.

The AVMAT program consists of the General Aviation Maintenance curriculum of 400 hours, the Airframe Maintenance curriculum of 750 hours, and the Powerplant Maintenance curriculum of 750 hours for a minimum total of 1900 hours of theory and laboratory instruction in four (4) semesters. Normally, students will not be allowed to enter the Airframe or Powerplant course without first completing the General Aviation Maintenance course.

An Associate in Science Degree or Certificate of Achievement is awarded students who complete the program. Upon completion of the GENERAL and either the AIRFRAME or POWERPLANT curricula, the student is eligible to take the FAA examination for the appropriate Airframe or Powerplant rating without waiting to complete the program.

Successful completion of each course requires at least a "C" grade in each unit with all absences made up or the course repeated.

In addition to preparing the student for the entry level as an Aviation Maintenance Technician, basic skills applicable to many other vocational areas are included in this program. Some of these skills are oxy-acetylene welding; wood-working; sheetmetal handforming and riveting; spray painting; overhaul and repair of reciprocating and gas turbine engines, generators, ignition, fuel and lubrication components; and repair of electrical, hydraulic, refrigeration, air conditioning, and pressurization systems and components.

All instructors have extensive experience in the aviation industry and possess appropriate FAA certificates and qualifications.

Cost for textbooks and a required tool kit is approximately \$550.

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.

Program Prerequisites: ENG 10, MATH 1 or
Placement in ENG 20-60, MATH 50

		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
AVIAT 20	Av Mnt Tech I	5	5
AVIAT 21	Av Mnt Tech II	5	5
AVIAT 23	Av Mnt Tech III	7	7
MATH 50	Technical Mathematics I	3	3
		<hr/> 20	<hr/> 20

Second Semester

AVIAT 24	Recipr Eng	5	5
AVIAT 36	P/P Sys Comp II	2	2
AVIAT 40	Eng Elec Sys Cmp	8	8
AVIAT 46	Propellors	3	3
Communications (Rec: ENG 60)			3
		18	21

Third Semester

AVIAT 30	A/F Struct I	4	4
AVIAT 32	A/F Struct II	5	5
AVIAT 35	P/P Sys Comp I	6	6
AVIAT 47	Insp Mnt Rep Eng	4	4
AVIAT 48	A/C Turbine Engines	4	4
General Education Requirement*			3
		23	26

Fourth Semester

AVIAT 41	A/C Sys Comp I	5	5
AVIAT 43	A/C Sys Comp II	6	6
AVIAT 45	A/C Sys Comp III	7	7
AVIAT 34	A/F Struct III	3	3
General Education Requirement*			3
		21	24
Minimum Credits Required		82	91

*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.

BUSINESS (CLERC, STENO, SSCI)

Department Head: Jean Hara.

Instructors: Jade Dung, Jean Hara, Debra Miller.

The Business Department offers three programs of study. These programs are competency-based and focus on the skills, knowledge, and attitudes needed to prepare the student for entry-level office positions in the shortest possible time. The three programs of study are:

The General Clerical Program: A one-semester, intensive program, which includes the development of the basic skills, work habits, and attitudes for general clerical office positions. The program leads to the Certificate of Completion. Residency requirement for the Certificate of Completion: 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 Dean or Provost may also approve use of credit by examination to meet residency requirements at their discretion.

The Stenography Program: A two-semester, intensive program, which prepares the student for entry-level stenographic positions. This program leads to the Certificate of Achievement.

The Secretarial Program: A two-year or four-semester program, which prepares the student for entry-level stenographic/secretarial positions. Third and fourth semester courses are offered in the evening. This program leads to the Associate in Science Degree.

Cost of supplies and textbooks is approximately \$180–\$220 per semester.

Program Prerequisites:

General Clerical—

ENG 9, MATH 1 or
Placement in ENG 10,
MATH 22 or 50

Stenography & Secretarial—

ENG 10, MATH 1 or
Placement in ENG 22,
MATH 22 or 50

First Semester

		Certificate of Completion Credits	Certificate of Achievement Credits	Associate in Science Degree Credits
BUS 23	Business Mathematics	3	3	3
ENG 10	Basic Writing V	3		
ENG 22	Introduction to Expository Writing		3	3
OFPRO 20	Filing/Indexing	2	2	2
OFPRO 40	Office Procedures	3		
OFPRO 42	Personal Development	3	3	3
SHTHD 20	Beginning Shorthand		4	4
TYPW 20	Beginning Typewriting	3	3	3
		17	18	18

Second Semester

OFPRO 40	Office Procedures		3	3
SHTHD 30	Intermediate Shorthand		4	4
TYPW 30	Intermediate Typewriting		3	3
TRNSC 35	Machine Transcription		3	3
BUS 93V	Cooperative Education (Optional)		0–4	0–4
ENG 55	Business Communications		3	3
			16–20	16–20
Minimum Credits Required		17	34–38	34–38

Third Semester

ACC 20	Introduction to Accounting			3
BUS 20	Introduction to Business			3
SHTHD 40	Advanced Shorthand			4
General Education Requirement*				6
				16

Fourth Semester

WPRO 50	Introduction to Word Processing			3
OFPRO 50	Secretarial Procedures			4
Elective (Recommended: BUS 93V)				3
General Education Requirement*				3
				13
Minimum Credits Required				63–67

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

CARPENTRY (CARP)

Department Head: Harvey Chun.

Instructors: 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 \$300 for the first year and \$50 for each succeeding year.

Program Prerequisites: ENG 9, MATH 1 or Placement in ENG 10, MATH 50		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
CARP 20	Introduction to Carpentry	11	11
BLPRT 30F	Blueprint Reading For Carpenters	4	4
MATH 50	Technical Mathematics I	3	3
		18	18
Second Semester			
CARP 22	Concrete Form Construction	11	11
OSH 101	Introduction to OSH I	3	3
ENG 22–60, 100; SP 20, 151, 200; HUM 35; or DRAMA 20			3
		14	17
Third Semester			
CARP 41	Rough Framing & Exterior Finish	11	11
General Education Requirements (Rec: SSCI 41)			3
		11**	14
Fourth Semester			
CARP 42	Finishing	11	11
General Education Requirement*			3
		11	14
Minimum Credits Required		54	63

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

**Students desiring full-time status are required to register for 12 credits. Recommended courses: HLTH 31, First Aid & Safety; WELD 17C, Arc Welding.

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

COMMERCIAL ART (CMART)

Department Head: Marcia Morse and Michel Kaiser.

Instructors: Harrison Bud Brooks, Michel Kaiser, Kit Kowalke, Marcia Morse, Linda Oszajca.

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 \$700. 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, MATH 1 or
Placement in ENG 48, MATH 50

**Associate
in Science
Degree
Credits**

First Semester

ART 113	Foundation Studio A/Basic Drawing	3
ART 115	Foundation Studio C/Two Dimensional Design	3
General Education Requirement (ART 101)		3
CMART 20	Commercial Art I	4
General Education Requirement*		3
		<hr/> 16

Second Semester

ART 213 or 214	Drawing or Life Drawing	3
ART 207	Photography Studio I	3
CMART 21	Commercial Art II	4
CMART 58	Advertising Copy & Business Practice	3
General Education Requirement*		3
		<hr/> 16

Third Semester

CMART 32	Graphic Design (CMART 33 may be substituted)	4
Elective	Art or Commercial Art**	3
Elective	Commercial Art, or Graphic Arts**	3-4
General Education Requirements*		6
		<hr/> 16-17

Fourth Semester

Elective	Commercial Art**	4
Elective	Commercial Art, or Graphic Arts**	3-4
Elective	Commercial Art or Art**	3-4
CMART 70	Portfolio Presentation and Review	3
		<hr/> 13-15
Minimum Credits Required		<hr/> 61 <hr/>

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

**Electives - CMART 32, 33, 34, 35, 36B, 36C, 40, 50, 55, 60V, 93V, 99V; ART 60, 100, 114, 116, 209, 215, 216, 217, 223, 270, 280; GRAPH 23, 25.

COMMERCIAL BAKING (BAKE)

Department Head: Fred Young.

Instructors: Isaac Tamada, Fred Young.

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 \$75.

		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
BAKE 40	Baking Industry I	10	10
General Education Requirement (MATH 50)			3
ENG 22-60, 100; SP 20, 151, 200; HUM 35; or DRAMA 20			3
		10	16
Second Semester			
BAKE 41	Baking Industry II	10	10
BIOL 60	Microorganisms, Food and Sanitation		3
General Education Requirement*			3
		10	16
Third Semester			
BAKE 50	Shop Practice I	10	10
ART 30	The Visual Arts		3
General Education Requirements*			3
		10	16
Fourth Semester			
BAKE 51	Shop Practice II	10	10
MGT 20	Introduction to Management		3
CHEM 100/100L			4
		10	17
Minimum Credits Required		40	65

*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.

COSMETOLOGY (COSME)

Department Head: Gene Schaefer.

Instructors: Nancy-Beth Au, Lorraine Okami, Gene Schaefer.

The student who earns a Certificate of Achievement or an Associate in Science in Cosmetology is prepared for the State Board of Cosmetology Examination. Upon passing the examination the individual becomes a licensed cosmetologist.

The four-semester program will develop in the student a knowledge and appreciation in 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.

There are two special Admission requirements:

- 1. Submit a high school diploma or its equivalent. Applicants without the high school diploma will be denied admission to the Program.
- 2. Register with the State Board of Cosmetology at 10 South King Street, Honolulu, Hawaii.

A basic cosmetology kit, uniform, and textbooks cost approximately \$250.

Program Prerequisites: ENG 9, MATH 1 or Placement in ENG 10; high school diploma or equivalent		Certificate in Achievement Credits	Associate in Science Degree Credits
First Semester			
COSME 20	Elementary Cosme Theory	3	3
COSME 21L	Elementary Cosme Lab	10	10
General Education Requirement (COMUN 50)*		3	3
		16	16
Second Semester			
COSME 30	Intermediate Cosme Theory	3	3
COSME 31L	Intermediate Cosme Lab	10	10
CHEM 55	Fundamentals of Cosmetic Chemistry	3	3
		16	16
Third Semester			
COSME 40	Advanced Cosme Theory	3	3
COSME 41L	Advanced Cosme Lab	10	10
General Education Requirement (Rec: ART 30, or BUS 20)**			3
		13	16

Fourth Semester

COSME 50V	Cosmetology Board Preparation***	0-6	0-6
Elective			0-3
General Education Requirements**			9
		0-6	12-15
Minimum Credits Required (See Note)		45-51	60-63

*Communication 50 taken concurrently with COSME 20/21L.
**General Education Requirements for the A.S. degree are listed under Degrees and Certificates.
***Students with fewer than 1800 hours of cosmetology must take COSME 50V to accumulate required hours.
Note: Students must meet the minimum proficiency standards in communication and computation established by the College to qualify for the Certificate of Achievement.

ELECTRICAL INSTALLATION AND
MAINTENANCE TECHNOLOGY (EIMT)

Department Head: Thomas Mikulski, Gordon Pang.
Instructors: Harry Kawamura, Thomas Mikulski.

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 electric 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 \$125. Required handtools cost approximately \$75.

Program Prerequisites: ENG 10, MATH 1 or Placement in ENG 20-60, MATH 50		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
ELEC 20	Electrical Fundamentals	4	4
ELEC 22	Wiring Materials and Methods	6	6
MATH 50	Technical Mathematics I	3	3
Communication (Rec: ENG 60)			3
		13	16
Second Semester			
ELEC 30	Electrical Installation Theory I	4	4
ELEC 32	Electrical Installation Lab I	6	6
BLPRT 22	Blueprint Reading and Drafting	3	3
MATH 55	Technical Mathematics II		3
		13	16

Third Semester

ELEC 40	Electrical Installation Theory II	4	4
ELEC 42	Electrical Installation Lab II	6	6
General Education Requirements*			6
		10	16

Fourth Semester

ELEC 44	AC/DC Systems & Equipment	4	4
ELEC 46	Electrical Maintenance & Repair	6	6
General Education Requirement*			3
		10	13
Minimum Credits Required		46	61

*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)

Department Head: Richard Inamine and Charles Shelton.

Instructors: Richard Inamine, Raymond Kamaura, Charles Shelton, Lawrence Torres.

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

Cost of equipment and textbooks is approximately \$250.

Program Prerequisites: ENG 10, MATH 25 or
Placement in ENG 60, MATH 58

Associate
in Science
Degree
Credits

First Semester

ETRON 20	Electronics I	4
ETRON 20L	Electronics I Laboratory I	2
ETRON 21	Electronic Fabrication I	2
General Education Requirement (MATH 58, 127, 205 or 206)		3
General Education Requirement (PHYS 58)		4
(PHYS 152–152L or higher may be substituted)		
		15

Second Semester

ETRON 22	Applications of Electronics	4
ETRON 22L	Applications of Electronics Laboratory	2
DRAFT 22D	Electronic Drafting	2
General Education Requirements (incl. ENG 60)*		6
		14

Third Semester

<i>Electronics Communications Option</i>		
ETRON 41	Pulse Circuits	4
ETRON 41L	Pulse Circuits Laboratory	2
General Education Requirement (PHYS 57)		4
(PHYS 151–151L or higher may be substituted)		
Electronics Elective		6
		<hr/> 16
<i>Biomedical Option</i>		
ETRON 41	Pulse Circuits	4
ETRON 41L	Pulse Circuits Laboratory	2
ETRON 33	Biomedical Electronics I	3
BIOL 22 or 130	Human Anatomy and Physiology	3
PHYS 57 (PHYS 151–151L or higher may be substituted)		4
		<hr/> 16

Fourth Semester

<i>Electronics Communications Option</i>		
ETRON 42	Electromagnetic Transmission	3
ETRON 42L	Electromagnetic Transmission Laboratory	1
ETRON 48	Electronic Communication System	3
ETRON 48L	Electronic Communication System/Laboratory	1
Electronics Electives		4
General Education Requirement*		3
		<hr/> 15
<i>Biomedical Option</i>		
ETRON 34	Biomedical Electronics II	3
ETRON 34L	Biomedical Electronics II Laboratory	1
ETRON 35	Biomedical Electronics III	4
Elective	Directed Studies (ETRON 99V)	1
CHEM 20	Beginning Chemistry	3
or 151 & 151L		
General Education Requirement*		3
		<hr/> 15
Minimum Credits Required		
		Communications Option 60
		Biomedical Option 60

Recommended Electronics Electives:

COMUN 263C

ETRON 23, 27, 43/43L, 44, 52, 60, 80, 83–83L, 93V, 99V (V courses 1–4 credits only)

EE 120

One From ICS 101, 157, EE 150, 151 (3 credits only)

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

ENGINEERING TECHNOLOGY (ENGT)

Department Head and Instructor: Charles Yamamoto.

The Engineering Technology curriculum is a two-year program of study which includes courses in general education, fundamental engineering theories, and a knowledge of basic industrial practices. Students who successfully complete the curriculum will satisfy the requirements for graduation with an Associate in Science Degree. Maximum flexibility is available to persuade the student to enroll in supplementary courses, the levels of which are compatible with his degree of proficiency based on his previous educational background.

Graduates are qualified for employment as engineering technicians. An engineering technician participates in field surveying, civil drafting, structural drafting, soils and concrete testing, engineering computations, construction estimating, and engineering design.

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 engineering technician 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 supplies, instruments, and textbooks is approximately \$125.

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, MATH 24 or Placement in ENG 22–60, MATH 25		Associate in Science Degree Credits
First Semester		
ENGT 58	Engineering Graphics	4
MATH 25	Elementary Algebra II (Elective, if placed higher than MATH 25)	3
Communication (Rec: SP 20 or SP 151)		3
General Education Requirement (MATH 55)		3
General Education Requirements (ENG 22, 60, or 100)		3
		<hr/> 16
Second Semester		
ENGT 22	Surveying & Measurements I	4
ENGT 26	Mechanics I	3
ENGT 61	Construction Materials & Methods	3
MATH 27	Intermediate Algebra	3
General Education Requirement* (CHEM 151–151L)		4
		<hr/> 17
Third Semester		
ENGT 23	Surveying & Measurements II	4
ENGT 51	Strength of Materials	4
ENGT 54	Structural Drafting	3
ENGT 62	Construction Management	3
General Education Requirement*		3
		<hr/> 17

Fourth Semester

ENGT 31	Topographic Drafting I	3	
ENGT 64	Construction Estimating & Bidding	3	
ENGT 56	Soils and Foundations	3	
General Education Requirement*		3	
		<hr/>	12
Minimum Credits Required			<hr/> <hr/> 62

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

FASHION TECHNOLOGY (FT)

Department Head: Karen Hastings.

Instructors: 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).

		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
FT 111	Esthetics of Clothing	3	3
FT 205	Materials and Methods of Clothing or Construction		
FT 21	Basic Construction Techniques	4	4
FT 215	Block Pattern Designing	3	3
General Education Requirements*			6
		<hr/>	<hr/>
		10	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	3
FT 34	Intermediate Clothing Construction	3	3
FT 40	Textiles	3	3
		<hr/>	<hr/>
		15	15

Third Semester			
FT 237	Pattern Grading		3
FT 41	Apparel Design	3	3
FT 32	Advanced Apparel Design	3	3
FT 216 or	Fashion Design and Sketching or		
CMART 28	Textile Art	3	3
General Education Requirements*			3
		9	15
Fourth Semester			
FT 36	Draping	3	3
FT 38	Draping & Design	3	3
CMART 28 or	Textile Art		
FT 216	Fashion Design and Sketching	3	3
FT 43	Cutting Room Functions	3	3
General Education Requirement*			6
		12	18
Minimum Credits Required		46	64

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

**Electives 93V, 99V, 120, 126, 127, 128, 129, 130, and 131.

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)

Department Head and Instructor: John Dinneen

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 \$50–\$100 per semester.

A student should contact the Fire Science instructor or a counselor before starting the program, and periodically thereafter.

Program Prerequisites: ENG 10, MATH 1 or Placement in ENG 20–60, MATH 50		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
FIRE Electives		9	3
FIRE 22	Essentials of Fire Suppression		3
FIRE 23	Fundamentals of Fire Prevention		3
General Education Requirement (MATH 50)			3
General Education Requirement (Communication)*			3
		9	15

Second Semester

General Education Requirements*		6	
PHYS 50	Technical Physics		4
FIRE Electives		6	6
		<hr/> 6	<hr/> 16

Third Semester

CHEM 50	Introduction to Chemistry		4
FIRE Electives		9	9
General Education Requirement*			3
		<hr/> 9	<hr/> 16

Fourth Semester

FIRE Electives		6	6
General Education Requirement*			3
Electives			4
		<hr/> 6	<hr/> 13
Minimum Credits Required		<hr/> 30	<hr/> 60

*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)

Department Head: Barney Metz.

Instructors: Barney Metz, Frank Warner.

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

Cost of tools, supplies, and textbooks is approximately \$500.

		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
DIMCH 20	Diesel Engines	10	10
WELD 17B	Gas Welding	1	1
DIMCH 17	Hand and Shop Tools	2	2
MATH 50	Technical Mathematics I		3
		<hr/> 13	<hr/> 16
Second Semester			
DIMCH 30	Fuel Injection and Electrical Systems	10	10
WELD 17C	Arc Welding	1	1
HLTH 31	First Aid and Safety	1	1
(Communication)			3
		<hr/> 12	<hr/> 15

Third Semester

DIMCH 40	Power Train	12	12
General Education Requirements*			6
		<hr/>	<hr/>
		12	18

Fourth Semester

DIMCH 50	Diagnostics	10	10
General Education Requirement*			3
		<hr/>	<hr/>
		10	13

Minimum Credits Required	<hr/>	<hr/>
	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 and computation established by the College to qualify for the Certificate of Achievement.

HUMAN SERVICES (HSERV)

Department Head: Visitation Momeyer.

Instructors: Joan Dykstra, Kimi Matsuda, Vee Momeyer, Sharon Ota.

The Human Services curriculum is designed to prepare the student for a variety of para-professional 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. There are several options in this program of which three are listed below.

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 utilized. Seventy-five hours of work per semester is required for each credit earned in Work Practicum. Course designations for Work Practicum are ED 91V (Practicum/Education) and SOSER 91V (Work Practicum/Community Service). Course descriptions are listed in the Course Description section of this catalog.

There are two programs to prepare students for the field of early childhood education. One is competency-based (Child Development Associate) and the other one is an on-campus program with traditional classroom courses (Early Childhood Education) in addition to work practicum.

The cost of textbooks is approximately \$50–\$100 per semester.

Note: The following options will not be offered during the 1986–87 academic year: Corrections, Educational Assistant, Elderly Services.

Child Development Associate (CDA) Option

CDA training is competency-based and focuses primarily on the acquisition of specific skills and knowledge needed to work with pre-school children in center-based programs. Training includes at least fifty percent supervised field experiences, integrated with academic work (presented in the form of modules, seminars, workshops, and readings). The program is flexible and tailored to the individual needs of the student, and the period of training can vary depending on the student's previous experience and motivation. HCC training is directed toward achievement of specific competencies and preparation for final assessment. Final assessment and credentialing is done by the National CDA Consortium. In addition to completion of HCC application, interested students should apply for admission into the CDA program through the Department of Human Services.

		Certificate of Achievement Credits	Associate in Science Degree Credits
COURSES			
ED 49	CDA Orientation	3	3
ED 50V	CDA Training I	6	6
ED 51V	CDA Training II	6	6
ED 52V	CDA Training III	6	6
ED 57V	CDA Training IV	6	6
ED 253	CDA Assessment Preparation	3	3
ED, FNS, HD, HLTH, HSERV, HPER, or VOC electives (Recommended: HD 31, 130, 201, 231, 235, ED 167, 168)			9–15
General Education Requirements*			15–21
Minimum Credits Required		30	60

*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.

Early Childhood Education Option

		Certificate of Achievement Credits	Associate in Science Degree Credits
COURSES			
HD 31 or HD 231	Infancy - Early Childhood Introduction to Human Development	3	3
HD 130	Child Management	3	3
HD 235	Work with Parents	2	2
ED 167	Introduction to Early Childhood Curriculum I	3	3
ED 168	Introduction to Early Childhood Curriculum II	2	2

HSERV 51	Work Practicum Discussion	2	3–4
ED 91V	Work Practicum/Education	6	9–12
HLTH 31	First Aid/Safety	1	1
ED, FNS, HD, HSERV, HPER, or VOC electives		8	15
General Education Requirements*			15–19
Minimum Credits Required		30	60

*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.

Community Service Option

		Certificate of Achievement Credits	Associate in Science Degree Credits
COURSES			
SOSER 21	Social Work Theories and Practices	3	3
SOSER 22	Social Work Group Principles and Theories	3	3
SOSER 91V	Work Practicum/Community Service	6	9–12
HSERV 51	Work Practicum Discussion	2	3–4
HD 31 or HD 201 or HD 231	Infancy - Early Childhood Social Systems Perspectives of Human Resources Introduction to Human Development I	3	3
HD 232	Introduction to Human Development II	3	3
HPER 195	Modern Health: Personal and Community	2	2
VOC 55	Individual and Group Counseling	3	3
ED, FNS, HD, HSERV, or HLTH electives		5	1–16
General Education Requirements*			15–30
Minimum Credits Required		30	60

*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.

