Courses of Instruction
Courses of instruction are listed alphabetically by subject.

Writing Intensive Courses
The College offers a series of writing intensive courses in which students engage in formal and informal writing assignments totaling a minimum of 4,000 words. Students strengthen writing skills as well as learn course content and understand how to apply what they learn through writing. Students also satisfy degree requirements at the College (two required for the AA degree), and at UH Mānoa (a minimum of five writing-intensive classes required). The Schedule of Classes designates writing intensive courses by WI in the course title (e.g., HIST 284 WI-Hawaiian History).

Course Credit
One credit is assigned to a course for one or more hours per week of class time during a typical 15-week semester. This time may be assigned to lecture, discussion, or lab instruction.

The credit value of each course is indicated by a number at the end of each course description. For example, “3cr.” indicates the course carries three credits; “3,3” indicates each module “BC” of the course carries three units of credit.

Following the credits is a number indicating the contact hours per week of lecture, discussion, or laboratory (e.g., “3hr. lect.” means the course meets three hours per week in a lecture format). Course modules indicate “in-class” minimums (e.g., 15hr. lect. per semester).

Methods of Instruction
The College presents courses in a variety of modes, including traditional classroom settings. The Individualized Study mode allows students to study independently with the assistance of an instructor. Developmental math courses are offered on computers using MyMathLab. Internet classes are those where course materials and assignments are presented over the World Wide Web. Televised courses are offered in several ways. The Hawai‘i Interactive Television System (HITS) offers live interaction among classrooms in Hana, Kahului, Lahaina, Lāna‘i, Molokai, and throughout the state. Cable courses are broadcast over the college channel to cable subscribers. The Schedule of Classes designates these classes.

Laulima
Laulima is the online, virtual classroom used by courses offered through the University of Hawai‘i system. Laulima, means “cooperation” or “joint action” and “many hands.” Many instructors use Laulima to support their face-to-face as well as online classes. Via Laulima students are able to access and download handouts, take exams and quizzes, communicate with instructors and classmates, participate in discussions, turn in assignments, maintain a personal calendar, save documents to access from any computer, see their personal Gradebook and much more.

Access Laulima at: laulima.hawaii.edu
Introduction: maui.hawaii.edu/ids/ict

Terminology: Prereq, Coreq, Recommended, Consent

Prerequisite (Prereq): Course that must be satisfactorily completed or competency that must be met before the student can enroll in the desired course.

Corequisite (Coreq): Course that the student must take concurrently with the desired course.

Recommended: Course or competency that will help the student succeed in the desired course or program.

Consent: Term used in a prerequisite, meaning consent to enter the course must be given by the instructor, department chair, program coordinator, or other authorized designee.

Banner Prerequisite Checking
The Banner computer registration system checks transcripts to assess whether students have met the prerequisite course, grade, or score. Banner allows students to register for a course only when their transcript shows a prerequisite is met.

There are several exemptions: prerequisites in progress, prerequisites completed at an institution outside the UH Community College system, or petitioning an exemption through Consent of Instructor.

Students without the published prerequisite cannot register for the course using the MyUH online registration. All non-UH system courses must be transferred, articulated, and input into the Banner system before electronic checks can occur.

See a counselor regarding transcript evaluation, or transferring prequisites completed outside the UH system. Call for an appointment at 984-3306.

Numbering System
Courses generally not transferable to four-year colleges but transferable within the UHCC System.................................10-99

Lower Division Courses
Transfer level courses normally taken by freshmen..............................100-199
Transfer level courses normally taken by sophomores, open to qualified freshmen .......................200-299

Upper Division Courses
Junior .................................................. 300-399
Senior................................................ 400-499

Codes for UHMC AA Degree Requirements
The following codes are used by UHMC and by most colleges in the UH system, to provide articulation designations for courses.

DA Diversification Arts
DH Diversification Humanities
DL Diversification Literatures
DB Diversification Biological Science
DP Diversification Physical Science
DS Diversification Social Sciences
DY Diversification Laboratory
FW Foundations Writing
FGA Foundations Global (Before 1500 CE)
FGB Foundations Global (Since 1500 CE)
FGC Foundations Global (Pre-history to present)
FS Foundations Symbolic Reasoning
HI Hawai‘i Emphasis*

*Note: Check with an academic advisor regarding courses meeting Hawaiian, Asian, or Pacific Issues (HAP) requirement at other UH system colleges.

**Note: Hawaiian Second Language (HSL) - check with an academic advisor regarding the HSL requirement at UH system colleges. HSL is not required for the AA degree in Liberal Arts.
124 Principles of Accounting I  
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Introduces basic accounting principles and practices for service and merchandising types of businesses. Areas include: accounting as an information system, the accounting system, the accounting cycle, financial statements and internal control, short-term liquid assets, inventories, and current liabilities and payroll. Special emphasis will be placed upon the practical application of accounting principles. 3cr., 3hr. lect.

125 Principles of Accounting II  
Prereq: ACC 124, and MATH 18 with grade C or better, or placement at least MATH 82, or consent.
Continues the study of financial accounting procedures. Areas include: long-term assets, accounting for partnerships and corporations, statement of cash flows, financial statement analysis, in-depth study of specific balance sheet accounts. 3cr., 3hr. lect.

132 Payroll & Hawai‘i General Excise Taxes  
Prereq or coreq: ACC 124 or ACC 201, or consent.
Introduces principles, manual and computerized procedures, and terminology for business applications of payroll accounting. Includes preparation and filing of federal and Hawai‘i state forms for payroll and the Hawai‘i General Excise and Use Tax. 3cr., 3hr. lect.

134 Income Tax Preparation  
Prereq: ENG 19 with grade C or better or placement at least ENG 22, or consent.
Introduces the preparation of federal and State of Hawai‘i individual income tax returns with an emphasis on tax principles and their application to the tax returns. This course is intended for an individual preparing basic tax returns under the supervision of an accounting professional. 3cr., 3hr. lect.

137 Business Income Taxation  
Prereq: ACC 134, or consent.
Studies federal and Hawai‘i state income taxes with a brief review of personal income tax followed by in-depth study of self-employment, partnership, and corporate tax returns as well as withholding and estimated taxes. 3cr., 3hr. lect.

150 Using QuickBooks® in Accounting  
Prereq or coreq: ACC 125 or 201, or consent.
Provides hands-on training approach to computerized accounting using QuickBooks®. Applies previously acquired accounting skills and knowledge in a computerized environment to set up and maintain accounting records. Emphasis will be placed on the application of QuickBooks® to the accounting cycle. 3cr., 3hr. lect.

201 Introduction to Financial Accounting  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, and MATH 82 with grade C or better, or placement at least MATH 100, or consent.
Introduces accounting theory and methods used to record and report financial information. Analyzes methods of valuing assets, liabilities, and ownership of an organization. 3cr., 3hr. lect.

202 Introduction to Managerial Accounting  
Prereq: ACC 124 and 125, or ACC 201, or consent.
Introduces methods for evaluating financial performance, including cost accounting, budget, break-even analysis, ratio analysis, and sources and uses of funds. 3cr., 3hr. lect.

255 Using Spreadsheets in Accounting  
Prereq: ACC 202 (or concurrent) and either BUSN 150 or ICS 101, or consent.
Provides hands-on training in the use of spreadsheets on computers to solve accounting problems. Applies previously acquired accounting skills and knowledge. Emphasizes financial and managerial accounting. 3cr., 3hr. lect.

295 Accounting Capstone  
Prereq: ACC 132, 134, 150, 255 (concurrent), and 202, or consent.
Provides an opportunity to demonstrate the tools and understanding developed during the accounting program. Includes financial, managerial, payroll accounting and income tax preparation. Includes the use of computers. Emphasizes the use of ethics in business decisions. (Letter grade only) 3cr., 3hr. lect.

300 Intermediate Financial Accounting I  
Prereq: ACC 202, or consent.
Emphasizes the application of generally accepted accounting principles to the preparation and use of financial statements in decision-making. Special emphasis placed on recognition and measurement of revenues, cash, receivables, inventories, property, plant and equipment, depreciation and depletion, and intangibles. Includes use of spreadsheets. 3cr., 3hr. lect.

Administration of Justice (AJ)  
R. Daniels

101 Introduction to Administration of Justice  
Examines history and philosophy of the administration of justice in United States with overview of major sub-systems within the criminal justice system: law enforcement, courts, and corrections. Examines expectations and interrelationships of officials, theories of crime, punishment, and rehabilitation. Surveys career opportunities. 3cr., 3hr. lect.

103 Criminalistics  
Prereq: AJ 101, or consent.
Introduces initial investigatory steps relating to crime scenes. Acquaints student with specific offenses and methods of obtaining information. 3cr., 3hr. lect.

104 Criminalistics  
Prereq: AJ 103, or consent.
Emphasizes identification and reproduction of physical evidence. Studies specialized scientific methods and their relationships to court procedures. 3cr., 3hr. lect.

150 The Correctional Process  
Introduces the field of corrections. Includes the history and philosophy of punishment and methods used to protect society and rehabilitate the offender. 3cr., 3hr. lect.

170 Introduction to Private Security  
Surveys concepts and issues in the administration of security. Defines public vs. private security roles for retail business, industry, and governmental agencies. Provides an overview of the functions of various security activities. 3cr., 3hr. lect.
200 Principles of the Hawai‘i Justice System
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Reviews criminal justice systems in the United States, with special emphasis on Hawai‘i. Analyzes law enforcement and the judicial and corrections procedures from time of arrest until final disposition of the case. Studies federal and state laws and constitutional principles through legal research. 3cr., 3hr. lect.

210 Juvenile Justice
Prereq: AJ 101, and ENG 22 or 55 with grade C or better or placement at ENG 100, or consent.
Studies principles and procedures of arrest, detention, petition, summons, records and adjudication of juvenile offenders. Introduces organization and function of the police juvenile unit, community diversion practices, and organization of the Family Court. Reviews Hawai‘i statutes and United States Supreme Court decisions affecting juvenile rights of due process. Considers societal context of juvenile problems, delinquency prevention, and treatment. (Crosslisted as SOC 231.) 3cr., 3hr. lect.

221 Criminal Law
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Studies history and philosophy of criminal law. Examines United States Constitution, especially the Bill of Rights. Considers nature of law, legal institutions, criminal court procedures, offenses against persons and property. Includes case briefs. 3cr., 3hr. lect.

223 Laws of Arrest, Search, Seizure
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Analyzes statutes and cases pertaining to the problems and procedures in effecting valid arrests, searches, and seizures. Considers Hawai‘i Supreme Court decisions and controlling opinions of the United States Supreme Court. 3cr., 3hr. lect.

224 Rules of Evidence
Considers origin, development, philosophy, kinds and degrees of evidence. Surveys pertinent federal constitutional amendments, landmark Supreme Court decisions affecting the admissibility of evidence, and changes in Federal and Hawai‘i case law. Case briefs. 3cr., 3hr. lect.

226 Economic Crimes
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Provides information about major economic crimes such as embezzlement, computer crime, and others. Discusses investigative techniques relating to each of the major economic crimes. 3cr., 3hr. lect.

230 Principles of Police Supervision
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Analyzes supervisor’s function and principles of organization and personnel management. Stresses communication, training, disciplines, psychology of supervision, essentials of leadership, promotion methods, and selection of supervisors. 3cr., 3hr. lect.

231 Stress in Policing
Surveys major sources of stress in police work and effects of stress on the officer. Considers stress management programs. 3cr., 3hr. lect.

232 Officer Survival
Emphasizes positive tactics police officers can employ to effectively use their own firearms to defeat those of assailants. Teaches techniques that work for survival in real-life situations. 3cr., 3hr. lect.

234 Police-Community Relations
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Examines philosophies and styles of policing. Encourages effort of the police and community to share in the common goal of understanding mutual problems. 3cr., 3hr. lect.

240 Hawaiian Cultural & Natural Resources Management
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Recommended: AJ 101, and one of COM 145, COM 130/BUS 130, or SP 151.
Provides a background for onsite management of Native Hawaiian cultural and natural resources. Relates traditional Native Hawaiian resource conservation practices to current governmental policies, rules, and regulations. Introduces duties and responsibilities of conservation and resource enforcement officers. 3cr., 3hr. lect.

250 Community Based Corrections
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Explores juvenile and adult probation, after-care parole, halfway houses, work and educational release-furlough. Examines dilemma of custody-control vs. supervision-treatment. Investigates citizen-agency relationships, along with potentials for utilizing citizen volunteers in corrections. 3cr., 3hr. lect.

270 Principles of Loss Prevention
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Considers various theories of managing security countermeasures. Acquaints students with loss prevention measures for retail businesses, government agencies, hotels and motels, hospitals, schools, and other organizations. 3cr., 3hr. lect.

293v Administration of Justice Internship
Prereq: AJ 101 with grade C or better, or placement at ENG 100, or consent.
Offers flexible, customized, supervised school-to-work experiences in all aspects of the administration of justice field. Integrates and applies classroom theory to work situations via field experiences. Student must complete a minimum of 75 hours per credit per semester. (Note: 3 credits required for AAS degree. Student may take up to 6 additional credits.) 1-3cr., 75hrs./cr.

Agriculture (AG)

J. Boswell, A. Emmsley

92 Selected Topics in Agriculture
O Landscape Plant Selection-Care
P Pesticides & Safety
Q Interiorscapes
R Tropical Fruit & Nuts
S Organic Gardening
T Plant Breeding
U Open Topic

Meets local interests in agriculture. Varies specific content for each topic to match job site or geographical needs and conditions. Credit in topics O and U are not applicable toward a degree in agriculture. Credit in topics P, Q, R, S, and T may be used for elective credit only. (AG 92U may be repeated toward an AAS degree. Student may take up to 6 additional credits.) 1cr., 1hr. lect./lab

101 Home Gardening
Introduces ornamental and vegetable gardening for the home gardener. Includes landscape installation and maintenance. Intended for non-majors. 3cr., 4hr. lect./lab
103 Sustainable Agriculture Systems
Explores sustainable agriculture systems in Hawaii and the world. Compares various sustainable models. Examines various sectors of production agriculture and related agribusinesses in Hawaii. Field trips to farms, processors and wholesalers. 2cr., 1hr. lect./2hr. lab

104 Food Safety & Post Harvest Handling
Examines Food Safety Certification requirements for Farms. Explores and evaluates post harvest handling of farm products including vegetables, fruits, meats and flowers. Identifies and evaluates standard wholesale and retail packaging for various farm products. Reviews worker protection standards. 1cr., 1hr. lect.

113 Organic Certification
Outlines the requirements for certified organic farms. Examines process of transitioning to organic farming. Examines and evaluates record keeping requirements and accepted products and practices. 1cr., 1hr. lect.

122 Soils Technology
Recommended: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Studies identification, preparation, and fertilization of soils; amendments, sterilization, mulching, and composting methods. Includes soil testing, microbiology, and soil moisture. Emphasizes sustainable management systems. 3cr., 2hr. lect./2hr. lab (DB, DY)

162 Introduction to Beekeeping
Recommended: AG 174.
Introduces the biology and behavior of honeybees and best management practices for hive management. Develops hands-on skills for hive inspection, maintenance, and management techniques to control honeybee diseases and pests. Investigates alternative pollinators. 2cr., 2hr. lect./lab

174 Insects & Their Control
Recommended: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Introduces basic morphology and classification of insects. Studies destructive and beneficial insects. Covers principles of cultural, mechanical, legislative, biological, and chemical control. Investigates sustainability of control methods. 3cr., 2hr. lect./2hr. lab (DB, DY)

194v Turfgrass Work Practicum
Prereq: AG 233 and Agriculture major and consent. Recommended: AG 260.
Provides supervised work experience in turfgrass management. Students are actively involved in all phases of turfgrass maintenance. Daily work log, confirmed by supervisor, and periodic scheduled meetings with instructor are required. (May be repeated for a maximum of 3 credits.) 1-3cr., 5-15hr. lab

200 Principles of Horticulture
Introduces botany and plant physiology. Discusses plant nutrient, moisture, and environmental requirements. Treats plant propagation. Studies culture and production techniques for selected ornamental crops. 4cr., 3hr. lect./2hr. lab (DB, DY)

201 Introduction to Plant Disease
Recommended: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Introduces classification, morphology, and biology of fungi, bacteria, viruses, and nematodes that attack economic crops. Covers diagnosis and control of plant diseases. Investigates sustainability of control methods. 3cr., 2hr. lect./2hr. lab

230 Agricultural Business Management
Recommended: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Introduces farm and landscape management practices including decision making, record keeping, cash flow, financial statements, ratio analysis, use of computers as a management tool, and marketing of agricultural products and services. 3cr., 3hr. lect.

232 Farm Tractor & Equipment Operation
Prereq: Consent.
Teaches operation of a rototiller and wheel type tractor with allied implements on the College farm. Includes safety, maintenance, three point hitch hookups, hydraulics, and field adjustments. 1cr., 3hr. lab

233 Turfgrass Equipment, Operation & Maintenance
Prereq: Turfgrass Specialist Certificate, or consent.
Teaches the operation and maintenance of greens mower, aerator, fairway mower, sprayer, and other turf maintenance equipment. Includes safety. 2cr., 3hr. lect./lab

235 Irrigation Principles & Design
Recommended: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Teaches types of irrigation systems including materials, equipment, design, and installation. Discusses evapotranspiration and soil moisture relations. 3cr., 2hr. lect./2hr. lab

250 Tropical Landscape Horticulture
Recommended: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Introduces production methods for selected crops including propagation planting, fertilization, irrigation, pest control, harvesting, and marketing. Evaluates conventional and alternative methods of production and analyzes effects of these practices. Examines economic and social impacts. Field trips to production areas. 4cr., 2hr. lect./6hr. lab

251 Sustainable Crop Production
Prereq or coreq: AG 103 and AG 104, or consent. Recommended: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Introduces production methods for selected crops including propagation planting, fertilization, irrigation, pest control, harvesting, and marketing. Evaluates conventional and alternative methods of production and analyzes effects of these practices. Examines economic and social impacts. Field trips to production areas. 4cr., 2hr. lect./6hr. lab

252 Sustainable Crop Production II
Prereq: AG 251 with grade C or better, or consent. Recommended: AG 200.
Reinforces production practices for sustainable agriculture. Develops skills in designing, planning and executing a sustainable production system for wholesale and retail sales. Determines cost of production and integrates multiple marketing practices. Evaluates products, cultural practices and marketing methods. Practices farm record keeping. 2cr., 6hr. lab
253  Hawaiian Food Plants: Traditional and Contemporary Production
Prereq: AG 200 or BOT 105 either with grade C or better, or consent.
Explores the commercial production of traditional food crops of Hawai‘i. Compares the traditional geographical centers of production to contemporary production areas. Compares and contrasts traditional and contemporary cultural production practices. Explores modern markets for traditional crops. Teaches production techniques including propagation, planting, fertility, harvest and post harvest methods. Identification of common varieties of traditional crops. 4 hr., 6 hr. lect./lab (HI, DB)

260  Turfgrass Management
Recommended: Placement at ENG 100, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Studies identification, planting, and maintenance of turfgrasses for home, park, and golf areas. Discusses watering and fertilizing. Treats insect, disease, and weed control. 3 cr., 2 hr. lect./2 hr. lab

263  Flower & Foliage Crop Production
Prereq: AG 200, or consent. Recommended: AG 266.
Introduces production of cut flowers and foliage, and flowering pot plants, under field and protected cultivation in Hawai‘i. 3 cr., 2 hr. lect./2 hr. lab

264  Plant Propagation
Prereq: AG 200, or consent. Recommended: AG 266.
Introduces theoretical and applied aspects of sexual and asexual reproduction of plants. Propagation of selected plants by seed, cuttings, grafting, budding, layering, and division. 3 cr., 2 hr. lect./2 hr. lab

265  Horticulture of Hawaiian Plants
Prereq: BOT 105 with grade C or better, or consent. Recommended: AG 200.
Explores the biology, ecology, and adaptations of plants focusing on endemic and indigenous Hawaiian and Polynesian introduced. Teaches techniques of horticulture including propagation, cultivation, and management. Introduces uses of the plants in landscaping and native habitat restoration projects. 4 cr., 6 hr. lect./lab (HI, DB, DY)

266  Greenhouse & Nursery Management
Recommended: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
Introduces management practices for production and operation of nurseries and greenhouses in Hawai‘i. Includes environmental factors, structures, materials, sanitation, pests, and diseases. 3 cr., 2 hr. lect./2 hr. lab

269  Ornamental Plant Materials
Prereq: AG 200 or BOT 105 either with grade C or better, or consent.
Introduces students to the study of human biological make-up, origins of that make-up, and the pre-history of human biological and cultural development. 3 cr., 3 hr. lect. (DB)

210  Archaeology Laboratory
Prereq: ANTH 210 with grade C or better (or concurrent), or consent.
Teaches methods and techniques of archaeological excavation. Uses laboratory techniques to analyze data. 1 cr., 3 hr. lab (DY)

215  Physical Anthropology
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Introduces students to the study of human biological and cultural development. 3 cr., 3 hr. lect. (DB)

225  Medical Anthropology
Prereq: ENG 22 with grade C or better or placement at ENG 100, or consent. Recommended: ANTH 200 or 215 (or concurrent).
Surveys the cultural areas of the Pacific from pre-contact to present day. Covers prehistoric migrational patterns, historical movements, and present day distributions, including western colonization and current problems. (Crosslisted as HIST 288.) 3 cr., 3 hr. lect. (DS)

281  Archaeological Field Techniques
Prereq: ANTH 210 with grade C or better (or concurrent), or consent.
Applies archaeological techniques including survey, excavation, mapping, and photography. Taught entirely in the field at an archaeological site. 4 cr., 7 hr. lect./lab (DS)

**Anthropology (ANTH)**

**M. Kirkendall**

150  Human Adaptation
Studies human evolution. Examines prehistoric and recent developments of culture and common features and principle variations in cultural behavior. 3 cr., 3 hr. lect. (DS)

165  Heritage Sites in Archaeology
Prereq: ENG 100 with grade C or better, or consent.
Introduces the concepts and practices of archeology, historical research, historic site preservation, and heritage management. Combines lecture, laboratory, and fieldwork. 3 cr., 3 hr. lect. (HI, DS)

200  Cultural Anthropology
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Studies the concept of culture and basic tools for analyzing cultural behavior. Topics include patterning and integration, dynamics of culture, culture and the individual, cultural change, and anthropology and the future. 3 cr., 3 hr. lect. (DS)

210  Archaeology
Recommended: ANTH 150, 200, or 215.
Introduces prehistoric archaeology. Surveys cultural growth in prehistoric times. Explains methods and techniques of excavation and laboratory analysis. 3 cr., 3 hr. lect. (DS)
95

Architectural Engineering & CAD Tech (AEC)

80 Basic Drafting
Recommended: ICS 101 or BUSN 150, and placement at ENG 100, or consent.
Provides basic instruction in blueprint reading and drafting. Covers manual drafting procedures and practices with an introduction to computer-aided drafting. Serves students preparing to be public school industrial arts teachers and those interested in a background in technical drafting. 3cr., 1hr. lect./4hr. lab

110 Basic AutoCAD
Prereq: AEC 80 or BLPR 22, or equivalent training/experience with consent.
Recommended: ICS 101 or BUSN 150, and placement at ENG 100.
Introduces the foundations of AutoCAD. Covers basic commands and operations from 2D drawing and editing to creating solid models and rendering. Teaches 2D drawing, text, dimensions, blocks, hatching, reference files, sharing data, 3D drawing, and plotting. Prepares students for Autodesk certification. 3cr., 1hr. lect./4hr. lab

114 Architectural Graphics
Recommended: ICS 101 or BUSN 150, and placement at ENG 100, or consent.
Introduces solid and spatial representation including: (a) orthographic and axonometric drawing, descriptive geometry, and shadow casting; (b) axonometric modeling, perspective modeling, and overlay drawings with entourage; (c) freehand drawing. 3cr., 1hr. lect./4hr. lab

118 Construction Materials
Recommended: ICS 101 or BUSN 150, and placement at ENG 100, or consent.
Provides a broad survey of materials and products used in the building industry, their nature, characteristics, variety, and uses. Includes concrete, masonry, wood, metals, conveying systems, electrical and mechanical systems, and other topics based on the CSI format. Emphasizes materials and construction in Hawai‘i. 3cr., 1hr. lect.