INDUSTRIAL EDUCATION (IED)

Department Head: Harry Kawamura.

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. Candidates completing program requirements are awarded the Associate of Arts—Industrial Education degree and can transfer to the College of Education to complete general education, professional education,

and teaching field requirements for the Bachelor's Degree. The cost of textbooks and materials is approximately \$30–\$50 per course.

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

I. 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, 104, 123, 127, 205, 206, 231, 232

World Civilization: 2 semester courses

History 151, 152

Humanities: 1 semester course

American Studies 201, 202

Art 101, 107, 108, 270, 280; 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, 200 201; Religion 150, 151

Natural Sciences: 1 semester course (including lab)

Chemistry 100–100L, 151–151L, 161, 162, 171–171L;

Physics 100–100L, 151–151L, 152–152L, 170–170L

Social Sciences: 1 semester course

Anthropology 150, 200;

Botany 105;

Economics 120 or 150, 151; Geography 102, 151;

Psychology 100, 110, 220; 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 seven 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)

IEDIE 102 (3)

3. Graphics Technology

ART 207 (3) (Permission of HCC instructor)

GRAPH 23 (4) (Permission of HCC instructor)

GRAPH 25 (4) (Permission of HCC instructor)

EDIE 309 (3) (Manoa only)

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 Hawaii
7. Industrial 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 Technical 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 Department Head or counselor.

INTERPRETING FOR DEAF PEOPLE (INTRP)

Certification of Completion

The curriculum is designed to prepare the student to serve as an interpreter for deaf people. Qualified interpreters may contract their services as private vendors or may employ their interpreting skills in other service positions such as the police service, social work, or health service. The main need is for part-time interpreters in educational and work training settings. Cost for textbooks is approximately \$50–\$75 per semester.

This program has been temporarily stopped-out. Contact Edgar Hanohano, Assistant Dean of Instruction, for details.

Program Prerequisite: INTRP 16

**Certificate
of
Completion
Credits**

First Semester

INTRP 20

Principles of Interpreting for Deaf
People I

3

INTRP 22	Laboratory in Interpreting for Deaf People	2
INTRP 24	Psycho-Social Aspects of Deafness	3
LING 102	Introduction to the Study of Language	3
		11
Second Semester		
INTRP 30	Principles of Interpreting for Deaf People II	3
SOSER 91V	Work Practicum	2
HSERV 51	Work Practicum Discussion	1
INTRP 34	English Vocabulary for Sign Language Interpreters	3
SP 20 or higher	Speech Communications	3
		12
Total credits		23

Residency requirement: 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 Dean or Provost may also approve use of credit by examination to meet residency requirements at their discretion.

MACHINE SHOP TECHNOLOGY (MST)

Department Head: George Kalilikane.
Instructors: George Kalilikane, Alvah Morley.
The curriculum is designed to provide instruction for the student desiring employment in industry where the use of metalworking machinery is extensive. Sources of employment are repair and maintenance shops, machine shops, industrial plants, shipyards, machine industries and other businesses where persons trained in machine shops are needed.
Cost of tools and textbooks is approximately \$350 plus additional cost of approximately \$25 during the second semester.

Program Prerequisite: MATH 1 or Placement in MATH 50		Associate in Science Degree Credits (*Certificate of Achievement Credits)	
		Entering in Fall Semester	Entering in Spring Semester
First Semester			
MACHS 20*	Benchwork	3*	3*
MACHS 24*	Lathe I	6*	6*
BLPRT 23*	Blueprint Interpretation & Sketching	3*	3*
Math 50*	Technical Mathematics I	3*	3*
		15(15*)	15(15*)

Second Semester

MACHS 26*	Lathe II	6*	
MACHS 30*	Grinding		3*
MACHS 32*	Milling Machine	6*	
MACHS 34*	Cutter Grinding		3*
PHYS 55B, 55C	Fundamentals of Metallurgy, Physical Effects of Stress and Heat on Metals		3
ENG 60	Technical Writing	3	
General Education: OSH 101 or Gp. C**			3
General Education: Gp. B or D**			3
		<hr/>	<hr/>
		15(12*)	15(6*)

Third Semester

MACHS 26*	Lathe II		6*
MACHS 30*	Grinding	3*	
MACHS 32*	Milling Machine		6*
MACHS 34*	Cutter Grinding	3*	
PHYS 55B, 55C	Fundamentals of Metallurgy, Physical Effect of Stress and Heat on Metals	3	
ENG 60	Technical Writing		3
General Education: OSH 101 or Gp. C**		3	
General Education: Gp. B or D**		3	
		<hr/>	<hr/>
		15(6*)	15(12*)

Fourth Semester

MACHS 40V*	Advanced Machine Tool Practice	1-10*	1-10*
WELD 19*	Welding for Trades and Industry	3*	3*
Electives		1-10	1-10
		<hr/>	<hr/>
		15(4*-13*)	15(4*-13*)
Minimum Credits Required		<hr/>	<hr/>
		60(37*)	60(37*)

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

Inside/Marine Machinist Option**Associate in Science Degree**

These two Associate in Science Degree options provide the necessary instruction and on-the-job training required to meet the "Limited Mechanics" qualifications as established by the United States Civil Service Commission for employment at Pearl Harbor Naval Shipyard. Graduates may qualify for positions as Inside Machinists or Marine Machinery Mechanics. Students selecting these options must see the program head or division counselor so that eligibility, based on civil service and shipyard regulations, can be determined.

Initial cost for tools and safety apparel will be approximately \$350 with an additional \$100 required at time of employment.

Inside Machinist Option

**Program Prerequisites: ENG 9, MATH 1 or
Placement in ENG 10 and MATH 50**

**Associate in Science
Degree Credits**

**Entering in Entering in
Fall Semester Spring Semester**

First Semester

MACHS 20	Benchwork	3	3
MACHS 24	Lathe I	6	6
BLPRT 23	Blueprint Interpretation & Sketching	3	3
BLPRT 45	Naval Blueprint Reading	2	2
MATH 50	Technical Mathematics I	3	3
		17	17

Second Semester

MACHS 26	Lathe II		6
MACHS 32	Milling Machine		6
MACHS 34	Cutter Grinding	3	
MACHS 93V	Cooperative Education	9	
PHYS 55B, 55C	Fundamentals of Metallurgy, Physical Effects of Stress and Heat on Metals		3
		12	15

Third Semester

MACHS 26	Lathe II	6	
MACHS 30	Grinding		3
MACHS 32	Milling Machine	6	
MACHS 50	Introduction to Shipboard Pumps and Valves	3	
MACHS 93V	Cooperative Education		9
PHYS 55B, 55C	Fundamentals of Metallurgy, Physical Effects of Stress and Heat on Metals	3	
		18	12

Fourth Semester

MACHS 30	Grinding	3	
MACHS 50	Introduction to Shipboard Pumps and Valves		3
MACHS 93V	Cooperative Education	9	
ENG 60	Technical Writing		3
General Education: OSH 101 or Gp. C*			3
General Education: Gp. B or D*			3
		12	12

Fifth Semester

MACHS 34	Cutter Grinding		3
MACHS 93V	Cooperative Education		9

ENG 60	Technical Writing	3	
General Education: OSH 101 or Gp. C*		3	
General Education: Gp. B or D*		3	
Electives: Rec. WELD 19		3	0-3**
		12	12-15
Minimum Credits Required		71	68-71

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

**Students entering program in the Spring semester are encouraged to take WELD 19.

Marine Machinist Option

Program Prerequisites: ENG 9, MATH 1 or Placement in ENG 10 and MATH 50		Associate in Science Degree Credits	
		Entering in Fall Semester	Entering in Spring Semester
First Semester			
MACHS 20	Benchwork	3	3
MACHS 24	Lathe I	6	6
MACHS 53	Introduction to Shipboard Machinery	3	
BLPRT 23	Blueprint Interpretation & Sketching	3	3
BLPRT 45	Naval Blueprint Reading	2	2
MATH 50	Technical Mathematics I		3
		17	17
Second Semester			
MACHS 30	Grinding		3
MACHS 53	Introduction to Shipboard Machinery		3
MACHS 55	Repair of Shipboard Machinery	3	
MACHS 93V	Cooperative Education	9	
PHYS 51B, 51C, 51D	Basic Measurement, Simple Machines, Hydraulics and Fluids		3
General Education: OSH 101 or Gp. C*			3
General Education: Gp. B or D*			3
		12	15
Third Semester			
MACHS 30	Grinding	3	
MACHS 55	Repair of Shipboard Machinery		3
MACHS 57	Alignment & Testing of Shipboard Machinery	3	
MACHS 93V	Cooperative Education		9
MATH 50	Technical Mathematics I	3	
General Education: OSH 101 or Gp. C*		3	
PHYS 51B, 51C, 51D	Basic Measurement, Simple Machines, Hydraulics and Fluids	3	
		15	12

Fourth Semester

MACHS 57	Alignment & Testing of Shipboard Machinery		3
MACHS 59	Naval Ship Systems & Components	3	
MACHS 93V	Cooperative Education	9	
ENG 60	Technical Writing		3
Electives			6
		12	12

Fifth Semester

MACHS 59	Naval Ship Systems & Components		3
MACHS 93V	Cooperative Education		9
ENG 60	Technical Writing	3	
General Education: Gp. B or D*		3	
Electives		6	
		12	12
Minimum Credits Required		68	68

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

MARINE PIPEFITTING (MPIPE)

Department Head: Alvah Morley.

This Associate in Science degree program provides the necessary instruction and on-the-job training required to meet the "Limited Mechanics" qualification as established by the United States Civil Service Commission for employment at Pearl Harbor Naval Shipyard. Students selecting this program must see the program head or division counselor so that eligibility, based on civil service and shipyard regulations, can be determined.

The cost of supplies and textbooks is approximately \$350.00.

Program Prerequisite: ENG 9, MATH 1 or
Placement in ENG 10 and MATH 50

		Associate in Science Degree Credits
First Semester		
PIPE 20	Intro to Marine Pipefitting	4
PIPE 30	Marine Pipefitting I	4
BLPRT 23	Blueprint Interpretation & Sketching	3
BLPRT 45	Naval Blueprint Reading	2
WELD 17B	Gas Welding	1
MATH 50	Technical Mathematics I	3
		17
Second Semester		
PIPE 93V	Cooperative Education	9
BLPRT 46	Naval Blueprint Reading II	3
		12

Third Semester

PIPE 40	Marine Pipefitting II	4
PHYS 51B, 51C, 51D	Basic Measurement, Simple Machines, Hydraulics and Fluids	3
PHYS 55B	Fundamentals of Metallurgy	2
ENG 20-60, 100; SP 20, 151; DRAMA 20; HUM 35		3
General Education: OSH 101 or Gp. C*		3
General Education: Gp. B or D*		3
		<hr/> 18

Fourth Semester

PIPE 50	Marine Pipefitting III	4
PIPE 93V	Cooperative Education	9
		<hr/> 13
Minimum Credits Required		<hr/> <hr/> 60

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

OCCUPATIONAL SAFETY AND HEALTH (OSH)

Department Head: John Dinneen

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.

A *specialization in Radiation Safety* leading toward an Associate in Science degree is available to students who have successfully completed one or more semesters in Occupational Safety & Health. Eligible students may be selected to work as Physical Science Aides at Pearl Harbor Naval Shipyard. An advising sheet listing details and eligibility requirements may be obtained from the Counseling Office.

The cost of supplies and textbooks is approximately \$50-\$150 per semester.

This program has been temporarily stopped-out. Contact Edgar Hanohano, Assistant Dean of Instruction, for details.

Program Prerequisites: ENG 22-60 or Placement in ENG 100 or equivalent. MATH 123 or Placement in MATH 127		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
OSH 101	Introduction to Occupational Safety and Health	3	3
CHEM 151, 151L	Elementary Survey of Chemistry (Lab)		4
ENG 100	Expository Writing Major Forms		3
MATH 127	Pre-Calculus: Elementary Functions		3
PSY 100	Survey of Psychology		3
		<hr/> 3	<hr/> 16

Second Semester

OSH 105	Introduction to Industrial Hygiene	3	3
OSH 205	Physical Hazards Control	3	3
OSH elective	(OSH 147)	3	3
PHYS 151, 151L	College Physics (Lab)		4
BIOL 22 or 130	Human Anatomy & Physiology	3	3
		<hr/> 12	<hr/> 16

Third Semester

OSH 103	Human Factors in Safety	3	3
OSH elective	(OSH 145, 153)	6	3
SP 151	Personal and Public Speech		3
General Education Requirement (Group B or D)		3	3
Elective (Recommended: FIRE 30 or ICS 101)			3
		<hr/> 12	<hr/> 15

Fourth Semester

OSH 210	Safety Program Management	3	3
Electives (Recommended: FIRE 23)		3	12
		<hr/> 6	<hr/> 15
Minimum Credits Required		<hr/> 33	<hr/> 62

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

POLICE SCIENCE (PS)

See **ADMINISTRATION OF JUSTICE (AJ)**

REFRIGERATION AND AIR CONDITIONING TECHNOLOGY (RAC)

Department Head: Derek Oshiro.

Instructors: Brian Ogata, 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 and tools is approximately \$300.

		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
RAC 20	Fundamentals of Refrigeration	5	5
RAC 22L	Refrigeration Laboratory I	5	5
RAC 27	Refrigeration Electricity	4	4
BLPRT 22	Blueprint Reading & Drafting	3	3
General Education Requirement (MATH 50)		3	3
		<hr/> 20	<hr/> 20

Second Semester

RAC 23	Advanced Refrigeration	5	5
RAC 24L	Refrigeration Laboratory II	5	5
RAC 28	Applied Electricity	2	2
General Education Requirements* (PHYS 51, 57, or 58)			4
		12	16

Third Semester

RAC 41	Psychrometry and Cooling Load	5	5
RAC 42L	Air Conditioning Machinery Lab I	5	5
General Education Requirements* (Recommended: OSH 101)		3	3
General Education Requirements* (Communications)			3
		13	16

Fourth Semester

RAC 43	Air Distribution and Air Conditioning Systems	5	5
RAC 44L	Air Conditioning Machinery Laboratory II	5	5
General Education Requirement*			3
		10	13
Minimum Credits Required		55	65

*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.

SHEET METAL AND PLASTICS TECHNOLOGY (SMP)

Department Head: Albert Chun.

Instructors: 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 duct, 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	4	4

SMP 23	Introduction to Surface Development	2	2
MATH 50	Technical Mathematics I		3
		<hr/> 13	<hr/> 16
Second Semester			
SMP 24	Advanced Fabrication Processes	4	4
SMP 25	Air Conditioning Fabrication	4	4
SMP 26	Pattern Development I	2	2
Communications	(HUM 35 or SP 20)		3
ENG 21C	Intermediate Reading (Technical)	3	3
		<hr/> 13	<hr/> 16
Third Semester			
SMP 41	Advanced Air Conditioning 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*	(Rec. SSCI 41)		3
		<hr/> 13	<hr/> 16
Fourth Semester			
SMP 44	Blow Pipe Fabrication	4	4
SMP 45	Advanced Fabrication	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
		<hr/> 14	<hr/> 17
Minimum Credits Required		<hr/> <hr/> 53	<hr/> <hr/> 65

*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.

WELDING TECHNOLOGY (WELD)

Department Head: Stanley Torricer.

Instructors: Wilfred Arakaki, 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 \$100.

		Certificate of Achievement Credits	Associate in Science Degree Credits
First Semester			
WELD 20	Introduction to Welding	8	8
WELD 24	Introduction to Metal Working Processes	5	5
BLPRT 22	Blueprint Reading & Drafting	3	3
		16	16
Second Semester			
WELD 30C	Welding Fabrication Techniques and Procedures	5	5
WELD 41B	Advanced Welding-Arc Welding of Ferrous Metals	3	3
WELD 50C	Arc & Oxy-Acetylene Welding	5	5
BLPRT 30B	Blueprint Reading for Welders	3	3
		16	16
Third Semester			
WELD 41C	Advanced Welding - Welding Qualification Procedures & Test & Pipe Welding		3
HLTH 31	First Aid and Safety		1
OSH 101	Introduction to Occupational Safety and Health (Gp C)		3
MATH 50	Technical Mathematics		3
General Education Requirements (Recommend SSCI 41, PHYS 55D)			6
			16
Fourth Semester			
WELD 50B	TIG & MIG Welding		3
General Education Requirements (Communication Requirement)			3
Electives			6
			12
Minimum Credits Required		32	60
Recommended Electives for Associate in Science:			
MACHS 22			
OSH 145			

*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.

Liberal Arts Departments, Disciplines & Staff

HUMANITIES

Department Head: Ronald Pine.

Instructors: Stanley Andrychowicz, Ron Batie, Dewey Caldwell, Norman Hallett, Terrence Haney, Doric Little, David Panisnick, Barbara Peterson, Ronald Pine, Alan Yonan.

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

INFORMATION AND COMPUTER SCIENCE

Department Head: Samuel Rhoads.

Instructors: Samuel Rhoads, Reginald Wood, Arthur Schroeder.

Although the College does not offer a major in Computer Science, it does offer courses designed to acquaint students with computer fundamentals and introductory computer programming.

LANGUAGE ARTS

Department Head: Gloria Hooper.

Instructors: Sonia Chess, Keith Crockett, George Dixon, Howard Driver, Joyce Henna, Leilani 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 and Tagalog language courses.

MATHEMATICS

Department Head: Roy Fujimoto.

Instructors: Alice Bertram, Roy Fujimoto, Michael Kaczmariski, Joanne Libarios, John Lilienthal, Frank Mauz, Elizabeth Mowbray, John Muth, James Reeder, Faye Tamakawa, Timothy Wilson, Arlene Yee, Sheila Yoder.

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

Department Head: Theodorus Hufen.

Instructors: Richard Brill, Donald Bourassa, Robert Eddinger, Kakkala Gopalakrishnan, Phil Hubbard, Theodorus Hufen, Mark Schindler, John Shen, Ron Takata.

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

SOCIAL SCIENCES

Department Head: Ramsey Pedersen.

Instructors: Caroline Blanchard, David Cleveland, Maka Larsen-Basse, Meda Lind, Lena Low, Thomas Ohta, Ramsey Pedersen, Reginald Wood, Richard Ziegler.

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

Special Programs

APPRENTICESHIP/JOURNEYWORKER TRAINING

Coordinators: Kazukiyo Kuboyama, Orville Mun.

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 self-improvement in their respective trades.

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

Asbestos Worker	Lather
Auto Mechanic	Machinist
Bricklayer Mason	Meatcutter
Building Maintenance	Millman Woodworker
Carpentry	Operating Engineer
Cement Finishers	Painting & Decorating
Ceramic Tile	Plasterer
City and County Water Supply	Plumber
City and County Waste Water	Public Works Center
Community Antenna Television System	Public Works Electrician
Drywall	Refrigeration and Air Conditioning
Electrician	Reinforcing Steel
Floor Layer	Roofer
Glaziers	Sheet Metal
Heavy Equipment Repairs	Taper
Ironworker	Welding

Home Study courses are provided in those areas where the demand exists to train indentured apprentices.

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

GARMENT INDUSTRY TRAINING PROGRAM

Address: 874 Dillingham Boulevard, Building 27, Room 112

Phone: 845-9212

Coordinator: Adrienne Kamaura and Paul Van Voorhees

Instructors: Adrienne Kamaura, Paul Van Voorhees

The Garment Industry Training Program is funded by the Hawaii State Legislature and administered by Honolulu Community College. The program provides non-credit short-term training for Power Machine Operators, Cutters, Spreaders, Marker Makers and other Garment Industry personnel.

JOB EXPERIENCE EDUCATION

Coordinator: Robert Kita, phone 848-0331

Instructors: David Babineau, Ellen Ishida.

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

The Job Experience Education program is federally funded and enrollment is limited to qualified applicants. All questions relevant to entry into the programs should be directed to the Job Experience Education office located on campus in Building 71.

THE EDUCATION CENTER (ED CENTER)

Address: 879 North King Street

Phone: 845-2908

Director: Milton Lau.

The Education Center has been a part of Honolulu Community College since January 1972.

The Center provides basic and upgrading skills for unprepared adults.

The program has three components:

1. Non-credit courses held in the community.
2. Learning laboratory (Basic skills, G.Ed. Preparation)
3. Counseling, information, and referral.

The Center differs from other adult education programs in many ways.

1. Classes are offered at the request of the community.
2. Services are offered all year.
3. Students may register any time during the year.
4. Classes are conducted for as few as 10 people.
5. Individualized counseling is available.
6. Tutoring is available.

PEARL HARBOR NAVAL SHIPYARD APPRENTICE SCHOOL

Address: Marine Barracks, Bldg. 281, Pearl Harbor Naval Shipyard.

The Pearl Harbor Naval Shipyard Apprentice School provides a four-year program of instruction in ship and shipyard maintenance and repair. Each year new apprentices are accepted into the program which offers career training in 22 separate vocational areas.

Apprentices in the Shipyard program receive related classroom instruction, trade theory, and work-experience training as part of their regular 40-hour week. Each year of training consists of four-week cycles of which three weeks are spent in the shop and one week in the classroom. During the classroom phase of related

instruction, courses are offered by Honolulu Community College instructors in Drafting, English, Industrial Psychology, Mathematics, Physics, and Speech. Within the work-experience and trade theory phases of the program, each apprentice receives Honolulu Community College approved trade training instruction.

Upon successful completion of apprenticeship, each graduate will be awarded up to 45 Honolulu Community College "career-course" credits for the work experience and trade theory phases of the program. In addition, to qualify for the Honolulu Community College Associate in Science degree, the apprentice must earn a minimum of 15 general education credits. (See APPLIED TRADES A.S. degree information.)

Special Courses

COOPERATIVE EDUCATION

Department Head: Donald Yanagihara.

Instructors: Kenneth Johnson, Donald Yanagihara.

Cooperative Education is offered in both vocational-technical and liberal arts areas.

One to four credits may be earned each semester by students in Cooperative Education courses. Five hours of work per week per semester is required for each credit awarded. A maximum of 12 cooperative education credits may be earned in a given program. Exceptions to the foregoing policies may be made for MST, MPIPE, ADT, and OSH majors.

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. Seventy-five hours of work per semester is required for each credit earned.

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. The student must be enrolled in appropriate major courses.

Courses available in Cooperative Vocational Education are ABRP 93V, AMT 93V, BAKE 93V, BUS 93V, CMART 93V, DIMCH 93V, DRAFT 93V, ELEC 93V, ENGT 93V, ETRON 93V, FT 93V, MACHS 93V, OSH 93V, PIPE 93V, and WELD 93V.

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.

See appropriate vocational-technical department listings for further information about Cooperative Vocational Education, and the Cooperative Education coordinator for information about Cooperative Arts and Sciences Education.

PRE-BUSINESS COURSES

Honolulu Community College offers most 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 250–257 (Literature)
SP 151 (Speech)
MATH 205 (Calculus)
ACC 201 (Intro to Financial Accounting)
ACC 202 (Intro to Management Accounting)
ECON 150 (Intro to Macroeconomics)
ECON 151 (Intro to Microeconomics)
ICS 101
All required liberal arts courses.

Presently one full-time faculty member serves as an advisor to any student interested in business. Interested students should contact Lena Low.

PRE-ENGINEERING COURSES

Honolulu Community College offers most of the courses required for the first two years of civil, mechanical, and electrical engineering at the University of Hawaii at Manoa. These offerings include the following courses:

CHEM 161/161L, 162/162L
MATH 205, 206, 231, 232
PHYS 170/170L, 272/272L, 274
EE 120, 150, 151
CE 270
ME 113
All required core courses

Presently two full-time faculty members serve as advisors to any students interested in engineering. Interested students should contact either Don Bourassa or Mark Schindler.

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 section will be organized as needed in each department and identified by the discipline departmental name. e.g. POLSC 199V and ENGT 99V.)

Course Descriptions



Course Descriptions

All courses offered at Honolulu Community College are listed alphabetically in this section according to the discipline. (Exceptions: Special Studies, Experimental Courses. See Special Courses.)

ACCOUNTING (ACC)

20 Introduction to Accounting (3)

Prerequisite: MATH I and Business major or consent of instructor.

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

24 Hawaiian Land Laws (2)

Study of history of Hawaii land tenure from the Great Mahele of 1948 to present. Common Hawaiian surveying terms and phrases, land court and other systems of land registration. (2 hrs. lect.)

100 Introduction to Law & the Legal System (3)

Prerequisite: ENG 22 or equivalent.

An introduction to Law and the American legal system. Strengths, weaknesses, and limitation of Law are discussed. State and federal cases are analyzed. (3 hrs. lect.)

121 Introduction to Law Enforcement (3)

Prerequisite or Co-requisite: ENG 10

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

123 Criminal Investigation I (3)

Prerequisite or Co-requisite: AJ 121

Proper handling of major criminal offenses, crime scene protection; what constitutes physical evidence; the assistance that may be obtained from various divisions or bureaus within the department. (3 hrs. lect.)

124 Criminal Investigation II (3)

Prerequisite: AJ 123 or consent of instructor

Case preparations; collection, preservation of physical evidence, crime scene search; use of fingerprints, casts, photographs, laboratory assistance, and scientific equipment available to assist the investigator. (3 hrs. lect.)

126 Juvenile Procedures and the Police (3)

Prerequisite or Co-requisite: AJ 121

Focus upon the law enforcement officer's need for a basic and practical understanding of the legal principles involved in juvenile delinquency problems. Analyses of legislative and judicial responses to juvenile behavior problems provide realistic and meaningful insights into the functioning of the juvenile justice processes. (3 hrs. lect.)

127 Operations of Uniformed Police (3)

Prerequisite or Co-requisite: AJ 121

This course will teach the student what the uniformed sections of the police department do. The responsibilities of patrol, traffic, and other uniformed personnel. Various types and methods of patrol will be covered; newer concepts surrounding the uniformed officer such as team policing, unit beat policing, and basic car plan will be discussed and illustrations given. (3 hrs. lect.)

128 Police Reporting (3)

Prerequisite: AJ 121

Corequisite: AJ 121

The accurate, concise, detailed reporting of police events. Reporting facts, observations, and incidents for successful prosecution. (3 hrs. lect.)

150 Constitutional Law (3)

Prerequisite or Co-requisite: AJ 121

Origin, development, philosophy and constitutional basis of arrest, search, seizure, and evidence. (3 hrs. lect.)

151 Constitutional Law II (3)

Prerequisite: ENG 10, AJ 121, 150 or consent of instructor

An extension and greater in depth exploration of AJ 150. Considerable time will be spent on the 4th, 5th, 6th, 8th and 14th amendments of the U.S. Constitution. (3 hrs. lect.)

160 The Use of Computers in Police Work (3)

Prerequisite: AJ 121

To familiarize the student with the modern technological advances and applications of the computer relative to police investigation, recordkeeping, crime analysis, crime trends and patterns, statistics and their importance, computer aided dispatch, etc. (3 hrs. lect.)

227 Criminal Law I for Police Science (3)

Prerequisite: ENG 22 or equivalent

A particularized study of the elements and characteristics of Criminal Law, in

general. Extensive and comparative analysis of the controlling criminal case law in the United States will be made. (3 hrs. lect.)

228 Criminal Law II for Police Science (3)

Prerequisite: ENG 10, AJ 121, 227 or consent of instructor

An extension of AJ 227, with additional time developed to current cases and to some extent local Hawaii cases. Some of the pertinent federal cases at the trial level, as well as the appellate decisions will be studied and discussed. (3 hrs. lect.)

240 Principles of Police Supervision (3)

Prerequisite or Co-requisite: AJ 121

The course will cover such essentials as the function of the supervisor in organization and management, elements of leadership, the training of function, instructional process, personnel evaluation systems, personnel complaint investigation procedures and techniques. (3 hrs. lect.)

244 Administration of Justice (3)

Prerequisite or Co-requisite: AJ 121

The history of our judicial (court) system; the various courts and their respective area of jurisdiction; procedures from the time of arrest through the sentencing of the individual or whatever disposition the court feels necessary. (3 hrs. lect.)

245 Police Organization and Management (3)

Prerequisite or Co-requisite: AJ 121

Principles of organization and administration in law enforcement; operations and activities of various divisions, bureaus or details, training, recruitment, planning; research, policy, inspection and control. (3 hrs. lect.)

246 Police and Community Relations (3)

Prerequisite or Co-requisite: AJ 121

The control role of the police department in the city government; the importance of a good community relations program, what constitutes a community relations program. Race attitude toward police, the "why" of such attitudes, and what might be done to change such attitudes. Various factors to be considered when organizing a community relations detail or program. (3 hrs. lect.)

AERONAUTICS (AERO)

20 Primary Ground School (3)

Introduction to fundamentals of flight. Includes basic study of Federal Aviation Regulations, meteorology, navigation, aerodynamics, radio navigation, communications, and general aircraft service and maintenance. Students will plan a cross-country flight which they will evaluate through actual execution of the flight. This course is designed to help the student prepare for the Private Pilot written examination. The course utilizes Computer Assisted Instructional materials. (3 hrs. lect.)

30 Commercial and Instrument Ground School (4)

Prerequisite: AERO 20 or equivalent

A study of the general areas of aeronautics necessary for the commercial and instrument pilot certificates. Emphasis is placed on flight planning, en route and terminal procedures, radio navigation aids, computers, and attitude instru-

ment flight. Stress is placed on safe operating procedures. Federal Aviation Regulations are reviewed constantly along with flight safety requirements. (3 hrs. lect.; 3 hrs. lab.)

AMERICAN STUDIES (AMST)

201-202 Introduction to American Civilization I & II (3-3)

The focus of this course is on one of the central themes of American thought and culture—Individualism. AMST 201 centers around the growth and development of the idea of individualism and examines some of the more important models of individualism—the frontiersman, the self-made man, etc. AMST 202 deals with the individualism and alienation, and therefore, examines various peoples estranged from the larger society. (3 hrs. lect.)

211 Contemporary American Issues I (3)

Selected urgent problems, such as changing values, urban crises, sex and race discrimination, environmental deterioration. (3 hrs. lect.)

212 Contemporary American Issues II (3)

Selected major socio-political problems and movements and their historical background. America's emergence as a world power; World War I and the Red Scare; the Cold War—abroad and at home; War-hawks and doves, technology, ecology, and the future. (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 non-transfer 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.)

ARCHITECTURAL DRAFTING TECHNOLOGY (DRAFT)

See DRAFTING (DRAFT)

ART (ART)**30 The Visual Arts (3)**

An introduction to the visual ideas and materials of art for non-majors. (3 hrs. lect.)

60 Printmaking Workshop (4)

Prerequisite: ART 113 or consent of department head or instructor

An introduction to the materials and techniques of major printmaking processes in historical and contemporary application. (3 hrs. lect.; 3 hrs. lab.)

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.)

107 Elementary Studio: Photography (3)

Studio experience for non-majors. Lectures and projects. Basic technique course; assumes no previous knowledge of photography. Student must have camera with adjustable shutter speeds, and aperture settings, and light meter. Credit cannot count toward major requirements in art. (2 hrs. lect.; 4 hrs. lab.)

108 Elementary Studio: Drawing and Painting (3)

Studio experience mainly for non-majors. Lectures and projects. Liberal Arts elective. Credit cannot count toward major requirement for the Bachelor's Degree in Art. (2 hrs. lect.; 4 hrs. lab.)

113 Foundation Studio "A" Drawing (3)

Prerequisite: ENG 10

Co-requisite: ART 101, MATH 1

Basic drawing with emphasis on two-dimensional visualization and rendering of forms, spaces, and ideas through a variety of approaches and media. (2 hrs. lect.; 4 hrs. lab.)

114 Foundation Studio "B" Color (3)

Prerequisite: MATH 1, ENG 10

Co-requisite: ART 101

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 Foundation Studio "C" Two-Dimensional Design (3)

Prerequisite: MATH 1, ENG 10

Co-requisite: ART 101

Two-dimensional design with emphasis on basic concepts, elements and principles of organization and their conscious control and manipulation in problem-atic situations. (2 hrs. lect.; 4 hrs. lab.)

116 Foundation Studio “D” Three-Dimensional Design (3)

Prerequisite: MATH 1, ENG 10

Co-requisite: ART 101

Three-dimensional design with emphasis on visualization and tactile exploration of forms, environments, and ideas through a variety of approaches, tools, processes, and materials. (2 hrs. lect.; 4 hrs. lab.)

160 Art and Environment (3)

An introductory course dealing with contemporary problems relating to the integration of art and design into our environment. Students are to become aware of the role of the artist and craftsman in our society and gain insights and procedures into making visual improvements. (3 hrs. lect.)

207 Photography Studio I (3)

Prerequisites: ART 101, 113, 114, 115 or consent of department head or instructor.

Basic techniques of photography. The camera as a tool for communication. Assumes no previous knowledge of photography. Student is required to have a camera with adjustable speed and aperture settings. (2 hrs. lect.; 4 hrs. lab.)

209 Image in Motion (3)

Prerequisites: ART 207 or consent of instructor.

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 35mm adjustable camera and light meter. Repeatable one time only. (2 hrs. lect.; 4 hrs. lab.)

213 Drawing (3)

Prerequisites: ART 101, 113 or consent of department head or instructor.

Continuation and development of ideas introduced in ART 113. (2 hrs. lect.; 4 hrs. lab.)

214 Life Drawing (3)

Prerequisites: ART 101, 113

Prerequisite or Co-requisite: ART 213

Drawing from the model. Repeatable for credit with written approval of department head. Must be repeated one time only (preferably under different instructor) by students planning to obtain BFA in drawing and painting at UHManoa. (2 hrs. lect.; 4 hrs. lab.)

215 Printmaking—Intaglio (3)

Prerequisites: ART 101, 113 or consent of department head or instructor.

Basic intaglio techniques of printmaking, including etching, engraving, dry-point, 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 consent of instructor.

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 including open-screen, resist and block-out, cut film and photographic method. (2 hrs. lect.; 4 hrs. lab.)

223 Introductory Painting (3)

Prerequisites: ART 101, 113, 114 or consent of instructor.

To cover paper and canvas preparation, glazes, impasto and wash techniques and perceptual and conceptual exercises in composition and pictorial structure. (2 hrs. lect.; 4 hrs. lab.)

270 History of Western Art (3)

Prerequisite: ART 101

Major developments of the Arts of Europe and the Americas. (3 hrs. lect.)

280 History of Asian Art

Prerequisite: ART 101

Major developments of the Arts of Asia. (3 hrs. lect.)

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

AUTO BODY REPAIR AND PAINTING (ABRP)

ABRP 20B, 20C, 20D equivalent to ABRP 20 (12)

ABRP 22B, 22C, 22D equivalent to ABRP 22 (12)

ABRP 40B, 40C, 40D equivalent to ABRP 40 (12)

ABRP 41B, 41C, 41D equivalent to ABRP 41 (12)

20 Basic Auto Body Repair (12)

An introductory course in general and specific properties of automobile sheet metal. Emphasis is placed on basic repair processes including knowledge of materials, tools and equipment used in the repairing of automobile sheet metal. (6 hrs. lect.; 18 hrs. lab.)

20B Basic Metal Work (5)

Training in safety, care, and use of hand tools and power equipment; body chassis nomenclature; materials and terms of the trade. Principles and practices of roughing out, dinging, picking, filing, disc sanding, soldering, shrinking, mig (GMAW), oxyacetylene welding, and resistance spot welder. Safe operation of sander and welding equipment. (2 hrs. lect., 9 hrs. lab.)

20C Fender Repairing (5)

Prerequisite: ABRP 20B

Theory and practice in dinging and metal finishing, patching rust holes, fender alignment, flexible plastic and fiberglass repairs. Safe operation of foot shear and bending brake. (2 hrs. lect., 9 hrs. lab.)

20D Automobile Sheet Metal (2)

Prerequisite: ABRP 20C

Introduction to general and specific subject of steel and aluminum sheet metal; basic shapes and reinforcements; elasticity of sheet metal; stress and strain of sheet metal; and expansion and contraction of metal. (2 hrs. lect.)

22 Basic Auto Body Refinishing (12)

Prerequisite: ABRP 20

This course is designed particularly for the automobile refinisher, and is updated with the latest information and techniques in paint materials, spray-painting equipment, preparation and refinishing procedures. Training is provided in the application of acrylic enamels and lacquers. This is also an advanced course in color mixing, matching and blending. (6 hrs. lect.; 18 hrs. lab.)

22B Paint Shop Safety, Equipment, Abrasives, and Glossary of Terms (3)

Prerequisite: ABRP 20

Training in paint shop safety; care and use of paint spray equipment, including 1) air compressor, 2) air transformers and regulator, 3) hoses, 4) spray booth, 5) infrared baking equipment, 6) glossary of terms, and 7) use of abrasives and fasteners. (2 hrs. lect., 3 hrs. lab.)

22C Basic Fundamentals of Painting (5)

Prerequisite: ABRP 22B

Care and use of a spray gun; preparation for refinishing; application of under coats, acrylic lacquer, enamel, acrylic enamel and polyurethane paints. (2 hrs. lect., 9 hrs. lab.)

22D Spot Painting (4)

Prerequisite: ABRP 22C

Mixing, matching, color identification, and blending of paint; use of paint additives, color formulas, mixing machine, compound, polishing, paint conditions and remedies. (2 hrs. lect., 6 hrs. lab.)

40 Auto Body Repairs I (12)

Prerequisites: ABRP 22, MATH 1, ENG 9

This is a course in the repair of various types of conventional and unitized body frame misalignment. Also, body and frame strightening equipment, attachment gauges and dimension charts are used. Training in adjustment and alignment of doors, hood, decklid and front fender will be stressed. Radiator service (repairing, rodding and recoring) is introduced. (6 hrs. lect.; 18 hrs. lab.)

40B Frame Repairing (6)

Prerequisite: ABRP 22, MATH 1, ENG 9

Theory and practice of straightening and aligning frames, both conventional and unitized; use of tram-track and centering gauges; removing and replacing fenders and grilles; aligning front end sheet metal, and straightening bumpers and brackets. (3 hrs. lect., 9 hrs. lab.)

40C Body Panel Adjustment and Alignment (3)

Prerequisite: ABRP 40B

Training in adjustment and alignment of door, hood, decklid, and front fender; also includes repairing of these panels. (2 hrs. lect., 3 hrs. lab.)

40D Radiator Repairing (3)

Prerequisite: ABRP 40C

Basic principles and practice in radiator repairing, recoring, and rodding; also includes care and use of radiator repairing testing equipment and refinishing. (1 hr. lect., 6 hrs. lab.)

41 Auto Body Repairs II (12)

Prerequisites: ABRP 40

Theory and practice of repairing and replacing body panels, e.g. door, rocker, trunk lower panel, turret top, and center pillar post. The basic principles and practice of bumper repair and adjustment, front suspension and wheel alignment are stressed. Fundamental principles of shop management, estimating, and industrial relation are reviewed. Fundamental procedures in the removal and replacing of hardware, trim, upholstery, and glass are reviewed. (6 hrs. lect.; 18 hrs. lab.)

41B Body Panel Replacement (4)

Prerequisite: ABRP 40

Training in replacing body panels, such as door panels, quarter panels, rocker panels, center pillar, and turret top; also includes repairing and aligning panels. (2 hrs. lect., 6 hrs. lab.)

41C Estimating, Shop Management and Industrial Relations (2)

Prerequisite: ABRP 41B

Theory and practice of everyday business transactions; proper procedures and methods of estimating; and the problems facing potential service managers, foremen, and shop owners in the areas of industrial relations. (2 hrs. lect.)

41D Front Suspension and Wheel Alignment (3)

Prerequisite: ABRP 41C

Corrective and repair procedures on front suspension and wheel alignment damage. (1 hr. lect., 6 hrs. lab.)

41E Fundamentals of Hardware, Trim, Upholstery, and Window Servicing (3)

Prerequisite: ABRP 41D

Theory and practice of the basic procedures for removing and replacing trim, glass, upholstery and weather-stripping. (1 hr. lect., 6 hrs. lab.)

93V Cooperative Education (1-4)

Prerequisite: Approval of Department Head

This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Auto-body Repair and Painting. (5-20 hours work experience per week.)

AUTOMOTIVE MECHANICS TECHNOLOGY (AMT)

15C Basic Automotive Repair and Maintenance (Engines) (2)

Basic theory and practice in the operation, repair, and maintenance of modern internal combustion engines. Emphasis will be placed on prevention maintenance and light repairs. (3 hrs. lect.; 3 hrs. lab.)

15D Basic Automotive Repair and Maintenance (Power Train) (2)

Basic theory and laboratory work in power train components. Emphasis will be placed on preventive maintenance and light repairs. (3 hrs. lect.; 3 hrs. lab.)

15E Basic Automotive Repair and Maintenance (Fuel and Electrical) (2)

Basic theory and laboratory work in gasoline fuel systems and their components and automotive electrical systems and their components. Emphasis will be placed on preventive maintenance and light repairs. (3 hrs. lect.; 3 hrs. lab.)

16 Car Care (2)

An exploratory course in auto mechanics for non-majors with primary emphasis on preventive maintenance service. (2 hrs. lect.)

17 Machine Tools and Industrial Materials (2)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 20, 23, 30B, 30C

Instruction in the care and use of hand and power tools. Basic characteristics of industrial materials and the identification of common hardware. (1 hr. lect.; 3 hrs. lab.)

20 Introduction to Automotive Mechanics (1)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 17, 23, 30B, 30C

An exploratory course in auto mechanics with an overview of the automobile's basic systems. Emphasis will be based on system's preventive maintenance and service. General safety practices stressed. (1 hr. lect.)

23 Lubrication & Cooling Systems (1)

Prerequisite: Placement in ENG 9

Corequisite: AMT 17, 20, 30B, 30C

This course covers the fundamental principles of the lubrication and cooling systems. Emphasis on preventive maintenance. (1 hr. lect.)

30B Engines I (3)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 17, 20, 23, 30C

This course covers the theory and construction of the upper half of the engine to include the cylinder head and valve-train. Shop practice will include disassembly, inspection, precision measurement, repair or replacement of components, reassembly and final adjustment. (1 hr. lect., 6 hrs. lab.)

30C Engines II (3)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 17, 20, 23, 30B

This course covers the theory and construction of the lower part of the engine to include the engine block, pistons, piston rings, connecting rods, bearings, crankshaft, and oil pan. Shop practice will include disassembly, inspection, precision measurement, repair or replacement of components, reassembly, and final adjustments. (1 hr. lect., 6 hrs. lab.)

40B Automotive Fuel Systems (3)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 40C, 40D, 40E

The purpose of this course is to develop automotive fuel system service and repair skills and technical knowledge sufficient for acceptable job performance. The principles of air and fuel delivery systems, conventionally and electroni-

cally controlled, exhaust and emission control systems are included in the course of instruction. Emphasis will be placed on diagnosing, repairing & overhauling automotive air and fuel delivery systems and components. (2 hrs. lect.; 3 hrs. lab.)

40C Basic Automotive Electricity and Battery (2)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 40B, 40D, 40E

The purpose of this course is to develop automotive electrical systems service and repair skills and technical knowledge sufficient for acceptable job performance. Automotive electrical fundamentals, principles and operation of the automobile battery, lighting and accessory systems are included. Emphasis will be placed on diagnosing (troubleshooting), testing, and repairing automotive electrical systems and components. (1 hr. lect.; 3 hrs. lab.)

40D Starter and Charging Systems (2)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 40B, 40C, 40E

The purpose of this course is to develop basic automotive electrical systems service and repair skills and technical knowledge sufficient for acceptable job performance. Automotive electrical fundamentals, principles and operations of the automotive starting and charging systems are included. Emphasis will be placed on diagnosing (troubleshooting), testing and repairing automotive starting and charging components. (1 hr. lect.; 3 hrs. lab.)

40E Tune Up Ignition System (3)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 40B, 40C, 40D

The purpose of this course is to develop basic automotive electrical systems service and repair skills and technical knowledge sufficient for acceptable job performance. Principles and operation of the ignition system and fundamental procedures for electrical tune up are included. Emphasis will be placed on diagnosing (troubleshooting), testing and repairing the components of the ignition system. (1 hr. lect.; 6 hrs. lab.)

43 Automotive Air Conditioning (3)

Prerequisite: AMT 40B, 40C

A basic study of refrigeration principles will be followed by system construction and theory of operation. As the student develops a proficiency of theory, construction and functions of system components, diagnostic and service procedures will be introduced. (3 hrs. lect.)

46 Power Train (3)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 50, 53, 55

Theory and practice in the description and nomenclature, operation, diagnosis of trouble, disassembly, inspection, precise measurements, repair or replacement, reassembly, and adjustment of power train components. Emphasis on transaxle system operation and service. (1 hrs. lect.; 6 hrs. lab.)

50 Automatic Transmission (3)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 46, 53, 55

Fundamental theory and practical application of the basic laws of simple and

multiple planetary gearing as applied in automatic transmission study to include transmission units. (2 hrs. lect.; 3 hrs. lab.)

53 Brake Systems (2)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 46, 50, 55

Theory and practice in the description and nomenclature, operation, maintenance, and repair of hydraulic and power brake systems. (1 hr. lect.; 3 hrs. lab.)

55 Suspension and Steering (2)

Prerequisite: Placement in ENG 9

Co-requisite: AMT 46, 50, 53

Theory and practice in the description and nomenclature, operation, maintenance and repair of mechanical and power steering systems, suspensions, wheel alignment and balance. (1 hr. lect.; 3 hrs. lab.)

57 Emission Control (2)

Prerequisite: Completion of Three Semesters of AMT Majors Courses or consent of instructor

Diagnosis and service procedures as they pertain to the function of vehicle emission control systems and devices. This course is tailored to provide advanced automotive mechanics technology students and inservice mechanics with working knowledge to properly diagnose trouble, service and repair crankcase, exhaust, and evaporative emission control systems. (2 hrs. lect./lab)

60B Diagnostic Tune Up (4)

Prerequisite: Completion of three semesters of AMT major courses

Co-requisite: AMT 60C, 60D

Application of diagnostic skills and techniques in advanced automotive mechanic technology with emphasis on realism in laboratory and shop operations. The course includes cumulative proficiency testing in tune up, computerized ignition, fuel injection and emission controls. (2 hrs. lect., 6 hrs. lab.)