120 Introduction to Construction Drawing
Prereq: AEC 110 and 118.
Provides a drafting course in basic building construction and common construction drawings. Covers foundations, framing, doors and windows, cornices, roofs, architectural dimensions, materials, symbols, drawing conventions, and construction conceptualization. 3cr., 1hr. lect./4hr. lab

123 Residential Planning & Design
Prereq: AEC 110 and 118, or consent.
Provides experience in the fundamentals of development and presentation of preliminary board designs. Covers architectural design concepts and principles, applications of AutoCAD and ArchiCAD study models, rendering, and group and juried presentations. 3cr., 1hr. lect./4hr. lab

124 Advanced Graphics
Prereq: AEC 114, or consent.
Provides experience in developing a modeling/drafting project entirely on the computer using the three-dimensional tools of CAD. Includes architectural models, rendering, and animation to create photorealistic computer images of buildings, components, and project sites. 3cr., 1hr. lect./4hr. lab

Civil Engineering Drawing
Prereq: AEC 110 and at least MATH 82 with grade C or better, or consent.
Introduces civil engineering drawing with AutoCAD. Explores maps, surveys, drawing scales and conventions, contours and profiles, site plans and plot plans, site utilities, topographic models, excavation, retaining walls, highway layout, and subdivision and block plans. 3cr., 1hr. lect./4hr. lab

Art (ART)

J. Owen, M. Takemoto

101 Introduction to the Visual Arts
Introduces the basic elements of visual arts and their expressions in various forms. Meets the UH Mānoa Arts & Science core requirement. 3cr., 3hr. lect. (DA)

105 Elementary Studio: Ceramics
Studies ceramic form. Emphasizes hand building, glazing techniques, and surface treatment. Involves lectures and projects. Meets the UH Mānoa Arts & Science core requirement. 3cr., 2hr. lect./4hr. lab (DA)

107D Introduction to Digital Photography
Prereq: Access to digital camera (manual settings preferable).
Introduces the fundamental, technical, and aesthetic practices of digital photography. Students will learn camera operation, computer editing techniques, basic lighting concepts, composition and print production. 3cr., 2hr. lect./4hr. lab (DA)

113 Introduction to Drawing
Emphasizes two-dimensional visualization and rendering of forms, spaces, and ideas through a variety of approaches and media. Meets the UH Mānoa Arts & Science core requirement. 3cr., 6hr. lect./lab (DA)

115 Introduction to 2D Design
Recommended: ART 101.
Introduces the theory and practice of composing and arranging two-dimensional forms in black, white, and color through manipulation of the basic elements and their interrelationships. Meets the UH Mānoa Arts & Science core requirements. 3cr., 2hr. lect./4hr. lab (DA)
123B  Introduction to Water Color Painting
Introduces the theory and practice of watercolor painting. Includes basic materials and technical procedures. 1cr., 2hr. lect./lab (DA)

123C  Introduction to Oil Painting
Introduces the theory and practice of oil painting. Includes basic materials and technical procedures. 1cr., 2hr. lect./lab (DA)

123D  Introduction to Acrylic Painting
Introduces the theory and practice of acrylic painting. Includes basic materials and technical procedures. 1cr., 2hr. lect./lab (DA)

161  Introduction to Computer Graphics
Prereq or coreq: ICS 101 or BUSN 150, or consent.
Introduces computer graphics tools and concepts in digital image editing, illustration graphics, print and web design, and 2D and 3D animation. (Crosslisted as ICS 161.) 3cr., 3hr. lect. (DA)

205  Photoshop and Illustrator
Prereq: ICS 101 or BUSN 150, or consent.
Introduces the basic tools and features of digital image editing, photo retouching, and color correction of images. Focuses on the fundamental drawing techniques of illustration graphics including pen tool paths, objects, and type. (Crosslisted as ICS 205.) 3cr., 3hr. lect./lab (DA)

218  Intermediate Computer Graphics
Prereq: ICS 161, 205, or 214, or consent.
Provides instruction with the tools and concepts of computer graphics utilizing editing, illustration graphics, print publishing, web authoring, and 2D and 3D animation. (Crosslisted as ICS 261.) 3cr., 3hr. lect./lab (DA)

221  Fundamentals of Design for Print and Web
Prereq: ICS 101 or BUSN 150, or consent.
Introduces development principles related to graphic design terminology, tools and media, and layout and design concepts. Topics include integration of type, images, and other design elements, developing computer skills in industry standard computer programs, and study of design development pertaining to color theories, publications, and advertising. Projects emphasize relating form to content through selection, creation and integration of typographic, digital imaging, illustrative and design elements in print and web environments. (Crosslisted as ICS 214.) 3cr., 3hr. lect./lab (DA)

223  Intermediate Painting
Prereq: ART 113 and 123BCD, or consent.
Practices the development of painting skills following the chronological progression of Western Modernism. Explores painting work by examining historical development of Japanese art and cultivating an understanding of Japanese art and its cultural context. 3cr., 6hr. lect./lab (DA)

243  Intermediate Ceramics: Hand Building
Prereq: ART 105, or consent.
Develops vessel and sculptural concepts using hand-building techniques. Introduces the elements of art through the making of ceramic form. Progresses beyond basic hand building techniques to advanced skills: various forming and embellishing techniques, work with plaster and molds, colored slip, colored clay, glaze work, and the firing of kilns. Students work towards development of individual creative expression. 3cr., 2hr. lect./4hr. lab (DA)

244  Intermediate Ceramics: Wheel Throwing
Prereq: ART 105, or consent.
Develops vessel and sculptural concepts using wheel-throwing techniques. Introduces the elements of art through the making of ceramic form. Progresses beyond basic throwing techniques to intermediate throwing skills, various forming and embellishing techniques both on the wheel and subsequent to throwing, colored slip work, glaze work, and the firing of kilns. Students work towards development of individual creative expression. 3cr., 2hr. lect./4hr. lab (DA)

270  History of Western Art
Surveys Western Art from prehistoric to modern times. Emphasizes the historical aspects of art including an overview of each historical period. (Meets UH Mānoa Arts and Science core requirement) 3cr., 3hr. lect. (DH)

Astronomy (ASTR)
J. Pye

110  Survey of Astronomy
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, and MATH 18 with grade C or better, or placement at least MATH 82, or consent. Recommended: High school science
Introduces the history and methods of astronomy, with descriptive treatments of planets, the solar system, stars, galaxies, and cosmology. Discusses the concepts of size, distance, and time in the observable universe. 3cr., 3hr. lect. (DP)

110L  Observational Astronomy Laboratory
Prereq: ASTR 110 with grade C or better (or concurrent), and at least MATH 82 with grade C or better, or placement at least MATH 100. Recommended: ICS 101 or equivalent.
Introduces instrumentation and methods used in astronomical observations and research. Demonstrates astronomical principles through laboratory observations and analysis of astronomical data, and provides experience using instrumentation and software for observations, data collection and analysis, and image processing. 1cr., 3hrs. lab (DY)

Auto Body Repair & Painting (ABRP)
D. Tanga

20E  Basic Auto Body
Introduces basic auto body skills and procedures. Covers the proper and safe handling of hand and power tools and materials used in the auto body industry. 2cr., 4hr. lect./lab

20F  Basic Metal Work
Prereq: ABRP 20E, or consent.
Introduces welding with the oxy-acetylene torch, MIG (GMAW) welding, and the resistance panel spot welder. Covers the use, maintenance, and safety of the specialized hand and power tools of this repair process. 2cr., 4hr. lect./lab

20G  Auto Sheet Metal
Prereq: ABRP 20F, or consent.
Introduces picking and filing, shrinking of damaged sheet metal, and corrosion repair. 2cr., 4hr. lect./lab
20H Body & Fender
Prereq: ABRP 20G, or consent.
Explains principles of auto body repair skills in roughing, dinging, fender and panel repair, and the finishing procedures to complete the body and fender repair process. 2cr., 4hr. lect./lab

20I Auto Body Repair Practicum
Prereq: ABRP 20G, or consent.
 Applies exercises in repair methods and procedures discussed in ABRP 20EFGH on live jobs. 2cr., 4hr. lect./lab

22E Basic Auto Refinishing
Presents the basics of automotive refinishing. Emphasizes shop and personal safety in using hand tools, power tools, supplies, and materials for vehicle preparation for painting. 2cr., 4hr. lect./lab

22F Refinish Equipment & Techniques
Prereq: ABRP 22E, or consent.
Introduces safety, proper operation, and maintenance of the tools and equipment used for automotive refinishing. Covers surface preparation and the proper procedures of undercoat applications. 2cr., 4hr. lect./lab

22G Complete Refinishing Techniques
Prereq: ABRP 22F, or consent.
Explains the complete painting process. Covers preparation and application of sealers to surface, to the final detailing of the vehicle. 2cr., 4hr. lect./lab

22H Touch-Up Refinishing Techniques
Prereq: ABRP 22G, or consent.
Introduces vehicle preparation and various techniques for touch up refinishing. 2cr., 4hr. lect./lab

22I Refinishing Practicum
Prereq: ABRP 22H, or consent.
 Applies the refinishing procedures and skills acquired in ABRP 22EFGH on live jobs. 2cr., 4hr. lect./lab

40E Automotive Trim and Glass
Prereq: ABRP 20EFGHI and ABRP 22EFGH, or consent.
Introduces the servicing, removing, and replacing of automotive hardware, interior and exterior trim, fixed and movable glass, and upholstery. 2cr., 4hr. lect./lab

40F Dimensioning Collision Damage
Prereq: ABRP 40E, or consent.
 Explains methods to determine collision damages to the automotive chassis and suspension components for conventional framed and unitized vehicles. 2cr., 4hr. lect./lab

40G Frame Alignment & Repair
Prereq: ABRP 40F, or consent.
Analyzes corrective procedures in aligning conventional framed and unitized constructed vehicles. 2cr., 4hr. lect./lab

40H Structural Sectioning
Prereq: ABRP 40G, or consent.
Presents theory and practice of structural sectioning of conventional framed and unitized constructed vehicles. 2cr., 4hr. lect./lab

40I Major Repairs Practicum
Prereq: ABRP 40H, or consent.
 Applies exercises in analysis and corrective methods discussed in ABRP 40EFGH on live jobs. 2cr., 4hr. lect./lab

41E Minor Collision Repair
Prereq: ABRP 41F, or consent.
 Explains the repairing of minor collision damage to automotive sheet metal. 2cr., 4hr. lect./lab

41F Mechanical Systems
Prereq: ABRP 41E, or consent.
Introduces trouble shooting of automotive cooling system, air conditioning, and electrical systems during vehicle repair. 2cr., 4hr. lect./lab

41G Plastic Panel Repair
Prereq: ABRP 41F, or consent.
Introduces the repairing of damaged plastic and fiberglass panels and components. 2cr., 4hr. lect./lab

41H Management & Estimating
Prereq: ABRP 41G, or consent.
 Introduces the student to the fundamentals of writing and understanding repair estimates and repair orders. Discusses management, business procedures, and industrial relations. 2cr., 4hr. lect./lab

41I Minor Repairs Practicum
Prereq: ABRP 41H, or consent.
 Applies exercises in repair methods and procedures discussed in ABRP 41EFGH on live jobs. 2cr., 4hr. lect./lab

44E Advanced Major Collision
Prereq: ABRP 41EFGH, or consent.
 Applies specialized techniques in major collision repair on live jobs. 2cr., 4hr. lect./lab

44F Advanced Minor Collision
Prereq: ABRP 41EFGH, or consent.
 Applies specialized techniques in minor collision repair on live jobs. 2cr., 4hr. lect./lab

44G Advanced Complete Refinishing
Prereq: ABRP 41EFGH, or consent.
 Applies specialized techniques in complete automotive refinishing on live jobs. 2cr., 4hr. lect./lab

44H Advanced Touch-Up Refinishing
Prereq: ABRP 41EFGH, or consent.
 Applies specialized techniques in automotive touch-up refinishing on live jobs. 2cr., 4hr. lect./lab

44I Advanced Management and Estimating
Prereq: ABRP 41EFGH, or consent.
Analyzes problem solving in body shop management. Develops special estimating skills on live jobs. 2cr., 4hr. lect./lab

Automotive Technology (AMT)
T. Hussey, K. Takushi

16 Car Care
Prereq: Student must maintain a valid Driver’s license throughout duration of the automotive course of studies. Explores auto mechanics for non-majors with primary emphasis on preventive maintenance service and minor repairs. 2cr., 3hr. lect./lab

20 Introduction to Auto Mechanics
Prereq: Student must maintain a valid Driver’s license throughout duration of the automotive course of studies, or consent. Recommended: Placement at ENG 21 or higher. Introduces principles for the operation of automotive systems. Explains the selection and use of basic automotive tools, equipment, and procedures for the preventive maintenance and minor repair service. Includes lectures, demonstrations, and lab work on shop training units and “live” service vehicles. 2cr., 4hr. lect./lab
30 Engines
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Student must maintain a valid Driver’s license throughout duration of the automotive course of studies. Recommended: At least 10th grade reading skill.
Examines principles of operation, diagnosis, service, and repair of modern internal-combustion gasoline engine. Explains use of automotive tools and testing equipment. Applies concepts to live engine projects. 6cr., 12hr. lect./lab

40B Fuel and Emission Systems
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Student must maintain a valid Driver’s license throughout duration of the automotive course of studies. Recommended: At least 10th grade reading skill, or consent.
Examines principles of operation, diagnosis, service, repair of modern internal-combustion gasoline engine. Explains use of automotive tools and testing equipment. Applies concepts to live engine projects. 4cr., 8hr. lect./lab

41C Electrical/Electronics II
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Student must maintain a valid Driver’s license throughout duration of the automotive course of studies. Recommended: At least 10th grade reading skill, or consent.
Examines principles of operation, diagnosis, service, repair of the electrical/electronic system. Covers electrical/electronic lighting and accessory systems, including motor driven accessories, supplemental restraints, cruise control, entertainment, and module communications. Explains use of automotive tools and testing systems. 4cr., 8hr. lect./lab

46 Power Train
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Student must maintain a valid Driver’s license throughout duration of the automotive course of studies. Recommended: At least 10th grade reading skill, or consent.
Examines principles of operation, diagnosis, and repair of automatic transmissions and transaxles, clutches, drive shafts, and drive axles. Explains use of automotive tools and testing equipment. 4cr., 8hr. lect./lab

50 Automatic Transmissions
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Student must maintain a valid Driver’s license throughout duration of the automotive course of studies. Recommended: At least 10th grade reading skill, or consent.
Examines principles of operation, diagnosis, and repair of automatic transmissions and transaxles. Explains use of automotive tools and testing equipment. 4cr., 8hr. lect./lab

53 Brake System
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Student must maintain a valid Driver’s license throughout duration of the automotive course of studies. Recommended: At least 10th grade reading skill, or consent.
Examines principles of operation, diagnosis, service, and repair of drum, disc, and power brake systems. Explains use of automotive tools and testing equipment. 4cr., 8hr. lect./lab

55 Suspension-Steering
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Student must maintain a valid Driver’s license throughout duration of the automotive course of studies. Recommended: At least 10th grade reading skill, or consent.
Examines principles of operation, theory, design, and repair of standard and power steering systems, front and rear suspension, tires, wheels, alignment, and balancing. Explains use of automotive tools and testing equipment. 3cr., 6hr. lect./lab
60  Diagnostic and Repair
Prereq: AMT.20, 30, 40B, 40C, 40G (or concurrent), 41C, 43, 46, 50, 53, and 55, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies. Applies diagnostic skills and techniques in advanced automotive mechanics technology with emphasis on realism in lab and shop operations. Includes students being prepared to take the ASE certification exam in the following areas: suspension and steering, electrical/electronics, engine performance, automatic transmission/transaxle, manual drive train and axles, brakes, heating and air conditioning, and engine repair. 8cr., 16hr. lect./lab

80  Small Engine Repair
Explores the theory and practice in the operation, repair, and maintenance of small displacement internal combustion engines including two-cycle and four-cycle types found on single cylinder lawn mowers, power plants, garden tillers, and chain saws. 2cr., 1hr. lect./1hr. lab

Biochemistry (BIOC)
B. Butler, S. Calder, S. Irwin

241  Fundamentals of Biochemistry
Prereq: MATH 82 with grade C or better or placement at least MATH 100, or consent. Recommended: High school science. Introduces biological chemistry stressing integration of the fundamental concepts of general chemistry, inorganic chemistry, and organic chemistry with broad application of these principles to the study of living systems. 3cr., 3hr. lect. (DP)

244  Essentials of Biochemistry
Prereq: BIOC 241 or CHEM 151 or CHEM 161, or consent. Introduces chemical principles and concepts of living systems. Emphasizes the composition, function, and transformation of biological substances in animals, plants, and microorganisms. Provides sufficient organic chemistry to supplement a thorough understanding of the general concepts of biochemistry. 3cr., 3hr. lect. (DP)

Biochemistry (BIOC)
J. Boswell, B. Butler, S. Calder, A. Coopersmith, S. Irwin

100  Human Biology
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent. Surveys human anatomy and physiology. Introduces students to the structure and function of cells, tissues, organs, and systems of the human body. Includes disease processes and recent scientific advances. 3cr., 3hr. lect. (DB)

101  Biology and Society
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent. Introduces characteristics of science, historical development of scientific concepts, and interactions of society with science, illustrated by topics from biological sciences. (Crosslisted as SCI 121.) 4cr., 3hr. lect.3hr. lab (DB, DY)

102  General Botany
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent. Studies growth, function, and evolution of plants. Analyzes human interactions with plants and plant interactions with their environment. (Crosslisted as ZOOL 101.) 4cr., 3hr. lect.3hr. lab (DB, DY)

103  Principles of Zoology
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent. Surveys major animal groups with emphasis on structure, physiology, development, reproduction, evolution, ecology, behavior, and interactions with humans. (Crosslisted as ZOOL 101.) 4cr., 3hr. lect.3hr. lab (DB, DY)

105  Hawaiian Field Biology
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent. Surveys, in the classroom and on location, ecosystems from near-shore ocean waters to mountain top. Considers geological history, physical geography, and natural history. Discusses pre-Polynesian establishment of organisms, origins of endemic species, and the influences of human populations on island ecosystems. 4cr., 3hr. lect.3hr. lab (HI, DB, DY)

124  Environment & Ecology
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent. Examines the biological and physical principles affecting human interactions with the environment. Explores the impacts of science, technology, values, and perceptions on global ecology. Discusses problems of pollution, overpopulation, and resource depletion with an emphasis on island ecosystems. Evaluates alternatives to current actions and public policies stressing responsibility of the individual. 3cr., 3hr. lect. (DB)

124L  Environment & Ecology Laboratory
Prereq: BIOL 124 with grade C or better (or concurrent), or consent. Laboratory to accompany BIOL 124. 1cr., 3hr. lab (DY)

151  Introduction to Genetics
Prereq: ENG 100, or consent. Recommended: BIOL 100 or 101. Introduces basic concepts in genetics and explores how they are used in research. Investigates human gene structure and function, including the genetic basis of development, causes of birth defects, mental retardation, genetic diseases, sexual determination, and behavior. Surveys current topics in genetic research. 3cr., 3hr. lect. (DB)

152  Introduction to Biotechnology
Prereq: BIOL 100 or 101, ENG 100, and MATH 82 or higher, all with grade B or better, or consent. Recommended: High school or college level chemistry and BIOL 151. Provides and overview of the impact of biotechnology in the achievement of contemporary objectives in the fields of medicine, ecology, food science, and forensics. Introduces the concepts of bioethics, patenting, and regulatory issues. Includes laboratory section with hands-on applications in DNA and protein technologies. 3cr., 2hr. lect/3hr. lab. (DB, DY)

171  Introductory Biology I
Prereq or coreq: CHEM 151 or 161, or consent. Coreq: BIOL 171L. Introduces cell structure and chemistry, growth, reproduction, genetics, evolution, viruses, bacteria, and simple eukaryotes. Required for life science majors. 3cr., 3hr. lect. (DB)
171L Introductory Biology I Laboratory
Prereq or coreq: CHEM 151 or 161, or consent. Coreq: BIOL 171, or consent. Laboratory to accompany BIOL 171. 1cr., 3hr. lab (DY)

172 Introductory Biology II
Prereq: BIOL 171, or consent. Continues BIOL 171. Includes anatomy, physiology, and systematics of plants and animals. Studies behavior, ecosystems, populations, and communities. 3cr., 3hr. lect. (DB)

172L Introductory Biology II Laboratory
Prereq: BIOL 171, 171L, and 172 (or concurrent), or consent. Laboratory to accompany BIOL 172. 1cr., 3hr. lab (DY)

200 Coral Reefs
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent. Introduces the biology, ecology, and geology of stony corals and the reef structures they build. Identifies the roles of other members of the coral reef community including algae, other invertebrates, and fishes. Explores the uses of corals as resources and the impacts of human activities on coral reefs. 4cr., 3hr. lect./3hr. lab (HI, DB, DY)

225 Fundamentals of Cell & Molecular Biology
Prereq: BIOL 151, BIOL 171 & 171L, CHEM 161 & 161L, and MIRC 130, and CHEM 162 & 162L or BIOC 241, or consent. Recommended: ENG 100. Introduces the fundamentals of cell and molecular biology. Covers the physiology of prokaryotic and eukaryotic cells, protein structure and function, protein synthesis, genome organization in viruses, gene cloning, DNA technology, and genetic engineering. Discusses bioethics. 4cr., 3hr. lect./3hr. lab (DB, DY)

226 Methods in Biotechnology
Prereq: BIOL 225 with grade C or better, or consent. Focuses on techniques, ethical issues and theory for the biotechnology industry. Covers concepts and skills including protein biochemistry, tissue culturing techniques, manipulation, extraction and purification of DNA, probe preparation and hybridization methods. Emphasizes aseptic techniques, along with methods of media preparation, growth and maintenance bacteria. 5cr., 11hr. lect./lab

265 Ecology and Evolutionary Biology
Prereq: BIOL 101, 151, or 171 any with a grade C or better, or consent. Integrates the basic principles of ecology and evolution. Covers the origin of life, evolutionary mechanisms, systematics, macroevolution, ecological processes, population and community ecology, dispersal, and biogeography. Uses examples from the biodiversity of Hawaii. Includes recent research and advances in the field. 3cr., 3hr. lect. (DB)

282 Global Change
Prereq: ENG 100 with grade C or better, or placement at ENG 100, or consent. Introduces principal components of global change and explores the impacts on the environment. Focuses on the interdisciplinary nature of global change and Interrelationships to biological, physical, anthropological, economic, and political concepts. 3cr., 3hr. lect. (DB)

Blueprint (BLPR)

22 Blueprint Reading & Drafting
Introduces principles of pictorial and architectural drawing, interpretations of working drawings and specifications, and drafting practices. 3cr., 3hr. lect.

40 Blueprint Reading & Estimating
Prereq: BLPR 22, or consent. Treats reading and interpreting blueprints and specifications. Covers material take offs, working drawings, sketch, and work schedules. 3cr., 5hr. lect./lab

Botany (BOT)
J. Boswell, A. Emmsley, S.K. Raymond

101 General Botany
Studies growth, function, and evolution of plants. Analyzes human interactions with plants and plant interactions with their environment. (Crosslisted as BIOL 102.) 4cr., 3hr. lect./3hr. lab (DB, DY)

105 Hawaiian Ethnobotany
Identifies endemic, indigenous, and Polynesian introduced flora of Hawaii. Examines the many uses of Hawaii’s flora by the indigenous people. Reveals the relationship of gods/plants/man, and connects belief and practices with the intentional migration of specific plants. (Crosslisted as HWST 211). Meets Social Science requirement, not Natural Science requirement. 3cr., 3hr. lect./lab (HI, DS)

105L Hawaiian Ethnobotany Lab
Prereq: BOT 105 and HWST 211, either with a C or better (or concurrent). Studies the interactions between the Hawaiian culture and plants/plant environments. Considers different levels and types of interactions and patterns of interactions between people and plants. Places emphasis on the importance of cultural upbringing. Includes field trips in lieu of lab. (Crosslisted as HWST 211L) 1cr., 3hr. lab. (DY)

Business (BUS)
R. Gonzalez, R. Klein, R. Miller, J. Moore, L. Peros, M. Wukelic

120 Principles of Business
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100. Surveys the fundamentals of American business enterprise. Treats the foundations and responsibilities of business, management, finance, marketing, and the legal, government, and social environment. 3cr., 3hr. lect./disc.
125 Starting a Small Business  
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Surveys the small business environment, establishing a firm, decision-making processes, marketing assessments, financing, operations considerations, and government regulations. Covers development of a business plan. Designed for those who wish to start or are currently operating their own small business. 3cr., 3hr. lect.  

130 Business Communication - Oral  
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent. Develops competence in oral communication within business and organizational context. Provides the theory and practical skills to be a confident and effective communicator in a variety of business and organizational settings. (Crosslisted as COM 130.) 3cr., 3hr. lect. (DA)  

150 Personal Finance  
Prereq: ENG 19 with grade C or better or placement at least ENG 22, and MATH 18 with grade C or better, or placement at least MATH 82, or consent. Introduces financial planning, money management and tax planning. Includes financing real and personal property, purchasing insurance and managing investments. (Crosslisted as ECON 150.) 3cr., 3hr. lect.  

201 Introduction to ABIT  
Prereq: Admission to the ABIT program. Focuses on skills required for ethical and effective conduct in business. Includes teamwork, oral presentation, writing, computer skills, and social skills that are part of the business world. 1cr., 1hr. lect.  

310 Statistical Analysis for Business Decisions  
Prereq: ACC 300, MATH 115, and MATH 203 or MATH 205, all with grade C or better, or consent. Emphasizes problem recognition and formulation; stress on cross-disciplinary complex problem solving and communication; computer intensive. Coverage of descriptive statistics, probability and hypothesis testing with emphasis on quality, productivity, and regression analysis. 3cr., 3hr. lect.  

318 Principles of Finance  
Prereq: ACC 202, BUS 120, ECON 130 & 131, MATH 115, and MATH 135 or higher, or consent. Introduces the theory and practice of financial management: analysis and decision making for asset management, capital budgeting, capital structure, and dividend policy. 3cr., 3hr. lect.  

320 Entrepreneurship – Opportunity Recognition and Evaluation  
Prereq: MGT 310 and MKT 300, or consent. Develops skills necessary to recognize an opportunity, and evaluate the viability of an idea, prior to the investment of significant time and money. Uses student teams to develop, present, and critique entrepreneurial startups. 3cr., 3hr. lect.  