60C Diagnostic Transmission, Brakes and Suspension (2)

Prerequisite: Completion of three semesters of AMT major courses

Co-requisite: AMT 60B, 60D

Application of diagnostic skills and techniques in advanced automotive mechanic technology with emphasis on realism in laboratory and shop operations. This course includes cumulative proficiency testing in transmission, brakes and suspension. (1 hr. lect.; 3 hrs. lab.)

60D Diagnostic Engine, Electrical, Cooling and Lubrication Systems (4)

Prerequisite: Completion of three semesters of AMT major courses

Co-requisite: AMT 60B, 60C

Application of diagnostic skills and techniques in advanced automotive mechanic technology with emphasis on realism in laboratory and shop operations. This course includes cumulative proficiency testing in engine, electrical, cooling and lubrication systems. (2 hr. lect.; 6 hrs. lab.)

70 Motorcycle Maintenance (3)

A performance-oriented course in operator's maintenance of two- and four-cycle motorcycles. Emphasis will be on active skills practice in service fundamentals and repair procedures, and suspension systems. (1 hr. lect.; 6 hrs. lab.)

76 Introduction to Diesel Engines (3)

A study of diesel engine principles, design and construction with emphasis on

two-cycle engine operation, diesel fuel injection systems, turbocharging, and maintenance. (3 hrs. lect.)

80 Small Engine Repairs (2)

Theory and practice in the description and operation, repair and maintenance of small engines. (1 hr. lect.; 3 hrs. lab.)

93V Cooperative Education (1-4)

Prerequisite: Approval of Department Head

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. (5-20 hours work experience per week.)

AVIATION MAINTENANCE (AVIAT)

GENERAL MAINTENANCE CURRICULUM

20 Aviation Maintenance Technician I (5) (51 hrs. lect.; 59 hrs. lab.)

Prerequisite: MATH 50 and ENG 10 placement

Co-requisite: MATH 50

MAINTENANCE PRIVILEGES & LIMITATIONS, PUBLICATIONS, FORMS & RECORDS

Mechanic privileges, limitations, ratings and legal responsibilities; aircraft airworthiness, type and production certificates; operation limitations; registration certificates; airplane, engine and equipment airworthiness; inspection, repair and alteration of aircraft (FAA Form 337).

WEIGHT & BALANCE

Weight and balance of fixed wing and rotary wing aircraft, limitations, computations. Federal Aviation Regulations, weighing information sources, recording data in aircraft maintenance records, loading charts and graphs, preparation of formal weight and balance reports.

FLUID LINES & FITTINGS

Fabrication and installation of rigid and flexible fluid lines and fittings; the operation and use of special tools, inspection and maintenance procedures and the storage requirements of aircraft hose.

BASIC PHYSICS

Principles of simple machines, sound, fluid and heat dynamics; basic airfoil theory; aerodynamics and theory of flight.

21 Aviation Maintenance Technician II (5) (52 hrs. lect.; 65 hrs. lab.)

MATERIALS & PROCESSES

Aircraft materials and processes, non-destructive testing methods and heat treating processes, identification of materials and selection of aircraft hardware-selection of proper materials for aircraft welding and repair and the use of precision measuring instruments.

CLEANING & CORROSION CONTROL

Cleaning and corrosion control, the causes and effects of corrosion, treating and control of corrosion, selection of cleaning materials and cleaning of aircraft and parts.

23 Aviation Maintenance Technician III (7) (73 hrs. lect.; 69 hrs. lab.)

BASIC ELECTRICITY

Fundamentals of electricity, direct current, circuits, magnetism and electro

magnetism, aircraft storage batteries, their use and maintenance, alternating current circuits; fundamentals and operation of common electrical test equipment.

AIRCRAFT DRAWING

Care and use of blueprints; isometric, orthographic and auxiliary projection lines and sections related to aircraft drawings; geometric construction; practical layout work; identification of standard parts and materials.

GROUND OPERATION & SERVICING

Aircraft ground operation and servicing; ground run-up of aircraft engines, induction fires, fueling; use of external power courses and preparing aircraft for storage.

AIRFRAME MAINTENANCE CURRICULUM

30 Airframe Structures I (4) (43 hrs. lect.; 61 hrs. lab.)

AIRCRAFT WOODWORK

Use of wood in aircraft construction; characteristics of wood, lumber and plywood, care and storage of aircraft woods; glues and gluing methods; hardware, hand tools, woodworking machines and operation; construction and repair of wooden aircraft components.

AIRCRAFT DOPE AND FABRIC

Selection and application of fabric and fiberglass covering materials in the construction of aircraft including the inspection, testing, and repairing of fabric and fiberglass covering materials.

AIRCRAFT FINISHES

Tools, equipment and materials used for aircraft covering, fabrication and application of airfoil covers, hand and machine sewing, finishes and associated materials, brush and spray application of finishes, insignia and markings, and repair of fabric covers.

AIRCRAFT WELDING

Oxyacetylene welding equipment and its use; welding of steel and steel alloys; brazing and soldering; principles and fundamentals of electric arc welding and heliarc welding; cutting metal by oxyacetylene process; welding of aluminum and alloys of aluminum and magnesium; welding of nickel and copper alloys; aircraft construction and repair by welding; heat treating processes for steels and aluminum alloys.

32 Airframe Structures II (5) (42 hrs. lect.; 104 hrs. lab.)

STRUCTURAL REPAIR OF METALS AND COMPOSITE STRUCTURES

Fundamentals, tools and equipment; layout work, development and use of templates; bend allowance, set back and mold lines; rivets and riveting, screws and fasteners; bumping and forming methods; repair of airframe structure and stressed skin; use of stainless steel and titanium in aircraft structures; inspection and repair of plastics, honeycomb, bonded and laminated structures.

34 Airframe Structures III (3) (26 hrs. lect.; 65 hrs. lab.)

RIGGINGS & ASSEMBLY

Tools and equipment necessary to assemble and rig fixed wing and rotary wing aircraft; use of manuals; installation of wings of fixed wing aircraft, alignment of wing and tail groups and other structural components; installation and alignment of controls, rigging changes after flight check, analysis and correction of rigging faults, and comprehensive testing.

100 HOUR AND/OR ANNUAL INSPECTION

Airframe inspection procedures, types and purpose of inspections, Federal Aviation Administration inspection requirements, forms and records, and comprehensive testing.

41 Aircraft Systems & Components I (5) (51 hrs. lect.; 54 hrs. lab.)*AIRCRAFT ELECTRICITY*

Installation, checking, troubleshooting, repair and servicing of airframe electrical components and systems, controls, switches, indicators, and protective devices; alternating current and direct current systems.

43 Aircraft Systems & Components II (6) (65 hrs. lect.; 89 hrs. lab.)*HYDRAULICS*

Identification and selection of hydraulic fluids; inspection, checking, servicing, troubleshooting, repairing hydraulic and pneumatic power systems.

LANDING GEAR UNITS

Operation, inspection, and adjustment of landing gear systems and their related components; disassembly, inspection, repairing and servicing mechanical and hydraulic type brake assemblies; adjustment of shoe, single and multiple disc type brakes; servicing, repairing, and storage of aircraft tires.

45 Aircraft Systems & Components III (7) (88 hrs. lect.; 63 hrs. lab.)*POSITION & WARNING UNITS*

Principles of operation, inspection, and checks of speed-, stall-, and take-off warning systems and anti-skid brake control systems; inspection and maintenance of landing gear position indicating and warning systems.

AIRCRAFT INSTRUMENTATION

Installation practices of aircraft instruments. Inspection and maintenance of temperature, pressure, and position indicating systems.

COMMUNICATION & NAVIGATION

Introduces the student to the purpose and operating principles of autopilots and approach control systems; types, installation and operation of electronic communications and navigation equipment.

CABIN ATMOSPHERE CONTROL EQUIPMENT

Functions, operation, principles, inspection and maintenance of aircraft vapor-cycle and air-cycle air conditioning, oxygen systems, and control of cabin pressurization; inspection and maintenance of combustion heaters and exhaust type heat exchangers.

ICE & RAIN CONTROL SYSTEMS

Operation, installation, checking of deicing and anti-icing systems; inspection and maintenance of electrically-operated pitot static and static vent anti-icing.

FIRE DETECTION & PROTECTION SYSTEM

Operating principles of smoke and carbon monoxide detection systems. Inspection and maintenance of built-in fire extinguishing and fire detection systems.

FUEL SYSTEMS

Function, operation, inspection, and maintenance of aircraft fueling, defueling, transfer and jettison systems.

POWERPLANT MAINTENANCE CURRICULUM**24 Reciprocating Engines (5) (40 hrs. lect.; 108 hrs. lab.)***OVERHAUL OPPOSED & RADIAL ENGINES*

Classification of reciprocating engines; principles of the Otto Cycle; factors affecting volumetric efficiency, power measurements and calculations; identification and functions of various components of reciprocating engines; complete overhaul of opposed engine; theory and maintenance of radial engines.

INSPECT & REPAIR OPPOSED & RADIAL ENGINES

Inspection and marking of parts, use of micrometers and other precision inspection tools, manufacturing manuals and table of limits, repair and/or replacement of parts on complete engine assembly.

35 Powerplant Systems and Components I (6) (73 hrs. lect.; 108 hrs. lab.)

LUBRICATION SYSTEMS

Functions, operating principles, identification, and selection of lubricants for reciprocating engines; instrumentation, inspection, and maintenance of lube fuel system components.

FUEL METERING SYSTEMS

Principles of carburetion, fuel mixture ratios and their indication. Float type and pressure injection carburetors, direct fuel injection, maintenance, overhaul and repair of carburetors, water injection units, carburetor installation, inspection and troubleshooting engine fuel system and components.

36 Powerplant Systems & Components II (2) (20 hrs. lect.; 26 hrs. lab.)

INDUCTION SYSTEMS

Function and basic principles of induction systems. Description on induction icing and removal; function and operating principles of supercharging; inspection and maintenance of carburetor air intake and induction manifolds.

ENGINE COOLING & EXHAUST

Function and basic principles of engine cooling systems and engine exhaust systems. Basic operating principle of turbo-superchargers and turbo-compound engines; inspection and maintenance on exhaust system components.

40 Engine Electrical Systems & Components (8) (86 hrs. lect.; 87 hrs. lab.)

IGNITION SYSTEMS

Basic principles of ignition systems. Magneto theory, condensers, shielding, magneto types, internal timing; magneto inspection, installation, removal, operation and maintenance. Ignition switches, ignition system wiring and ignition boosters, aircraft spark plugs, low tension ignition systems, and troubleshooting the ignition system.

ELECTRICAL SYSTEMS

Installation, inspecting, and maintenance of engine electrical wiring, control switches, indicators, and protective devices; use of service manuals and parts catalogs for repair or replacement of engine electrical system components; determining continuous load on generating systems.

ENGINE INSTRUMENT SYSTEMS

Installation, inspection, maintenance and operating principles of engine fire protection and fixed fire extinguishing systems.

46 Propellers (3) (36 hrs. lect.; 42 hrs. lab.)

Propellers and propeller installation. Propeller fundamentals and terminology, synchronizing and ice control systems, propeller governing systems; troubleshooting, installation and removal of propellers.

47 Inspection, Troubleshooting & Repair of Reciprocating Engines (4) (39 hrs. lect.; 62 hrs. lab.)

Systematic troubleshooting to determine cause of malfunctions associated with powerplants; FAA conformity and airworthiness standards will be applied to lubricating systems, induction systems, fuel systems, fuel metering systems ignition systems, cooling systems, propellers, propeller governing systems, and engine performance.

48 Turbine Engines (4) (44 hrs. lect.; 20 hrs. lab.)

This course covers types of turbine engines and their application, centrifugal flow and axial flow engines, operating principles and effects of temperature, pressure, volume, and velocities of working gases; turbine engine components, parts, nomenclature, design and materials, function of compressors, combustors, turbine, and exhaust sections; turbine fuels, fuel systems and components, fuel system rigging procedures and methods, ignition systems, starting systems, lubricating systems, type of lubricants, inspection and maintenance of turbine engine and components.

AVIATION TECHNOLOGY

50 General Aviation Maintenance (3)

The general course includes Federal Aviation Agency regulations, weight and balance, electricity, ground operations and servicing, materials and processes, fluid lines and fittings, and basic physics. (36 hrs. lect.; 76 hrs. lab.)

52 Airframe Maintenance (4)

The Airframe Maintenance course includes elementary theory of flight, woodwork, aircraft fabric and finishing, aircraft sheet metal, welding, controls and control surfaces, aircraft systems and components, and inspections. (45 hrs. lect.; 123 hrs. lab.)

53 Powerplant Maintenance (4)

The Aircraft Powerplant Maintenance course includes theoretical and practical instruction in Federal Aviation Agency Regulations, reciprocating engine overhaul and maintenance, aircraft engine systems and components, gas turbine engine inspection and maintenance. (45 hrs. lect.; 123 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. Practice in calculations concerning the construction and balance of formulas, fermentation, and cost control. 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. Formulas and methods and standard industrial practices employed in the production of breads, rolls, doughnuts, sweet rolls, cakes, cookies, and pies. Instruction and practice in foremanship; material purchasing, stock control, cost computation, retail store operation and record keeping. (5 hrs. lect.; 15 hrs. lab.)

51 Shop Practice II (10)

Prerequisite: BAKE 50

A continuation of BAKE 50. Students are rotated systematically through the various production and operational areas. Assignments are varied according to the individual's abilities and interests. Special consideration is given to the handling of fancy pastries and cake decoration. (5 hrs. lect.; 15 hrs. lab.)

93V Cooperative Education (1-4)

Prerequisite: Approval of Department Head

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. (5-20 hours work experience per week.)

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.)

60 Microorganisms, Food and Sanitation (3)

A survey of the roles bacteria, viruses, yeasts, molds and fungi play in our world. Their role in food preparation and manufacture, food spoilage, and disease transmission in foods. Also explored are the how and why of food preservation and sanitation practices in food preparation. (3 hrs. lect.)

130 Human Anatomy & Physiology (3)

A descriptive non-laboratory course covering the fundamentals of human anatomy and physiology. It is a survey type course for those interested in human biology but it also fulfills requirements for allied health majors.

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, and Welding Technology. 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

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.)

40 Blueprint Reading and Estimates (3)

Prerequisite: BLPRT 30F

The development of advanced blueprint reading skills including preparation of a material quantity take-off from selected construction plans and documents currently used in industry. (3 hrs. lect.)

45 Naval Blueprint Reading (2)

Prerequisite: BLPRT 23

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.)

46 Blueprint Reading for Pipefitters (3)

Prerequisite: BLPRT 45

This course provides instruction on the reading, drafting, and designing of various types of marine and conventional piping systems. Nomenclature, common symbols, and model designs are emphasized along with the drafting and reading of blueprints. (3 hrs. lect.)

BOTANY (BOT)

18 Principles of Plant Growth (3)

This course explores the relationship of botanical principles to the culture of garden and ornamental plants, effects of nutritional deficiencies, environmental imbalances, pest activity and disease on plant growth. (3 hrs. lect.)

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.)

101L 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.)

105 Ethnobotany (3)

The study of the various ways plants are used in relation to the needs and customs of a given ethnic group of people. This is a non-technical course which emphasizes the plants used by the native people of Hawaii and other Pacific Islands. (This course may be used to fulfill 3 credits in social sciences.) (3 hrs. lect.)

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)

Prerequisites: Business major or consent of instructor.

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 multi-national business. (3 hrs. lect.)

23 Business Mathematics (3)

Prerequisite: MATH 1 or equivalent

A course to develop skills in the fundamental operations of the 10-key/electronic calculator as applied to business problems. Business applications include payroll, prorations, discounts, commission, markup, interest, percent, percentage, and Truth in Lending. Proficiency in 10-key touch operation. (3 hrs. lect., 2 hrs. lab.)

25 Starting a Small Business (3)

Prerequisites: ENG 10 and one of the following: MATH 23–55 or BUS 23

This course will acquaint the student learning a trade in any of the vocational technical disciplines at Honolulu Community College with the specific problems facing a business in Hawaii. Applications oriented, current business and economic theories, practices, procedures and resources appropriate for the start up of a small business in Hawaii will be discussed. (3 hrs. lect.)

93V Cooperative Education (1–4)

Prerequisite: Approval of Department Head

This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Business. (5–20 hours work experience per week.)

CARPENTRY (CARP)**20 Introduction to Carpentry (11)**

Prerequisite: ENG 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)

Prerequisite: "C" or higher in CARP 22

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—footing, 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 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.)

50 Carpentry for Trades & Industry (3)

Comment: ADT Majors Only

This course is designed primarily for ADT majors. It covers the principles of construction involving foundation framing, interior and exterior trim, and materials and products. Non-majors may enroll on a space available basis. (3 hrs. lect.)

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.)

50B Introduction to Chemistry (Wastewater Treatment) (4)

Prerequisite: MATH 50

A course presenting the fundamentals of chemistry involved in the operation of wastewater treatment plants. Emphasis is placed on chemical analyses necessary to maintain process control of wastewater treatment plants and to monitor sewage and industrial waste effluents. (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 100L

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.)

CHEM 161–162 equivalent to CHEM 171

*Credit toward graduation will be allowed for only one of the following three:
CHEM 151, CHEM 161, CHEM 171*

161–162 General Chemistry I & II(3–3)

Prerequisite: MATH 27. CHEM 161 and MATH 123 are prerequisite for CHEM 162

Co-requisite: CHEM 161L with CHEM 161; CHEM 162L 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. CHEM 161L and MATH 123 are prerequisite for CHEM 162L

Co-requisite: CHEM 161 with CHEM 161L; CHEM 162 with CHEM 162L

Laboratory experiments illustrating concepts of chemistry discussed in CHEM 161 & CHEM 162. (3 hrs. lab)

171 General Chemistry (4)

Prerequisite: CHEM 151, MATH 205 or consent of instructor

Co-requisite: CHEM 171L

Concepts of chemistry such as atomic structure, chemical bonding, kinetics, equilibrium, electrochemistry, and energy changes in matter. (4 hrs. lect.)

171L General Chemistry Laboratory (1)

Prerequisite: 151L or consent of instructor.

Co-requisite: CHEM 171

Laboratory experiments illustrating concepts of chemistry discussed in CHEM 171. (3 hrs. lab.)

CHINESE (CHNSE)**101–102 Elementary Mandarin I–II (4–4)**

Prerequisite: ENG 10 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.)

CIVIL ENGINEER (CE)**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 and section properties.

COMMERCIAL ART (CMART)**20 Commercial Art I (4)**

Prerequisites: MATH 1, ENG 10 or equivalent

Co-requisites: ART 101, 113, 115

Study of basic graphic art skills, layout, copy fitting and type specifications, paste-up, and methods of black and white reproduction used in general printing, and for newspapers and magazines. (3 hrs. lect.; 3 hrs. lab.)

21 Commercial Art II (4)

Prerequisite: CMART 20

Prerequisites or Co-requisites: ART 101, 113, 115

Continuation of Commercial Art I. Instruction in techniques and media for layout, camps, and complex mechanicals. Study of preparation of art for printing in a variety of black and white, and color projects. (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 101, 113, 115, CMART 21

Graphic design solutions to visual problems in various communication forms as posters, brochures, trademark and corporate design. Client related projects, visiting lecturers and field trips. (3 hrs. lect.; 3 hrs. lab.)

33 Advertising Design (4)

Prerequisites: ART 101, 113, 115, CMART 21

Planning of visual images and typographic layout for advertising media as newspaper, magazine, television and direct mail. 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 or consent of Department Chairman

Drawing techniques and skills in illustration of products and objects. Emphasis on black and white mediums and progression from layout to finished art. (3 hrs. lect.; 3 hrs. lab.)

35 Typography (4)

Prerequisites: ART 115, CMART 20, or consent of instructor.

Type styles and letter forms as design and construction elements. Historical and contemporary typesetting methods include hand-set type, and an option to learn computer type setting. (3 hrs. lect.; 3 hrs. lab.)

36B and 36C The Figure in Illustration (2-2)

Prerequisites: ART 113, 214, CMART 21 or consent of Department Chairman

36B—Drawing the human figure in fashion illustration, includes study of figure proportion in fashion drawing, fabrics and styles, and various media. (8 weeks, 2 credits).

36C—Use of figure in general illustration, with sales of products or in pictorial narratives layout and finished art. (8 weeks, 2 credits).

Both B and C must be completed during the same semester in order to receive credit. (3 hrs. lect.; 3 hrs. lab.)

40 General Illustration (4)

Prerequisites: CMART 20 or ART 113, 114, and 115 or consent of instructor

Introduction to illustration. Media skills and image development for development for advertising, editorial, book, and institutional projects. (3 hrs. lect.; 3 hrs. lab.)

50 Black and White Photography (4)

Prerequisite: ART 207

Instruction in advanced technical aspects of camera use, black and white films, processing and enlarging. An approach to film exposure and development control. Introduction to studio photography and special effects. Repeatable for credit one time only with written approval of department head. (3 hrs. lect.; 3 hrs. lab.)

55 Commercial Photography (4)

Prerequisites: ART 207

Emphasis on technique and marketing of photographic work including portraiture and product photography. Use of 4 × 5 view camera. Copying art work and slides, and fashion photography will be taught. Field trips and guest speakers when available. Repeatable for credit one time only with written approval of department head. (3 hrs. lect.; 3 hrs. lab.)

58 Advertising Copy & Business Practice (3)

Prerequisite: ENG 10 or required placement test score or consent of instructor.

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.)

60V Commercial Art Internship (2–4)

Prerequisite: Completion of 3 semesters of CMART Program or Equivalent, or Consent of Instructor

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.)

70 Portfolio Presentation and Review (3)

Prerequisites: Approval of Department Head. Required for students in final semester of CMART program.

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.)

93V Cooperative Education (1–4)

Prerequisite: Approval of Department Head

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. (5–20 hours work experience per week.)

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. The medium of the camera and stage will be used extensively. (3 hrs. lect.)

COSMETOLOGY (COSME)

20 Elementary Cosmetology Theory (3)

Prerequisite: ENG 9, MATH 1, High School diploma or equivalent

Co-requisite: COSME 21L, COMUN 50

Basic related science in 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)

Prerequisite: ENG 9, MATH 1, High School diploma or equivalent

Co-requisite: 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. lab. min.)

30 Intermediate Cosmetology Theory (3)

Prerequisite: COSME 20, 21L

Co-requisite: 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)

Prerequisite: COSME 20, 21L

Co-requisite: COSME 30, CHEM 55

The student engages in intermediate manipulating 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)

Prerequisite: 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)

Prerequisite: 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.)

50V Cosmetology Board Preparation (0-6)

Prerequisite: COSME 40, 41L or consent of instructor

This course encompasses all areas of the theoretical and practical portion of cosmetology which relate directly to the State Board Examinations and is designed for the senior student who will enter the business world at the end of the term. Special emphasis is placed on professionalism, salon management, Cosmetology Act, rules and regulations. (18 hrs. lect./lab. min.)

DIESEL MECHANICS (DIMCH)

DIMCH 20B, 20C, 20D, 20E, 20F equivalent to DIMCH 20 (10)

17 Hand and Shop Tools (2)

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)

Prerequisite: Placement in ENG 9, Placement in MATH 1

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 diesel engines; 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 and 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 is covered in unit. (1 hr. lect.; 3 hrs. lab.)

30 Fuel Injection and Electrical Systems (10)

Prerequisite: Placement in ENG 9, Placement in MATH 1

The purpose, design, construction, theory and operating principles of fuel and electrical systems are covered in this course with special emphasis on developing the skills required to service, repair, test, and adjust the components and associated systems. (5 hrs. lect.; 15 hrs. lab.)

40 Power Train (12)

Prerequisite: Placement in ENG 9, Placement in MATH 1

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.)

50 Diagnostics (10)

Prerequisite: DIMCH 20, 30, 40

A course covering Heavy Equipment systems including hydraulic, pneumatic,

and special power systems. Theory, operation, troubleshooting, repair and maintenance are covered in detail. (5 hrs. lect.; 15 hrs. lab.)

93V Cooperative Education (1-9)

Prerequisite: Approval of Department Head

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. (5 to 40 hours work experience per week.)

DRAFTING (DRAFT)

20 Introduction to Drafting (4)

Co-requisites: DRAFT 24, 26 and qualified to enroll in MATH 50

This course introduces representations in construction. Topics include fundamentals of drafting (including projection), sectioning, pictorial drawings and architectural representation. It orients the students to the nature and scope of the course and to the drafting occupation. (1 hr. lect.; 9 hrs. lab.)

22D Electronic Drafting (2)

Prerequisite: ETRON 20/20L

Topics include correct schematic presentation and arrangements. The course provides the student with experiences in design, layout, wiring and cost analysis of conventional and printed circuits as well as interpretation of graphs, synchrograms and histograms. (2 hrs. lect.)

24 Descriptive Graphics (3)

Co-requisites: DRAFT 20, 26

A course designed to prepare the student to arrive at graphical solutions to space problems. Various methods of drawing are used to solve engineering and architectural problems. (2 hrs. lect.; 3 hrs. lab.)

26 Construction Materials I (3)

Co-requisites: DRAFT 20, 24

This course is a broad survey of the materials used in construction, the buildings made from such materials, and manner in which these materials and structures are utilized. Materials and methods of light wood construction, lumber grades and uses, millwork, plywood, lath and plaster, roofing, flashing, woodworking joints, foundations, footings, walls, floors, building code requirements are studied. (1 hr. lect.; 6 hrs. lab.)

30 Architectural Construction I (4)

Prerequisites: DRAFT 20, 24, 26

Co-requisite: DRAFT 36

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

32 Structural Drafting (3)

Introduction to structural drafting using wood, reinforced concrete, and steel. Terminology, fundamentals of design elements, local building codes, typical details and shop drawings are emphasized. (2 hrs. lect.; 3 hrs. lab.)

34C Presentation Drawings (3)

Prerequisites: DRAFT 20, 24, 26, 30, 36 or approved equivalent

Architectural presentation drawings are used to graphically communicate the architect's ideas to his clients. The course is intended to develop in the draftsman the ability to produce—through combined mechanical and freehand techniques—graphic illustrations of architectural works which would represent a photographic likeness of a building which have yet to be built. (2 hrs. lect.; 3 hrs. lab.)

36 Architectural Drafting I (4)

Prerequisites: DRAFT 20, 24, 26

Co-requisite: DRAFT 30

Advanced course in the application of materials and methods of construction, light wood construction principles and practices, basic residential planning, drafting expressions, architectural details, and complete working drawings of residential buildings. (1 hr. lect.; 9 hrs. lab.)

38 Architectural Drafting II (5)

Prerequisites: DRAFT 30, 36

Co-requisite: DRAFT 42

Advanced residential design using wood, steel and concrete as basic building materials. Knowledge of graphic methods of representation learned in previous courses is strengthened and more emphasis is placed on creativity. The student completes several residential design projects which provide the groundwork for a professional attitude. (2 hrs. lect.; 9 hrs. lab.)

40 Architectural Drafting III (4)

Prerequisites: DRAFT 38, 42

Includes the theory and practice of the elements of proper presentation, accuracy and neatness of working drawings. (1 hr. lect.; 9 hrs. lab.)

42 Codes and Specifications (4)

Prerequisites: DRAFT 30, 36

Co-requisite: DRAFT 38

This course explains organization and operation of the architect's, engineer's, or contractor's office. It includes the study of office practices, accounting methods, and general administration of the restrictions, standards, and the legal documents governing the construction of buildings; and the legal responsibilities involved in writing specifications, contracts, estimations, and environmental impact statements. (1 hr. lect.; 9 hrs. lab.)

44 Building Services (3)

Prerequisites: DRAFT 38, 42

Co-requisites: DRAFT 32, 40

Preliminary and detail planning of multi-dwelling, small commercial and industrial buildings in wood, plastics, brick, glass, concrete block, reinforced concrete and steel. Standards of plumbing and sanitation, sewage disposal, storm drainage, air conditioning, heating, electrical circuits, illumination and the preparation of schematic plans for these services (1 hr. lect.; 6 hrs. lab.)

52 Construction of Scale Models (3)

Prerequisite: DRAFT 20 or any introductory BLPRT course

This course will include the construction of scale models from developed working drawings. Various techniques of model construction will be included. Models will be constructed by using illustration boards, balsa wood, soft

woods, styrofoam, and other materials. Instruction in the use of and safety of conventional wood working tools and equipment will also be emphasized. (1 hr. lect.; 6 hrs. lab.)

61 Introduction to Computer Aided Design & Drafting (CADD) (3)

Prerequisites: DRAFT 30, 36

This course is designed to introduce students to the principles of “Computer Aided Design and Drafting”. The course will include simplified drawing menus which consist of lines, circles, symbols, text, and pictorial libraries. (2 hrs. lect.; 3 hrs. lab.)

93V Cooperative Education (1-9)

Prerequisite: Approval of Department Head

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. (5-40 hrs. work experience per week.)

DRAMA (DRAMA)

20 Discovering Theatre (3)

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

101 Introduction to Drama and Theatre (3)

Representative plays studied as illustrative of changing forms in the theatre and dramatic literature. (3 hrs. lect.)

201 Introduction to Film (3)

Introduction to aesthetic aspects of silent and sound movies. Technical subjects analyzed only as they relate to theme and style. (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)

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.)

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. Credit not given for both this course *and* ECON 150. (3 hrs. lect.)

150 Principles of Economics I (3)

Prerequisite: MATH 24 or equivalent placement.

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. Course meets requirement for ECON major at Manoa. Credit not given for both this course *and* ECON 120. (3 hrs. lect.)

151 Principles of Economics II (3)

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. Course meets requirement for ECON major at Manoa and is recommended for those interested in Business Administration. (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)

38 Traditional Asian Values and the American Learning Process (3)

Analysis of Asian values, their manifestations in Asian American communities, and areas of conflict with wider American Society. Special emphasis will be placed on Asian value manifestations in the American school setting, and on teacher strategies in the use of these values in facilitating the teaching-learning process. (3 hrs. lect.)

40 Bilingual/Bicultural Teaching Methods I (2)

Analysis of theories regarding the inter-relationships between language and culture, nature of second-language; examination of English language proficiency examinations and curriculum materials and techniques in the teaching of reading, writing, speaking and listening in English in the bilingual/bicultural classroom; study of target-language equivalents of technical language in English. (2 hrs. lect.)

41 Bilingual/Bicultural Teaching Methods II (2)

Study of target-language equivalents of English technical terms in math, examination and/or development of instructional materials with cross-cultural orientation in the teaching of weights, measures, banking, buying, selling and other math situations. (2 hrs. lect.)

43 Bilingual/Bicultural Education (3)

Examination of educational and legal bases for bilingual/bicultural education in a pluralistic society, review of Federal, state and district guidelines and pro-

visions for bilingual/bicultural education; review of research in bilingual/bicultural education; analysis of types and models of bilingual/bicultural education and difference from Teaching-of-English-as-a-Second-Language programs. (3 hrs. lect.)

45 Working with Handicapped Children (3)

A practical approach to teaching children with special needs in the regular classroom. The needs of handicapped children ages two through six are discussed from a developmental interaction viewpoint. Especially designed for the paraprofessional. (3 hrs. lect.)

49 CDA Orientation (3)

This introduction course will enable students to identify the competencies, functional areas and the assessment procedure of the Child Development Associate program. It will also enable students to begin developing the CDA portfolio as they learn skills in observing, planning, and communicating in preschool settings. (3 hrs. lect.)

50V CDA Training I (1-6)

Prerequisite: consent of instructor

Competency-based training to prepare child care specialists with the basic competencies to assume primary responsibility for the daily activities of groups of preschool children in center-based programs. Emphasis is on field training and credit by assessment. Repeatable until 6 credits are earned. Repeatable only if the student earned a minimum of 3 credits in CDA the previous semester. (lect./lab hrs. variable)

51V CDA Training II (1-6)

Prerequisite: consent of instructor

Continuation of ED 50V. Repeatable until 6 credits are earned. Repeatable only if the student earned a minimum of 3 credits in CDA the previous semester. (lect./lab hrs. variable)

52V CDA Training III (1-6)

Prerequisite: consent of instructor

Continuation of ED 51V. Repeatable until 6 credits are earned. Repeatable only if the student earned a minimum of 3 credits in CDA the previous semester. (lect./lab hrs. variable)

57V CDA Training IV (1-6)

Prerequisite: consent of instructor

Continuation of ED 52V. Repeatable until 6 credits are earned. Repeatable only if the student earned a minimum of 3 credits in CDA the previous semester. (lect./lab hrs. variable)

91V Practicum/Education (1-3)

Supervised work experience. Individualized in-service training in education. May be repeated until 12 credits are earned. Responsibilities to increase with each repeat. Concurrent enrollment in HSERV 51 is recommended. (5-15 hrs. practicum)

167 Introduction to Early Childhood Curriculum I (3)

Prerequisites: HD 31 or 231, ENG 10

Study of the role of the teacher and the educational assistant and how it relates to his/her value system. Focus will be on creating a learning environment based

on observation of children. Knowledge of child development and models of early childhood education. (3 hrs. lect.)

168 Introduction to Early Childhood Curriculum II (2)

Prerequisites: HD 31 or 231, ENG 10

Curriculum for child care centers, including art, music/movement, language, literature, math, science, social studies, and nutrition. (1 hr. lect.; 3 hrs. lab.)

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.)

253 CDA Assessment Preparation (3)

Prerequisites: ED 49, 50V, 51V, 52V and consent of instructor

This course requires the observable performance and evaluation of the six Child Development Associate competency areas in the preschool classroom. Emphasis is placed upon refinement and completion of the portfolio, integration of theory and practice, and preparation for assessment by the Child Development Consortium. (3 hrs. lect.)

ELECTRICAL ENGINEERING (EE)

120 Introduction to Microprocessors and Design (3)

Prerequisite: High School physics or consent of instructor

This course is an introduction to engineering design process using microprocessor, organization of microprocessors, machine and assembly language programming. Each student will have hands-on experience with microcomputer and complete a design project. (3 hrs. lect.; 3 hrs. lab.)

150 Introduction to Computer Programming (3)

Prerequisite: High school algebra or instructor's approval

Comment: Recommended for science/pre-engineering students

This is an introductory course in programming. Emphasis is on structured programming—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. (3 hrs. lect.)

151 Computer Programming II (3)

Prerequisite: EE 150 or instructor's approval

This is a second course in programming. The course will cover topics subsequent to those covered in EE 150. The course will concentrate on different languages from semester to semester. The languages covered will be one of the following: FORTRAN, PL/I, C, Modula-2, Ada or Pascal. (3 hrs. lect.)

ELECTRICITY (ELEC)

ELEC 20B, 20C equivalent to ELEC 20 (4)

ELEC 22B, 22C equivalent to ELEC 22 (6)

ELEC 30B, 30C equivalent to ELEC 30 (4)

ELEC 32B, 32C equivalent to ELEC 32 (6)

ELEC 40B, 40C equivalent to ELEC 40 (4)

ELEC 42B, 42C equivalent to ELEC 42 (6)

ELEC 44B, 44C equivalent to ELEC 44 (4)

ELEC 46B, 46C equivalent to ELEC 46 (6)

20 Electrical Fundamentals (4)

Prerequisites: ENG 10, 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 electrons; electrical units and nomenclature; law and formulas; circuit computations; basic circuit configurations; magnetism and electromagnetism. (5 hrs. lect.)

20B Electrical Fundamentals—DC (2)

Prerequisite: ENG 10, MATH 1 or consent of department chairman

This is a course designed to introduce students to the concepts and principles of Direct Current electricity. Topics include the basic physics of the electron; using Ohm's law; simple circuits; electric power and energy; magnetism and magnetic devices; measuring instruments; chemical energy of batteries; electromagnetic induction. (2 hrs. lect.)

20C Electrical Fundamentals—AC (2)

Prerequisite: ELEC 20B

This is a course designed to introduce students to the concepts and principles of alternating current electricity. (2 hrs. lect.)

22 Wiring Materials and Methods (6)

Prerequisites: ENG 10, 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.)

22B Wiring Materials and Methods I (3)

Prerequisite: ENG 10, MATH 1 or consent of department chairman

A basic lab course designed to develop knowledge and manipulative skills in the use of basic hand tools, and various hardware encountered in electrical work. Laboratory experiments designed to explore the concepts and applications of DC Electricity. (9 hrs. lab.)

22C Wiring Materials and Methods II (3)

Prerequisite: ELEC 22B

An advanced lab course designed to increase the students' knowledge and manipulative skills in the use of basic hand tools, and various hardware encountered in electrical work. Laboratory experiments designed to explore the concepts and applications of AC Electricity. (9 hrs. lab.)

30 Electrical Installation Theory I (4)

Prerequisites: ELEC 20, 22

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.)

30B Electrical Installation Theory I (2)

Prerequisite: ELEC 20 & 22 or 20B, 20C & 22B, 22C

This course is designed to develop knowledge of basic residential wiring. Emphasis is on the National Electrical Code and the principles of basic residential blueprint reading. (2 hrs. lect.)

30C Electrical Installation Theory I (2)

Prerequisite: ELEC 30B, 32B

Co-requisite: ELEC 32C

This course is designed to develop knowledge of advance residential wiring. Emphasis is on the National Electrical Code and the principles of advance residential blueprint reading. (2 hrs. lect.)

32 Electrical Installation I (6)

Prerequisites: ELEC 20, 22

Co-requisite: ELEC 30

This course is designed to provide the basic and advanced knowledge in residential wiring techniques. Laboratory exercises are designed to give students practical experience in different wiring techniques. (18 hrs. lab.)

32B Electrical Installation I (3)

Prerequisite: ELEC 20 & 22 or 20B, 20C & 22B, 22C

Co-requisite: ELEC 30B

This course is designed to provide basic knowledge in residential wiring techniques. Laboratory exercises are designed to give students practical experience in different wiring techniques, using the nonmetallic-sheathed cable. (9 hrs. lab.)

32C Electrical Installation I (3)

Prerequisite: 30B & 32B

Co-requisite: 30C

This course is designed to provide advance knowledge in residential wiring techniques. Laboratory exercises are designed to give students practical experience in different wiring techniques to maintain, to trouble-shoot and to repair all residential wiring circuits. (9 hrs. lect.)

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.)

40B Electrical Installation Theory II (2)

Prerequisite: ELEC 30 & 32 or 30B, 30C & 32B, 32C

This course is designed to develop knowledge of basic commercial and industrial wiring techniques. Emphasis will be on the National Electrical Code and the principles of basic commercial and industrial blueprint reading. (2 hrs. lect.)

40C Electrical Installation Theory II (2)

Prerequisite: 30B, 32B, 40B

This course will take the student into the more complex commercial and industrial wiring techniques. Emphasis will be on the National Electrical Code and the principles of commercial and industrial blueprint reading. (2 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.)

42B Electrical Installation II (3)

Prerequisite: ELEC 30 & 32 or 30B, 30C & 32B, 32C

Co-requisite: ELEC 40B

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. (9 hrs. lab.)

42C Electrical Installation II (3)

Prerequisite: ELEC 40B & 42B

Co-requisite: ELEC 40C

A course designed to provide advance knowledge in commercial wiring techniques. Laboratory exercises are designed to give students practical experience in different wiring techniques to maintain, to trouble-shoot, and to repair all commercial wiring circuits. (9 hrs. lab.)

44 AC/DC Systems and Equipment (4)

Prerequisites: ELEC 40, 42

Co-requisite: ELEC 46

This course is designed to advance the student into electrical principles of direct-current and alternating-current circuits and equipment. Emphasis is placed on the theory, operating characteristics and control of AC and DC machinery. (5 hrs. lect.)

44B AC/DC Systems and Equipment I (2)

Prerequisites: ELEC 40 & 42 or 40B, 40C & 42B, 42C

Co-requisite: 46B

This course will provide the student with information on the construction and operation of AC/DC motors, generators, and controls. (2 hrs. lect.)

44C AC/DC Systems and Equipment II (2)

Prerequisites: 44B & 46B

Co-requisite: 46C

This course covers the basic theory and practical application of electrical motor control. The student will work extensively with diagrams that illustrate the text material. (2 hrs. lect.)

46 Electrical Maintenance & Repair (6)

Prerequisites: ELEC 40, 42

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 students 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.)

46B Electrical Maintenance and Repair I (3)

Prerequisites: ELEC 40 & 42 or 40B, 40C & 42B, 42C

Co-requisite: ELEC 44B

A lab course combining trade practices and related technical instruction designed to develop the students mechanical and analytical skills in the maintenance, troubleshooting, and repair of electric motors. (9 hrs. lab.)

46C Electrical Maintenance and Repair II (3)

Prerequisites: ELEC 44B & 46B

Co-requisite: ELEC 44C

A lab course combining trade practices and related technical instruction designed to develop the students mechanical and analytical skills in the maintenance, troubleshooting, and repair of electric motor controls. (9 hrs. lab.)

93V Cooperative Education (1-4)

Prerequisite: Approval of Department Head

This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Industrial Electricity. (5-20 hrs. work experience per week.)

ELECTRONICS (ETRON)

ETRON 20B, 20C equivalent to ETRON 20 (4), 20L (2)

ETRON 22B, 22C equivalent to ETRON 22 (4), 22L (2)

18 General Electronics (3)

Co-requisite: ETRON 18L

A course for non-majors which includes the study of fundamentals of electronics with emphasis on understanding basic theory of operation of vacuum tube and transistor electronics equipment. (3 hrs. lect.)

18L General Electronics Laboratory (1)

Co-requisite: ETRON 18

Laboratory assignments covering practical applications of the basic theories studied in ETRON 18. The laboratory experiments stress minor servicing of electronic equipment using voltage measuring, resistance readings and signal tracing techniques. (3 hrs. lab.)

20 Electronics I (4)

Prerequisite: Qualified to enroll in MATH 58 and ENG 60

Basic theory of electricity from the atomic theory to filter circuits, includes Ohm's Law, DC and AC circuits, network analysis, sinusoidal and nonsinusoidal voltages and current, resonant circuits, meters, three phase systems, and basic logic circuits. (4 hrs. lect.)

20B Electronics IB (3)

Co-requisite: MATH 58, ENG 60

Basic theory of electricity from atomic theory to complex DC circuits, includes Ohm's Law, DC measuring devices and network analysis. (2 hrs. lect.; 3 hrs. lab.)

20C Electronics IC (3)

Prerequisite: ETRON 20B or equivalent

Co-requisites: MATH 58, ENG 60

Continuation of ETRON IB and includes sinusoidal and noninusoidal voltages and currents, resonant circuits, three phase systems and basic logic circuits. (2 hrs. lect.; 3 hrs. lab.)

20L Electronics I Laboratory I (2)

Co-requisite: ETRON 20

Laboratory experiments with circuits and components demonstrating principles studied in ETRON 20. (6 hrs. lab.)

21 Electronic Fabrication I (2)

Prerequisites: Qualified to enroll in MATH 58 and ENG 60

ETRON fabrication course designed to introduce the student to: hand/power tools, parts/materials, construction and assembly principles and techniques. (1 hr. lect.; 3 hrs. lab.)

22 Applications of Electronics (4)

Prerequisite: ETRON 20/20L

Co-requisite: ETRON 22L

A detailed study of transistors and vacuum tubes employed as audio and radio frequency amplifiers, of oscillators and their various feedback circuits, of power supplies including both vacuum tube and solid state rectifiers. Transmitter circuits are studied along with the various modulation and keying methods. The basic theory of antennas and transmission lines is covered. Receivers are studied and the theory of operation of superheterodyne radio receivers is examined in detail. Test instruments including oscilloscopes, signal generators and various types of indicating meters are studied. (4 hrs. lect.)

22B Electronics IIB (3)

Prerequisite: ETRON 20/20L or 20B, 20C or equivalent

Basic principles of vacuum tubes, semiconductor devices and their applications to basic power supplies, amplifiers, and sinusoidal oscillators. (2 hrs. lect.; 3 hrs. lab.)

22C Electronics IIC (3)

Prerequisite: ETRON 22B or equivalent

Continuation of ETRON 22B, includes semiconductors, integration circuits, and their applications to (sinusoidal and nonsinusoidal circuits) amplifiers, oscillators and logic circuits. (2 hrs. lect.; 3 hrs. lab.)

22L Applications of Electronics Laboratory II (2)

Co-requisite: ETRON 22

Laboratory assignments include experiments using the theories and applications studied in ETRON 22. (6 hrs. lab.)

23 Electronics Fabrication II (2)

Prerequisite: ETRON 21

Continuation of ETRON 21 with an emphasis on prototype development and project fabrication. (1 hr. lect.; 3 hrs. lab.)

27 F.C.C. (3)

Prerequisite: ETRON 22 or consent of instructor

This course covers the specialized communication theory, supplementing the

electronic fundamentals student to take the Federal Communications Commission Radio-Telephone Second Class license examination. (3 hrs. lect.)

33 Biomedical Electronics I (3)

Prerequisite or Co-requisite: ETRON 41/41L

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)

Prerequisite: ETRON 33

Co-requisite: ETRON 34L

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)

Co-requisite: ETRON 34

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)

Prerequisite: ETRON 33

Practical application of theoretical concepts and skills gained in ETRON 33, 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.)

41 Pulse and Digital Circuits (4)

Prerequisites: ETRON 22/22L, MATH 58, ENG 60

Co-requisite: ETRON 41L

A study of nonsinusoidal waveforms, multivibrators, blocking oscillators, shock-excited oscillators, waveshaping circuits, limiters, clampers, stepcounters, and sweep generator circuits. (4 hrs. lect.)

41L Pulse and Digital Circuits Laboratory (2)

Co-requisite: ETRON 41

Laboratory experiments with circuits and components demonstrating principles studied in ETRON 41. (6 hrs. lab.)

41B Pulse and Digital Circuits (3)

Prerequisite: ETRON 22C

A study of nonlinear circuits. Topics include wave forms, CR circuits, diode switching, transistor switching, Schmitt trigger circuits, ramp generators, multivibrators. (5 hrs. lect./lab.)

41C Pulse and Digital Circuits (3)

Prerequisite: ETRON 41B

A study of nonlinear circuits. Topics include logic circuits, sampling gates, digital counting, digital equipment, pulse modulation, digital systems and microprocessors. (5 hrs. lect./lab.)