322 New Venture Leadership  
Prereq: MGT 310, or consent. Recommended: PSY 100 or SOC 100. Focuses on organizational leadership. Emphasizes the human dimension within organizations. Provides a foundation for understanding the process and stages of organization dynamics. Includes the management of change and innovation. 3cr., 3hr. lect.  

415 Entrepreneurial Business Planning  
Prereq: ACC 300, BUS 318, MGT 310, and MKT 300, or consent. Teaches development and implementation of business plans. Includes research, writing, and presentations. Explores the use of business plans for raising capital, starting a new business, and validating timelines. 3cr., 3hr. lect.  

496 ABIT Capstone II  
Prereq: BUS 310, BUS 495, ICS 481, and MKT 400 all with grade C or better, or consent. Provides the skills necessary to utilize and demonstrate the tools and technologies developed during the ABIT program. Includes Internet technology design, prototyping and implementation. Demonstration of business plan and supporting technology to external stakeholders. Extension of Capstone I project using latest Internet technologies. 3cr., 3hr. lect.  

Business Law (BLAW)  
R. Miller  

200 Legal Environment of Business  
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent. Introduces legal environment in which businesses operate with particular attention to principles of law relating to contracts, agency, commercial paper, partnerships, corporations, and government regulations. 3cr., 3hr. lect.  

Business Technology (BUSN)  

50 Basic Computing Skills for College Success  
Introduces the basics of how computers are used by college students. Covers the parts and operations of personal computers, the graphical user interface and file management techniques. Provides instruction and practice with E-Mail, Internet and the Laulima course management system. Provides instruction and practice with word processing and presentation programs. 3cr., 3hr. lect.  

70 Filing  
Prereq or coreq: ENG 22 or 55, or consent. Introduces indexing and filing procedures. Covers the theory and practice of alphabetic, geographic, and subject systems. 1cr., 1.33hr. lect./lab
89 Electronic Calculating
Gives students practice with real world skills used in the modern business environment. Emphasizes proper technique and speed with the ten-key pad found on calculators, computer keyboards, and cash registers. Develops the ability to work with numbers and use a calculator to perform business computations. 1cr., 18hr. lect./lab

110 Office Computer Troubleshooting and Maintenance
Prereq: BUSN 150 or ICS 101 either with grade C or better, or consent.
Introduces basic troubleshooting and maintenance procedures for personal computers used in typical office environments. Develops basic understanding of computer hardware modules and operating system software. Covers system assembly, disassembly, configuration, booting up, preparing disk drives, loading operating system software, diagnosing problems, and upgrading. 3cr., 3hr. lect./lab

121 Introduction to Word Processing
Introduces the parts of a personal computer and how the computer keyboard and mouse are used. Develops the ability to key alphabetic, punctuation, number, symbol keys, and the ten-key pad by touch. Further develops speed, accuracy, and technique keying. Introduces document formatting. 3cr., 3hr. lect./lab

123 Word Processing for Business
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent. Recommended: 35 gross words a minute (gwam) or BUSN 121 with grade C or better.
Uses advanced features from a word processing program to create business documents emphasizing production and proofreading. Introduces knowledge of the Internet and computer. Includes timed computer keyboarding skills for creating and editing business documents and sending electronic attachments. 3cr., 3hr. lect./lab

150 Introduction to Business Computing
Recommended: BUSN 50 or 121.
Introduces the role of computers in the evolution of an information-based society. Reviews history and need for information processing, the basic information processing cycle and functions, processing capabilities of computers, system development, and program development. Provides students with experience in an operating system and business applications, such as word processing, database management, spreadsheets, and presentation software. 3cr., 3hr. lect.

151 Intermediate Business Computing
Prereq: BUSN 150 or ICS 101 either with grade C or better, or consent.
Expands the concepts of business computing introduced in BUSN 150. Develops greater proficiency in creating, modifying, and printing documents, spreadsheets, database queries, reports, and forms. Broadens knowledge of word processing, spreadsheet, database, and presentation software. Provides experience with typical business applications that utilize Intranet and Internet technologies. 3cr., 3hr. lect./lab

157 Desktop Publishing for Business
Prereq: BUSN 150 or ICS 101 either with grade C or better, or consent.
Introduces desktop publishing on the personal computer. Develops proficiency in creating and modifying layout for brochures, business cards, fliers, and newsletters. Covers basic principles of graphics designs, formatting techniques, importing text files from word processing programs, preparing and importing various types of graphics, and creating special effects with graphics and text. 3cr., 4hr. lect./lab

161 Customer Service
Prereq: ENG 22 or 55, or placement at ENG 100, or consent.
Builds and maintains the critical skills and understanding necessary to be a dynamic and successful member of today’s rapidly growing service economy. Individuals who work with customers gain insight into customer behavior and attitudes and develop strategies to create positive customer relationships encountered in various situations on the job. 3cr., 3hr. lect./lab

166 Professional Employment Preparation
Recommended: Ability to keyboard and knowledge of word processing.
Facilitates employment search by emphasizing professional techniques and standards in the preparation of application forms, resumes, cover letters, and employment interviews. (Crosslisted as IS 105C.) 1cr., 1lect.

170 Records and Information Management
Prereq or coreq: ENG 100, or consent.
Studies principles and procedures for organizing and operating Records and Information Management (RIM) programs. Topics include: selection of filing systems, equipment, and supplies, procedures for storage, retrieval, transfer, retention, and disposal of record; records inventory and analysis; records protection and disposition; and study and application of ARMA (Association of Records Managers and Administrators) rules for alphabetic, alphanumeric, geographic, numeric, and subject methods. Helps a business or organization meet its fiscal, legal, governmental, requirements by managing its information systems. 3cr., 3hr. lect./lab

183 Executive Transcription
Prereq: BUSN 123 and ENG 209 (or concurrent), or consent.
Develops machine transcription skills for the conversion of business documents from dictated, unedited material to correctly formatted, mailable copy. Emphasizes executive, medical, legal, and technical terminology. 3cr., 3hr. lect./lab

185 Processing Physician’s Orders
Prereq: NURS 50 and BUSN 123 both with grade C or better, or consent.
Introduces skills for transcribing physician orders. Includes transcribing medication, intravenous, admission, pre-operative, post-operative, and referral orders. Includes computer transcription. 3cr., 1hr. lect./4hr. lab

189 Business Mathematics
Prereq: MATH 18 with grade C or better or placement at least MATH 82, or consent.
Introduces various quantitative computational procedures used in accounting and finance such as present and future value concepts, payroll, inventory, and international currency exchange rates. Utilization of the electronic 10-key pad as a tool for calculating is stressed. 3cr., 3hr. lect./lab
193v Business Technology Cooperative Education  
Prereq: Business Technology major or permission of department or instructor.  
Provides practical career-related work experience through a program used nationally in colleges and universities to apply classroom knowledge and to develop job competencies.  
Full-time or part-time work in private and public sectors of the business, government and industrial communities is utilized for this program.  
1-3 cr., 1.25 hr. 
seminar plus minimum 75 documented field experience hours per credit (e.g., 
1 cr. = 75 hrs, 2 cr. = 150 hrs.)

232 Business Computer Spreadsheets  
Prereq: BUSN 151 and BUSN 189 both with grade C or better, or consent.  
Covers business spreadsheets with special attention to advanced techniques required by experts.  
Develops critical thinking skills for applying software tools to business problems.  
Covers financial and logical functions, custom formatting, charts and graphs, multi-sheet and shared workbooks, formula auditing, data importing, Web features, one-variable and two-variable data tables, and application development tools.  
3 cr., 3 hr. lect./lab

237 Business Computer Databases  
Prereq: BUSN 151 and BUSN 189 both with grade C or better, or consent.  
Covers business databases with special attention to advanced techniques required by experts.  
Develops critical thinking skills for applying software tools to business problems.  
Covers databases and table creation and modification, queries, forms, reports, defining data relationships, importing and exporting data, multi-user databases, operations on the Web, and creating database applications.  
3 cr., 3 hr. lect./lab

261 Web Page Construction Fundamentals and Marketing  
Prereq: BUSN 150 or ICS 101 either with grade C or better, or consent.  
Introduces web page construction including HTML code, Internet service providers, and web page construction software.  
Examines World Wide Web marketing strategies.  
3 cr., 3 hr. lect./lab

286 Legal Terminology and Procedures  
Prereq: ENG 209 with grade C or better, or consent.  
Covers the skills needed for a legal office assistant in a law firm or other legal setting.  
Explains legal terms, concepts, and principles.  
Emphasizes creating, formatting, and editing common types of legal documents.  
3 cr., 3 hr. lect./lab

292 Integrated Office Procedures  
Prereq: BUSN 123, 151, 157, and 193v all with grade C or better, or consent.  
Includes advanced word processing, spreadsheet, database, integration of applications, and creation of a web site.  
Incorporates electronic presentations for projects.  
Utilizes appropriate office software applications.  
Prepares for industry certifications.  
Designed to bring together within a portfolio all elements of learning from the Business Technology program.  
3 cr., 3 hr. lect.

Carpentry (CARP)  
20 Basic Carpentry Skills  
Prereq: ENG 19 with grade C or better or placement at least ENG 22, and at least MATH 18 with grade C or better (or concurrent); or consent.  
Introduces proper use and maintenance of carpentry hand and power tools.  
Practices selecting and using construction materials and fastening systems.  
3 cr., 1 hr. lect./3 hr. lab

41 Rough Carpentry  
Prereq: CARP 20, or consent.  
Introduces theoretical and on-the-job skills necessary to lay out and construct foundations, wall and ceiling framing, and roofing systems for residential and light commercial construction.  
3 cr., 4 hr. lect./lab

42 Exterior Finishing  
Prereq: CARP 20, or consent.  
Covers theoretical and on-the-job skills necessary to install exterior windows, doors, roofing, siding, and decks in residential and light commercial construction.  
3 cr., 4 hr. lect./lab

43 Interior Finish  
Prereq: CARP 20, or consent.  
Introduces interior finish of floors, walls, ceiling, trim and special feature applications in residential and light commercial construction.  
3 cr., 4 hr. lect./lab

44 Cabinets and Stairways  
Prereq: CARP 20, or consent.  
Focuses on installation of cabinets, countertops, stairways, and railings in residential and light commercial construction.  
3 cr., 4 hr. lect./lab

Chemistry (CHEM)  
S. Calder, S. Irwin

151 Elementary Survey of Chemistry  
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, and MATH 82 with grade C or better or placement at least MATH 103, or consent.  
Provides the beginning student with background in the fundamentals of chemistry.  
Intended for students needing a one-semester science course.  
Presents films, demonstrations, and experiments of introductory laboratory techniques illustrating chemical principles.  
4 cr., 3 hr. lect./3 hr. lab (DP, DY)

161 General Chemistry I  
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, and MATH 103 with grade C or better (or concurrent) or placement at least MATH 135, or consent.  
Coreq: CHEM 161L.  
Covers basic principles of chemistry including introduction to units, equations, atomic structure, chemical bonding, gases, crystals, and solutions.  
3 cr., 3 hr. lect. (DP)

161L General Chemistry Laboratory I  
Coreq: CHEM 161, or consent.  
Develops laboratory experiments illustrating fundamental principles of chemistry.  
1 cr., 3 hr. lab (DY)

162 General Chemistry II  
Prereq: CHEM 161 and MATH 135 or higher, or consent.  
Coreq: CHEM 162L.  
Covers reaction thermodynamics, chemical kinetics, chemical equilibrium, acids and bases, solubility, complex ions, oxidation-reduction, and the various groups of elements including their differences, production, uses, and reactions.  
3 cr., 3 hr. lect. (DP)

162L General Chemistry Laboratory II  
Coreq: CHEM 162, or consent.  
Develops laboratory experiments illustrating fundamental principles of chemistry.  
1 cr., 3 hr. lab (DY)
Communication (COM)

C. Thompson

130 Business Communication - Oral
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Develops competence in oral communication within business and organizational context. Provides the theory and practical skills to be a competent communicator in a one-to-one setting. 3cr., 3hr. lect. (DA)

145 Interpersonal Communication I
Provides the theory and practical skills to be a competent communicator in a one-to-one setting. 3cr., 3hr. lect. (DS)

210 Intercultural Communication I
Prereq: ENG 100, or consent.
Explores problems and opportunities of communicating in a variety of intercultural contexts. Focuses on theory and practice in managing intercultural communication effectiveness. 3cr., 3hr. lect. (DS)

215 Conflict Resolution & Mediation
Prereq: COM 145 or BUS/COM 130 or PSY 100 or 105 any with grade C or better, or consent.
Recommended: ENG 100 with grade C or better.
Explores the reason for conflict and the different approaches for seeking resolution for conflict. Studies personal and societal value systems, the psychology of how people respond to conflict, the impact of culture on conflict styles, communication skills useful in dealing with conflict, and alternative resolution strategies. Practices mediation skills as a third party intervention method. (Crosslisted as PSY 253.) 3cr., 3hr. lect. (DS)

353 Conflict Management & Resolution
Prereq: ENG 100, PSY 100, or SOC 100, any with grade C or better, or placement at ENG 130, COM 145, or COM 210, any with grade C or better, or consent.
Recommended: PSY 253/COM 215.
Examines communication and behavior in interpersonal conflict through analysis of professional and personal relationships. Assesses political, social, and cultural influences on conflict, and applies Western and Polynesian models of dispute resolution processes in relational conflict. (Crosslisted as PSY 353.) 3cr., 3hr. lect. (DS)

459 Intercultural Communication II
Prereq: ENG 100 with grade C or better, or consent.
Surveys the major factors affecting interpersonal communication between/ among members of different cultures. Expands breadth and depth of knowledge of cultural, social, and political influences on intercultural communication. Focuses on theory, research, and managing intercultural effectiveness globally. 3cr., 3hr. lect. (DS)

Community Health Worker (CHW)

N. Johnson

150 Community Health Worker
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Recommended: BIOL 100, PHRM 103, 104, 105, and HLTH 150 all with grade C or better (or concurrent).
Introduces theoretical and practical clinical skills necessary for providing basic health care assistance and screening services. 4cr., 8hr. lect./lab

155 Community Health Worker Externship
Prereq: CHW 150 and PHRM 105 both with grade C or better, or consent.
Provides practical skills and experiences in clinic settings and in primary health care centers. Increases ability and effectiveness in inter-agency networking, home visiting/ client assessments, and case management techniques. 3cr., 8hr. lect./lab

Cooperative Arts & Sciences Education (CASE)

J. Patao
See Special Curricula section for details.

93v, 193v, 293v Work-Based Learning
Cooperative Education is an academic course which awards college credits to students who participate in a field experience that is related to their major or career goals.

Cooperative Vocational Education (CVE)

D. Louie, C. Omori, T. Shurilla, C. Speere, T. Lelli

111 Introduction to the Culinary Industry
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Provides an overview of the culinary industry within the aspects of the entire hospitality industry. Provides students with an introduction to the historical, social, and cultural forces that have affected and shaped the industry of today. Identifies job qualifications and opportunities, professional standards, communication skills, and attitudes essential for successful workers in the industry. 2cr., 2hr. lect.

112 Sanitation and Safety
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Studies and applies the principles and procedures of sanitation and safety in the hospitality industry. Includes the study of food-borne illnesses, biological, chemical, physical hazards, and cross-contamination as they may occur during the flow of food. Introduces HACCP (Hazard Analysis Critical Control Point) and other sanitation and safety programs. Covers safety issues and OSHA (Occupational Safety and Health Administration) guidelines and standards as they apply to the hospitality industry. 2cr., 2hr. lect.

115 Menu Merchandising
Prereq: CA in CULN, or consent.
Covers principles of menu merchandising such as cost and pricing, equipment and personnel, design and format, and marketing. 2cr., 2hr. lect.
120  Fundamentals of Cookery
Prereq: CULN 111 with grade C or better (or concurrent), or consent.
Focuses on fundamental concepts, skills, and techniques of cookery. Includes the use of standardized recipes. Covers basic cooking methods for meats, poultry, seafood, vegetables, and starches. Teaches identification, use and maintenance of equipment, tools, and utensils in a safe and sanitary manner. 4cr., 30hr. lect./90hr. lab per semester (offered as a 5 or 8-wk. module)

121  Culinary Skill Building
Prereq: CULN 111 and 112 both with grade C or better (or concurrent), or consent.
Identifies and practices individual introductory culinary skill components necessary in the professional kitchen. Discusses, demonstrates and practices knife usage, stocks, sauces, thickening agents, cooking methodology, cheese, eggs, and other related products. 3cr., 1hr. lect./6hrs. lab

122  Culinary Skill Development
Prereq: CULN 111 and 112 both with grade C or better (or concurrent), or consent.
Identification, fabrication, and use of herbs, spices, and foods processed in professional kitchens. Demonstrates and practices individual skill components required as professional culinarians. Utilizes safety and sanitation practices, maintaining high standards of professionalism and personal ethics. 3cr., 1hr. lect./6hrs. lab

131  Short Order Cookery
Prereq: CULN 121, 122, and 150 (or concurrent), all with grade C or better, or consent.
Identifies and uses tools, equipment, foods, and supplies used in a short order kitchen. Examines various positions in the short order kitchen. Practices, applies and analyzes principles of cookery and service of short order foods. 3cr., 1hr. lect./6hrs. lab

140  Cold Food Pantry
Prereq: CULN 121 and 150, both with grade C or better, or consent.
Identifies and uses tools, equipment, foods and supplies used in the cold food kitchen. Discusses the preparation and properties of cold foods and their ingredients. Examines and practices the preparation, presentation, quality control and merchandising of foods served cold. 3cr., 1hr. lect./6hrs. lab

150  Fundamentals of Baking
Prereq: CULN 111 and 112 both with grade C or better (or concurrent), or consent.
Studies the uses of bakery tools, equipment, materials, and recipes. Provides practical experience in working basic hotel and restaurant bakery stations. Involves quality production of bakery goods, pastries and desserts. 4cr., 2hr. lect./6hrs. lab

160  Dining Room Service
Prereq: CULN 120 with grade C or better, or consent.
Provides study and practice in various types of table service. Teaches proper serving etiquette with respect to customer relations. Includes practical experiences in a public dining room. Beverage service includes bar setup and equipment used, job descriptions of the various positions commonly found in the service of alcoholic beverages, specific service techniques used in those positions, and the rules and regulations of serving alcoholic beverages responsibly. 4cr., 2hr. lect./6hrs. lab

220  Advanced Cookery
Prereq: CULN 112, 120, 121, 131, and 140 all with grade C or better, or consent.
Provides practice and theory in the art of a la carte and banquet food production as found in quality hotels and specialty restaurants. 5cr., 2hr. lect./9hr. lab

240  Garde Manger
Prereq: CULN 121 or CULN 140 either with grade C or better, or consent.
Provides instruction and demonstration in the preparation of hot and cold hors d’oeuvres, canapés, aspics, chaud-froids, mousses, pates and terrines, buffet centrepieces, and vegetable and ice carvings. Discusses buffet catering, set-up, and menu planning. 4cr., 2hr. lect./4hrs. lab

250  Advanced Baking I
Prereq: CULN 150 with grade C or better, or consent.
Develops skills used in the production of more advanced baked pastry and confectionary products: especially chocolates, candies and decorated specialties which include, specialty cakes and artisan bread. 5cr., 2hr. lect./9hrs. lab

251  Advanced Baking II
Prereq: CULN 250 with grade C or better, or consent.
Develops skills used in the production of more advanced baked pastry and confectionary products. Emphasizes the techniques required to produce items such as soufflés, parfaits, ice creams and sorbets, plated desserts, marzipan, decorated specialties, sugar and isomalt decoration, and pastillage. 5cr., 2hr. lect./9hrs. lab

265  Beverage Operations
Prereq: CA in CULN, or consent.
Covers product identification of wines, beers, and spirits, including how they are manufactured and marketed. Emphasizes bar management over bartending skills. Teaches principles of setting up and operating a bar, including cost and quality controls, sales/merchandising, customer relations, and serving alcoholic beverages responsibly. 3cr., 3hr. lect.

271  Purchasing & Cost Controls
Prereq: CA in CULN, or consent.
Analyzes purchasing and food control systems in commercial food service operations. Practices cost and sales analysis, comparative buying, and inventory control. 4cr., 8hr. lect./lab

280  Food, Cooking, and Health in Hawai’i
Prereq: CA in CULN and FSHN 185, or consent.
Introduces the unique aspects of Hawai’i and Hawaiian culture as they relate to food, the origins of native Hawaiian foods, their uses and the protocol involved. Relates changes in traditional Hawaiian menus and diets to society and time. Discusses nutrition principles of the traditional Hawaiian diet and use those principles to develop healthy foods and menus in partnership with local farmers. Identifies native Hawaiian foods and uses them to develop a contemporary cuisine. 3cr., 1hr. lect./6hr. lab

281  Cooking for Better Health
Prereq: CA in CULN and FSHN 185, or consent.
Reviews and studies basic nutrition principles upon which healthy menus can be built. Combines nutrition, nutritional cooking principles and advanced cookery methods and techniques to produce and serve healthy classical and modern cuisine. 3cr., 1hr. lect./6hr. lab
292v  Work Practicum
Prereq or coreq: CULN 112, or consent.
Provides broad-based exposure to principles and practices of the fundamentals of catering with the food service industry. Utilizes practical hands-on experiences to teach the facets of sales, planning, preparation, and service of food on and off premise affairs covering theme, receptions, buffets, and banquets. Also provides a means for experiencing a diversity of on-site food service through field trips. (May be repeated for a maximum of 9 credits.) 1-3 cr., hours arranged

293v  Culinary Arts Field Experiences
Prereq: CA in CULN, or consent.
Offers flexible, customized, and supervised school-to-work experiences in all aspects of the culinary arts industry. Integrates and applies classroom theory to work situations via numerous field experiences. Infuses the “Culinary’s Code” into field experiences. (May be repeated for a maximum of 9 credits.) 5-15 hr. field experience per week and seminars arranged

294v  Work Practicum & Seminar in the Culinary Arts
Prereq: CULN 111, 112, 120, 121, 131, and 140 all with grade C or better, or consent.
Provides individualized, broad-based exposure to the principles and practice of the culinary arts via supervised work experiences in various operational capacities. Utilizes seminars to enhance application and relevance of principles and required competencies. Encourages cooperative and collaborative skills, development, professional and personal growth. (May be repeated for a maximum of 9 credits.) 1-3 cr., 1 hr. lect., 3 hr. practicum per week per credit

Dance (DNCE)

131  Modern Dance I
Provides an introduction to basic modern dance technique skills and explores the creative process through dance. 3 cr., 4 hr. lect./lab (DA)

132  Modern Dance II
Prereq: DNCE 131, or consent.
Provides a continuation of the development of skills and concepts introduced in DNCE 131. 3 cr., 4 hr. lect./lab (DA)

141  Jazz Dance I
Introduces the fundamental techniques of jazz dance to the beginning student and encourages creativity through movement and music. 3 cr., 4 hr. lect./lab (DA)

150  Survey of Dance
Provides a survey of contemporary western dance including ballet, modern dance and jazz. 3 cr., 3 hr. lect. (DA)

180  Dance Production I
Coreq: DNCE 131 or 132, or consent.
Provides an opportunity for creation and performance of a dance piece. Addresses all aspects of production. 1 cr., 2 hr. lect./lab (DA)

Dental Assisting (DENT)

J. Yamada

120  Dental Office Principles for Dental Assistants
Prereq: Admission to Dental Assisting program or consent, and ENG 22 with grade C or better or placement at ENG 100.
Develops skills and knowledge to manage the business activities of the dental office. Introduces communication skills, record and financial management, scheduling practices, marketing and career objectives for the dental assistant. Includes telephone techniques, scheduling and confirming appointments, organization of files, charts and patient records, charts processing, accounting, patient needs and follow-up, marketing techniques, maintaining and ordering of dental supplies. 3 cr., 3 hr. lect.

150  Orientation to Dental Assisting
Prereq: Admission to Dental Assisting program, or consent.
Provides an orientation to dental practice, including specialties, history, professional and legal responsibilities, role of the dental auxiliary, dental and medical terminology, patient communication, and office personnel relationships. Introduces infectious diseases important to dentistry, hazardous materials and waste management, and rules of regulatory agencies (DCCA, OSHA, CDC, and ADA). Teaches disinfection, instrument decontamination, sterilization procedures, tray set-up preparation, and protocols and emergency procedures for hazardous and biohazardous waste or materials. (Letter grade only.) 2 cr., 2 hr. lect.