42 Electromagnetic Transmission (3)

Prerequisite: ETRON 41/41L

Co-requisite: ETRON 42L

A study of the technology involved in the transmission of electromagnetic waves. The principles examined cover the entire spectrum from extremely low frequencies through light. Major topics include transmission lines, waveguides, optical fibers, wave propagation and antennas. (3 hrs. lect.)

42L Electromagnetic Transmission Laboratory (1)

Co-requisite: ETRON 42

Laboratory experiments and exercises involving transmission of electromagnetic waves thru transmission lines, waveguides and optical fibers, keystone microwave sources and laser light sources are covered as well and antennas and wave propagation through space. (3 hrs. lab.)

43 Computer Electronics (3)

Prerequisite: ETRON 22

Co-requisite: ETRON 41/43L

An introduction to electronic digital computers. Major areas covered are logic circuits, binary arithmetic, machine language, interfacing and data communications. Emphasis is placed on the integrated circuit microprocessor. (3 hrs. lect.)

43L Computer Electronics Laboratory (1)

Prerequisite: ETRON 22L

Co-requisite: ETRON 43

Experiments with digital logic circuits, integrated circuit computer devices, and machine language programming. The operation of a simple microprocessor based computer will be included. (3 hrs. lab.)

44 Instruments and Measurements (2)

Prerequisite: ETRON 20/20L

Measurement of current, voltage and power using commercial type vacuum tube voltmeters, impedance bridges, Z-Y bridge, and "Q" meters. Measurement of capacitance and inductance by indirect methods. Instrument amplifiers; frequency standards and audio and RF calibration methods. (2 hrs. lect.)

48 Electronic Communication Systems (3)

Prerequisite: ETRON 22/22L

Co-requisite: ETRON 48L

A study of the electronic communication systems currently in use. The principles to cover from conventional amplitude modulation through frequency modulation, single side-band, various multiplexing systems and pulse modulation. (3 hrs. lect.)

48L Electronic Communication Systems Laboratory (1)

Co-requisite: ETRON 48

Laboratory experiments and exercises involving transmitters, receivers and antennas for various electronic communication. (3 hrs. lab.)

52 Industrial Electronics (3)

Prerequisite: ETRON 22/22L

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

60 Introduction to Television (3)

Prerequisite: ETRON 22/22L or consent of instructor

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)

Prerequisite: ETRON 41/41L, 48/48L or experience in communications or data processing

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.)

83 Computer Systems (3)

Prerequisite: ETRON 41, 43

Co-requisite: ETRON 83L

Applications of pulse circuits and computer electronics principles to more advanced computer systems. Emphasis is on systems based on microprocessors. The interaction of both hardware and software in the performance of system functions is studied in depth. The more advanced techniques of peripherals, data communications, and system trouble shooting are also examined. (3 hrs. lect.)

83L Computer Systems Laboratory (1)

Prerequisite: ETRON 41L, 43L

Co-requisite: ETRON 83

Laboratory experiments and exercises involving digital computer hardware and software. The function of the component parts of microprocessor based small computer systems will be stressed. Peripheral devices and data communications as well as system trouble shooting will be included. (3 hrs. lab.)

93V Cooperative Education (1–4)

Prerequisite: Approval of Department Head

This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Electronics Technology. (5–20 hours work experience per week)

ENGINEERING TECHNOLOGY (ENGT)

22 Surveying & Measurements I (4)

Prerequisite: MATH 55

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 transit-tape surveys, and the art of determining elevations through leveling. (2 hrs. lect.; 6 hrs. lab.)

23 Surveying & Measurements II (4)

Prerequisite: ENGT 22

Principles of the rectangular coordinate system. Adjustment of azimuth traverses and level circuits. Office computations of land areas and omitted measurements. Computation and stakeout of horizontal and vertical curves. Topographic surveying, including contouring and plotting details, profiles, and cross-sections. (2 hrs. lect., 6 hrs. lab.)

26 Mechanics I (3)

Prerequisite: MATH 55

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.)

31 Topographic Drafting (3)

Prerequisite: ENGT 23

Fundamentals of graphic representation of natural and man-made features in accordance with general engineering practices. Plotting details, profiles, and cross-sections, and contour sketching. Preparation of worksheets, and finished pencil and ink drawings. (1 hr. lect.; 6 hrs. lab.)

34 Advanced Surveying (4)

Prerequisite: ENGT 23

Principles of land surveying and subdivision of land, including lot description writing. Analysis of triangulation systems, including computation of geographic positions and state plane coordinates. Concepts and applications of construction surveying. (2 hrs. lect.; 6 hrs. lab.)

51 Strength of Materials (4)

Prerequisite: ENGT 26

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.)

52 Structural Design I (3)

Prerequisite: ENGT 51

Introduction to design of building components using structural steel, reinforced concrete, and timber members. Elementary connection using bolts, rivets, and welds are also emphasized. (3 hrs. lect.)

54 Structural Drafting (3)

Prerequisite: ENGT 58

A study of drafting room procedures, terminology, conventions and dimensioning. Emphasis on working drawings in structural steel and reinforced concrete buildings. (1 hr. lect.; 6 hrs. lab.)

56 Soils and Foundations (3)

Prerequisite: ENGT 26

Study of basic soil mechanics, terminology, soil test methods and procedures. Visits to various materials testing laboratories. (2 hrs. lect.; 3 hrs. lab.)

58 Engineering Graphics (4)

Co-requisite: MATH 55

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. (1 hr. lect.; 9 hrs. lab.)

61 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.)

62 Construction Management (3)

Introduction to the construction industry from the standpoint of administrative, business, and other management aspects of construction contracting. The course emphasizes descriptive material, intended to familiarize the student with the multitude of subjects that determine the successful translation of building projects into final construction. (3 hrs. lect.)

64 Construction Estimating & Bidding (3)

Prerequisite: ENGT 23 and 54

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)

93V Cooperative Education (1-4)

Prerequisite: Approval of Department Head

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. (5-20 hour work experience per week)

ENGLISH (ENG)**9 Basic Reading V (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 Basic Writing V (3)

Prerequisite: ENG 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 Basic Writing for Non-Native Speakers of English (3)

Prerequisite: ENG 9 or Required Placement Test Score

Specifically designed for the non-native speaker of English, this course focuses its attention on grammar, capitalization, punctuation, and sentence structure. The main goal is getting the student to write complete sentences that communicate well. Non-native speakers may substitute ENG 15 for ENG 10. (3 hrs. lect.)

21B Intermediate Reading (General) (3)

Prerequisite: ENG 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.)

21C Intermediate Reading (Technical) (3)

Prerequisite: ENG 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.)

22 Introduction to Expository Writing (3)

Prerequisite: ENG 10 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 (3)

Prerequisite: ENG 10, ENG 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. The course serves as a prerequisite for English 100 when the student attains a grade of "B" or above. Non-native speakers may substitute ENG 32 for ENG 22.

48 Literary Fundamentals (3)

Prerequisite: ENG 10 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.)

55 Business Communications (3)

Prerequisite: ENG 10 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 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: Four Major Forms (3)

Prerequisite: Placement in ENG 100 or "B" 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 "B" or higher in ENG 22–60

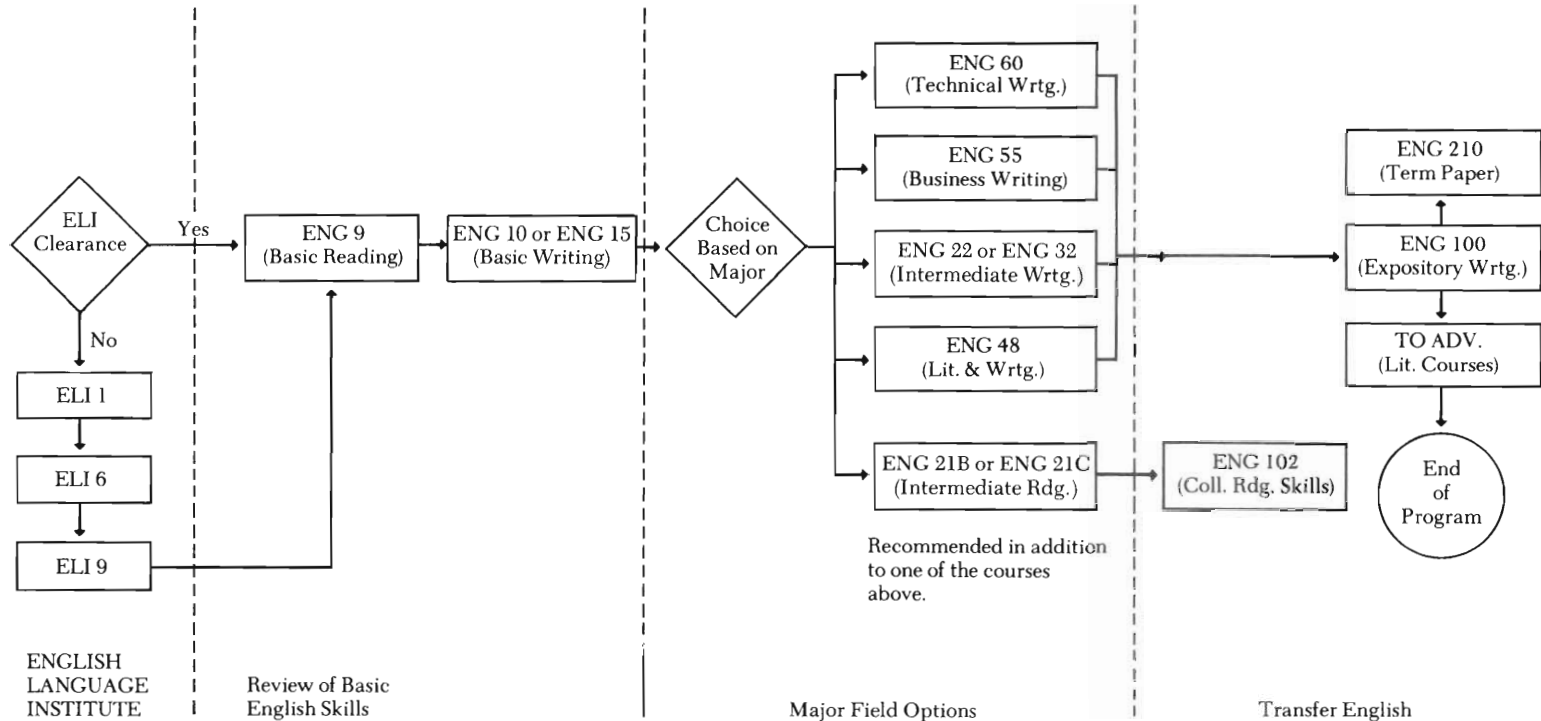
Improvement in college and adult level reading with emphasis on increasing reading rate and comprehension through techniques of phrase reading, skimming, and vocabulary development. (3 hrs. lect.)

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.)

Enter English Program at level
determined by Placement Test



250 Major Works of 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.)

251 Major Works of British Literature (Middle Ages to 1800) (3)

Prerequisite: ENG 100

Study of major British works from the Middle Ages to 1800. (3 hrs. lect.)

252 Major Works of British Literature (1800 to present) (3)

Prerequisite: ENG 100

Study of major British works from 1800 to the present. (3 hrs. lect.)

253 World Literature (Classical Times to Renaissance) (3)

Prerequisite: ENG 100

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

254 World Literature (1600 to present) (3)

Prerequisite: ENG 100

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

255 Types of Literature: Short Story, Novel (3)

Prerequisite: ENG 100

Study and criticism of short stories and novels and how they are created. (3 hrs. lect.)

256 Types of Literature: Drama, Biography, Poetry (3)

Prerequisite: 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 English Language Institute Program I (3)

Prerequisite: Placement on the basis of English as a Second Language (ESL) test scores

A beginning course in reading, writing, speaking and listening for non-native speakers of English. Although the course does not satisfy the 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 course. (3 hrs. lect.)

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 I

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 enroll in any other English courses. (3 hrs. lect.)

9 English Language Institute Program III (3)

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. (3 hrs. lect.)

ENVIRONMENTAL TECHNOLOGY (WST)

23 Wastewater Technology I (4)

An introduction to the fundamentals of Wastewater treatment plant operations. Covers such topics as wastewater collection; pre-treatment, primary treatment, secondary treatment, and advanced treatment; solids handling and treatment; and treated effluent disposal and reclamation. (3 hrs. lect.; 3 hrs. lab.)

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.)

21 Basic Construction Techniques (4)

Co-requisite: FT 215 or consent of instructor

Principles, concepts and procedures for quality construction and custom fitting of clothing. (3 hrs. lect.; 3 hrs. lab.)

27 Basic Pattern Drafting and Clothing Construction (3)

Prerequisites: FT 21, 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 hrs. 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)

Prerequisites: FT 21, 205, 215

Continuation of pattern making using basic slopers to produce and alter a vari-

ety of garments to fit the figures. Creative design is encouraged. (2 hrs. lect.; 3 hrs. lab.)

32 Advanced Apparel Design (3)

Prerequisites: FT 27, 215

Co-requisite: FT 41

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.)

34 Intermediate Clothing Construction (3)

Prerequisite: FT 21, 205, 215

Continuation of clothing construction techniques and pattern re-designing and alterations. (2 hrs. lect.; 3 hrs. lab.)

36 Draping (3)

Prerequisite: FT 41 or consent of instructor

Co-requisite: FT 38

Basic fundamentals of draping with standard and individual forms. (2 hrs. lect.; 3 hrs. lab.)

38 Draping and Design (3)

Co-requisite: FT 36

Integration of draping and flat 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 natural and man-made fibers; yarns, construction, finishes and fabrics with simple physical and chemical tests. (2 hrs. lect.; 3 hrs. lab.)

41 Apparel Design (3)

Prerequisites: FT 27, 215

Co-requisite: FT 32

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: Approval of Department Head

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. (5–20 hours work experience per week.)

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 Survey of Fashion Merchandizing (3)

This course is to survey the primary and secondary fashion industries, the structure of the fashion market plan, and the trends in fashion. (3 hrs. lect.)

125 Fashion Show Production (3)

Comprehensive practical experience including all factors required for the preparation and production of fashion shows, clinics, and other fashion promotions. May be repeated for credit. (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 Fashion Merchandising Mathematics (3)

This course covers the essential terminology, concepts, practices and procedures as well as the calculations and interpretations of figures related to the many factors involved in profitable fashion merchandising. (3 hrs. lect.)

130 Operating Small Fashion Store (3)

Designed to help students understand how to organize a small fashion retail enterprise. Decision-making required for the successful management of a small fashion store will be covered. Students will develop a model plan for a small fashion retail store. (3 hrs. lect.)

131 Fashion Supervision (3)

A survey of the principles, theories and strategies of communication with and managing people in groups or as individuals. Strong emphasis on human relations. Supervisors role in employee recruitment, selection, training and evaluation. (3 hrs. lect.)

205 Materials and Methods of Clothing Construction (4)

Prerequisites: Eng 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 consent of instructor

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 Textiles and Clothing (TxCL) Department. These are subject to change without prior notice.

HCC	UHM
FT 111	TxCL 111
FT 205 or	TxCL 205
FT 21 and 34	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 consent of instructor

A stimulating 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)

Prerequisite: FIRE 22 and FIRE 23 or consent of instructor

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)

Prerequisite: FIRE 22 and FIRE 23 or consent of instructor

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 consent of instructor

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)

Prerequisite: FIRE 22 and FIRE 23 or consent of instructor

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)

Prerequisite: FIRE 22 and FIRE 23 or consent of instructor

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, and communications. (3 hrs. lect.)

50 Fire Apparatus and Equipment (3)

Prerequisite: FIRE 22 or consent of instructor

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)

Prerequisite: FIRE 22 and FIRE 23 or consent of instructor

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)

Prerequisite: FIRE 22 and FIRE 23 or consent of instructor

An interesting 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)

Prerequisite: FIRE 22 and FIRE 23 or consent of instructor

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)

Prerequisite: FIRE 22 and FIRE 23 or consent of instructor

An insight into the fire company organization, procedures and functions, and managerial duties and responsibilities of the holder of that office. (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, hygienic 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, aesthetic, 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 FASHN 285, offered at the University of Hawaii at Manoa.

FRENCH (FR)***101-102 Elementary French I-II (4-4)**

Prerequisite: ENG 10 or instructor approval for 101; FR 101 or instructor approval for 102

Development of listening, speaking, reading, writing. French daily life and culture 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 acquaint the student with basic geographic principles and to enable him/her to better understand and appreciate the Hawaiian environment. Fundamental concepts of physical and cultural geography are presented with emphasis on Hawaii's volcanic landforms, coastal features, climate and vegetation as related to settlement patterns and principle industries. Geographic aspects of tourism and agriculture are examined as well as population distribution, problems of land use and urban analysis of Honolulu. (3 hrs. lect.)

101 Man's 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. Field trip studies to Halawa Water Tunnel and Oahu volcanoes. Laboratory problems in environmental analysis. Fulfills Natural Sciences core requirement. (3 hrs. lect.)

102 World Regional Geography (3)

Study of the world's major geographic and population regions and the interrelationships between the physical and human elements of these regions. An over-

all view of the regions related to geographical factors will be undertaken with regard to social, political and economic factors. The use of maps, understanding of climate controls, and unifying geographical factors will be sought to discern general world patterns. (3 hrs. lect.)

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 the 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.)

GRAPHIC ARTS (GRAPH)

23 Offset Printing (4)

Prerequisite: Cmart 21 or consent of instructor

Production procedures in commercial offset printing. Operation and maintenance of small press equipment. Includes stripping, platemaking, and make-ready for printing. (3 hrs. lect.; 3 hrs. lab.)

25 Process Camera (4)

Prerequisite: Cmart 21 or consent of instructor

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 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.)

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 resuscitation (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 skills. Comparison and contrast of flexibility and agility. How to improve flexibility and agility skills 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.)

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 histo-

rians 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.)

224 History of Hawaii (3)

A general study of the social, political, and economic development of Hawaii from the ancient Hawaiians to the present. A special emphasis will be placed on the people and events that helped shape the destiny of Hawaii. (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 Asia I & 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.)

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: The following courses have been accepted in the Home Economics (HE) Department at the University of Hawaii at Manoa. These are subject to change without prior notice.

HCC	UHM
HE 153	HE 153
HE 260	HE 260
HE 267	HE 267

HUMAN DEVELOPMENT (HD)**31 Infancy - Early Childhood Development (3)**

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.)

33 Parenting (3)

This course is designed to assist parents in understanding and coping with the stresses of parenting. Course includes: Parental expectations; values clarification; concepts of anger and issues of stress management in adult life situations. Course includes lab experiences in parent-child interaction. (2 hrs. lect.; 3 hrs. lab.)

69 Holistic Health and Employment (3)

This course will meet the special concerns of the student who is employed or seeking employment in his/her major by focusing on the psychology of job performance including interests, skills, attitudes, brain function, and life-style habits that facilitate personal enrichment, occupational upgrading and career mobility, enabling the student to function more effectively in the social environment. (3 hrs. lect.)

85 Career Life Planning (3)

The Career Life Planning course is designed to assist students to explore skills, interest, abilities and values to enhance self-awareness. Students also learn labor market familiarization, economic overview, occupational clusters, sex role stereotyping and rights as workers. Job search skills, interviewing, preparation for resumes, and application writing are also included in the course. (3 hrs. lect.)

130 Child Management (3)

Exploration of five approaches to child management. Major focus is on developing skills needed to successfully communicate with and guide children, including techniques for preventing and solving behavior problems. (3 hrs. lect.)

133 Dynamics of Child Abuse and Neglect (3)

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, and role of helping person in child abuse prevention. Course is seminar-lecture with audio-visual aids and community resource persons as guest lecturers. (3 hrs. lect.)

196 Introductory Seminar in Student Development (2)

Exploration of issues in higher education, both academic and personal. Emphasis on student development (acceptance of student roles in a setting of higher education). Assessment of personal growth and increased self-perception is encouraged through an identification and affirmation of personal values and strengths. (2 hrs. lect.)

201 Social Systems Perspectives of Human Resources (3)

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 Introduction to Human Development I (3)

Prerequisite: ENG 21 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 Introduction to Human Development II (3)

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. HD 231 and HD 232 need not be taken in sequence. (3 hrs. lect.)

235 Work with Parents (2)

Study of parent development. Central focus is on developing skills for establishing effective relationships between the preschool teacher and parents of the children with whom the teacher is working. The course will include such skills as active listening and conflict solving. Class sessions will include parent-teacher conferences, written communication with parents and group meetings with parents. (2 hrs. lect.)

244 Aging (3)

Basic course in study of developmental process and problems of aging. Students will be guided to look at aging from a systems approach. Sociological, biological, and cognitive development of the aging individual will be discussed. (3 hrs. lect.)

296 Working with People (3)

Includes knowledge and skills needed in working with people. Techniques of helping and communicating with people will be discussed and practiced in class. Especially appropriate for those planning to work in human services. (3 hrs. lect.)

HUMAN SERVICES (HSERV)**22 Care of Pre-Primary Child (3)**

Skills and knowledge necessary for quality care of infants and toddlers. Units to

be presented include: physical care of the child, care in emergencies and sickness, observation, growth and development, learning, guidance, working with parents, and general management of a small day care operation. (3 hrs. lect.)

24 Enriching Child Play (2)

Selection and use of toys that are developmentally appropriate for the child under six in the home; make-it-yourself toys and equipment; art, music and dramatic activities suitable for the home environment; use of water and other natural materials in play; selection and use of stories and books; excursion ideas. This course is especially designed for family day care home operators and parents who care for children at home. (2 hrs. lect.)

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, 41, 42, 43 Special Topics in Human Services (3-3-3-3)

Workshop, project, or readings in methods or problems in human services for paraprofessionals (1) general human services, (2) education, (3) community service, (4) health, (5) elderly services. May be repeated for credit. (1-3 hrs. lect. or 3-9 hrs. lab.)

40B, 40C, 40D S/T Special Topics (1-2)

Special Topic courses offered in either a one or two credit format. A variety of contemporary topics, workshop, projects, or readings in methods or problems in human services related to child services for paraprofessionals are covered. May be repeated for credit. (1-3 hrs. lect. or 3-6 hrs. lab.)

41B, 41C, 41D S/T Special Topics (1-2)

Special Topic courses offered in either a one or two credit format. A variety of contemporary topics, workshop, projects, or readings in methods or problems in human services related to child services for paraprofessionals are covered. May be repeated for credit. (1-3 hrs. lect. or 3-6 hrs. lab.)

42B, 42C, 42D S/T Special Topics (1-2)

Special Topic courses offered in either a one or two credit format. A variety of contemporary topics, workshop, projects, or readings in methods or problems in human services related to community services for paraprofessionals are covered. May be repeated for credit. (1-3 hrs. lect. or 3-6 hrs. lab.)

43B, 43C, 43D S/T Special Topics (1-2)

Special Topic courses offered in either a one or two credit format. A variety of contemporary topics, workshop, projects, or readings in methods or problems in human services related to community services for paraprofessionals are covered. May be repeated for credit. (1-3 hrs. lect. or 3-6 hrs. 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.)

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 CR/N basis. (3 hrs. lect.)

35 Critical Thinking (3)

Prerequisite: ENG 10 or placement in ENG 22

This is an inter-disciplinary course which addresses the question "How can I evaluate and express my own ideas clearly and confidently?" The emphasis is upon developing critical judgement as a basis of listening, speaking, reading, and writing. Group processes may be used to increase self awareness. May be taken on CR/N basis. (3 hrs. lect.)