151  Intro to Chairside Dental Assisting
Prereq: Admission to Dental Assisting program, or consent.
Introduces basic procedures of chairside assisting, use and care of dental equipment, patient management, instrument identification, sterilization procedures and tray set-up preparation, and manipulation of dental materials, including temporary dressings, cement bases and liners, topical agents, alginates, composites, resins, and amalgams. Includes supervised clinical experience in dental and periodontal charting, and dental assisting functions. (Letter grade only.) 5 cr., 1 hr. lect./9 hr. lab/2 hr. lect./lab

152  Chairside Dental Assisting
Prereq: DENT 151 with grade C or better, or consent.
Provides supervised clinical experience in dental assisting. Includes supervised clinical in externship environments. Includes advanced and specialty chairside procedures. (Letter grade only.) 4 cr., 12 hr. lab

154  Dental Materials
Prereq: DENT 151 with grade C or better, or consent.
Reviews physical and chemical properties and manipulations of alginate impression materials, gypsum products, cements, resins, metallic and non metallic restorative materials, investments, and waxes. Introduces physical and chemical properties and manipulation of hydrocolloid impression materials, polysulfide elastmemic impression materials, condensations silicone and polysiloxane/polyvinyl elastomeric impression materials. (Letter grade only.) 1 cr., 2 hr. lect./lab

164  Oral Biology I
Prereq: Admission to the Dental Assisting program, or consent.
Discusses general anatomy of the skull; arteries, veins, and lymphatics; musculature; and nervous structures of the head and neck, including the normal periodontal tissues, oral mucous membranes, and salivary glands. Includes the embryologic development of the structures and tissues of the head, neck, teeth and oral cavity, oral microbiology, and nutrition. Discusses the anatomy and identification of teeth, the eruption sequence, normal occlusion, and classification of occlusion. (Letter grade only.) 3 cr., 2 hr. lect./2 hr. lect./lab
165 Oral Biology II
Prereq: DENT 164 with grade C or better, or consent.
Reviews embryonic development of the structures and tissues in the head, neck, teeth, and oral cavity. Discusses histology of the hard and soft tissues of the oral cavity. Explains development of structural defects involving the oral cavity and teeth. Includes normal periodontal tissues, oral mucous membranes, and salivary glands. (Letter grade only.) 2cr., 1hr. lect./2hr. lect./lab

176 Dental Radiology I
Prereq: Admission to the Dental Assisting program, or consent.
Discusses production, characteristics, and biological effects of radiation, and the functions, components, and operation of the x-ray unit. Includes radiation protection and monitoring, chemistry and techniques associated with x-ray film, and developing solutions. Reviews anatomic landmarks, and introduces intra-oral and long-cone radiographic techniques in bitewing, periapical, and occlusal surveys. (Letter grade only.) 2cr., 3hr. lab/2hr. lect./lab

177 Dental Radiology II
Prereq: DENT 176 with grade C or better, or consent.
Discusses evaluation of film quality and recognition of anomalies and variations in tissue density. Introduces specialized procedures for the periodontic, endodontics, and edentulous patient. Explains forensic and legal considerations, and introduces principles of panoramic and cephalometric film. (Letter grade only.) 1cr., 3hr. lab

Dental Hygiene (DH)
R. Vierra

150 Oral Histology & Embryology
Prereq: DENT 165 with grade C or better, or consent.
Describes general and oral histology including an overview of oral embryology, a study of the fundamentals of cytology, and the normal microscopic anatomy of oral tissues. 2cr., 1hr. lect/2hr. lect./lab

153 Assessment Procedures in Dental Hygiene
Prereq: Admission to Dental Hygiene program.
Provides an orientation to dental hygiene practice. Focuses on the assessment techniques of the dental hygiene process of care model. Introduces infectious diseases important to dentistry, hazardous materials management, waste management, and rules of regulatory agencies (DCCA, OSHA, CDC and ADA). Teaches disinfection, instrument decontamination, and emergency procedures for hazardous and biohazardous waste and materials. Focuses on dental hygiene assessment procedures including: review of health/dental history, vital signs, extra/intraoral examination, assessment of the dentition, and comprehensive periodontal examination. Discusses rationale for collection of assessment data and associated clinical procedures. 2cr., 2hr. lect.

155 Dental Emergencies
Prereq: Admission to Dental Hygiene program.
Provides an overview of medical and dental emergencies including prevention of and preparedness for management of emergencies, client observation, and vital signs. Discusses basic principles of pharmacology related to emergencies including drug actions and interactions, toxicity and allergy, dental drugs in common use, and drugs used in the treatment of medical problems. Describes legal and ethical aspects of emergency procedures in dentistry. 1cr., 1hr. lect.

156 Preclinical Dental Hygiene
Prereq: Admission to Dental Hygiene program.
Introduces clinical procedures and techniques of dental hygiene including prevention of disease transmission, health/dental history, extra/intraoral examination, gingival evaluation and description, comprehensive periodontal examination, suspicious caries examination, and classification of occlusion. Demonstrates operation of the dental unit, basic instrumentation techniques, and ergonomic practice. 3cr., 1hr. lect./8hr. lab

158 Anatomical Sciences
Prereq: Admission to Dental Hygiene program.
Examines dental anatomy focusing on the development, morphology and functions of the teeth, head and neck including mastication. 2cr., 2hr. lect.

173 Dental Hygiene Education
Prereq: Admission to Dental Hygiene program and PSY 100 with grade C or better (or concurrent).
Describes fundamentals of client education including communication theory, development of client/clinician relationships, mechanical plaque removal devices, and antimicrobial therapies. Emphasizes patient motivation with particular attention to psychological, social, cultural, and economic factors. Introduces nutritional counseling in dental hygiene practice, tobacco cessation, critique of dental literature, and evaluation of dental health products. 1cr., 1hr. lect.

254 Pathology in Dental Hygiene and Special Patient Populations
Prereq: Admission to Dental Hygiene program.
Introduces general pathology and specific pathologic processes, repair, healing, and regressive changes. Discusses social significance of pathology. Correlates pathology and diseases related to the dental hygiene client, including the indications and contraindications for care, modifications to treatment, and appointment planning for special patient/client populations. Uses client case studies. 3cr., 3hr. lect.

255 Oral Pathology in Dental Hygiene
Prereq: DH 254 with grade C or better, or consent.
Examines pathology of the head, neck, and oral structures. Differentiates developmental conditions, caries, diseases of bacterial, viral, and fungal origin. Describes neoplasms of the oral cavity. 2cr., 2hr. lect.
256 Applied Pharmacology in Dentistry
Prereq: PHRM 203 with grade C or better.
Examines drugs by groups with special emphasis on those used in dentistry including their physical and chemical properties, dosage, and therapeutic effects. Describes implications for client dental hygiene care using case studies.
1cr., 1hr. lect.

257 Periodontics 1 and Advanced Clinical Techniques
Prereq: DH 156 with grade C or better.
Focuses on fundamental principles of periodontology including normal periodontium, etiology, and classification of periodontal disease and relationship of dental deposits to periodontal diseases. Correlates basic sciences with the clinical aspects of periodontal diseases. Describes etiology and pathogenesis of periodontal diseases. Identifies development of periodontal pocket, abscess, and process of bone loss. Demonstrates advanced instrumentation techniques, ultrasonic devices, root planing, curettage, subgingival irrigation, and hypersensitivity.
2cr., 1hr. lect./16hr. lab

258 Periodontics 2 and Advanced Clinical Techniques
Prereq: DH 257 with grade C or better.
2cr., 1hr. lect./2hr. lect/lab

260 Clinical Dental Hygiene 1
Prereq: DH 156 with grade C or better.
Focuses on assessing, planning, implementing, and evaluating dental hygiene care on clinic clients. Develops clinical competency, skills, and performance with each successive academic semester.
4 cr., 1hr. lect./12 hr. lab

261 Clinical Dental Hygiene 2
Prereq: DH 260 with grade C or better.
Focuses on assessing, planning, implementing, and evaluating dental hygiene care on clinic clients. Develops clinical competency, skills, and performance with each successive academic semester.
2 cr., 1hr. lect./4hr. lab

262 Clinical Dental Hygiene 3
Prereq: DH 261 with grade C or better.
Focuses on assessing, planning, implementing, and evaluating dental hygiene care on clinic clients. Develops clinical competency, skill, and performance.
5cr. 1hr. lect./16hr. lab

263 Clinical Dental Hygiene 4
Prereq: DH 262 with grade C or better.
Focuses on assessing, planning, implementing, and evaluating dental hygiene care on clinic clients. Develops clinical competency and skills.
5cr., 1hr. lect./16hr. lab

264 Community Dental Health
Prereq: DH 173 with grade C or better.
Focuses on the role of the public health professional in improving the oral health in the community. Examines community dental health problems, school dental health programs, epidemiology of dental disease, and assessment, development, implementation, and evaluation of a community dental health program.
2cr., 2hr. lect.

265 Law and Ethics in Dental Hygiene
Prereq: Admission to Dental Hygiene program.
Describes ethics, jurisprudence, and practice aspects of dental hygiene practice. Discovers employment opportunities. Discusses resumes, interviewing, and office policies.
1cr., 1hr. lect.

266 Local Anesthesia and Pain Control
Prereq: DENT 155 & 256 both with grade C or better.
Reviews pharmacology, anatomy, physiology, and emergency procedures associated with local anesthesia and nitrous oxide/oxygen analgesia. Demonstrates preparation for and administration of conduction and infiltration anesthesia in dental procedures. Provides laboratory and clinical experience in administration of local anesthesia and nitrous oxide/oxygen analgesia.
2cr., 1hr. lect/4hr. lab

267 Dental Radiology and Interpretation
Prereq: DENT 176 & 177 both with grade C or better.
Reviews the production, characteristics, and biological effects of radiation, and functions, components, and operation of the x-ray unit. Includes radiation protection and monitoring and chemistry and techniques associated with x-ray film and developing solutions. Reviews anatomic landmarks, and intraoral and long-cone radiographic techniques in bitewing, periapical, and occlusal surveys. Introduces radiographic identification and interpretation of radiographic caries, periodontal disease, trauma, and dental anomalies. Includes clinical lab experience of taking and interpreting x-rays on clients.
1cr., 2hr. lect/lab

193v Digital Media Internship I
Prereq: ICS 161, and consent of instructor and Co-op coordinator. Recommended: ICS 102 and ENG 100.
Reflects student interest area and the availability of job stations. Offers opportunity to upgrade workplace employability. Student, instructor, and employment supervisor jointly develop learning outcomes. The instructor and the employment supervisor jointly evaluate student.
1-3cr., 1.25hr. seminar plus 75 documented field experience hours per credit (e.g., 1cr.=75hr., 2cr.=150hr., 3cr.=225hr.)

293v Digital Media Internship II
Prereq: DMED 193v, ENG 100, and consent. Recommended: MATH 100 or MATH 107, and BUS/COM 130.
Reflects student interest area and the availability of job stations. Offers the opportunity to upgrade employment and problem-solving skills. Student, instructor, and employment supervisor jointly develop learning outcomes. The instructor and the employment supervisor jointly evaluate student.
1-3cr., 1.25hr. seminar plus 75 documented field experience hours per credit (1cr.=75hr., 2cr.=150hr., 3cr.=225hr.)
**Directed Study (DIRS)**

Prereq: Consent.
See Special Curricula section.

**Drama (DRAM)**

**C. Gardner**

**101 Introduction to Drama and Theatre**

Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.

Treats representative plays from Aeschylus’ Agamemnon to Miller’s Death of a Salesman as illustrative studies of changing forms in the theatre and dramatic literature. 3cr., 3hr. lect. (DA)

**221 Beginning Acting I**

Provides individual exercises and group rehearsals of beginning acting. Emphasizes voice, movement, and relaxation. Students must perform in direction of class scenes. 3cr., 2hr. lect./2 hr. lab (DA)

**222 Beginning Acting II**

Prereq: DRAM 221, or consent.
Continues Beginning Acting I. Expands work on voice, movement, improvisation and scene work. Requires performance of monologues and scenes from classic and contemporary plays. 3cr., 2hr. lect./2hr. lab (DA)

**260 Dramatic Production**

Studies the process of converting the play to the performance. 3cr., 3hr. lect. (DA)

**280 Beginning Playwriting**

Prereq: ENG 100 with grade C or better, or consent.
Introduces structure, guidelines, and format of the one-act play, beginning with the conception of an idea, followed by effective outlining techniques, subsequent drafts, and the final product in a polished one-act play. 3cr., 3hr. lect./lab (DA)

**East Asian Languages (EALA)**

**272 Survey of Japanese Language and Culture**

Surveys various aspects of Japanese culture in connection with geography, anthropology, sociology, and history. Introduces background of Japanese language. (Conducted in English.) 3cr., 3hr. lect.

**Economics (ECON)**

**18 Personal Economics**

Introduces ways to get your money’s worth. Explains charge accounts, borrowing, mortgages, insurance, taxes, investments, and retirement planning. Emphasizes practical examples that face the typical family. 3cr., 3hr. lect.

**120 Introduction to Economics**

Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Introduces the way economic systems operate. Contrasts the American economy with other systems. Studies the operation of business. Analyzes national policies in solving the economic problems of inflation, unemployment, and foreign trade. One semester course for non-majors in economics. 3cr., 3hr. lect. (DS)

**130 Principles of Economics: Microeconomics**

Prereq: ENG 22 with grade C or better or placement at ENG 100, and MATH 82 with grade C or better or placement at least MATH 103, or consent.
Analyzes the market mechanism, prices, competition, and the efficient allocation of scarce resources. Formulates possible solutions to contemporary economic and social issues such as world food problems, poverty and distribution of income, market power of business including multi-nationals, role of labor unions, energy crises, environmental pollution, consumerism, and welfare. 3cr., 3hr. lect. (DS)

**131 Principles of Economics: Macroeconomics**

Prereq: ENG 22 with grade C or better or placement at ENG 100, and MATH 82 with grade C or better or placement at least MATH 103, or consent.
Analyzes the forces determining national and international economic performance in such areas as employment, inflation, production, money supply, and trade. Presents, in historical context, the modern economic situation. Describes the relative roles of major economic institutions such as businesses, labor unions, government agencies, international organizations, and the banks. 3cr., 3hr. lect. (DS)

*Note: ECON 130 and 131 are both required for Economics majors and for admission to UH Mānoa College of Business Administration. ECON 120, 130, or 131 may be used to meet Social Science core requirements. UH Mānoa students cannot receive more than 6 credits for ECON 120, 130, and 131.

**Education (ED)**

**J. Powers, E. Yamashita**

**105 Introduction to Early Childhood Education**

Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Introduces and explores the historical roots and fundamental principles of early childhood care and programs, the variety and scope of programs in the community, issues confronting the field, and career options. 3cr., 3hr. lect.

**110 Developmentally Appropriate Practices**

Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Provides a practical guide and overview of the basic awareness, attitudes, knowledge, and skills necessary for working with children from birth through age eight. Introduces concepts of developmentally appropriate practices, the importance of play and inclusion of children with special needs. 3cr., 3hr. lect.

**115 Health, Safety, and Nutrition for the Young Child**

Prereq: ENG 22 or placement at ENG 100, or consent.
Introduces theories and practices for creating and maintaining a safe, healthy learning environment for young children and adults in group settings. Introduces guidelines and practices for providing for the nutritional needs of young children and adults in group settings. 3cr., 3hr. lect.
131 Early Childhood Development: Theory into Practice
Prereq: ENG 22 or placement at ENG 100, or consent.
Explains principles of human development from conception through early childhood. Focuses 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. 3cr., 3hr. lect.

140 Guidance for Children in Group Settings
Recommended: ED 131
Addresses positive ways to support children's social-emotional development. Focuses on adult-child and child-child interactions and relationships. (Crosslisted as FAMR 140.) 3cr., 3hr. lect.

152 Early Literacy Development
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Provides an overview of the historical and contemporary perspectives on early literacy development. Includes information on current research in early literacy and language development. Explores strategies to encourage and facilitate literacy development through the teaching environment, conversation, materials, observation, assessment, planning, and family involvement. Evaluates effects of culture and family on early literacy and language development. 3cr., 3hr. lect.

170 Introduction to Working with Infants and Toddlers
Prereq: ENG 19 or placement at least ENG 22, or consent.
Provides an overview of basic skills used in working with infants and toddlers in groups. Focuses on interactive aspects of child development. Introduces infant-toddler caregiving routines and environments, and caregiver roles. Explores ways to enrich experiences and to promote strong relationships with families. 3cr., 3hr. lect.

175B Introduction to Home Visiting
Prereq: ENG 19 or placement at least ENG 22, or consent. Recommended: FAMR 231 or FAMR 131BCD preferred.
Explores child growth and development from birth to five with emphasis on establishing a partnership with families to encourage their involvement in enhancement of the child's self esteem; self-discipline; intellectual development; and physical, social, and emotional competence. Introduces principles of adult learning and effective communication skills. 1cr., 3hr. lect.

175C Home Visiting: Assessment & Recordkeeping
Prereq: ENG 19 or placement at least ENG 22, or consent.
Introduces and explores assessment, record keeping, and case-management skills required for home visitor programs. Examines action plans based on identification of the child and adult needs and progress. 1cr., 3hr. lect.

175D Home Visiting: Professionalism
Prereq: ENG 19 or placement at least ENG 22, or consent.
Explores community resources, professional ethics, personal boundaries, confidentiality, and professional development for the home visitor to meet the needs of community agencies that employ home visitors. 1cr., 3hr. lect.

190 Early Childhood Field Experience
Prereq: Permission of instructor; and ED 110 and ED 131 both with grade C or better, and ENG 22 or placement at ENG 100. Recommended: ED 105.
Note: Students may be required to obtain a physical or doctor’s note and to be fingerprinted, all at the student’s expense.
Provides a supervised work experience in an early childhood education and care setting. Supports students in integrating content knowledge with practice. Designed for those who have little or no experience in early childhood programs. 4cr., 8hr. practicum/2hr. seminar

191v Early Childhood Field Experience IB
Prereq: Permission of instructor; and ED 110 and ED 131 both with grade C or better; and ENG 22 or placement at ENG 100. For Preschool CDA candidates, Preschool CDA Certificate of Competence required. Recommended: ED 105.
Note: Students may be required to obtain a physical or doctor’s note and to be fingerprinted, all at the student’s expense.
Provides a supervised work experience in an early childhood education and care setting. Supports students in integrating content knowledge with practice. Designed for those already working in an early childhood program. (May be repeated for a maximum of 12 credits.) 1-4cr., 1.5-15hr. practicum/1hr. discussion per week or 2hrs. discussion every other week.

245 Child, Family, Community
Prereq: ENG 22 or placement at ENG 100, or consent.
Develops communication skills in establishing effective partnership relationships with diverse families and other adults. Introduces students to the local resources available for family referral. (Crosslisted as FAMR 235.) 3cr., 3hr. lect.
263 Language and Creative Expression Curriculum
Prereq: ED 110 and ED 131, or consent.
Provides theoretical foundation and practice in the planning, implementation, and assessment of the language arts and creative expression curriculum. Students must have regular contact with preschool children for implementation of course assignments in a setting approved by the instructor. 3cr., 3hr. lect.

264 Inquiry and Physical Curriculum
Prereq: ED 110 and ED 131, or consent.
Provides theoretical foundation and practice in the planning, implementation and assessment of the inquiry and physical curriculum. Students must have regular contact with preschool children for implementation of course assignments in a setting approved by the instructor. 3cr., 3hr. lect.

275 Inclusion of Children with Special Needs
Prereq: ENG 22 or placement at ENG 100, or consent.
Provides introduction to legal, historical, and research information about serving young children with special needs in inclusive environments. Introduces issues and practices associated with establishing partnerships with families and understanding collaborative relationships that contribute to meeting diverse needs of young children in inclusive settings. Facilitates development of skills to adapt and modify the learning environment in line with developmentally appropriate practice. Introduces traditional and alternative assessment and identifies skills necessary to facilitate successful transitions. 3cr., 3hr. lect.

281B Early Childhood Program Admin: Licensing & Overview
Prereq: ENG 22 or placement at ENG 100, and at least MATH 82, or consent.
Examines licensing and its role; organizations; and roles and responsibilities of the early childhood program administrator. Looks at and evaluates present vision and mission statements, and gives tools to develop vision and mission statements. 1cr., 3hr. lect. for 5 wks.

281C Early Childhood Program Admin: Staff Development
Prereq: ENG 22 or placement at ENG 100, and at least MATH 82, or consent.
Examines hiring, grievance, and firing policies of early childhood programs. Examines and lets student develop a staff development framework for their program. 1cr., 3hr. lect. for 5 wks.

281D Early Childhood Program Admin: Curriculum and Environment
Prereq: ENG 22 or placement at ENG 100, and at least MATH 82, or consent.
Examines and analyzes early childhood curriculum and physical environments. Lets students develop plans to improve curriculum and physical environments of individual programs. 1cr., 3hr. lect. for 5 wks.

282B Early Childhood Program Admin: Budgets & Financial Management
Prereq: ENG 22 or placement at ENG 100, and at least MATH 82, or consent.
Examines principles of profit and non-profit management, budgeting, and financial planning. Gives students tools to develop budgets and short- and long-term financial plans for early childhood programs. 1cr., 3hr. lect. for 5 wks.

282C Early Childhood Program Admin: Recordkeeping
Prereq: ENG 22 or placement at ENG 100, and at least MATH 82, or consent.
Examines and analyzes operating policies, recordkeeping practices, and staff and child evaluation procedures of early childhood programs. 1cr., 3hr. lect. for 5 wks.

282D Early Childhood Program Admin: Advocacy
Prereq: ENG 22 or placement at ENG 100, and at least MATH 82, or consent.
Examines the various ways an administrator can be an advocate for the profession. Looks at programs, accreditation, and understanding and utilizing decision-making processes at the county, state, and federal levels. 1cr., 3hr. lect. for 5 wks.

291v Early Childhood Field Experience II
Prereq: Permission of instructor; and ED 105, ED/FAMR 140, ED 190/191v, and ED 245/FAMR 235. Coreq: ED 263 or 264. Recommended: ED 115. Note: Students may be required to obtain a physical or doctor’s note and to be fingerprinted, at student’s expense. Provides a culminating supervised work experience in an early childhood education and care setting. Supports students in integrating content knowledge with practice. (May be repeated for maximum of 8 credits. Responsibilities increase with each repeat.) 1-4cr., 1.5-15hr. practicum/1hr. discussion per week or 2 hrs. discussion every other week.

Electricity (ELEC)

15 Electrical Safety
Explores fundamentals of electrical safety in the home, business, and industry. Discusses concepts of personal safety, periodic inspection, and regular maintenance. 1cr., 2hr. lect./lab

20 Introduction to Electricity
Recommended: MATH 18.
Examines residential, commercial, and industrial wiring systems. Studies current, voltage, resistance, and Ohm’s Law. Discusses magnetism, electrical measurements, DC circuits, induction, and capacitance. 3cr., 3hr. lect.

23 Electrical Wiring I
Introduces principles of switching, circuits, code requirements, and appliances. Develops skill in practical applications. 2cr., 3hr. lect./lab

25 Electrical Wiring II
Prereq: ELEC 23, or consent.
Studies the electrical system of the typical single-family residential dwelling. Examines how local and national codes apply to residential units. 2cr., 3hr. lect./lab
Electronics (ETRO)  
M. Hoffman, A. Mehta, J. Park

101 Introduction to Electronics Technology  
Prereq: ENG 19 with grade C or better or placement at least ENG 22, or consent. Recommended: ICS 101 or equivalent. Introduces applications of arithmetic and mathematics to electronic and computer technology, engineering notation, electrical units, schematic diagrams, fundamentals of electronic and computer technology, and electrical components. Demonstrates theory and application of electronic measuring instruments and the construction of circuits. (Letter grade only.) 3cr., 4hr. lect./lab

102 Instrumentation for Engineering Technicians  
Prereq: ENG 19 with grade C or better or placement at least ENG 22, or consent. Recommended: ICS 101 or equivalent. Introduces fundamental principles and applications of optics, electronics, engineering, and computer software integral to the operation of instrumentation used in a variety of disciplines and research areas. Emphasis will be on systems used for data collection, imaging, and image processing, including examples drawn from local high-tech industries. (Letter grade only.) 4cr., 6hr. lect./lab

105 Electronic Circuit Analysis I  
Prereq: ETRO 101 with grade C or better, or consent. Introduces topics including resistance, Ohm’s Law, Kirchhoff’s Laws, Networks with DC voltage sources, circuit analysis, Thevenin’s Theorem and Maximum Power Theorems, and uses of meters. 4cr., 6hr. lect./lab

106 Electronic Circuit Analysis II  
Prereq: ETRO 105, or consent. Coreq or prereq: MATH 135, or consent. Presents applications of network theorems, sinusoidal waveforms, phasor quantities, impedance, Kirchhoff’s Laws, power, resonance, AC meters and instruments. 4cr., 3hr. lect./3hr. lab

110 Electronic Technology I  
Prereq: ETRO 105, and MATH 107 or 135 (or higher), or consent. Introduces topics including basic theory and operations of solid-state devices including diodes, bipolar transistors, field effect transistors, SCRs, and zener diodes. Covers electronic circuits performing limiting, rectifying, and amplification. 4cr., 6hr. lect./lab

112 Electronic Technology II  
Prereq: ETRO 110 with grade C or better, or consent. Continues the study of electronic devices and circuits including design of amplifiers, cascade amplifiers, power amps, FET amps, operational amplifiers, IC oscillators, timing circuits and introduction to communication circuits. 4cr., 6hr. lect./lab

130 Computer Hardware & Operating Systems  
Prereq: ETRO 101 with grade C or better, or consent. Introduces the function of computer hardware and software components. Suggests best practices in maintenance and safety issues. Covers computer assembly and configuration. Includes computer operating system installation and troubleshooting of hardware and software problems. Provides an introduction to basic networking concepts. Prepares students for Comp TIA A+ certification. 4cr., 6hr. lect./lab

140 Computer Networking I  
Prereq: ETRO 101 with grade C or better, or consent. Recommended: PHYS 105. Introduces network terminology, protocols, and standards. Covers the OSI model, basic concepts of routers and routing, and IP addressing including subnet masks. Defines and describes different network topologies. Develops configuration and router skills. 4cr., 6hr. lect./lab

160 Laser Safety and Applications  
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, and at least MATH 82, or consent. Recommended: ICS 101. Introduces students to lasers and laser safety. Introduces physical properties of light and their applications in lasers, effects of laser radiation on the anatomy and physiology or eyes and other human organs, and protective measures. Explains proper use of lasers and safety practices. Teaches how to determine necessary safety measures using measurements and calculations. 1cr., 1hr. lect.