36 Problem Solving (3)

This is an inter-disciplinary 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 inter-disciplinary approach will be used and the student will be encouraged to examine his own values. (3 hrs. lect.)

60 American Culture for Asians (3)

Prerequisite: ELI 1 and 6

Co-requisite: Enrollment in ELI 9

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: Approval of Department Head

This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Humanities. (5-20 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 consent of Department Head.

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 consent of Department Head.

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, key-way cutting, gear cutting, and job set-up 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 consent of Department Head.

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. (5 hrs. lect./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)

See also EE 150, EE 151 and LSK 110 for computer courses.

101 Introduction to Computer Science I (3)

Comment: Recommended for non-science students

Introduction to computer technique: writing programs in BASIC language and running them on computer. Applications of computers in various fields. Impact of computers on society. (3 hrs. lect.)

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.)

INTERPRETING (INTRP)

Interpreting Program is on a two year stop-out.

15 Intermediate Manual Communication (4)

Prerequisite: COMUN 101 or equivalent

A continuation of the study of American Sign Language. Designed to provide intermediate conversational skill in the language used among most deaf people. (3 hrs. lect.; 3 hrs. lab.)

16 Advanced Manual Communication (4)

Prerequisite: INTRP 15 or equivalent.

Continuation of INTRP 15. (3 hrs. lect.; 3 hrs. lab.)

20 Principles of Interpreting for Deaf People I (3)

Survey of the basic theories, guidelines, principles and practices of interpreting including the interpreter code of ethics, role of the interpreter, physical setting and compensation. (3 hrs. lect.)

22 Laboratory in Interpreting for Deaf People (2)

Prerequisite: INTRP 16 or equivalent.

Co-requisite: INTRP 20

The study and practice of expressive and reverse interpreting and translating communications with deaf people. Primarily a practice course using films, audio tapes, video-tapes and deaf individuals stressing all types of situations and communication levels. (6 hrs. lab.)

24 Psycho-Social Aspects of Deafness (3)

Considers effects of prelingual and postlingual deafness or hearing impairment on the psychological and emotional development and adaptation of the individual to deafness. Cognitive and linguistic development, personality, interpersonal behavior, social reactions and possible compensation in other sensory systems of the body. (3 hrs. lect.)

30 Principles of Interpreting for Deaf People II (3)

Prerequisites: INTRP 20, 22 or equivalent

The second part of a two-part sequence, a review of topics covered in INTRP 20

and INTRP 22 along with the development of the student's ability to apply basic interpreting principles and demonstrate them in a variety of settings. (1 hr. lect.; 6 hrs. lab.)

34 Vocabulary for Interpreters (3)

Designed to expand general college vocabulary and idiomatic expressions, as well as their synonyms and usage. (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 consent of instructor

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 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. lab.)

*Native speakers may not take language courses for credit.

JAPANESE LITERATURE (JALIT)

See EAST ASIAN LANGUAGE AND LITERATURE (EALL)

JOURNALISM (JOURN)

150 The Press and Society (3)

Historical and technological development of communications media in relation to freedom of expression, the role of the media in contemporary society, with emphasis on the economic, social and political effects. (3 hrs. lect.)

205 News Writing (3)

Prerequisite: ENG 100 or consent of instructor

Fundamentals of news style, reporting, etc. (3 hrs. lect.)

206 News Editing (3)

Prerequisite: ENG 100 or consent of instructor

News and photo editing, headline writing, publications makeup. (3 hrs. lect.)

285V Newspaper Laboratory (1–3)

Prerequisite or Co-requisite: JOURN 205 or 206 or consent of instructor

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 as well as introduction to specific techniques used in studying math, speech, science, history and language arts. (3 hrs. lect.)

110 Introduction to Computer Skills (3)

A basic introduction to the many time-saving possibilities of using a microcomputer (wordprocessing, database management, spreadsheets, and educational software) relevant to academic success. (3 hrs. lect/lab.)

LINGUISTICS (LING)**102 Introduction to the Study of Language (3)**

Prerequisite: Placement in ENG 100 or "B" or higher in ENG 22, 48, 55 or 60 or consent of instructor

A study of the nature and workings of language; its role in culture and history. (3 hrs. lect.)

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 set up. Stress is placed on precision measurements using micrometer and vernier calipers. (4 hrs. lect.; 6 hrs. lab.)

30 Grinding (3)

Prerequisites: MACHS 20, 24

This is a course in the concept and operation of grinding and abrasive machin-

ing with stress on the effects of grit sizes, coolants, and surface speeds and feeds. The student uses the surface grinder, universal grinder and the abrasive-belt machine to gain skill and proficiency. (2 hrs. lect.; 3 hrs. lab.)

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, set-up, and feeds and speeds for commonly used metals. Students develop skills in plane and face milling, key-way cutting, gear cutting, and job set up 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.)

40V Advanced Machine Tool Practice (1–10)

Prerequisite: Consent of Instructor.

This is an advanced course in set-up, tooling, and operation of the engine lathe, vertical and horizontal milling machine, shaper, drill press, surface grinder, and universal grinder. Emphasis is placed on the utilization of technical handbooks and date publications to carry out projects and assignments. May be repeated for a total of 10 credits. (3–30 laboratory hours to be arranged.)

50 Introduction to Shipboard Pumps and Valves (3)

Prerequisites: MACHS 20, 24

This course provides instruction on purposes and functions of various types and classifications of pumps and valves used in naval ships. Nomenclature, common causes of pump and valve failures, corrective action to repair defects, and testing to assure corrections of discrepancies are emphasized. (2 hrs. lect.; 3 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.)

59 Naval Ship Systems and Components (3)

Prerequisite: MACHS 57

An advanced course in Naval ship systems and components with emphasis on

application and skills developed in all phases of Marine Machinist Technology. (2 hrs. lect.; 3 hrs. lab.)

93V Cooperative Education (1-9)

Prerequisite: Approval of Department Head

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. (5-40 hrs. work experience per week.)

MANAGEMENT (MGT)

20 Introduction to Management (3)

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)

Operations on whole numbers, fractions, mixed numbers, decimals, and percents. Graded on a CR/N basis. (3 hrs. lect.)

21 Selected Topics in Mathematics (1)

Prerequisite: Consent of Instructor

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 CR/N basis. (1 hr. lect.)

22 Pre-Algebra Mathematics (2)

Prerequisite: MATH 1 or sufficiently high score on placement test

The use of signed numbers, the concept of a variable, and the language and basic ideas of elementary algebra. Graded on CR/N basis. (3 hrs. lect.)

24 Elementary Algebra I (3)

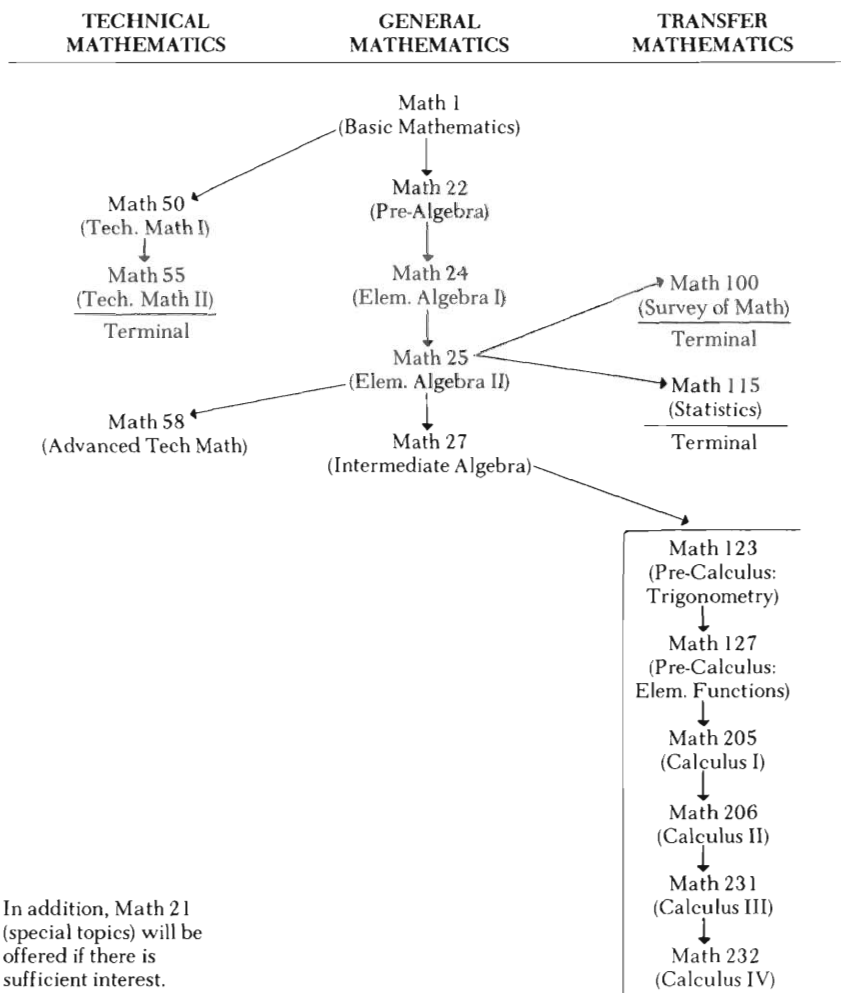
Prerequisite: MATH 22 or equivalent

Concept of a variable; signed numbers; integers and rational numbers; simplifying algebraic expressions; evaluation of expressions containing numbers and letters; exponents; polynomials; factoring and special products (algebraic fractions). (3 hrs. lect.)

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; ratio and proportion; 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 at Pearl Harbor Naval Shipyard. (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.)

123 Pre-Calculus: Trigonometry (3)

Prerequisite: "C" or higher in MATH 27 or equivalent

A study of angles, trigonometric and circular functions, solutions of triangles, graphical representation, identities, inverse trigonometric functions. (3 hrs. lect.)

127 Pre-Calculus: Elementary Functions (3)

Prerequisite: "C" or higher in MATH 123 or equivalent

A study of elementary functions, including polynomial, rational, exponential, logarithmic, and special functions; introduction to analytic geometry, including graphing, conic sections, translation of axes. Emphasis is placed on those topics which will prove useful to students planning to take Calculus. (3 hrs. lect.)

205 Calculus I (4)

Prerequisite: "C" or higher in MATH 127 or equivalent

Basic concepts, techniques and applications of differentiation; introduction to integration. (5 hrs. lect.)

206 Calculus II (4)

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. (5 hrs. lect.)

231 Calculus III (4)

Prerequisite: "C" or higher in MATH 206 or equivalent

Functions of several variables; vectors and 3-dimensional analytic geometry; partial differentiation. (5 hrs. lect.)

232 Calculus IV (4)

Prerequisite: "C" or higher in MATH 231 or equivalent

Multiple integrals, line integrals, Green's Theorem, surface integrals: ordinary differential equations. (5 hrs. lect.)

MECHANICAL ENGINEERING (ME)**113 Introduction to Engineering Design (3)**

Prerequisite: High school Physics, 2 years of high school Algebra and ENG 22 or equivalent

Introductory experience in analysis, synthesis, and communication used in solving engineering problems. (3 hrs. lect.)

MICROBIOLOGY (MICRO)**55 Environmental Microbiology (4)**

An introductory course in environmental microbiology covering all microbiological aspects of wastewater and wastewater treatment with emphasis on the applied aspects of wastewater treatment. The laboratory will illustrate the importance of microbiological organisms in wastewater treatment and demonstrate environmental effects on the same. (3 hrs. lect.; 3 hrs. lab.)

125 Origin of Life (3)

Prerequisites: 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 extra-terrestrial 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.)

130L General Microbiology Laboratory (1)

Prerequisite or Co-requisite: MICRO 130

Laboratory illustrating fundamental principles of microbiology. (3 hrs. lab.)

MUSIC (MUS)**106 Introduction to Music Literature (3)**

This is a music appreciation course with an emphasis on developing listening skills. 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 CR/N. (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 CR/N. (2 hrs. lect./lab.)

OCCUPATIONAL SAFETY AND HEALTH (OSH)

Occupational Safety and Health program is on a two year stop-out.

93V Cooperative Education (1-9)

Prerequisite: Approval of Department Head

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. (5-40 hours work experience per week)

101 Introduction to Occupational Safety and Health (3)

An overview of the occupational safety and health field. History of the safety movement from primitive times to enactment of OSHA and other implementing legislation; occupational safety and health as a career; occupational injuries and illness—scope of the problem, cost factors and causal factors of safety, the sociology of work accident/incident investigation, concepts and techniques of inspections, surveys and audits; communication skills; instructional methods, materials and equipment; and the development of occupational safety and health organizations. (3 hrs. lect.)

103 Human Factors in Safety (3)

Prerequisite: OSH 101 or consent of instructor

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 man; and, application of human factors in occupational safety and health programs. (3 hrs. lect.)

105 Introduction to Industrial Hygiene (3)

Prerequisites: High School Chemistry, Physics or Chemistry 100, OSH 101, or consent of instructor

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. Emphasize occupational safety and health program, codes and standards; and training techniques. (3 hrs. lect.)

145 Occupational Safety and Health in Construction (3)

Prerequisite: OSH 101 or consent of instructor

Comprehensive overview of techniques and procedures to insure effective control of hazards and accidents in the 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 101 or consent of instructor

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.)

153 Accident Investigation Techniques (3)

Prerequisite: OSH 101 or consent of instructor

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.)

205 Physical Hazards Control (3)

Prerequisite: OSH 101 or consent of instructor

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 facilities of the College and cooperating business facilities. (3 hrs. lect.)

210 Safety Program Management (3)

Prerequisite: OSH 101 or consent of instructor

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 Aquaculture (3)

Participation in field trips recommended

This course will provide a basic knowledge in aquaculture; the farming of marine and freshwater organisms for food. The course will cover various aspects of pond preparation and maintenance, hatchery and nursery management and water quality monitoring methods applicable to aquaculture operations. Emphasis will be on marine and freshwater species pertinent to Hawaii (2 hrs. lect.; 3 hrs. lab.)

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.)

See also Zoology for Marine Biology

OFFICE PROCEDURES (OFPRO)

20 Filing (2)

Prerequisites: General Clerical or Stenography major or consent of instructor.

A study of indexing and filing procedures covering the theory and practices of alphabetical, numerical, geographical, and subject systems. (2 hrs. lect.)

40 Office Procedures (3)

Prerequisites: General Clerical or Stenography major or consent of instructor.

The student will acquire, develop and refine technical skills and learn to identify job performance requirements and traits of effective office workers. The application of skills and knowledge to selected laboratory materials and experiences related to typical office procedures and responsibilities, including receptionist duties, telephoning techniques, filing, typing, duplicating, establishing priorities, developing ability to make judgments, and improving interpersonal relationships. (2 hrs. lect.; 3 hrs. lab.)

42 Personal Development (3)

Prerequisites: General Clerical or Stenography major or consent of instructor.

A course in personal development to bring forth the physical and positive attitudinal potentials of each student in becoming a more attractive personality for success in business and life. Major topics include self-analysis, nutrition, physical fitness, poise in motion, voice and diction, communication skills, social and business etiquette, grooming, wardrobe, personal and professional relationships, and job interview procedures. (3 hrs. lect.)

50 Secretarial Procedures (4)

Prerequisites: TYPW 30, SHTHD 30, OFPRO 40

A capstone course in secretarial science to develop an understanding of tasks and responsibilities common to secretaries; work organization, prioritizing of tasks, interrelationships of departments, and managing records. Emphasis is placed on problem solving, decision making, and production level techniques. Typing speed minimum of 60 words per minute with five errors or less on a piece of five-minute timed writing is required to pass the course. Offered only during the Spring semester. (3 hrs. lect.; 3 hrs. lab.)

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 (3)

Readings in the problems, fields, and methods of studying philosophy with emphasis on acquiring a philosophical attitude towards life as seen in these works. (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)

Universal themes and problems, from Asian perspective. (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.)

210 Introduction to Logic (3)

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.)

255 Introduction to Cosmology: Science and the Human Prospect (3)

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)

50 Technical Physics (4)

Prerequisite or Co-requisite: MATH 50 or equivalent credit

Introductory applied physics. Measurement, forces, basic machines, motion, energy, work, power, fluid pressure and flow. Heat measurement and transfer. Behavior of gases. Basic electricity. (3 hrs. lect.; 3 hrs. lab.)

51B Basic Measurement (1)

Introduces the student to measuring systems, conversion of units, use of: the precision rule, the vernier caliper, the micrometer caliper, the multimeter and the oscilloscope. (Lecture/discussion/laboratory, two sessions of two hours each. Total 4 hrs./wk. for one month.)

51C Simple Machines and Rotary Motion (1)

Introduces the student to the fundamental principles of the operation of simple machines, mechanical advantage and efficiency, the lever, the incline plane, pulleys, jacks, torque, rotary motion, the torque wrench gear trains and pulley systems. (Lecture/discussion/laboratory, two sessions of two hours each. Total 4 hrs./wk. for one month.)

51D Hydraulics and Fluids (1)

Pressure in liquids and gases; Bernoulli's Principle, Venturi Effect; Forces between molecules; density and specific gravity. (Lecture/discussion/laboratory, two sessions of two hours each. Total 4 hrs./wk. for one month.)

51E Statics and Equilibrium (1)

Translational equilibrium including forces, vectors, and concurrent forces; rotational equilibrium including parallel forces, torque, and center of gravity.

(Lecture/discussion/laboratory, two sessions of two hours each. Total 4 hrs./wk. for one month.)

55B Fundamentals of Metallurgy (2)

Intended for students in metal fabrication trades. Introductory applied fundamentals of metallurgy. Shop identification of ferrous and non-ferrous metals, classification of metals, physical and mechanical properties of metals, corrosion of metals, and structure of metals.

55C Physical Effects of Stress and Heat (1)

Prerequisite: Module B, Fundamentals of Metallurgy

Intended for students in the metals fabrication trades. An introductory lecture/demonstration/laboratory course. Effects of speeds and feeds on the surface of machined metals, methods and practices of heat treatment of metals.

55D Physical Effects of Welding on Metals (1)

Prerequisite: Module B, Fundamentals of Metallurgy

Intended for students in the metals fabrication trades. An introductory lecture/demonstration/laboratory course. Structure of welds and effects of welding of; carbon steel, alloy steel, cast iron and non-ferrous metals.

55E Industrial Plastics (2)

Intended for students in ABRP. Introduces the student to the basic chemistry of plastics and to the physical mechanical and chemical properties of plastics. Emphasis is on plastics used in the transportation industry. (6 hrs/week for 6½ weeks lect./lab.)

57 Mechanics and Heat (4)

Prerequisite: Algebra

Designed primarily for technical or engineering technology majors. Principles of precision measurements: scalar and vector quantities, applied forces, laws of motion, work, power and energy, simple machines, fluid mechanics, laws of thermodynamics. (3 hrs. lect.; 3 hrs. lab.)

58 Sound, Light and Electricity (4)

Prerequisite: Algebra

Designed primarily for technical or engineering technology majors. Simple harmonic motion; wave motion; sound; reflection; refraction, interference, diffraction, spectra; optical instruments; electrostatics and electric fields; basic circuits; magnetism and magnetic fields; induction; electromagnetic waves. (3 hrs. lect.; 3 hrs. lab.)

61 Applied Physics I (3)

Introduction to Physics; study of Force, Work, Machines, Motion, Hydraulics, Composition of Forces, Periodic table, Atomic theory and Properties of Materials.

62B Applied Physics II (1)

Theory of heat, heat transfer, effects of heat, measuring heat and heat machines; Electron theory, series and parallel circuits, effects of electricity, magnetism; Light—its effects and uses; Producing sound, controlling and using sound; Radiation and its effect. Offered Fall semester only at Pearl Harbor Naval Shipyard. (1 hr. lect.)

62C Applied Physics II (2)

Continuation of PHYS 62B. Offered Spring semester only at Pearl Harbor Naval Shipyard. (2 hrs. lect.)

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.)

151–152 College Physics (3–3)

Prerequisite: MATH 123 or equivalent. PHYS 151 is prerequisite for 152. MATH 127 highly recommended.

Co-requisite: PHYS 151L with PHYS 151; PHYS 152L with PHYS 152.

A noncalculus, two-semester, transfer level course for preprofessional or non-engineering majors. Study of the basic concepts of physics, including fundamental principles, theories, and experimental methods in mechanics, thermodynamics, electricity, magnetism, optics, and modern physics. (3 hrs. lect.)

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 Experimental Analysis in Mechanics and Thermodynamics (1)

Prerequisite: Credit or registration in 170. (3 hrs. lab.)

272 General Physics II (3)

Prerequisites: PHYS 170, PHYS 170L

Electricity and Magnetism; Geometrical Optics

272L Experimental Analysis in Electricity and Magnetism and Optics (1)

Prerequisites: Credit or registration in PHYS 272

Experimental Analysis in Electricity and Magnetism and Optics

274 General Physics III (3)

Prerequisites: PHYS 272, 272L, or PHYS 152, 152L or PHYS 164, 164L; credit or registration in Math 231

Relativity, introduction to quantum mechanics, atomic and nuclear physics, physical optics.

PIPEFITTING (PIPE)

20 Introduction to Marine Pipefitting (4)

A basic introduction to marine pipefitting including ships 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.)

50 Marine Pipefitting III (4)

Prerequisite: PIPE 40

The course covers testing, job orders and material listing, general purpose reports, trade math, and blueprint reading. (3 hrs. lect.; 3 hrs. lab.)

93V Cooperative Education (1–9)

Prerequisite: Approval of Department Head and participating Cooperative Education Agency

This course will provide the student with the opportunity to acquire on-the-job training/experience in conjunction with classroom and laboratory instruction in Marine Pipefitting. (5–40 hours work experience per week)

POLICE SCIENCE (PS)

See ADMINISTRATION OF JUSTICE (AJ).

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, civil liberties, and the role of governmental agencies and other political groups and organizations in the social and economic life of the community. Problems which students will face in their day-to-day life in the Hawaii community will be emphasized. (3 hrs. lect.)

110 Introduction to Political Science (3)

An introduction to political problems, systems, ideologies, and processes. (3 hrs. lect.)

220 Introduction to World Politics (3)

Prerequisite: ENG 22 or above

Introduction to contemporary issues in international politics. Methodologies of political economy, system theories, foreign policy analysis, conflict resolution strategies, global ecopolitics, and contending theories of international relations are introduced. The methods of each framework are integrated with current and historical examples from the global political arena. Issues of fragmentation, regionalization, and globalization are covered with an emphasis on the Pacific Basin. (3 hrs. lect.)

245 Introduction to Politics of Asia & the Pacific (3)

Introductory analysis of political behavior and processes in Asia and the Pacific. (3 hrs. lect.)

271 Introduction to Political Design & Futuristics (3)

Introduction to possible social and political alternatives for the future. Emphasis on the conditions likely if present trends continue, on the formulation of visions of better futures, and on the 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.)

69 Psychology for Living (3)

This course is designed to help the non-transfer student to understand his/her basic psychological needs, motivations and relationships, to enhance his/her mental health. (3 hrs. lect.)

100 Survey of Psychology (3)

A survey of factors influencing human and animal behavior, including genetics, brain-behavior relationships, learning, and socialization. (3 hrs. lect.)