161 Introduction to Optics & Photonics  
Prereq: ETRO 160, or consent. Recommended: ICS 101. Studies the physics of light, geometric optics, lenses, mirrors, polarizing lenses, interference/diffraction waves, laser physics, optical imaging, and bio-photonics. Provides lab experiments and projects to reinforce the theory. 3cr., 4hr. lect./lab
166 Introduction to Fiber Optics
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, and at least MATH 82, or consent. Recommended: ICS 101.
Introduces fiber optic communications. Provides a background and features hands-on training for installation and maintenance. Emphasizes fiber optic data links for Local Area Network (LAN) applications. Studies fiber types, cables, splices and connectors, and emitters and detectors on transmitters and receivers. 3cr., 3hr. lect./lab

193v Internship I
Prereq: ETRO 101 with grade C or better, or consent.
Introduces the student to the work place, the student’s major interest area, and the availability of job stations. Upgrades opportunities for specific skills dependent upon the job station. Requires a work-related project during which the student will demonstrate competency in acquired employability skills. Student, instructor, and employment supervisor jointly develop learning outcomes. Instructor and employment supervisor jointly evaluate student. (May be repeated for a maximum of 3 credits.) 1-3cr., 75hr./cr.

201 Digital Computer Technology I
Prereq: ETRO 101 with grade C or better, or consent.
Introduces digital computer technology including number systems and codes, Boolean algebra, logic circuits, multi- vator circuits, data control circuits, and troubleshooting of digital circuits. 4cr., 6hr. lect./lab

205 Digital Computer Technology II
Prereq: ETRO 201 and at least MATH 107 or 135, or consent.
Introduces digital computer technology including memory circuits, microprocessor architecture, addressing modes, programming, stack operations, subroutines, input and output operations, microcomputer subsystems and interfacing, troubleshooting of computer circuits. 4cr., 6hr. lect./lab

219 Calculus for Engineering Technology
Prereq: MATH 107 or MATH 140 or higher, PHYS 105 or higher, and ETRO 112, all with grade C or better, or consent. Coreq: ETRO 305 and PHYS 219.
Studies mathematical concepts and procedures useful in the study of engineering technology. Utilizes the capabilities of software such as MATLAB and its applications to find and visualize solutions to technical and engineering problems. Includes hands-on engineering mathematics examples. Utilizes vectors, integral and differential calculus in two and three dimensions. (Crosslisted as MATH 219.) 3cr., 3hr. lect.

240 Computer Networking II
Prereq: ETRO 140, or consent.
Offers intermediate level coursework in computer networking. Introduces basics of Ethernet switching. Covers intermediate routing skills including variable length subnet masking, routing protocols, and WAN technologies topics. Prepares students for the Cisco Certified Networking Associate (CCNA) exam. 4cr., 6hr. lect./lab

285 Windows System Administration and Security
Prereq: ETRO 130 and MATH 107 or 135 (or higher), or consent.
Introduces multiuser, multitasking network operating systems. Explores characteristics of Windows NT, 2000, and XP network operating systems. Covers installation, security, back-up procedures, and remote access. Introduces the Linux operating system in a network environment. 3cr., 4hr. lect./lab

293v Internship II
Prereq: ETRO 193v, or consent.
Introduces the student to the work place, the student’s major interest area, and the availability of job stations. Upgrades opportunities for specific skills dependent upon the job station. Requires a workplace-based project for which the student evaluates and prepares a written proposal as a solution to specific job-related problems. Provides work practicum that emphasizes the employability skills objectives adopted as standards by the Electronic Industry Association (EIA). Student, instructor, and employment supervisor jointly develop learning outcomes. Instructor and employment supervisor jointly evaluate student. (May be repeated for a maximum of 6 credits.) 1-3cr., 75hr./cr.

298 Special Projects in Electronic Technology
Prereq: ETRO 105, 130, 140, and 201, and MATH 107 or 135 (or higher), or consent.
Introduces special topics in electronic and digital computer technology. Creates, designs, and builds an electronic capstone student project under guidance of the instructor. Provides students the opportunity to gather the required schematics, components, and devices for the project. Allows option to repair or restore an existing electronic device. Requires the student meet each week with instructor. 4cr., 6hr. lect./lab

305 Engineering Computing
Prereq: ICS 111 with grade C or better, or consent. Coreq: MATH 219 and PHYS 219.
Studies computer programming to solve electronics and optical system problems. Uses software programming applications, technical databases, image processing, and other scientific and engineering software tools. Reinforces mathematical concepts useful in the study of engineering technology. Utilizes the capabilities of software such as MATLAB and its applications to visualize solutions to technical and engineering problems. Includes hands-on engineering computing examples to demonstrate programming skills. 3cr., 3hr. lect.

310 Applied Robotics
Prereq: ETRO 205 and 305, MATH 219 or 232, and PHYS 219, all with grade C or better, or consent.
Introduces robotics programming and includes robotic applications for multifunction part manipulation and motion with stepper and servo-motors. Studies topics related to robotic design including robotic vision, motion planning, sensing and sensors, actuators, navigation systems, mobility, and forward and inverse kinematics. Provides laboratory hands-on applications of concepts and theories. 3cr., 4hr. lect./lab

320 Intermediate Optics
Prereq: PHYS 105 or higher and ETRO 112 and 161, all with grade C or better, or consent.
Studies engineering technology concepts of applied optics. Uses the wave approach to describe and demonstrate the mechanisms and properties of optics systems. Utilizes state of the art optical design software such as Zemax. Studies practical examples of modern optical engineering 4cr., 6hr. lect./lab
350 Power Systems
Prereq: ETRO 360 and 370, both with grade C or better, or consent.
Studies the basic principles of electromechanical energy conversion: single and three-phase circuits, transformers, three-phase induction and synchronous machine, DC machine, AC including magnetic circuits, and poly-phase circuits. Demonstrates energy management systems and efficiency concepts from engineering technology. Studies power generation and transmission system. Utilizes computer programming and modeling. Includes laboratory exercises and inquiry-based activities. 3cr., 4hr. lect./lab

360 Signals and Systems
Prereq: MATH 219 or 232, PHYS 219, ETRO 305 and 320, all with grade C or better, or consent.
Studies signal and system classifications, operations on signals, time-domain analysis, impulse response and stability. Introduces frequency-domain response using Fourier series, Fourier transform, and Laplace transform; discrete Fourier series and transform; and sampling. Develops the analytical tools and techniques needed for the design and analysis of discrete-time and continuous-time linear systems. Provides laboratory hands-on applications of concepts and theories. 4cr., 6hr. lect./lab

370 Optoelectronics
Prereq: MATH 219 or 232, PHYS 219, ETRO 305 and 320, all with grade C or better, or consent.
Studies light detection using photovoltaic and photoconductive detectors, and phototransistors. Studies light generation using light emitting diodes and laser diodes. Characterizes and troubleshoots optoelectronic devices such as LED's, laser diodes, photodiodes, phototransistors, photoresistors, avalanche photodiodes, quad cells, and linear displacement devices. Includes laboratory experiments and inquiry-based activities, and provides practical experiences of the technical workplace. 3cr., 4hr. lect./lab

415 Project Management
Prereq: ETRO 440 or 475 both with grade C or better, or consent. Coreq: ETRO 497.
Introduces projects and project management. Emphasizes organization, project requirements, risk mitigation, planning, problem solving, implementation, comparisons and budgeting. Overview effective methods for interfacing individual outputs within larger projects. Utilizes project management software tools. Applies technical writing, formal and informal communication and laboratory practices in the context of typical workplaces. Covers organizations, hierarchies, team structures, collaboration methodology and funding mechanisms as it relates to Engineering Technology career paths. Supports specific applications to the Capstone Project. Develops a career plan within potential project types, structures, and funding opportunities in the Hawai’i workforce. 3cr., 4hr. lect./lab (CO)

440 Remote Sensing
Prereq: ETRO 305 and 320, MATH 219 or 232, and PHYS 219 all with grade C or better, or consent.
Applies radiometric and photometric measurement concepts: propagation, irradiance, radiance, radiant intensity, luminance, radiant exitance. Calibrates and characterizes remote sensing data and data analysis techniques. Covers the interaction between electromagnetic radiation and matter. Investigates the effects of the atmosphere on light propagation and remote sensing experiments. Includes laboratory exercises and inquires to build teamwork, presentation skills and practical experiences of the technical workplace. Utilizes technologies and analysis techniques relevant to the Hawai’i high-tech industry. 3cr., 4hr. lect./lab (CO)

450 Signal Processing
Prereq: ETRO 360 with grade C or better, or consent.
Introduces digital signal processing, discrete-time signals and systems, z-transform, linear shift-invariant systems, discrete Fourier transform (DFT) and fast Fourier transform (FFT) algorithms, and design of digital filters. Provides laboratory hands-on applications of concepts and theories. 3cr., 3hr. lect.

460 Control Systems
Prereq: ETRO 350 and 360 both with grade C or better, or consent.
Focuses on the modeling of dynamic systems and circuits, dynamic response, basic properties of feedback, PID control, root-locus, and frequency response. Introduces state-space modeling and design method. Studies phenomena related to the field of control systems. Offers practical examples of modern electro-mechanical control systems. Provides laboratory hands-on applications of concepts and theories. 4cr., 6hr. lect./lab

475 Advanced Instrumentation
Prereq: ETRO 305 and 320, MATH 219 or 232, and PHYS 219 all with grade C or better, or consent.
Covers imaging, spectroscopic and polarimetric optical techniques in specific applications. Investigates and documents remote sensing systems, hardware, fabrication, detectors, active / passive illumination and software mechanical control. Includes laboratory exercises and inquires utilizing advanced / novel instruments. Covers system design, tolerancing, implementation, alignment calibration and characterization. Utilizes software tools to explore instrumental origins of measurement, precision, accuracy and origins of noise. Develops ability to communicate findings orally and in written reports. 3cr., 4hr. lect./lab

497 Capstone Project I
Prereq: ETRO 310, 360, and 370, all with grade C or better, or consent. Coreq: ETRO 415.
Utilizes and demonstrates the tools, skills, and understanding developed during the engineering technology program. Focuses on planning and development of an engineering project which includes project documentation, formal project report writing, oral defense of the project, and project demonstration. Includes analyzing, designing, prototyping, synthesizing, troubleshooting, and testing a device, subsystem or complete system to create a useful project or service. 3cr., 4hr. lect./lab

498 Capstone Project II
Prereq: ETRO 497 with grade C or better, or consent.
Continues Capstone Project I, leading to completion of the project. Includes review of project definition and refining project plans. Continues development, testing, and evaluation. Requires a written formal report and oral presentation of the project. 3cr., 4hr. lect./lab

Energy (ENRG)

20B Energy Conservation in the Home
Covers techniques for conducting an energy audit of the home to identify areas of energy loss or waste, including water heaters, ceiling and wall insulation, major and minor appliances, window reflective films, roof overhang, and window shading. 1cr., 15hr. lect./lab
115

**Maui College**

20C **Energy Conservation in the Condominium**
Covers techniques for conducting an energy audit of the condo unit and facility to identify areas of energy loss or waste, including water supply systems, air conditioning, infiltration and exfiltration system, insulation, and windows. 1cr., 15hr. lect./lab

101 **Introduction to Sustainable Technology**
Prereq: ENG 19 with grade C or better or placement at ENG 22, and MATH 18 or placement at least MATH 82, or consent. Recommended: ICS 101 or BUSN 150, and placement at ENG 100. Introduces alternative methods for meeting long term energy needs, identifies and explores local resources including demand-side management of conventional gas and electric power and sustainable energy resources such as solar, wind, biomass, small hydroelectricity, geothermal, ocean thermal energy conversion, and alternative transportation fuel options. 3cr., 3hr. lect.

102 **Energy Management Systems**
Prereq: ENRG 101 (or concurrent), or consent. Introduces methods for meeting long term energy conservation, identifies and explores alternative monitoring and control systems and local energy efficient devices, including demand-side management of conventional gas and electric power as well as analysis of available new and retrofitted energy systems and their place in the integrated resource planning program in Maui County. 3cr., 3hr. lect.

103 **Energy Production Systems**
Prereq: ENRG 101 (or concurrent), or consent. Introduces theoretical concepts and practical applications of sustainable energy systems. Develops knowledge of photovoltaic, thermal, wind, hydro, ocean thermal, fossil, ocean wave, and absorption systems, with emphasis on solutions for residential and commercial applications in Hawai’i. 3cr., 3hr. lect.

104 **Energy Storage and Control**
Prereq: ENRG 101 (or concurrent), or consent. Introduces theoretical concepts and practical application of energy storage and control systems. Develops knowledge of batteries, thermal energy storage, pumped hydro, flywheel technology, and phase change storage. Discusses control, monitoring, testing, and safety equipment for energy storage systems, with emphasis on solutions for residential and commercial applications in Hawai’i. 3cr., 3hr. lect.

105 **Biomass Energy Processes**
Prereq: ENRG 101 (or concurrent), or consent. Introduces theoretical concepts and practical applications of methods for meeting long-term energy needs on Maui and in the State of Hawai’i through the utilization of biomass to produce energy and environmentally friendly by-products. 3cr., 3hr. lect.

193v **Internship in Sustainable Technology**
Prereq or coreq: ENRG 101, 102, 103, 104, or 105, and consent. Recommended: ENG 100, and ICS 101 or BUSN 150. Introduces student to the workplace on a job within the student’s area of interest and preparation. Student and instructor jointly develop learning outcomes, and the instructor and the employment supervisor jointly perform evaluation. (May be repeated for a maximum of 8 credits.) 1-4cr., 75hr. supervised work per credit.

### English (ENG)

**A. Andaluz, E. Engh, T. Marmack, M. Masuda, L. Nagle, D. Snyder, E. White**

15 **English Language Fundamentals**
Prereq: Placement for English language fundamentals, or consent. Develops fundamental writing, reading, communication, and study skills. (A-F, N, W grades only.) 3cr., 3hr. lect.

19 **Writing Skills**
Prereq: ENG 15, or placement at ENG 19, or consent. Concentrates on developing the paragraph: topic sentence and support. Improves sentence level skills of punctuation, grammar, and structure. (A-F, N, W grades only.) 3cr., 3hr. lect.

21 **Developmental Reading**
Prereq: ENG 19 with grade C or better, or placement at ENG 21, or consent. Recommended coreq: ENG 22. Provides students with skills to develop college level reading rate, comprehension, and retention of their texts. Improves vocabulary and stresses discovery of main ideas and specific details. Provides practice in drawing inferences and encourages development of critical judgment. (A-F, N, W grades only.) 3cr., 3hr. lect.

22 **Introduction to Composition**
Prereq: ENG 19 with grade C or better, or placement at ENG 22, or consent. Recommended coreq: ENG 21. Concentrates on developing the paragraph and introduces the essay. Improves sentence level skills of punctuation, grammar, and structure. (A-F, N, W grades only.) 3cr., 3hr. lect.
55 Business Communications - Written
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended coreq: ENG 21.
Focuses on business writing strategies and techniques. Emphasizes various forms and styles of business correspondence. Improves sentence level skills for business students. (Letter grade only.) 3cr., 3hr. lect.

100 Composition I
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 102, or consent.
Discoveres and applies the concepts of purpose, audience, and tone in writing. Emphasizes evaluating written texts and writing various types of essays, including writing from sources. Focuses on critical thinking. 3cr., 3hr. lect. (FW)

102 College Reading Skills
Prereq: ENG 21 with grade C or better, or placement at ENG 100, or consent.
Aims to develop higher powers of comprehension, recall, interpretation, perception, and appreciation. Emphasizes improved study skills, depth efficiency, and discrimination in reading. Develops flexibility of speed adjusted to the material and purpose of reading. Develops the interest and power to plan a self-improvement program for continued growth in reading at mature levels. This course is intended for students who are reading at or above their grade level and who wish to improve skills of comprehension and critical thinking. 3cr., 3hr. lect. (FW)

104 Introduction to Creative Writing
Prereq: ENG 100 with grade C or better, or consent.
Explores the principles and practice of creative writing through readings and composition in several major genres. 3cr., 3hr. lect. (DA)

106 Report Writing
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Practices organization of factual material and objective writing for the purpose of writing reports and technical articles. Develops ability to write clearly, accurately, and concisely. Reviews basic grammar. Improves technical vocabulary usage. 3cr., 3hr. lect.

209 Business & Managerial Writing
Prereq: ENG 100 with grade C or better, or consent.
Focuses on the skills needed for effective business and managerial written communication. Emphasizes informative, analytical, persuasive, evaluative, and collaborative writing. Gives practice in writing memos, business letters, directives and instructions, short reports, and formal research reports. 3cr., 3hr. lect. (DL)

210 Research Writing
Prereq: ENG 100 with grade C or better, or consent.
Practices inventing, developing, organizing, and writing complex theses and analyses. Emphasizes critical thinking and research. 3cr., 3hr. lect. (DL)

225 Writing for Science and Technology
Prereq: ENG 100 with grade C or better, or consent. Recommended: Successful completion of a science laboratory course.
Develops and applies skills in scientific writing to produce reports on experimentation and research. Analyzes various forms of writing required in scientific and technical careers. 3 cr., 3 hr. lect. (DL)

250 American Literature
Prereq: ENG 100 with grade C or better, or consent.
Studies major works of American fiction, non-fiction, drama, and poetry. 3cr., 3hr. lect. (DL)

Note: The courses ENG 251-256 and ENG 257EFR satisfy the 6-credit requirement for sophomore literature at the University of Hawai‘i, a prerequisite for upper division English courses.

251 Major Works of British Literature to 1800
Prereq: ENG 100 with grade C or better, or consent.
Studies major works of British fiction, non-fiction, poetry, and drama from the Middle Ages to 1800. 3cr., 3hr. lect. (DL)

252 Major Works of British Literature after 1800
Prereq: ENG 100 with grade C or better, or consent.
Studies major works of British fiction, non-fiction, drama, and poetry from 1800 to the present. 3cr., 3hr. lect. (DL)

253 World Literature
Prereq: ENG 100 with grade C or better, or consent.
Studies and analyzes internationally recognized literary works of major world cultures (Eastern) from ancient times to present. 3cr., 3hr. lect. (DL)

254 World Literature (Western)
Prereq: ENG 100 with grade C or better, or consent.
Studies and analyzes literary works of Western cultures from ancient times to present. 3cr., 3hr. lect. (DL)

255 Types of Literature
Prereq: ENG 100 with grade C or better, or consent.
Studies, analyzes, and critiques major European and American short stories and novels. 3cr., 3hr. lect. (DL)

256 Types of Literature
Prereq: ENG 100 with grade C or better, or consent.
Studies, analyzes, and critiques major works of European and American drama, biography, and poetry. 3cr., 3hr. lect. (DL)

257 Themes in Literature: Special Topics
Prereq: ENG 100 with grade C or better, or consent.
Studies and analyzes universal problems in selected literary works of various types, cultures, and periods. Presents topics, which will vary with student interest and availability of faculty. 3cr., 3hr. lect. (DL)

257E Themes in Literature: Literature of Hawai‘i
Prereq: ENG 100 with grade C or better, or consent.
Focuses on selected poems, legends, biographies, short stories, and novels by people of present-day Hawaiian, Polynesian, American, European, and Oriental heritage, drawn from ancient, transitional, and modern Hawaiian literature. Studies and analyzes universal problems in selected literary works. 3cr., 3hr. lect. (HI, DL)
257F Themes in Literature: Women Writers on Women  
**Prereq:** ENG 100 with grade C or better, or consent.  
Studies, analyzes, and critiques poems, short stories, prose, drama, and novels written by women who focus on women personae. Explores themes of gender such as family relationships, motherhood, sexuality, women and nature, women and politics, women and spirituality, women and creativity, and myths of femaleness. Studies and analyzes universal problems in selected literary works. 3cr., 3hr. lect.  (DL)

257R The Bible as Literature  
**Prereq:** ENG 100 with grade C or better, or consent.  
Presents an introduction to major literary genres, styles, techniques and themes in the Old and New Testaments. Emphasizes poetry, short story, fiction, drama, history, tragedy, myth, biography, legend, parable, proverb, psalm, epic, heroic narrative, historical romance, gospel, epistle, prophetic writing, and apocalyptic writing. Studies and analyzes universal problems in selected literary works. 3cr., 3hr. lect.  (DL)

316 Advanced Research Writing  
**Prereq:** ENG 209 or 210 either with grade C or better, or consent. **Recommended:** One of the ENG 250 series: 250, 251, 252, 253, 254, 255, 256, 257, 257E, 257F, or 257R.  
Provides advanced knowledge in how to plan, develop, organize, and edit writing projects with clarity and precision. Emphasizes critical thinking skills, social, ethical, and political argument, and the ability to write a variety of work, including research projects in specific fields of study using appropriate documentation styles. 3cr., 3hr. lect.  (DL)

377 Colonial Literature of the Pacific  
**Prereq:** ENG 100 with grade C or better and ENG 210 or 250, 251, 252, 253, 254, 255, or 257, 257E, 257F, or 257R with grade C or better.  
Examines and researches travel journalism and fictional texts in the English language, written by colonial travelers to the Pacific islands in the nineteenth and early twentieth centuries about the islands and their culture. Emphasizes postcolonial theory and its application to Polynesian culture through some of the great literary voices of the period. 3cr., 3hr. lect.  (DL)

### Family Resources (FAMR)
**J. Powers, L. Stein, E. Yamashita**

140 Guidance for Children in Group Settings  
**Recommended:** ED 131, or consent.  
Addresses positive ways to support children’s social-emotional development. Focuses on adult-child and child-child interactions and relationships.  (Crosslisted as ED 140.) 3cr., 3hr. lect.

230 Human Development  
**Prereq:** ENG 22 or higher, or consent.  
Studies concepts, issues, and theories of human growth and development from conception to death. Explores systems approaches to inquiry into factors affecting growth and development. 3cr., 3hr. lect.  (DS)

235 Child, Family, Community  
**Prereq:** ENG 22, or placement at ENG 100, or consent.  
Develops communication skills in establishing effective partnership relationships with diverse families and other adults. Introduces students to the local resources available for family referral.  (Crosslisted as ED 245.) 3cr., 3hr. lect.

244 Introduction to the Aging Process  
**Prereq:** FAMR 232, or consent.  
Studies the biological, emotional, and psychological aspects of the aging process. Discusses current attitudes about older people. Enables students to recognize needs of older adults. Discusses policy and legislation affecting older people. 3cr., 3hr. lect.  (DS)

245 Special Needs of Older Adults  
**Prereq:** FAMR 232 or 244, or consent.  
Introduces students to various agencies and programs available in the community. Enables students to recognize the needs of the older adult. Enables the student to interview and assess older adults. 3cr., 2hr. lect./2hr. lab

### Fashion Technology (FT)
**C. Maeda**

25 Ready-to-Wear Clothing Production  
Explores efficient and economical techniques in fabric layout, cutting, and sewing. Offers practice in aloha shirt and blouse construction. 3cr., 2hr. lect./3hr. lab

40 Fabric Analysis  
Analyzes the latest fabrics on the market. Explores how fiber content, fabric development, and color application affect fabric care. 3cr., 3hr. lect.

60 Advanced Pattern Making  
**Prereq:** FT 215, or consent.  
Develops skill in making patterns for children’s and women's apparel. Studies advanced pattern design and construction techniques using quarter and half scale pattern blocks. 3cr., 2hr. lect./3hr. lab

61 Advanced Pattern Drafting & Clothing Construction  
**Prereq:** FT 215 and FT 217, or consent.  
**Coreq:** FT 60, or consent.  
Explains development of a basic pattern from personal measurements. Explores flat pattern designing from illustration and individual student sketches. Emphasizes accurate pattern and garment construction to fit the figure. 3cr., 5hr. lect./lab

90 Special Topics in Fashion Technology  
Provides knowledge and training in new techniques and/or specialized areas in the sewing industry that are not included in the basic fashion technology curriculum.  (May be repeated without limit for credit.) 1-4cr.

**Special Topic: Advanced Fashion Illustration**  
**Prereq:** FT 216, or consent.  
Studies advanced illustration techniques for drawing the fashion figure. Stresses development of each student’s individual style of fashion illustration. 3cr., 3hr. lect.

**Special Topic: Sewing Activewear**  
**Prereq:** FT 113 and FT 115, or consent.  
Provides specialized training in the design and construction techniques used in the development of active sportswear. Stresses ready-to-wear production techniques. 3cr., 5hr. lect./lab
Special Topic: Home Furnishings
Prereq: FT 25, or consent.
Provides specialized training in design, measurement and construction techniques used in the production of draperies, pillows, table linens, bed linens, slipcovers, and other home furnishings. 3cr., 5hr. lect./lab

Special Topic: Draping
Prereq: FT 215, or consent.
Introduces the fundamentals of draping on the standard dress form. Practices interpretation of design details through draping. 3cr., 5hr. lect./lab

111  Art and Design in Fashion
Surveys fashion as it relates to art and design. Line, color, balance, and proportion are studied providing guidelines to understanding fashion and how it communicates personal image to society. 3cr., 3hr. lect.

113  Clothing Construction Methods I
Introduces sewing tools and equipment. Treats selection and adjustment of basic commercial patterns and construction of clothes from these patterns to fit figures. 3cr., 5hr. lect./lab

115  Clothing Construction Methods II
Prereq: FT 113, or consent. Explores custom sewing techniques using various kinds of fabrics. Emphasizes accuracy and neatness in pattern alteration and garment construction. 3cr., 5hr. lect./lab

125  Fashion Show Production
Provides basic information and practical experience in the preparation and production of a fashion show. (May be repeated for a maximum of 9 credits.) 1cr., 2hr. lect./lab

215  Flat Pattern Making I
Prereq: FT 113, or consent. Coreq: FT 217. Introduces principles of pattern making for women’s apparel through the manipulation of basic slopers. Covers the development of bodices, skirts, sleeves, and collars. 3cr., 5hr. lect./lab

216  Fashion Design & Sketching
Prereq: FT 111, or consent.
Introduces basic techniques for drawing fashion figures. Treats use of pen and ink, and water colors. Explains sketching the design. 3cr., 3hr. lect.

217  Flat Pattern Making II
Prereq: FT 113, or consent. Coreq: FT 215. Explores garment development using the flat pattern method. 3cr., 5hr. lect./lab (HE)

Filipino (FIL)

101  Beginning Filipino I
Introduces speaking, listening, reading, and writing skills of basic Tagalog. Includes the following: a) the basic structures of Tagalog; b) language commonly used in daily situations; and, c) different aspects of Philippine cultures. 4cr., 4hr. lect. (HSL)

102  Beginning Filipino II
Prereq: FIL 101, or consent. Continues FIL 101. Includes speaking, listening, reading, and writing skills of basic Tagalog. 4cr., 4hr. lect. (HSL)

261  Philippine Literature
Prereq: ENG 100 with grade C or better, or consent. Surveys Philippine/Filipino literature from the early period to contemporary times. It will introduce canonical works and authors as well as major literary forms of the period. Selected literary pieces in English and in English translation are studied in this course. 3cr., 3hr. lect. (HE)

Food Science & Human Nutrition (FSHN)

185  Food Science and Human Nutrition
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Integrates natural science concepts basic to the study of human nutrition. Emphasizes nutrient requirements of healthy individuals, nutrient categories and characteristics, physiological functions, and food sources. Includes review and adaptation of dietary practices to reflect current nutritional issues. 3cr., 3hr. lect. (DB)

285  The Science of Human Nutrition
Prereq: ENG 22 with grade C or better or placement at ENG 100, and MATH 18 with grade C or better, or placement at least MATH 82, or consent.
Integrates basic concepts of science with the study of human nutrition. Introduces nutrients and what food and nutrients do for humans. Looks at how healthy people can best get the amounts of nutrients and food they need throughout their lifetime. Studies how people and the environment change nutrient content. 3cr., 3hr. lect. (DB)

286  Sports Nutrition
Prereq: FSHN 185, or consent.
Introduces nutritional concerns of the athlete in relation to sports performance. Covers the carbohydrate, fat, protein, water, and vitamin/mineral requirements of the athlete and how to make wise food choices. Looks at fad diets, facts and fallacies about supplement use, pre- and post-event meals, and body weight and composition. Reviews the relationships among nutrition, exercise, and health. 3cr., 3hr. lect. (DB)

Finance (FIN)

R. Gonzalez

311  Investments
Prereq: BUS 310 and 318 both with grade C or better, or consent.
Introduces various investment media and capital markets. Topics include the analysis of security returns using techniques such as beta, filter rules, and portfolio theory. 3cr., 3hr. lect.
150 Introduction to GIS/GPS
PreReq: ICS 101 or BUSEN 150 either with grade C or better, or consent. Recommended: Familiarity with computer databases. 
Introduces applications of geographic information systems (GIS) with a special emphasis on using ArcView GIS. Includes database construction and techniques for spatial data manipulation, analysis, and display. Teaches use of global positioning system (GPS). Explores cross-disciplinary applications in the natural and social sciences. (Crosslisted as ICS 150.) 4cr., 6hr. lect./lab

180 GIS in Ecosystem Management
PreReq: GIS 150/ICS 150 with grade C or better, or consent. 
Uses global positioning system (GPS) technologies and advanced geographic information system (GIS) principles for data collection and analysis. Applies GIS techniques to develop geodatabases and computer generated map layers and for specific sites. Evaluates resource management decisions for natural ecosystem conservation and habitat restoration projects. 4cr., 6hr. lect./lab

Geography (GEOG)

101 The Natural Environment
Surveys the natural environment: weather, climate, soil, vegetation, and landforms, with emphasis on Hawai‘i. Lab optional. 3cr., 3hr. lect. (DP)

101L The Natural Environment Laboratory
PreReq: GEOG 101 (or concurrent), or consent. 
Introduces the geographer’s tools: globes, atlases, maps, and aerial photographs. Uses laboratory investigation techniques to understand concepts of physical geography. Special emphasis on Hawai‘i and on human modification of the environment. 1cr., 3hr. lab (DY)

102 World Regional Geography
PreReq: ENG 22 with grade C or better, or placement at ENG 100, or consent. 
Surveys the world’s major cultural regions. Explores economic, environmental, social, and political conditions from a geographical perspective. 3cr., 3hr. lect. (FGB)

122 Geography of Hawai‘i
PreReq: ENG 22 with grade C or better, or placement at ENG 100, or consent. 
Surveys the Hawaiian Islands through the lens of geographic enquiry. Introduces the unique characteristics of the natural and cultural landscapes of Hawai‘i. 3cr., 3hr. lect. (DS, HI)

151 Geography in Contemporary Society
PreReq: ENG 22 with grade C or better, or placement at ENG 100, or consent. 
Introduces elements of population, economic, and cultural geography. Includes urban studies and resource management. Explores applications to contemporary issues of developed and less developed countries. 3cr., 3hr. lect (DS)

Geology & Geophysics (GG)

D. Grooms

101 Introduction to Geology
PreReq: ENG 22 or 55 with grade C or better or placement at ENG 100, or consent. 
Surveys the earth, its evolution over geologic time, including continental drift, volcanism, processes shaping the earth’s crust including the composition and structure of the earth, the origin of the Hawaiian Islands, volcanism, rocks and minerals, landforms, stream and coastal processes, landslides, earthquakes and tsunamis, groundwater, and geologic and environmental hazards. Field trips. 4cr., 3hr. lect./3hr. lab, 1 all-day field trip (DP, DY)

103 Geology of the Hawaiian Islands
Surveys Hawaiian geology and geologic processes. Includes origin of the Hawaiian Islands, volcanism, rocks and minerals, landforms, stream and coastal processes, landslides, earthquakes and tsunamis, groundwater, and geologic and environmental hazards. Field trips. 3cr., 3hr. lect. (HI, DP)

151 Geography in Contemporary Society
PreReq: ENG 22 with grade C or better, or placement at ENG 100, or consent. 
Introduces elements of population, economic, and cultural geography. Includes urban studies and resource management. Explores applications to contemporary issues of developed and less developed countries. 3cr., 3hr. lect (DS)

Hawaiian (HAW)

K. Dukelow, K. Ka‘eo, P. Kai‘anui, S. K. Raymond

101 Elementary Hawaiian I
Introduces speaking, reading, and writing elementary Hawaiian. Treats structural points inductively. Devotes four out of five hours to drill and practice. Daily lab work determined by individual need. 4cr., 5hr. lect./lab (HI, HSL)

102 Elementary Hawaiian II
PreReq: HAW 101, or consent. Continues HAW 101 instruction to write, speak, and read Hawaiian. Devotes four out of five hours to drill and practice. Daily lab work determined by individual need. 4cr., 5hr. lect./lab (HI, HSL)

104 Hawai‘i: Language Through Hula
Introduces conversational Hawaiian language through the medium of dance (hula) and song. Requires study, memorization, and close examination of Hawaiian vocabulary and simple sentence structure. 3cr., 3hr. lect. (HI, DA)

201 Intermediate Hawaiian I
PreReq: HAW 102, or consent. Continues HAW 102. Uses advanced Hawaiian grammatical structure with emphasis placed on speaking Hawaiian. Practices translation of materials from classical Hawaiian literature. Devotes two out of five hours to drill and practice. Daily lab work determined by individual need. 4cr., 5hr. lect./lab (HI, HSL)

202 Intermediate Hawaiian II
PreReq: HAW 201, or consent.
Introduces further advanced Hawaiian grammatical structures with emphasis placed on speaking Hawaiian. Drills translating materials from classical Hawaiian literature. Devotes two of five hours to drill and practice. Daily lab work determined by individual need. 4cr., 5hr. lect./lab (HI, HSL)

221 Hawaiian Conversation
PreReq: HAW 202, or consent.
Practices systematic control of spoken Hawaiian. Further develops vocabulary for accurate, mature expression. 3cr., 3hr. lect. (HI, HSL)

261 Hawaiian Literature in Translation
PreReq: ENG 100 with grade C or better, or consent. 
Surveys Hawaiian literature, including prose narration and poetry with reference to Polynesian and world themes and forms from pre-contact to discovery. Introduces a full range of Hawaiian stories, chants, poems, songs, and sayings which have been translated into English. 3cr., 3hr. lect. (HI, DL)
262 Hawaiian Literature
Prereq: HAW 202 and 261 both with grade C or better, or consent.
Surveys and analyzes the literary genres from the Bible to kanikau. Features the selected works of American missionaries and Hawaiian authors emphasizing the period following discovery (1778-79), into the 19th and 20th centuries. Course uses Hawaiian language texts. Course conducted in English. 3cr., 3hr. lect. (HI, DL)

Hawaiian Studies (HWST)
J. Donaghy, K. Dukelow, K. Ka'eo, P. Kai'anui, S. K. Raymond

100B Intro to Hawaiian Culture: Communication-Basic Language and Phrases
Develops correct pronunciation and usage of basic Hawaiian language and phrases. 1cr., 1hr. lect. (HI, DH)

100C Intro to Hawaiian Culture: Worldwide-Values, Folklore, and Cultural Practices
Provides an orientation to traditional and contemporary Hawaiian practices and values. 1cr., 1hr. lect. (HI, DH)

100D Intro to Hawaiian Culture: Landscape-Historical Events, Physical Features, and Unique Flora & Fauna of Maui and Hawai'i
Explains important historical events of Maui and Hawai'i and identifies their unique flora and fauna, physical features, and scenes. 1cr., 1hr. lect. (HI, DH)

107 Hawai'i: Center of the Pacific
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Introduces the unique aspects of Hawai'i and Hawaiian culture in relation to the larger Pacific, including geography, origins, language, religion, land, art, and history. 3cr., 3hr. lect. (HI, DH)

111 The Hawaiian ʻOhana
Prereq: HWST 107 with grade C or better, or consent.
Examines culture of Hawaiian people as expressed in home and family. Provides understanding of the family as the basis of larger Hawaiian society. Compares and contrasts both ancient and modern aspects of the Hawaiian family. Uses Hawaiian terminology. 3cr., 3hr. lect. (HI, DH)

176 History and Development of Hawaiian Music
Prereq: HAW 101 and HWST 107 both with a grade C or better, or consent.
Focuses on the history and development of traditional and acculturated vocal and instrumental Hawaiian music. Discusses Hawaiian dance genres related to the music. Examines Hawaiian music and dance as an organization of sound and movement and as a product of culture and people. Uses sound recordings, video presentations, and live performances of the various music genres discussed. (Crosslisted as MUS 176.) 3cr., 3hr. lect. (HI, DH)

205 Hawaiian Music in Action
A Mele 'Aina
E Mele Pili Kanaka
I Other
Prereq: HAW 102, or consent.
Teaches Hawaiian songs as a means of strengthening knowledge of language, poetry, and culture. Conducted primarily in Hawaiian. (May be repeated for credit if subletters are different.) 2cr., 2hr. lect./lab (HI, DA)

207 Malama Ahupua'a: Resource Management
Prereq: HWST 107 with grade C or better, or consent.
Examines the ahupua'a system: its mythology, place names, history, poetry, and early documents of the Hawaiian nation as it was conceptualized by the ancient Hawaiians. Explores the relevance of the ahupua'a system in modern society. 3cr., 3hr. lect. (DH, HI)

211 Hawaiian Ethnobotany
Identifies endemic, indigenous, and Polynesian introduced flora of Hawai'i. Examines the many uses of Hawai'i's flora by the indigenous people. Reveals the relationship of gods/plants/man, and connects belief and practices with the intentional migration of specific plants. (Crosslisted as BOT 105). Meets Social Science requirement, not Natural Science requirement. 3cr., 3hr. lect./lab (HI, DS)

211L Hawaiian Ethnobotany Lab
Prereq: HWST 211 and BOT 105, either with a C or better (or concurrent).
Studies the interactions between the Hawaiian culture and plants/plant environments. Considers different levels and types of interactions and patterns of interactions between people and plants. Places emphasis on the importance of cultural upbringing. Includes field trips in lieu of lab. (Crosslisted as BOT 105L.) 1cr., 3hr. lab (DY)

213 Hawaiian Ethnozoology
Prereq: HAW 101, or consent.
Surveys and identifies Hawaiian fishes, birds, and other creatures, and their place in Hawaiian culture. Explores traditional methods of capture, practical uses, and conservation techniques. Uses Hawaiian terminology. 3cr., 3hr. lect. (HI, DH)

231 Hawaiian Culture
Studies the culture of ancient Hawai'i. Examines values, basic social relationships, religion, customs, and aspects of material culture. Provides an awareness and understanding of modern Hawaiian cultural pluralism. 3cr., 3hr. lect. (HI, DH)
262 Pana Maui: Maui’s Sacred Hawaiian Places
PreReq: HWST 107 or 111 or 270; and HAW 102; or consent.
Examines the sacred Hawaiian places of Maui, including accounts of mythical heroes, heiau, fishponds, wind and rain names, and their metaphorical value to ancient and modern Hawaiian culture. Uses Hawaiian terminology. 3cr., 3hr. lect. (HI, DH)

270 Hawaiian Mythology
PreReq: HWST 107 or HAW 102, or consent.
Surveys the gods, aumakua, kupua, mythical heroes, heroines, and their kinolau as the basis of traditional Hawaiian metaphor. 3cr., 3hr. lect. (HI, DH)

286 Kahoolawe: Aloha Aina
PreReq: HWST 107 or 231, either with grade C or better, or consent.
Develops and expands students’ consciousness towards Kahoolawe and the practice of Aloha Aina. Employs a native Hawaiian worldview in studying the cultural history of Kahoolawe. Provides hands-on opportunities to practice Aloha Aina. Empowers students to become stewards and participate in the protection, restoration, and revitalization of Hawaii Nei. Requires access and volunteer work on Kahoolawe. 3cr., 3hr. lect. (HI, DH)

291 Modern Issues in Hawaii
PreReq: HWST 107 and ENG 100, both with grade C or better, or consent.
Introduces contemporary, domestic and international Hawaiian issues within historical, social, cultural and political contexts. Engages students in research, question, critique, and development of their own critical analysis and commentary on diverse issues. 3cr., 3hr. lect. (HI, DH)

101 Health Navigator
PreReq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: Basic Internet skills.
Prepares people to navigate the health and social services systems; provides a knowledge foundation and practical skills base. Prepares the navigator to assist patients in various systems in search of appropriate diagnosis, treatment, and resolution. (Crosslisted as HSER 101.) 3cr., 3hr. lect.

118 Therapeutic Interpersonal Skills
PreReq: ENG 19 with grade C or better or placement at least ENG 22, or consent.
Provides students with the opportunity to assess themselves, their values, and related professional attitudes and behaviors. Characteristics of effective helpers, appropriate communication techniques, assertiveness skills, and ethical, legal and cultural issues are examined. These concepts are applied in community-based settings that involve individuals and groups who require intervention services. 3cr., 3hr. lect.

119 Therapeutic Activities
PreReq: ENG 19 with grade C or better or placement at least ENG 22, or consent.
Focuses on entry-level basic crafts and client management techniques utilized in Occupational Therapy or Activity Programs. Commonly utilized crafts will be demonstrated and fabricated, including techniques for adapting and grading. Basic client management techniques, wheelchair handling, transfers and safety considerations will be taught. Methods of instruction will be taught. Prepares therapeutic activity aides to work under supervision of a registered Occupational Therapist. 3cr., 3hr. lect.

122 Introduction to Physical Therapy Support Skills
PreReq: Certificate of Competence for Therapeutic Activity Aide I, or consent.
Provides a theoretical understanding of speech, language, and hearing development including delay/disorder in adults and children in home and community settings; supports families, parents and caregivers. Students learn normal development of speech and language and the nature of communication disorders, and the interaction of speech pathology and audiology with other allied health fields. Values that will be promoted include a) family-centered care, b) cultural sensitivity, c) age-appropriate activities, d) functional skills, and e) collaborative teamwork. 3cr., 3hr. lect.

129 First Aid & Safety
Introduces standard first aid procedures. Describes immediate care given in case of an accident, sudden illness, or other medical emergency. Explains procedures to stop bleeding, treat poisoning, restore breathing, immobilize broken bones, and administer CPR. 1cr., 1hr. lect.
127 Practicum in Speech/Language Pathology Support Skills
Prereq: Certificate of Competence for Therapeutic Activity Aide I
Provides training and practice in basic standard patient care in the field of speech/language patho-
logy, as well as an overview of theory, development, observation and reporting change in an individual’s condition. Prepares Therapeutic Activity Aides to work under the supervision of a registered Speech/Language Pathologist. Values to be promoted include a) family-centered care, b) cultural sensitivity, c) age-appropriate activities, d) functional skills, and e) collaborative teamwork. 2cr., 4hr. lect./lab.

128 Capstone for Therapeutic Activity Aide II
Prereq: Certificate of Competence for Therapeutic Activity Aide I
Provides the opportunity to demonstrate the tools and understanding developed during the Therapeutic Activity Aide I program. Students will create a portfolio and presentation to provide evidence of student learning and growth. 1cr., 1hr. lect.

150 Introduction to the Study of Disease
Prereq: ENG 19 with grade C or better or placement at least ENG 22, or consent.
Introduces basic concepts and characteristics of the disease processes. Discusses diseases related to specific body systems. 1cr., 3hr. lect. for 5 wks.

159 Exercise Physiology
Studies impact of exercise on the structure and functioning of the human body. Looks at various forms of exercise, e.g., aerobic, anaerobic, strength, and endurance training. Studies diet and exercise in terms of energy requirements and fuel sources, body composition, and weight control. Evaluates impact of exercise on chronic disease risk factors. 4cr., 3hr. lect./3hr. lab.

196 Health: Principles of Well-Being
Prereq: ENG 19 with grade C or better or placement at least ENG 22, or consent.
Emphasizes physiological well-being and methods of preventing chronic illness through principles of maintaining wellness. Studies theories of emotional and physical wellness and applies them to the student’s life. Studies exercise and nutrition along with mental health and their interdependence. 3cr., 3hr. lect.

History (HIST)
B. Kikuchi

151 World Civilization I
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Surveys spread of civilization from its Near Eastern origins, with emphasis upon cultural contributions from Egypt, Mesopotamia, India, China, Japan, Greece, Rome, and Post-Roman Europe up to 1650. 3cr., 3hr. lect. (FGA)

152 World Civilization II
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Treats development of civilization since 1650 with emphasis upon the expansion of Western influence throughout the world, and upon the political, economic, and cultural revolutions in the North Atlantic Community, Africa, and Asia. 3cr., 3hr. lect. (FGB)

241 Civilizations of Asia I
Prereq: ENG 100 (or concurrent), or consent.
Interprets and compares the development and interaction of the political, economic, and cultural elements in the major civilizations of Asia from earliest times to contact with the West. 3cr., 3hr. lect. (DH)

242 Civilizations of Asia II
Prereq: ENG 100 (or concurrent), or consent.
Surveys the impact of Western civilization upon major civilizations of Asia and the Asian response to this impact. 3cr., 3hr. lect. (DH)

253 Contemporary World History
Prereq: HIST 152, or consent.
Studies contemporary world history from World War II to the present. Emphasizes the historical background of major political, social, intellectual, and economic events leading to a better understanding of world issues today. 3cr., 3hr. lect. (DH)

281 Introduction to American History
Prereq: ENG 100 (or concurrent), or consent.
Develops understanding of the progress of American culture up to the Civil War, an insight into America’s heritage, and a sensitivity to its ideals and realities. 3cr., 3hr. lect. (DH)

282 Introduction to American History
Prereq: ENG 100 (or concurrent), or consent.
Develops understanding of the progress of American culture since the Civil War, an insight into America’s heritage, and sensitivity to its ideals and realities. 3cr., 3hr. lect. (DH)

284 History of Hawaii
Surveys the economic, political, and social history of Hawaii from earliest times to the present. Emphasizes the history of Hawaii since the time of European contact. 3cr., 3hr. lect. (HI, DH)

288 History of the Pacific Islands
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent. Recommended: HIST 152 or ANTH 200.
Surveys the cultural areas of the Pacific pre-contact to present day. Covers prehistoric migrational patterns, historical movements, and present day distributions, including western colonization and current problems. (Crosslisted as ANTH 235.) 3cr., 3hr. lect. (DH)
Hospitality & Tourism (HOST)

L. Liu, L. Peros

100 Hospitality Internship I
Prereq: ENG 19 with grade C or better or placement at least ENG 22, or consent.
Discusses job search strategies, Hospitality and Tourism internship requirements, career and academic planning. (Credit/No Credit and Audit grades only.) 2cr., 2hr. lect./disc.

101 Introduction to Hospitality & Tourism
Prereq: BUSN 150 or ICS 101 either with grade C or better (or concurrent), and ENG 19 with grade C or better or placement at least ENG 22, or consent.
Provides an overview of the travel industry and related major business components. Analysis of links between hotel, food, transportation, recreation, and other tourism-related industries will be addressed. 3cr., 3hr. lect.

150 Rooms Division Operations I
Prereq: HOST 101 (or concurrent), and ENG 19 with C grade or better or placement at least ENG 22, or consent.
Studies the practical application of professional housekeeping operations including the functions of management, interdepartmental relationships, and preventive maintenance practices required to assure quality service. 3cr., 3hr. lect.

152 Rooms Division Operations II
Prereq: HOST 101 (or concurrent), and ENG 19 with grade C or better or placement at least ENG 22, or consent.
Studies the philosophy, theory, equipment, and current operating procedures of a hotel front office. Concentrates on the human relation skills necessary for effective guest and employee relations and the technical skills necessary to operate a manual, mechanical or computerized front office operation. 3cr., 3hr. lect.

154 Food & Beverage Operations
Prereq: HOST 101 (or concurrent), and ENG 19 with grade C or better or placement at least ENG 22, or consent.
Introduces the basic principles of marketing, menu planning, service styles, nutrition, sanitation and safety, purchasing, and control systems as they apply to food and beverage management in an operational setting. Provides practical applications to effectively manage resources for food and beverage operations. 3cr., 3hr. lect.

200 Hospitality Internship II
Prereq: HOST 100 and HOST 101 and HOST 152 all with C or better, or consent.
Provides a supervised field experience that is related to the student’s major or career goals. The experience will enable the student to apply knowledge and skills learned in coursework to the work environment. 2cr., 2hr. lect., and 400 hrs./semester of documented industry work.

250 Hospitality Sales & Marketing
Prereq: CA in Hospitality & Tourism, or consent.
Provides students with basic knowledge and practical experience to develop strategic and operating marketing plans for hospitality properties. Emphasizes the marketing orientation as a management philosophy that guides the design and delivery of guest services. Examines the dynamic relationship between hospitality marketing and daily operations. 3cr., 3hr. lect./disc.

260 Hospitality Law
Prereq: CA in Hospitality & Tourism, or consent.
Provides an awareness of the rights and responsibilities that the law grants to or imposes upon a hotelkeeper. Illustrates the possible consequences of failure to satisfy legal obligations. 3cr., 3hr. lect./disc.

270 Hospitality Management
Prereq: HOST 152 and ENG 100 both with grade C or better, or consent.
Examines the key principles of management in the hospitality industry. Focuses on leadership skillbuilding and decision-making processes within the various management levels of a hospitality organization. Explores management concepts, strategies, and tools essential for organizational effectiveness. 3cr., 3hr. lect.

298 Hospitality Capstone
Prereq: Consent.
Integrates all the course work required for the HOST degree program. Explores a work-related management issue or operational problem in the hospitality industry. Analyzes, researches, and develops an in-depth strategy to resolve the issue or problem. 3cr., 3hr. lect./disc./simulation

394v Hospitality and Tourism International Internship
Prereq: Consent.
Provides an international work practicum experience in the hospitality industry. Requires students to demonstrate proficiency in job performance in a hospitality-related organization abroad. Students will complete a comprehensive work-based project and will outline professional goals, assess workplace issues, and prepare recommendations to solve issues. Synthesizes management theories learned in class with actual practices in the hospitality industry and formulation of a comprehensive report. Credit/No credit grade only. (May be repeated for a maximum of 6 credits.) 1-3cr., 200 hrs./per cr. supervised work

Human Services (HSER)

L. Stein

101 Health Navigator
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: Basic Internet skills.
Prepares people to navigate the health and social services systems; provides a knowledge foundation and practical skills base. Prepares the navigator to assist patients in various systems in search of appropriate diagnosis, treatment, and resolution. (Crosslisted as HLTH 101.) 3cr., 3hr. lect.

110 Introduction to Human Services
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Introduces the nature of human service programs. Studies federal, state, and local human service responsibilities. Includes talks by agency representatives and field trips to agencies. 3cr., 3hr. lect.