110 Psychology of Adjustment (3)

This course deals with the factors involved in understanding and improving adjustment. Needs, frustrations, conflicts, anxieties, patterns of adjustment, and general concepts of mental health are discussed. (3 hrs. lect.)

212 Introduction to Methods of Psychology (3)

Prerequisite: PSY 100

An introduction to experimental and statistical techniques in the study of behavior. Demonstrations and laboratory studies of learning, emotion, behavior genetics, and brain-behavior relationships will illustrate how scientific information is gathered. (3 hrs. lect.)

220 Developmental Psychology (3)

Prerequisite: PSY 100

Emotional, mental, physical, social development from infancy to adulthood; interests and abilities at different age levels. (3 hrs. lect.)

222 Social Psychology (3)

Prerequisite: PSY 100

Interpersonal relations; social attitudes; group dynamics; intergroup relations, class and cultural influences. (3 hrs. lect.)

230 Social Behaviorism (3)

Prerequisite: PSY 100

Outline of basic learning principles. A general, unified approach to the study of human personality and behavior, based upon a learning conception, various areas of psychology and the other social sciences are treated. (3 hrs. lect.)

REFRIGERATION AND AIR CONDITIONING (RAC)**20 Fundamentals of Refrigeration (5)**

Co-requisites: RAC 22L, 27

Principles of Physics applicable to mechanical and absorption cycles. Heat energy, heat transfer, properties of matter, change of state, laws of gases, temperature-pressure relationship, thermodynamic principles in the mechanical cycle, compressors, condensers, receivers, refrigerant controls, evaporators and accessories. (5 hrs. lect.)

22L Refrigeration Laboratory I (5)

Co-requisites: RAC 20, 27

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 27

Co-requisites: RAC 24L, 28

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, 28

A continuation of RAC 22L. Advanced maintenance, troubleshooting and repair of domestic and commercial units. (15 hrs. lab.)

27 Refrigeration Electricity (4)

Co-requisites: RAC 20, 22L

D.C. and A.C. theory and circuitry including vector analysis of A.C. circuits. A.C. motor theory, relays, overloads, line starters, and motor control circuitry. (5 hrs. lect.)

28 Applied Electricity (2)

Co-requisites: RAC 23, 24L

Meters, motors, line starters and electrical devices with emphasis on refrigeration and air conditioning circuitry. (1 hr. lect.; 3 hrs. lab.)

41 Psychrometry and Cooling Load (5)

Prerequisite: RAC 28

Co-requisite: RAC 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 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 42L

Co-requisite: RAC 44L

Duct sizing, duct devices, system design, system balance, control systems, double-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 set-up, water testing and engineering studies on central station chill water air conditioning system and operation of a maintenance shop. (15 hrs. lab.)

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.)

SCIENCE (SCI)

20 General Science by Videotape (1-3)

A general science course by videotape offered in an unscheduled variable credit format. A variety of contemporary topics in the natural sciences is covered, taken from various commercial and public television programs designed for general lay public consumption.

50B The Body Under Attack: Microbial Diseases of the Human Body (1)

A survey of host-parasite relationships between the human body and invading micro-organisms. (4 hrs. lect. per wk. for 4 wks. only.)

50C Medicinal and Drug Plants (1)

A study of plants used as drugs or for medicinal purposes. (4 hrs. lect. per wk. for 4 wks. only.)

50E Energy Alternatives: Principles and Technology of Alternate Energy Sources (1)

Survey of the basic principles and technology of alternate energy sources: direct solar, solar heating and air conditioning, wind power, geothermal power, wave and tidal power, ocean thermal energy conversion, biomass conversion, coal and oil shale gasification, hydrogen as a fuel, atomic fission and fusion. (4 hrs. lect. per wk. for 4 wks. only.)

50F Consumer Chemistry (1)

For non-science students who desire an understanding of the effect chemistry has on their lives. Consumer products such as food additives, drugs, and cosmetics will be discussed. (4 hrs. lect. per wk. for 4 wks. only.)

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.)

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)

Prerequisite: Approval of Department Head

This course will provide the student with the opportunity to acquire on-the-job experience, in conjunction with classroom and laboratory instruction in Science. (5-20 hrs. work experience per week)

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 sheetmetal 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 various shaped gutters, gutter miters, hangers, flashing of all types, downspout, expansion joints and other similar work. Standard installation practices. (2 hrs. lect.; 6 hrs. lab.)

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.)

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.)

29 Sheet Metal Architectural Design (2)

Prerequisite: DRAFT 24

This course provides the sheet metal experiences that will enable the student to appreciate the relation between design and sheet metal practices. The manufacture, properties, and application to the trade of the various metals and supplies used in the sheet metal industry are studied. This is open to all building trades students; designed primarily for architectural majors. (2 hrs. lect.)

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

Co-requisites: SMP 41, 42, 47

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 44, 45, 48, 49

Pattern development, emphasizing complex, intersecting problems and short-cut 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

Co-requisites: SMP 44, 45, 46

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./lect.)

48 Plastic Welding and Fabrication II (1)

Prerequisite: SMP 42

Co-requisites: SMP 44, 45, 46

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./lect.)

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.)

SHORTHAND (SHTHD)

20 Beginning Shorthand (4)

Prerequisite: Stenography major or consent of instructor.

A beginning course in shorthand principles and theory, with emphasis on reading, writing, spelling, and introduction to transcription. Included is the integrated study of vocabulary, grammar and punctuation for accurate and rapid transcription. Intensive skill development will be emphasized. (5 hrs. lect.; daily lab arranged)

30 Intermediate Shorthand (4)

Prerequisites: SHTHD 20 or equivalent; TYPW 20 or equivalent; Stenography major or consent of instructor.

A course in speed building using previewed and new material. Continued practice in writing new outlines and developing writing skill at 80 words a minute on new material. Integrated study of vocabulary, grammar and punctuation for accurate and rapid transcription. Emphasis on producing mailable transcripts. (5 hrs. lect.; daily lab arranged)

40 Advanced Shorthand (4)

Prerequisites: SHTHD 30 or equivalent; TYPW 30 or equivalent; Business major or consent of instructor

A third semester course in speed building with new material dictation at 100–

120 words per minute. Emphasis on production of mailable transcripts on materials dictated at 60–80 words per minute. Techniques for taking minutes at meetings will also be stressed. (5 hrs. lect.; daily lab arranged)

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: Approval of Department Head

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. (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)

Prerequisite: 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 Hawaiian in the class structure, learning strategies, family structure, lifestyle, land issues, and political and cultural revitalization.

225 Pilipino-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 availability, 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 Social Work Theories and Practices (3)

Primarily designed for the paraprofessional social service aides in human service programs. Course will relate the theories and practices of social work to performance standards required of social service aides. (3 hrs. lect.)

22 Social Work Group Principles and Theories (3)

This course will attempt to relate Social Work group work principles and theories for practical application for paraprofessional social service aides in human service programs. (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)

SOCIOLOGY (SOC)

22 Introduction to Marriage and Family (3)

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 “swinging,” “open marriage,” “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)

Formerly SOC 220

Family patterns, mate selection, parent-child interaction, socialization of roles, legal sanctions, and current trends in family organization and functions. (3 hrs. lect.)

SPECIAL STUDIES

See Special Courses, Special Studies.

SPEECH (SP)

20 Speech Communication (3)

Prerequisite: ENG 10 or placement in ENG 22

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.)

20B Speech Communication (1)

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. Offered Fall semester only at Pearl Harbor Naval Shipyard. (1 hr. lect.)

20C Speech Communication (2)

Continuation of SP 20B. Offered Spring semester only at Pearl Harbor Naval Shipyard. (2 hrs. lect.)

151 Personal and Public Speech (3)

Prerequisite: ENG 10 or placement in ENG 22

This basic course introduces students to principles of interpersonal communication. In addition to discussing theoretical materials students have opportunities to experience speech in a variety of informal and formal activities, including person-to-person, small group, oral readings, and public address situations. (3 hrs. lect.)

200 Speaking Skills for Prospective Teachers (3)

Prerequisite: ENG 10 or placement in ENG 22

Theory and activities for competence in the speaking skills useful in the classroom, especially interview, discussion, lecture. (3 hrs. lect.)

231 Interpretative Reading (3)

Principles of Interpretative Reading. Practice in textual analysis and in transmitting intellectual and aesthetic content of literature. (3 hrs. lect.)

251 Principles of Effective Speaking (3)

Prerequisite: SP 151 or consent of instructor.

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 consent of instructor.

Argument as a technique in the investigation of social problems; formal and informal practice in the use of evidence, proof, refutation, and argument. (3 hrs. lect.)

TAGALOG (TAG)*

101-102 Elementary Tagalog I-II (4-4)

Prerequisite: ENG 10 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.

TRANSCRIPTION (TRNSC)

35 Machine Transcription (3)

Prerequisites: ENG 22; TYPW 30 or concurrent enrollment; or consent of instructor.

Skill is developed in operating the transcribing unit to produce mailable busi-

ness correspondence, manuscripts, reports and tables; procedures for handling correspondence are also included. Review of punctuation, grammar and spelling. (2 hrs. lect.; 3 hrs. lab.)

TYPEWRITING (TYPW)

15 Personal Typewriting (3)

A basic course in typewriting which includes keyboard mastery by touch operation, correct typing techniques, material placement techniques, typing of personal business letters, manuscripts and reports, correction and proofreading techniques, typing rough drafts, typing on forms. (3 hrs. lect.; 2 hrs. lab arranged)

20 Beginning Typewriting (3)

Prerequisites: ENG 9, MATH 1 or consent of instructor.

A basic course in typewriting which includes keyboard mastery by touch operation, correct typing techniques, material placement techniques, typing of letters, memos, envelopes, manuscripts and reports, business forms, statistical typing, correction and proofreading techniques, typewriting shortcuts, and typing from rough drafts. (3 hrs. lect.; 2 hrs. lab arranged)

30 Intermediate Typewriting (3)

Prerequisites: TYPW 20; Business major or consent of instructor.

Development of speed and accuracy in typewriting. Office typewriting applications and production of business letters, memoranda, tabulated reports and tables, manuscripts, accounting and other forms, composing at the typewriter, typing from rough drafts. Emphasis on proofreading techniques. (3 hrs. lect.; 2 hrs. lab arranged)

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.)

89 Industrial Orientation (3)

Vocational exploration course providing overview, tool familiarization and hands on experience in the areas of auto mechanics, sheet metal, machine shop, carpentry, electronics, and electricity. May be taken on CR/N basis. (3 hrs. lect.)

WELDING (WELD)

WELD 20G, 20H, 20I equivalent to WELD 20 (8)

WELD 24B, 24C equivalent to WELD 24 (5)

WELD 30D, 30E equivalent to WELD 30C (5)

WELD 50D, 50E equivalent to WELD 50C (5)

17B Gas Welding (1) (For Non-majors)

Basic oxy-acetylene welding. Introduction to the safe operation of oxy-acetylene equipment. Fundamentals of fusion welding of ferrous metals in various positions. Fundamentals in brazing and silver soldering of ferrous and non-ferrous metals. Introduction to oxy-acetylene cutting. (2 hrs. demo/lab)

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 17B and/or WELD 17C

Introduction to the various methods of welding. Including electric, oxy-acetylene, and oxy-acetylene cutting. (1 hr. lect.; 6 hrs. lab.)

20 Introduction to Welding (8)

This is a course in the fundamentals of oxy-acetylene cutting and arc welding. Safe operation of oxy-acetylene equipment, metal shears, abrasive cutters, sanders and grinders is emphasized. Various methods of cutting and welding ferrous metals; types of arc welding equipment and welding of ferrous metals in the flat position are introduced. (4 hrs. lect.; 12 hrs. lab.)

20G Introduction to Welding I (2)

Introduction to the safe operation of oxy-acetylene equipment, Fundamentals of oxy-acetylene cutting of ferrous metals by various methods. (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. (1 hr. lab.; 6 hrs. lab.)

20I Introduction of Welding III (3)

Prerequisite: WELD 20G, 20H

Continuation for Weld 20H. Introduction to vertical and overhead position in arc welding. Introduction to basic pipe welding. (1 hr. lect.; 6 hrs. lab.)

24 Introduction to Metal Working Processes (5)

This course is designed to develop basic skills and safety practices for metal working processes. Emphasis is placed on safe operation and care of hand and power tools. Skills in making miter cuts, reading plans to specifications and elementary techniques of simple layout and identification of metals and how to process them are taught. (3 hrs. lect.; 6 hrs. lab.)

24B Metal Working Processes I (2)

This course is designed to develop basic skills and safety practices for metal working processes. Emphasis is placed on safe operation and care of hand and power tools. Skill in making miter cuts, reading plan to specification, elementary technique of simple layout, identification, of metals and to process them are taught. (1 hr. lect.; 3 hrs. lab.)

24C Metal Working Processes II (3)

Prerequisite: WELD 24B

This course is designed to develop basic skills and safety practices for metal working processes. Emphasis is placed on safe operation and care of hand and power tools. Skill in making miter cuts, reading plan to specification, elementary technique of simple layout, identification of metals and to process them are taught. (1 hr. lect.; 6 hrs. lab.)

30C Welding Fabrication Techniques and Procedures (5)

Prerequisite: WELD 24

Introduction to layout and fabrication of welded structures, jigs, and fixtures. Interpretation and practical application of blueprints and sketches. (3 hrs. lect.; 6 hrs. lab.)

30D Welding Fabrication Techniques & Procedures I (2)

Prerequisite: WELD 24B, 24C

This course is designed to prepare and familiarize the student with everyday application of proper method, procedure and technique in steel layout, fabrication, template and jig making. To identify the various structural shapes used in industry. To learn the operation and proper use of machinery and hand tools. To interpret the practical application of blueprints and sketches. (1 hr. lect.; 3 hrs. lab.)

30E Welding Fabrication Technique and Procedure II (3)

Prerequisite: WELD 24B, 24C, and 30D

This course is designed primarily to prepare and familiarize the student with the everyday application of proper technique in steel layout, fabrication, template and jig making. To identify the various structural shapes used in industry. To learn the operation and proper use of machinery and hand tools. To interpret the practical application of blueprint and sketches. (2 hrs. lect.; 3 hrs. lab.)

41B Advanced Welding—Arc Welding of Ferrous Metals (3)

Prerequisite: WELD 20, BLPRT 22, or consent of instructor

Advanced techniques in arc welding and preparation in vertical and overhead positions. (1 hr. lect.; 6 hrs. lab.)

41C Advanced Arc Welding—Welding Qualification Procedures and Test and Pipe Welding (3)

Prerequisite: WELD 41B or consent of instructor

Introduction to qualification procedures. Testing of welded specimens by the guided bend test and other methods. (1 hr. lect.; 6 hrs. lab.)

50B Tungsten Inert Gas (TIG) and Metallic Inert Gas (MIG) Welding (3)

Prerequisite: WELD 20 or instructor's approval

Introduction to the tungsten gas (TIG) and metallic inert gas (MIG) methods of welding aluminum and stainless steel. (1 hr. lect.; 6 hrs. lab.)

50C Arc and Oxy-Acetylene Welding (5)

Prerequisite: WELD 20 or instructor's approval

Special process in welding of ferrous and non-ferrous metals using arc and gas. (3 hrs. lect.; 6 hrs. lab.)

50D Arc & Oxy Acetylene Welding I (2)

This course covers basic gas fusion welding and braze welding of ferrous metals in light gauge mild steel in all positions. The student will be able to weld pipes. (1 hr. lect.; 3 hrs. lab.)

50E Arc and Oxy-Acetylene Welding II (3)

Prerequisite: WELD 17B, 17C or WELD 50D

This course covers special process in welding ferrous and non-ferrous metals using arc and gas. The student will be able to gas weld pipes, cast iron, aluminum stainless steel. Arc weld of cast iron, aluminum, stainless steel, hard surfacing and copper alloys. Arc and gas welding of tool and spring steel. (1 hr. 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.)

93V Cooperative Education (1-4)

Prerequisite: Approval of Department Head

This course will provide the student with the opportunity to acquire on-the-job experience in conjunction with classroom and laboratory instruction in Welding. (5-20 hrs. work experience per week.)

WOMEN'S STUDIES (WS)**130 Introduction to Women's Studies (3)**

This course views and interprets the historical, psychological, economic, social and biological determinants of women in America in order to better understand the contemporary status of women. (3 hrs. lect.)

WORD PROCESSING (WPRO)**20 Keyboarding (1)**

Prerequisite: ENG 9 or Concurrent Enrollment in ENG 9

A course to develop skills on the typewriter 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.; 2 hrs. lab. unscheduled, per week for 5 weeks)

21B Introduction to Text-Editing (Word Star) (1)

Prerequisite: WPRO 20, or TYPW 15, or 20 or Consent of Instructor

A course including hands-on use of text-editing word processing equipment. Creating, editing, and filing documents will be included. This course is recommended for non-Secretarial Science majors. This module may be followed by other WPRO 21 or WPRO 22 modules during the same semester. (3 hrs. lect.; 2 hrs. lab. unscheduled, per week for 5 weeks)

21C Introduction to Text-Editing (Spell Binder) (1)

Prerequisite: WPRO 20, or TYPW 15, or 20 or consent of instructor

A five-week modular course including hands-on use of the Spell Binder text-editing word processing program. Creating, editing and filing documents will be included. This course is recommended for non-Secretarial Science majors. This module may be followed by other WPRO 21 or WPRO 22 modules during the same semester. (3 hrs. lect.; 2 hrs. lab. unscheduled, per week for 5 weeks)

21D Introduction to Text-Editing (Wang Word Processor) (1)

Prerequisite: WPRO 20, or TYPW 15, or 20 or consent of instructor

A five-week modular course including hands-on use of the Wang Word Processor to do text-editing. Creating, editing and filing documents will be included. This course is recommended for non-Secretarial Science majors. This module may be followed by other WPRO 21 or WPRO 22 modules during the same semester. (3 hrs. lect.; 2 hrs. lab. unscheduled, per week for 5 weeks)

22 Word Processing Projects (1)

Prerequisite: WPRO 21, or/and WPRO 50, or Consent of Instructor

A course designed to provide live projects to be created or edited on text-editing word processing equipment. This course will include practical application of skills to productions of on-campus projects; prioritizing work; developing and good working characteristics of cooperation and responsibility may be taken after WPRO 21 or WPRO 50 for additional practice on text-editing machines. (3 hrs. lect.; 2 hrs. lab. unscheduled, per week for 5 weeks)

50 Introduction to Word Processing (3)

Prerequisites: Secretarial Science major or consent of instructor

An introductory course including word processing concepts and organizational patterns, development of power typewriting skills, and reinforcement of communication skills through transcription. Dictating techniques will also be included. (2 hrs. lect.; 3 hrs. lab. arranged)

ZOOLOGY (ZOOLOGY)**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

230 Survey of Ecology (4)

Prerequisites: BOT 101, ZOOLOGY 101, or SCI 121

A study of the relations of living things to their environment. Lectures will deal with basic ecological principles and concepts for both plants and animals. Laboratories will be field trips to various types of ecological habitats on Oahu. (3 hrs. lect.; 3 hrs. lab.)

240 Ethology (4)

Prerequisites: BOT 101, ZOOLOGY 101, or SCI 121

The interplay of exogenous (outside the animal) and endogenous (within the animal) factors in the control and development of animal behavior are explored. The various types of social cooperation—mating behavior, family and group life, and fighting are also explored. (3 hrs. lect.; 3 hrs. lab.)

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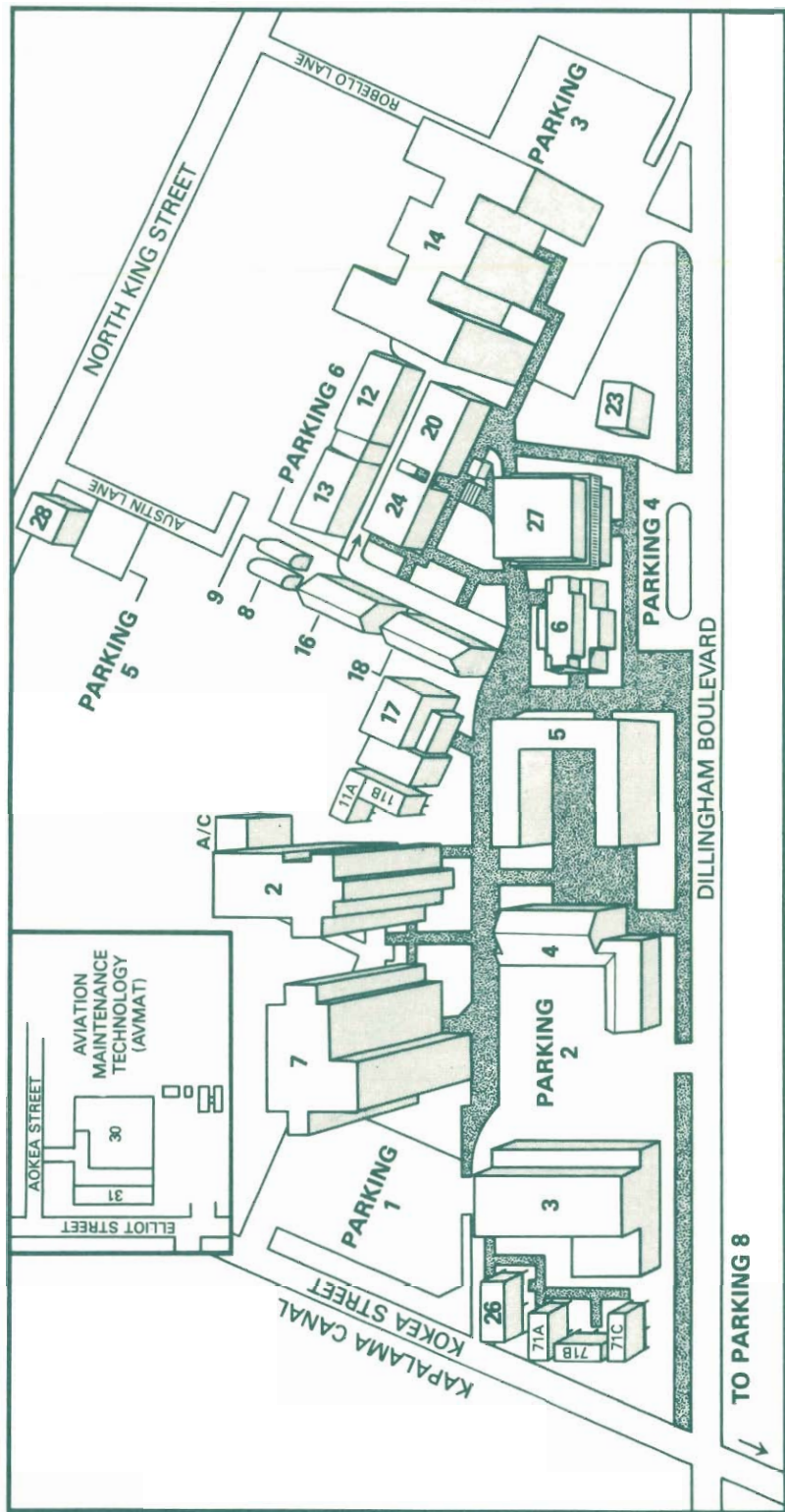
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