111 Community Action
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Develops a concept of human needs and examines how social institutions and communities provide for such needs. Views selected social problems in community settings and how communities, agencies, and organizational structures function to deal with them. Introduces social-cultural considerations and community action strategies. Participants will identify a community problem/need and develop and implement a proposal for action. 3cr., 3hr. lect.
130 Introduction to Youth Practitioner
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Introduces the core skills needed by youth practitioners. Focuses on basic communication skills, growth and development of adolescents, family and cultures and their roles in development, and youth with special needs. Develops teamwork and basic workforce skills. 3cr., 3hr. lect.

140 Introduction to Techniques of Counseling & Interviewing
Prereq: HSER 110 and at least ENG 22, or consent.
Offers basic introduction to counseling processes to those working or planning to work in the helping professions. Introduces theories and practices of counseling and interviewing individuals and groups. Provides opportunities to practice skills through role-playing. 3cr., 3hr. lect.

145 Working with Older Adults
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Introduces students to the experience of aging and the issues affecting the elderly. Examines aging from developmental and person-in-environment perspectives. Identifies the social service needs of the elderly, local and federal programs, and implications for the “soon-to-be-elderly”. 3cr., 3hr lect.

194 Work Practicum & Discussion in Community Service
Prereq: HSER 140 and ENG 100, both with grade C or better, or consent.
Provides individualized In-service training in community services and supervised work experience. Includes weekly seminar giving students opportunity to discuss practicum experiences. Permission of Instructor to enroll in class. 3cr., 1hr lect, 15hr practicum.

245 Group Counseling
Prereq: HSER 140, with grade C or better, or consent.
Provides theoretical and experiential training in facilitating self-exploration and growth groups. Designed to provide understanding and experience in selecting group members, establishing group norms and goals, setting group climates, developing group activities, promoting group and individual growth, and making appropriate group interventions. 3cr., 3hr lect.

248 Case Management
Prereq: HSER 140, or consent.
Provides knowledge and practical skills to become competent case managers in human services agencies. Develops professional skills in order to teach those who need assistance to manage their own lives within the scope of their resources and abilities. Presents culturally sensitive strategies and strength-based model of case management. Views those seeking help through the person-in-environment perspective. 3cr., 3hr lect.

256 Dynamics of Family Violence
Prereq: ENG 100, or consent.
Recommended: HSER 110.
Provides an in-depth study of the problems, dynamics, and effects of family violence and examines current societal responses. Includes the history of domestic violence, contributing cultural and socialization factors. Reviews partner, child, and elder abuse within the family and multi-generational effects. Examines legal and ethical issues, and best-practices for intervention nationally and in our community. 3cr., 3hr lect.

268 Alcohol & Drug Education
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Examines drug use, misuse, abuse, and addiction including the impact of drug actions on the body, brain, mind and spirit. Emphasizes historical and psychosocial factors that may contribute to drug use and policies and interventions to address the problem. 3cr., 3hr lect.

270 Substance Abuse Counseling
Prereq: HSER 140, or consent.
Provides theoretical and experiential training in the prevention, intervention, and treatment applicable to a diverse substance abuse population. Identifies ethical and legal issues of working with this population. 3cr., 3hr lect.

293v Work Practicum & Discussion in Community Service
Prereq: Permission of instructor; and HSER 110, HSER 140/248, and ENG 100. If taking course for Substance Abuse Counseling Certificates: HSER 268 and HSER 270.
Provides advanced, individualized, in-service training in community-based human services agencies. Includes weekly seminar giving students the opportunity to discuss practicum experiences. (May be repeated for a maximum of 8 credits.) 2-4cr., 1hr lect./practicum hours vary.

294 Work Practicum and Discussion In Community Service
Prereq: HSER 194 with grade C or better, and consent of instructor.
Provides advanced, individualized, in-service training in community-based human services agencies. Includes weekly seminar giving students the opportunity to discuss practicum experiences. Permission of instructor to enroll in class. 3 credits, 1hr lect, 15hr practicum.

345 Diversity in Aging
Prereq: HSER 248 and ENG 100, both with grade C or better, or consent.
Examines social and cultural diversity in the aging process. Identifies impacts of socioeconomic status, race/ethnicity, gender, sexual orientation, and religion/spirituality. Explores health disparities, cumulative advantage and disadvantage across the life course, and access to government services and programs. 3cr., 3hr lect.

350 Women & Addiction: Why Gender Matters
Prereq: HSER 268, 270, and ENG 100, all with grade C or better, or consent.
Examines girls and women’s substance misuse/abuse-dependence in a socio-cultural context through the person-in-environment and strengths perspectives. Evaluates common pathways to addiction, compares and contrasts physiological and psychological gender differences, impacts and consequences in the addiction process. Assesses the unique treatment needs of this population and gender-responsive strategies to meet those needs. Includes gender specific and culturally competent treatment trends in Hawaii. 3cr., 3hr lect.

360 Trauma Informed Care
Prereq: HSER 248, 270, and ENG 100, all with grade C or better, or consent.
Examines trauma experiences across the life span through the person-in-environment perspective including individual reactions, resiliencies and community responses. Compares trauma informed care with traditional helping paradigms via exploration of best practice models and local programs. 3cr., 3hr lect.
365 Motivational Interviewing  
**Prereq:** HSER 140 and ENG 100, both with grade C or better, or consent.  
Introduces the theoretical basis of motivational interviewing. Focuses on developing skills and strategies for using the model in diverse contexts (community agency settings, mental health and health care clinics) and across diverse behavioral issues (addictions and mental health, healthy lifestyle behaviors, chronic disease).  
3cr., 3hr lect.

**Humanities (HUM)**  
**C. Gardner**

100 Themes in Humanities  
**Gives the student a start toward viewing the arts as an expression of the meaning of life.** Interweaves interpretations of history and a variety of works of poetry, drama, novel, painting, sculpture, music, and philosophy to illustrate mankind’s changing awareness.  
3cr., 3hr lect.  
(DH)

400 Changes & Choices  
**Prereq:** ENG 316, or consent.  
Explores ways in which the humanities can contribute to personal and work lives, especially as individuals face change and make decisions. Analyzes how individuals worldwide examine circumstances including the changing landscape of living among people of various beliefs and cultures, making decisions, and dealing with consequences of such decisions. Examines the onset of other choices presented to us as a result of the original decisions made, or alternatively, made for us by our choosing not to engage in the process.  
3cr., 3hr lect.  
(DH)

101 Beginning Ilokano I  
**Introduces speaking, listening, reading, and writing skills of basic Ilokano. Includes the following:** (a) the basic structures of Ilokano; (b) language commonly used in daily situations; and, (c) different aspects of Philippine cultures.  
4cr., 4hr. lect.  
(HSL)

102 Beginning Ilokano II  
Continues ILO 101. Includes speaking, listening, reading, and writing skills of basic Ilokano.  
4cr., 4hr. lect.  
(HSL)

**Industrial Education, Building & Construction (IEDB)**

20 Introduction to Building & Construction  
**Prereq:** Placement at least ENG 21 and computer literacy, or consent.  
Introduces students to construction and construction careers using the Contextual Model. Focuses on problem solving related to construction projects from origination of the idea through the actual completion of the construction process. Requires sequencing the project; identifying, by career, the people involved with the project; and identifying the permits, licenses, and jurisdictional organizations. Introduces safety, common materials, hand and limited power tool applications, construction techniques, and blueprint reading.  
3cr., 6hr. lect./lab

**Information and Computer Science (ICS)**

101 Digital Tools for the Information World  
**Emphasizes production of professional level documents, spreadsheets, presentations, databases, and web pages for problem solving.** Includes concepts, terminology, and a contemporary operating system.  
Meets requirements for UH Mānoa and UH Hilo College of Business and UH Mānoa Biology program and Botany Department.  
3cr., 3hr lect./lab

102 Internet Resources  
**Prereq:** ICS 101 or BUSN 150, or consent.  
Recommended: Familiarity with the Internet.  
Introduces the variety of resources available on the Internet. Examines history, current issues, and how the Internet works. Teaches terminology, file formats, and addressing. Introduces the concept of client-server programs as applied to the Internet. Explores use of the World Wide Web as a vehicle for research. Teaches how to find, evaluate, and publish information.  
3cr., 3hr. lect./lab

110 Intro to Computer Programming  
**Prereq:** ICS 101 or BUSN 150, either with grade C or better, or consent.  
Teaches fundamental programming concepts including sequential, selection, and repetition flow; variables and types; syntax; error types; compilation; linking; loading; and debugging. Introduces algorithms, flow charts, UML, and other analytic tools. Explains and practices problem solving and critical thinking methods.  
3cr., 3hr. lect.

111 Intro to Computer Science I  
**Prereq:** ICS 110 with grade C or better, and MATH 82 with grade C or better or placement at least MATH 107, and ENG 19 with grade C or better or placement at least ENG 22, or consent.  
Introduces problem solving using computers. Provides a background for students entering computer science, engineering, or other fields that require a background in computer programming. Teaches the basics of the computer hardware/software interfaces. Includes programs, applications, and compliers. Introduces programming concepts, algorithms, and problem solving techniques using high-level object-oriented programming languages.  
Meets ACM CS 1 course standards.  
4cr., 4hr. lect./lab

115 Microcomputer Applications  
**Prereq:** ICS 101 or BUSN 150, or consent.  
Recommended: MATH 82 and elementary word processing or typing skills.  
Examines the utilization of major application packages as tools in business problem solving. Covers the following applications: a micro-computer operating system, word processing, spreadsheets, graphics, and database management systems.  
3cr., 3hr. lect./lab
University of Hawai‘i

116 Designing for Cross-Media: Publishing for Print & Web
Prereq: ICS 101 or BUSN 150, or consent. Focuses on design and layout for cross-media publishing. Examines the interface, functions, and integration of publishing software for graphic design and production. Explains how to prepare content for publication for print, Portable Document Format (PDF), and on the web. 3cr., 3hr. lect./lab

150 Introduction to GIS/GPS
Prereq: ICS 101 or BUSN 150, either with grade C or better; or consent. Recommended: Familiarity with computer databases. Introduces applications of geographic information systems (GIS) with a special emphasis on using ArcView GIS. Includes database construction and techniques for spatial data manipulation, analysis, and display. Teaches use of global positioning system (GPS). Explores cross-disciplinary applications in the natural and social sciences. (Crosslisted as GIS 150.) 4cr., 6hr. lect./lab

151C Introduction to C Programming
Prereq: ICS 111 with grade C or better, or consent.
Introduces students to C Programming Language and an Integrated Development Environment (IDE). Develops structured programs using problem solving, algorithm development, and programming concepts using a procedural language. 3cr., 3hr. lect./lab

161 Introduction to Computer Graphics
Prereq: ICS 101 (or concurrent) or BUSN 150, or consent.
Introduces computer graphics tools and concepts in digital image editing, illustration graphics, print and web design, and 2D and 3D animation. (Crosslisted as ART 161.) 3cr., 3hr. lect. (DA)

193v Computer Science Internship I
Prereq: ICS 111, and consent of both instructor and Co-op coordinator. Coreq: Enrollment in ECET program and one or more ECET or ETRO courses. Recommended: ETRO 101 and 105, and ENG 100.
Reflects student interest area and the availability of job stations. Offers opportunity to upgrade workplace employability. Student, instructor, and employment supervisor jointly develop learning outcomes. Instructor and employment supervisor jointly evaluate student. (May be repeated for a maximum of 3 credits.) 1-3cr., 75hrs. supervised work/cr.

200 Web Technology
Prereq: ICS 110 with grade C or better, or consent.
Introduces web page authoring. Creates client-side web pages using web authoring language and style sheets. Uses graphical design elements, validation, browser capability, and accessibility. Uses scripting language to add dynamic elements to web pages, client-side scripting, regular expressions, event handling, input validation, selection, repetition, and parameter passing. 3cr., 3hr. lect.

205 Photoshop and Illustrator
Prereq: ICS 101 or BUSN 150, or consent.
Introduces the basic tools and features of digital image editing, photo retouching, and color correction of images. Focuses on the fundamental drawing techniques of illustration graphics including pen tool paths, objects, and type. (Crosslisted as ART 205.) 3 cr., 3hr. lect./lab (DA)

211 Introduction to Computer Science II
Prereq: ICS 111 with grade C or better, or consent. Recommended: MATH 135.
Reinforces and strengthens problem-solving skills using more advanced features of programming languages and algorithms, such as recursion, pointers, and memory management. Emphasizes use of data structures, such as arrays, lists, stacks, and queues. Meets ACM CS2 course standards. 3cr., 3hr. lect./lab

214 Fundamentals of Design for Print & Web
Prereq: ICS 101 or BUSN 150, or consent.
Introduces development principles related to graphic design terminology, tools and media, and layout and design concepts. Topics include integration of type, images, and other design elements, developing computer skills in industry standard computer programs, and study of design development pertaining to color theories, publications, and advertising. Projects will emphasize relating form to content through selection, creation and integration of typographic, digital imaging, illustrative, and design elements in print and web environments. (Crosslisted as ART 221.) 3cr., 3hr. lect./lab (DA)

251 Introduction to Unix/Linux
Prereq: ICS 101 with grade C or better, or consent.
Introduces the Unix/Linux operating system with emphasis on the Red Hat Linux release. Covers the history and structure of Unix/Linux, basic functions, and fundamental commands. Explores advanced topics unique to Unix/Linux system administration. Stresses the ethics and responsibilities incumbent with Super User privileges. 4cr., 4hr. lect./lab
252  Unix/Linux System Administration  
Prereq: ICS 251 with grade C or better, or consent.
Continues exploration of the Unix/Linux operating system with an examination of the tasks and responsibilities of system administration. Examines and explores the Unix group and user hierarchy, system security, networking fundamentals, network administration, system logs, troubleshooting, application installation, and system installation and maintenance. Emphasizes the ethics and responsibilities of Unix System Administration and root user privileges. 4 cr., 4 hr. lect./lab

258  Programming for High Performance Clusters  
Prereq: ICS 111 with grade C or better, or consent.
Explores programming for high performance computational clusters. Examines the algorithmic paradigms required to most efficiently and effectively create or modify code that will exploit the unique characteristics of parallel processing. Identifies the attributes common to highly parallelizable code. Develops parallel algorithms and writes implementing computer code. Tests, evaluates, and refines code to maximize performance and efficiency. 3 cr., 3 hr. lect./lab

261  Intermediate Computer Graphics  
Prereq: ICS 161, 205, or 214, or consent.
Provides instruction with the tools and concepts of computer graphics utilizing digital media technology. Offers experience that integrates digital image editing, illustration graphics, print publishing, web authoring, 2D, and 3D animation. (Cross-listed as ART 218.) 3 cr., 3 hr. lect./lab (DA)

272  Digital Imaging & Animation  
Prereq: ICS 261, or consent.
Develops 2D computer graphics as elements for 3D projects. Compiles digital imaging and illustration using natural media tools, filters, compositing, templates for 3D project scenes, texture-mapping, and source files. Outlines 3D modeling and animation concepts, tools, and techniques for project development. 3 cr., 3 hr. lect./lab

275  Introduction to High Performance Computing Clusters  
Prereq: ICS 251 with grade C or better, or consent. Coreq: ICS 252.
Introduces High Performance Computing (HPC) clusters. Covers the history, technology, and structure of computational clusters, with emphasis on Beowulf-style clusters. Includes design concepts, software and hardware implementations, enabling applications, and administration. Includes algorithmic considerations and structures conducive to the development and implementation of parallelized applications. Provides experience building, configuring, and utilizing the cluster. 4 cr., 4 hr. lect./lab

283  Advanced Computer Graphics Design  
Prereq: ICS 261, or consent.
Reviews history, development, technology, and creative approaches of digital tools. Summarizes design theory. Employs graphics software to achieve concepts, content, and distinctive project solutions. Originates and manages the preproduction, production, postproduction of projects in print, web, digital imaging, illustration, and animation. Assembles projects into traditional, content, and digital portfolios. Analyzes professional issues for careers in digital media: resume, portfolio, exhibiting, personal web site, employment, and professional organization. 3 cr., 3 hr. lect./lab

285  Digital Media Capstone  
Prereq: ICS 283 and approval of DM faculty.
Provides an opportunity to integrate and employ tools and knowledge developed during the Digital Media program. Evaluates design and technical skills in digital media publishing projects. Assesses internship experiences and job market research for employment strategies. A comprehensive professional digital media publishing portfolio is required as a capstone project. 3 cr., 3 hr. lect./lab

293v  Computer Science Internship II  
Prereq: ICS 193v, or consent.
Reflects student interest area and the availability of job stations. Offers the opportunity to upgrade employment and problem-solving skills. Student, instructor, and employment supervisor develop learning outcomes. Instructor and the employment supervisor jointly evaluate student. (May be repeated for a maximum of 6 credits.) 1-3 cr., 75 hrs./cr.

298  Special Projects in Computer Science  
Prereq: ICS 252 and ICS 275 both with grade C or better; or consent. Coreq: Determined by topic. Recommended: Determined by topic. Covers current topics in computer science. Introduces students to topics of current interest and relevant to their studies. Includes both theoretical and hands-on experience in cutting edge hardware, software, networking, operating systems, applications, and techniques. 4 cr., 4 hr. disc.

319  Operating Systems  
Prereq: ICS 111 and 200, and MATH 203 or 205 all with grade C or better, or consent.
Covers concepts, issues and design of modern operating systems. Analyzes processes and state, concurrency, resource management algorithms for memory, processors and I/O devices, protection and security. Develops case studies of popular desktop and server operating systems. Conducts laboratory projects and teaches OS installation and administration techniques. 3 cr., 3 hr. lect.

320  Introduction to Information Systems & E-Commerce  
Prereq: ICS 115 or BUSN 151, and ICS 214, or consent.
Introduces general concepts of information systems and e-commerce. Includes key business applications, e-commerce and the Internet, system development, outsourcing, networking and data communications, data and databases, and security. Includes relevant projects. 3 cr., 3 hr. lect.

340 Introduction to Visual Basic
Prereq: ICS 115 or BUSN 151 either with grade C or better, or consent.
Introduces computer programming for non-computer science majors using the Visual Basic language. Includes algorithms and problem-solving, fundamental programming constructs, object-oriented design, event-driven programming, Graphical User Interface (GUI) principles, and components. 3cr., 3hr. lect./lab

352 Networks and Security
Prereq: ICS 111 and 200, and MATH 203 or 205 all with grade C or better, or consent.
Provides detailed knowledge of the internet and its capabilities, explains details of HTTP, TCP/IP, ethernet, and wireless 802.11 router, switches, and NAT; network and wireless security; practical experience in designing and implementing networks. Laboratory projects teach network design and administration. Discusses intermediate level topics on computer security. Examines legal, ethical and technology issues in computer access, confidentiality, authentication, privacy and intellectual property. 3cr., 3hr. lect.

360 Database Design & Development
Prereq: ICS 319 and ICS 352 both with grade C or better, or consent.
Provides detailed knowledge of database design and development. Explains data models: relational and object oriented. Examines relational database management systems. Demonstrates database design and development using SQL. Explains client/server systems and web access to databases. 3cr., 3hr. lect.

385 Web Development and Administration
Prereq: ICS 319 and ICS 352 both with grade C or better, or consent.
Provides detailed knowledge of web page authoring. Demonstrates scripting in operating systems, web pages, server-side application integration, regular expressions, event handling, input validation, selection, repetition, parameter passing. Develops an e-commerce web site that uses a standard browser to accept user input, processes the user input with business logic, and connects to a back-end SQL database.

Discusses topics in web site administration. Covers site management (operating system, web server and database installation and administration); security (cryptography, authentication, digital certificates); and content (site design, ethical and business considerations). 3cr., 3hr. lect.

418 Systems Analysis and Designs
Prereq: ICS 360 and ICS 385 both with grade C or better, or consent.
Provides detailed knowledge of system specification, modeling and analysis, prototyping, hierarchical design, program design methods, cost estimation, project management, computer-aided software design. Emphasizes planning, analysis, and design phases of the Software Development Life Cycle with one model of the SDLC covered. Demonstrates learning tools and techniques for sound requirement assessment and, working as a team, produces a verified design of a web-based software product. 3cr., 3hr. lect.

420 E-Commerce Development
Prereq: ICS 340 and 385, or consent.
Provides advanced knowledge and skills for the design, construction, and implementation of an Internet based commerce site. Discusses legal, security, cultural, and policy issues. 3cr., 3hr. lect.

463 Human Computer Interaction
Prereq: ICS 320 and MATH 115, or consent.
Application of concepts and methodologies of human factors, psychology and software engineering to address ergonomic, cognitive, and social factors in the design and evaluation of human-computer systems. 3cr., 3hr. lect/lab

Interdisciplinary Studies (IS)

M. Bruck

103S Building College Strengths Through Culture
Teaches, infuses, and uses culture to help students successfully transition into post-secondary education by developing an understanding of personal strengths for student success. 1cr., 1hr. lect.

104B Transitions: Personal
Introduces students to college level work, strategic reasoning, communicating, and academic strategies. Helps students to develop an understanding of personal learning strengths, needs, time and resource management, and the use of relevant resources. Develops skills necessary to monitor progress and resolve problems. Introduces the creation of an individual learning portfolio and plan to support the successful transition to college. 1cr., 1hr. lect.

104C Transitions: Community
Focuses on developing the understanding that it is essential for human beings to work together. Teaches how to work as a productive member of a successful team. Develops critical thinking and problem solving skills. Teaches and practices taking responsibility in implementing a solution, and recognizing and producing quality performance and quality products. 1cr., 1hr. lect.

104D Transitions: Lifelong
Teaches students to become lifelong learners who are able to access and assess information, make judgments, and generate original ideas; apply collaborative skills to pursue individual and/or group goals; accept responsibility for their own behaviors and attitudes; and direct themselves as they strive for personal excellence. 1cr., 1hr. lect.

105 Career/Life Exploration & Planning
Prepares student for effective career/life exploration, planning and decisions. Emphasizes self-assessment, world of work information, survey of occupational clusters and related academic preparation relevant to self-assessed interests, and values and decision-making. Students cannot take both IS 105 and IS 105B for credit toward a degree. 3cr., 3hr. lect./disc.

105B Personal Assessment
Assists students in evaluating their interests, values, abilities, lifestyles, and other factors relating to career choice. Provides students with an opportunity to develop career decision-making skills. 1cr., 15hr. lect. per semester
105C Professional Employment Preparation
Facilitates employment search by emphasizing professional techniques and standards in the preparation of application forms, resumes, cover letters, and employment interviews. (Crosslisted as BUSN 166.) 1cr., 1hr. lect.

105D Working in an Organization
Career Exploration & Planning
Examines case study approach to operating effectively in a government or company bureaucracy. Emphasizes topics such as “red tape,” cliques, impersonality, and frustrations. 1cr., 1hr. lect.

106 College Orientation I
Develops knowledge, skills, and attitudes associated with personal, academic, and career success. Provides overviews of college policies, procedures, and curricular offerings. Develops communication and teamwork skills. Encourages contacts with students and staff. Strongly recommended for entering students. 2cr., 2hr. lect.

107 College Orientation II
Prereq or coreq: IS 106, or consent. Integrates, practices, and applies knowledge, skills, and attitudes associated with personal, academic, and career success. Integrates and applies communication and teamwork skills. Encourages contacts with students and staff as well as community and campus service. Strongly recommended for entering students. 1cr., 1hr. lect.

150 Leadership Skill Development
Prereq: Consent. Recommended: IS 105B, or consent. Develops a clear understanding of self and personal strengths. Applies this knowledge and understanding in developing leadership skills. Teaches effective team building, coaching, and mentoring; effective communication; and project management skills. 3cr., 3hr. lect.

Japanese (JPNS)
101 Elementary Japanese I
Introduces speaking, listening, reading, and writing skills of beginning Japanese. Includes basic sentence structures. Daily practice highly recommended. 4cr., 5hr. lect. (HSL)

102 Elementary Japanese II
Prereq: JPNS 101, or consent. Continues 101. Introduces additional basic Japanese speaking, listening, reading, and writing sentence structures. Daily practice highly recommended. 4cr., 5hr. lect. (HSL)

201 Intermediate Japanese I
Prereq: JPNS 102, or consent. Second level course in Japanese listening, reading, speaking, and writing. Introduces more advanced grammatical patterns and vocabulary words. Daily practice highly recommended. 4cr., 5hr. lect. (HSL)

202 Intermediate Japanese II
Prereq: JPNS 201, or consent. Continues JPNS 201. Completes introduction of major grammatical patterns of standard Japanese. Daily practice highly recommended. 4cr., 5hr. lect. (HSL)

Journalism (JOUR)
205 News Writing
Prereq: Basic keyboarding skills of 15 wpm and ENG 100, or consent. Introduces the fundamentals of news style, reporting and ethics. Provides practical experience in news gathering and writing. 3cr., 3hr. lect.

Learning Skills (LSK)
L. Nagle
30 Study Skills
Recommended: ENG 15 or placement at ENG 19. Develops effective learning skills for success in career and technical as well as general education classes. Focuses on organization, time management, note-taking, test-taking, and communication, including reading, writing, listening and speaking. Includes use of library and Learning Center for individual improvement. (A-F, N, W, grades only.) 3cr., 3hr. lect./lab

110 College Learning Skills
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent. Enhances students’ abilities to succeed academically. Investigates communication and organizational skills, methods of inquiry, creative thinking skills, cognitive learning styles, and academic and community resources. 3cr., 3hr. lect./lab

Linguistics (LING)
102 Introduction to the Study of Language
Prereq: ENG 100 or 102, or placement at ENG 100, or consent. Investigates the nature and workings of language: its composition (sound system, grammatical structure, and lexicon), representation (oral and written), and divergence (relationships between languages of the world). General linguistic principles applicable to all languages will be covered. 3cr., 3hr. lect.

Maintenance (MAIN)
20 Introduction to Building Maintenance
Explores details of building construction and maintenance. Introduces fundamentals of building systems and operations of the maintenance department. 2cr., 3hr. lect./lab

30 Masonry
Introduces materials and explains techniques used in installing and repairing concrete, hollow tile, and related masonry construction. 2cr., 3hr. lect./lab

40 Painting and Decorating
Introduces materials and explains techniques used in applying and maintaining paints, wallpaper, and plaster. 2cr., 3hr. lect./lab

50 Plumbing I
Introduces materials and explains techniques used to install and maintain plumbing lines, fixtures, and controls. Emphasizes effective maintenance procedures for commercial structures. 2cr., 3hr. lect./lab
55 Plumbing II
Prereq: MAIN 50, or consent.
Studies the plumbing system of the typical single-family residential dwelling. Examines how local and national codes apply to residential units. 2cr., 3hr. lect./lab

60 Small Equipment Repair
Introduces the repair and maintenance of small engines, appliances, garden equipment, and power tools. Examines troubleshooting techniques and emphasizes repair fundamentals. 2cr., 3hr. lect./lab

65 Air Conditioning and Refrigeration
Studies air conditioning systems of residential and commercial buildings. Explores various types of refrigeration systems popular today. Introduces concepts of planning, testing, troubleshooting, and balancing such systems. 2cr., 3hr. lect./lab

70 Preventive Maintenance
Explores principles of preventive maintenance: records maintenance, replacement schedules, rust prevention, and equipment maintenance and servicing. 2cr., 3hr. lect./lab

Management (MGT)
R. Gonzalez, R. Miller, M. Wukelic

118 Introduction to Supervision
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Emphasizes basics of effective supervision. Introduces responsibilities of a supervisor, along with modern supervisory and human relations techniques and concepts. Provides practical applications in day-to-day supervisor-employee relationships. 3cr., 3hr. lect.

122 Organizational Behavior
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Investigates human behavior in organizations at the individual and group level including the effect of organization. Stresses improving interpersonal relations. Studies diversity, communication, perception, leadership, motivation, group interaction, overcoming resistance to change, power, politics, and organizational culture and structure. Emphasizes interactive and experiential methods of learning. 3cr., 3hr. lect.

124 Human Resources Management
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Studies human resource functions including: recruitment, interviewing, selection, testing, placement, orientation, training, rating, promotion, transfer, and separation and grievance handling. Stresses the need for good labor-management and human relations. 3cr., 3hr. lect.

310 Principles of Management
Prereq: BUS 120 and either PSY 100 or SOC 100, or consent.
Introduces activities and skills needed to successfully manage both domestic and international organizations with an emphasis on decision-making. Includes communication, work motivation, group dynamics, leadership and organizational change, conflict, personality, and teamwork. Relates these concepts to performance, job satisfaction, and organizational commitment. 3cr., 3hr. lect.

322 Organizational Leadership and Management of Change
Prereq: MGT 310 with grade C or better, or consent. Recommended: PSY 100 or SOC 100.
Prepares managers to influence the human side of developing and implementing changes in organizations. Theory, cases, and exercises help managers to understand the socio-technical aspects of change; to see leadership as motivating organizational members; to understand their own ability to influence others; and to understand the leadership successes of noted leaders from all walks of life. 3cr., 3hr. lect.

Marketing (MKT)
R. Miller, M. Wukelic

120 Principles of Marketing
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Introduces marketing principles including: channels of distribution, pricing, government regulations, consumer behavior, marketing functions and organization, product analysis, and promotional activity. 3cr., 3hr. lect.

160 Advertising & Promotion
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: MKT 120.
Introduces the principles of advertising and promotion, including sales promotion, publicity, public relations, and selling, and their relationship to the marketing system. Stresses strategies of informing, persuading, and integrating information to create a positive image. 3cr., 3hr. lect.

285 Internet/Social Media Marketing
Prereq: BUS 150 or ICS 101, and MKT 120, both with grade C or better, or consent. Recommended: MKT 160.
Examines the use of Internet as an effective marketing tool to enhance customer relationships and strengthen brand awareness. Examines how continually emerging Internet technologies and social media are increasing marketing effectiveness and efficiency. Covers development of an internet marketing plan. 3cr., 3hr. lect.

300 Principles of Marketing
Prereq: BUS 120, ECON 130, and ECON 131, or consent.
Applies the fundamental principles of successful marketing including segmentation, targeting, product development, positioning, packaging, placement, pricing, promotion, service and relationship building to development of marketing plans. Explores the impact of marketing of goods and services using the Internet, the World Wide Web, and other technologies as they emerge. 3cr., 3hr. lect.
400  Marketing for a Digital Age  
Prereq: MKT 300 with grade C or better, or consent.  
Examines how startup and small/medium companies reach the marketplace and sustain their businesses within highly competitive industries. Recognizes the need of management to operate flexibly, making maximum effective use of scarce resources in terms of people, equipment, funds, and the opportunities that exist within new and established market niches. 3cr., 3hr. lect.

Mathematics (MATH)  
K. Acks, A. Amirislani, S. Bowe, D. Harbin  
Many mathematics courses are offered in an open lab setting where students study individually under the general guidance of the instructor and tutors. Courses numbered below 100 do not count toward the AA degree. To progress to more advanced mathematics courses, students should have grade C or better in prerequisite courses. The prerequisite course is most beneficial when completed during the prior 12 months. Math placement testing is required of all students who are taking mathematics at UH Maui College. Math placement test results are valid for two years. (For more info, see English and Math Placement section, or the Math Routes for Specific Majors chart.)

18  Essential Math for Algebra  
Recommended: COMPASS Reading score at least 56 or concurrent enrollment in ENG 21 or 102.  
Develops computation and problem-solving skills that use math operations, signed numbers, fractions, and decimals to solve ratio, proportion, percent, geometry, basic statistics and basic linear equation problems. Introduces concepts required for success in STEM, health or business related fields. (A-F, N, W grades only.) 3cr., 3hr. lect.

50C  Technical Mathematics: Automotive  
Prereq: MATH 18 with grade C or better or placement at least MATH 82; and ENG 19 with grade C or better or placement at least ENG 22. Recommended: Placement at ENG 21.  
Develops skills in basic arithmetic, measurement, addition and subtraction, multiplication and division of real numbers, evaluating formulas, solving equations and applications of these skills in practical situations related to automotive careers. 3cr., 3hr. lect.

50H  Technical Mathematics: Culinary Arts  
Prereq: MATH 18 with grade C or better or placement at least MATH 82, and ENG 19 with grade C or better or placement at least ENG 22, or consent. Recommended: At least 10th grade reading skills.  
Applies and relates mathematical skills to the solution of food service problems: adjusting and costing recipes, calculating yields, markups, business forms and reports, financial statements, interest, taxes, and scheduling. 3cr., 4hr. lect./lab

82  Accelerated Algebraic Foundations  
Prereq: MATH 18 with grade C or better or placement at least MATH 82, or consent. Recommended: COMPASS Reading placement at least ENG 21.  
Develops graphing techniques for linear and quadratic equations. Introduces exponent rules and operations involving polynomials. Extends simplification of expressions and solutions of equations to systems, rational, radical, and quadratic. Develops application problem solving skills. (A-F, N, W grades only.) 4cr., 4hr. lect.

100  Survey of Mathematics  
Prereq: MATH 82 with grade C or better or placement at least MATH 100, and ENG 100 with grade C or better (or concurrent), or consent. Recommended: At least 11th grade reading skills.  
Acquaints the non-specialist with examples of mathematical reasoning. Explores selected topics such as numeral systems, consumer math, linear and exponential growth, inductive patterns, mathematical art, probability, statistics, set theory, and logic. 3cr., 3hr. lect. (FS)

107  Math for Electronics & Computers  
Prereq: MATH 82 with grade C or better or placement at least MATH 103, and ENG 22 with grade C or better or placement at ENG 100, or consent. Recommended: At least 11th grade reading skills.  
Surveys technical mathematics, with emphasis on applications to electronics, computers, and networking. Includes numbering systems for computers, Boolean algebra and logic gates for digital circuits, trigonometry for AC circuits, exponential and logarithmic functions for AC circuits, and rectangular and polar forms of complex numbers for LRC circuits. 4cr., 4hr. lect.

111  Mathematics for Elementary Teachers I  
Prereq: MATH 82 with grade C or better or placement at least MATH 100, and ENG 100 with grade C or better (or concurrent), or consent. Recommended: At least 11th grade reading skills.  
Explores mathematical ideas, problem solving, quantitative and symbolic reasoning. Focuses on operations and their properties, sets, counting, patterns, and algebra. 3cr., 3hr. lect.

112  Mathematics for Elementary Teachers II  
Prereq: MATH 111 with grade C or better. Recommended: At least 11th grade reading skills.  
Demonstrates operations and develops the properties of the natural numbers, integers, rational numbers, and real numbers. Explores the use of mathematical operations to solve problems including geometry, probability, and physical rates. 3cr., 3hr. lect. (FS)

115  Statistics  
Prereq: MATH 82 with grade C or better or placement at least MATH 100, and ENG 100 with grade C or better (or concurrent), or consent. Recommended: Placement at ENG 102.  
Utilizes basic statistical topics including measures of central tendency and dispersion, classification of variables, sampling techniques, elementary probability, normal and binomial probability distributions, tests of hypothesis, and linear regression and correlation in order to solve problems. 3cr., 3hr. lect. (FS)
**MATH ROUTES FOR SPECIFIC MAJORS**

Begin at the appropriate course, as determined by your math placement score and your particular career path.

### Business: CULN

| MATH 18 | → | MATH 50H |

### Vocational: AG, FT, SUSTAINABLE CONSTRUCTION TECH

| MATH 18 |

### Vocational: ABRP, AMT

| MATH 18 | → | MATH 50C |

### Vocational: ECET

| MATH 18 | → | MATH 82 | → | MATH 107 |

See program map for specific requirement.

### Business: ACC, BUSN, BUSN, HOST

| MATH 18 | → | MATH 82 | → | MATH 100 or MATH 115 |
| MATH 82 | → | MATH 103 | → | MATH 135 | → | MATH 203 |
| BUSN 189 |

### Liberal Arts (non-calculus), Public Service: AJ, HSER, NURS

(See Program Maps, pages 27-52)

| MATH 18 | → | MATH 82 | → | MATH 100 |
| MATH 111 | → | 112 MATH |

or MATH 115

### Liberal Arts (calculus)

| MATH 18 | → | MATH 82 | → | MATH 103 | → | MATH 135 |
| MATH 205 | → | MATH 206 | → | MATH 231 | → | MATH 232 |
| MATH 219 |

### BAS ENGT Engineering Technology

| MATH 18 | → | MATH 82 | → | MATH 107 | → | MATH 219 |
135 Pre-Calculus: Elementary Functions
Prereq: MATH 103 with grade C or better or placement at MATH 135, and ENG 100 with grade C or better (or concurrent), or consent. Recommended: At least 11th grade reading skills. Investigates the nature of functions and examines polynomial, rational, exponential, and logarithmic functions. Studies the solution to equations and inequalities in one and several variables. 3cr., 3hr. lect. (FS)

140 Trigonometry Analytic Geometry
Prereq: MATH 135 with grade C or better or placement at MATH 140, and ENG 100 with grade C or better (or concurrent), or consent. Recommended: At least 11th grade reading skills. Studies the trigonometric functions, their applications, identities and equations, the conic sections, and some topics of discrete algebra. 3cr., 3hr. lect. (FS)

203 Calculus for Business & Social Sciences
Prereq: MATH 135 with grade C or better or placement at MATH 140, and ENG 100 with grade C or better (or concurrent), or consent. Recommended: At least 12th grade reading skills. Studies the basic concepts of differentiation and integration and their applications in the areas of finance, management, economics, and social sciences. 3cr., 3hr. lect. (FS)

205 Calculus I
Prereq: MATH 140 with grade C or better or placement at MATH 205, and ENG 100 with grade C or better (or concurrent), or consent. Recommended: At least 12th grade reading skills. Explores basic concepts of differential and integral calculus. Reviews functions, focuses on differentiation and its applications. Introduces integration. 4cr., 4hr. lect. (FS)

206 Calculus II
Prereq: MATH 205 with grade C or better, or placement at MATH 206, and ENG 100 with grade C or better (or concurrent), or consent. Recommended: At least 12th grade reading skills. Extends and completes the calculus on a single real variable with the differentiation and integration of the transcendental functions, techniques of integration, applications, and infinite series. 4cr., 4hr. lect. (FS)

219 Calculus for Engineering Technology
Prereq: MATH 107 or 140 (or higher), PHYS 105 or higher, and ETRO 112, all with grade C or better, or consent. Coreq: PHYS 219 and ETRO 305. Studies mathematical concepts and procedures useful in the study of engineering technology. Utilizes the capabilities of software such as MATLAB and its applications to find and visualize solutions to technical and engineering problems. Includes hands-on engineering mathematics examples. Utilizes vectors, integral and differential calculus in two and three dimensions. (Crosslisted as ETRO 219.) 3cr., 3hr. lect.

231 Calculus III
Prereq: MATH 206 with grade C or better, and ENG 100 with grade C or better (or concurrent), or consent. Recommended: At least 12th grade reading skills. Studies functions of several variables including vectors, vector functions, the calculus on these functions, and 3-dimensional analytic geometry. 3cr., 3hr. lect./disc. (FS)

232 Calculus IV
Prereq: MATH 231 with grade C or better, and ENG 100 with grade C or better (or concurrent) or consent. Recommended: At least 12th grade reading skills. Completes the study of functions of several variables with multiple integrals and vector analysis. Studies the solutions of elementary differential equations. 3cr., 3hr. lect./disc. (FS)

Music (MUS)
J. Donaghy, R. Wehrman

106 Introduction to Music Literature
Treats styles and forms of Western music. Develops skills in listening to and appreciating music. Introduces music styles in their historical and social contexts. 3cr., 3hr. lect. (DH)

107 Music in World Cultures
Analyzes folk, popular, and art music from major regions of the world, with emphasis on Asia and the Pacific. Develops a knowledge of representative styles and regional characteristics in world music. 3cr., 3hr. lect. (FGC)

108 Fundamentals of Western Music
Recommended coreq: MUS 121C. Introduces basic musical concepts to enable students to express themselves as budding composers, performers, listeners and teachers. Develops skills in listening to and writing down examples, clapping out rhythms, melodies and chords. Designed for the beginner with no previous musical training. 3cr., 3hr. lect. (DA)

114 College Chorus
Recommended coreq: MUS 123 or 124. No previous choral experience required. Introduces performance of choral literature from the Renaissance to the present. Includes fundamentals of music and voice training. (May be repeated without limit for credit.) 2cr., 3hr. lect./lab (DA)

114H Hawaiian Chorus
Recommended: Previous vocal experience may be helpful. Introduces basic vocal group performance. Studies ancient to modern Hawaiian songs. 2cr., 3hr. lect./lab (HI, DA)

121C Elementary Class Piano I
Prereq: Must have access to a piano or keyboard. Designed for beginning pianists or for musicians who play another instrument. Develops understanding of concepts of melody, rhythm, harmony and form using simple songs. Develops basic keyboard technique by covering fingering, hand position, hand coordination, simple reading and chord exercises. (Cannot be audited.) 2cr., 3hr. lect./lab (DA)

Microbiology (MICR)
S. Calder, S. Irwin

130 General Microbiology
Prereq: ENG 100 with grade C or better, and MATH 82 with grade C or better (or concurrent), or placement at least MATH 100; or consent. Introduces fundamentals of microbiology. Explains role of microorganisms and how they affect humans. Emphasizes medical and public health aspects, bacterial and viral diseases, and epidemiology. 3cr., 3hr. lect. (DB)

140 General Microbiology Laboratory
Prereq or coreq: MICR 130. Laboratory to accompany Microbiology 130. 2cr., 4hr. lab. (DY)
121D Elementary Guitar Class I  
Prereq: Requires a guitar in playable condition. Introduces classroom instruction in guitar playing. Develops basic guitar technique by covering hand positions, fingering, scales, chords, and arpeggios. Teaches music reading. Applies reading skills to performance. Introduces a variety of guitar literature. 2cr., 2hr. lect./lab (DA)

121Z Beginning ‘Ukelele  
Recommended: Students must provide their own ‘ukelele in good playable condition and have internet access. Introduces Hawaiian-style ukulele playing. Students learn to play the ukulele through a selection of traditional and contemporary American and Hawaiian songs. An introduction to ukulele history in Hawai‘i is included. No prior experience necessary. 2cr., 2hr. lect./lab (DA)

122C Elementary Class Piano II  
Prereq: MUS 121C with grade C or better, or consent. Must have access to piano or keyboard. Develops basic keyboard skills established during the first semester, including both reading and playing by ear. Repertoire expands to a variety of styles, including classical, pop, jazz, and rock. (Cannot be audited.) 2cr., 3hr. lect. (DA)

122D Elementary Guitar Class II  
Prereq: MUS 121D, or consent. Requires a guitar in playable condition. Investigates further guitar techniques, ensemble and solo playing. Introduces sight reading. Develops skill in interpretation. 2cr., 2hr. lect./lab (DA)

123 Beginning Voice Class  
Recommended coreq: MUS 108 and MUS 114. Previous musical training is desirable but not necessary. Introduces principles of voice production as related to problems of voice literature, both technical and interpretive, at an elementary level. 2cr., 2hr. lect./lab (DA)

124 Intermediate Voice Class  
Prereq: MUS 123, or consent. Recommended coreq: MUS 108 and MUS 114. Previous musical training is desirable but not necessary. Develops principles of voice production as related to problems of voice literature, both technical and interpretive, at an elementary level. 2cr., 2hr. lect./lab (DA)

127 History and Development of Hawaiian Music  
Prereq: HAW 101 and HWST 107 both with a grade C or better, or consent. Focuses on the history and development of traditional and acculturated vocal and instrumental Hawaiian music. Discusses Hawaiian dance genres related to the music. Examines Hawaiian music and dance as an organization of sound and movement and as a product of culture and people. Uses sound recordings, video presentations, and live performances of the various music genres discussed. (Crosslisted as HWST 176.) 3cr., 3hr. lect. (HI, DH)

128 Basic Theory and Aural Skills  
Recommended: MUS 108. Teaches basic concepts of music theory, notation, and reading applied to dictation and sight-singing. Introduces reading and sight-singing to students with limited skills in music. Develops listening and writing skills necessary to compose music. 2cr., 1hr. lect./2hr. lect./lab (DA)

203 Instrumental Ensemble  
Prereq: Consent by audition, or prior MUS 203 with grade C or better. Rehearsal and performance group for instrumentalists. Repertoire ranges from the Renaissance and Baroque to contemporary music, including major works for chorus and opera. (May be repeated without limit for credit.) 1cr., 2hr. lect./lab. (DA)

216 Intermediate Piano Class  
Prereq: MUS 121C and 122C, or consent. Further develops basic keyboard skills established during the first two semesters, including both reading and playing by ear. Expands repertoire to a variety of styles, including classical, pop, jazz, and rock. Provides experience playing a solo in a recital. 2cr., 2hr. lect./lab (DA)

217 Introduction to Music Technology  
Recommended: MUS 108, 121C, or 121D. Develops an understanding of history and application of electronics in musical composition and performance. Facilitates the creative process in music through the application of technology. 3cr., 4hr. lect./lab (DH)

218 English Composition and Music  
Recommended: MUS 108, 121C, or 121D. Teaches basic concepts of music theory, notation, and reading applied to dictation and sight-singing. Introduces reading and sight-singing to students with limited skills in music. Develops listening and writing skills necessary to compose music. 2cr., 1hr. lect./2hr. lect./lab (DA)

227 Digital Recording Techniques  
Prereq: MUS 271, or consent. Recommended: MUS 108, 121C, 121D, or ICS 161, or TCOM 261. Continues MUS 271. Focuses specifically on digital audio recording and processing techniques on the Pro Tools HD platform as they apply to the audio arts and sciences. Explores the roles of engineer and producer in the digital audio studio environment. 3cr., 4hr. lect./lab (DH)
Nursing (NURS)


12 ARCH: Diseases, Special Diets, Medications
Recommended prereq or coreq: NURS 100. Prepares the adult residential care home operator to observe the resident for signs and symptoms of common diseases, make medications available, and prepare for special diets. 1cr., 1hr. lect.

13 ARCH: Helping Therapies & Behavior Management
Recommended prereq or coreq: NURS 100. Prepares the adult residential care home operator to assist in the provision of occupational, physical, recreational, and diversional therapy. Identifies the operator’s role in fostering mental health and care of the mentally ill and mentally retarded. 1cr., 1hr. lect.

14 ARCH: Regulations, Accounts, Community Resources
Recommended prereq or coreq: NURS 100. Prepares the adult residential care home operator to implement specified regulations of Chapter 100, prepare simple accounting records, and identify community resources available to resident operators. 1cr., 1hr. lect.

50 Health Unit Coordinator
Prereq: BIOL 100 with grade C or better, and NURS 100 with grade C or better (or concurrent), or consent. Develops knowledge of medical terminology and medical abbreviations; diagnostic tests and procedures; drug categories and medications commonly used in hospitals, ambulatory and long term care facilities. Includes background information relating to physician orders. 4cr., 2hr. lect./4hr. lab

100 Nurse Assistant
Prereq: ENG 19 with grade C or better, or placement at least ENG 21, or consent. Prepares nurse assistants to care for acute, semi-acute, or convalescent clients in the hospital, long-term care, or home setting. Prepares nurse assistant to work under the supervision of a registered or practical nurse. Serves as a beginning level health care course for those interested in the health care field. Prepares nurse assistants for national certification. 6cr., 4hr. lect./6hr.

210 Health Promotion Across the Life Span
Prereq: Admission to the Nursing Program. Focuses on identifying needs of the total person across the life-span in a wellness/health promotion model of care. Introduces the role of the nurse, nursing code of ethics, and the nursing process with emphasis on learning self-health and client health practices. To support self and client health practices, students learn to access research evidence about healthy lifestyle patterns and risk factors for disease/illness, apply growth and development theory, interview clients in a culturally sensitive manner, and work as members of a multidisciplinary team utilizing reflective thinking and self-analysis. (Letter grade only.) 9cr., 3hr. lect./18hr. lab

211 Professionalism in Nursing I
Prereq: Admission to the Nursing Program. Focuses on the history of nursing practice and education. Emphasizes the ethical and legal aspects of nursing and the professional responsibilities in the practice of nursing. Nursing Professional Fee required. (Letter grade only.) 1cr., 1hr. lect.

212 Pathophysiology
Prereq: Admission to the Nursing Program. Introduces nursing students to pathophysiology concepts which serve as a foundation to understanding the basis of illness and injury and their corresponding spectrum of human response. These concepts will serve as a foundation for the formulation of clinical decisions and care planning. Nursing Professional Fee required. (Letter grade only.) 3cr., 3hr. lect.

220 Health and Illness I
Prereq: NURS 210, 211, and 212 with grade C or better, or consent. Introduces assessment and common interventions (including technical skills) for clients with illnesses common across the life span, as well as those prevalent in Hawaii. The client and family’s understanding and acceptance of their illnesses, coupled with clinical practice guidelines and evidenced-based research, are used to guide clinical judgments in nursing care. Roles of the interdisciplinary team, legal aspects of delegation, cultural issues, ethical issues, health policy, and health care delivery systems are explored in the context of nursing care. Nursing Professional Fee required. (Letter grade only.) 10cr., 4hr. lect./18hr. lab

220A Health and Illness I A
Prereq: NURS 210, 211, and 212, all with grade C or better, or consent. Introduces assessment and common interventions (including technical skills) for clients with illnesses common across the life span, as well as those prevalent in Hawaii. The client and family’s understanding and acceptance of their illnesses, coupled with clinical practice guidelines and evidenced-based research, are used to guide clinical judgments in nursing care. Roles of the interdisciplinary team, legal aspects of delegation, cultural issues, ethical issues, health policy, and health care delivery systems are explored in the context of nursing care. Nursing Professional Fee required. (Letter grade only.) 5cr., 2hr. lect./9hr. lab

220B Health and Illness I B
Prereq: NURS 220A with grade C or better (or concurrent), or consent. Introduces assessment and common interventions (including technical skills) for clients with illnesses common across the life span, as well as those prevalent in Hawaii. The client and family’s understanding and acceptance of their illnesses, coupled with clinical practice guidelines and evidenced-based research, are used to guide clinical judgments in nursing care. Roles of the interdisciplinary team, legal aspects of delegation, cultural issues, ethical issues, health policy, and health care delivery systems are explored in the context of nursing care. Nursing Professional Fee required. (Letter grade only.) 5cr., 2hr. lect./9hr. lab

230 Clinical Immersion I
Prereq: NURS 220B with grade C or better. Focuses on monitoring a variety of subjective and objective data, identifying obvious patterns and deviations, and developing prioritized intervention plans for specific populations. Implements new nursing skills with supervision. Develops own beginning leadership abilities and acknowledges delegation as needed modality to improve client care. (Letter grade only.) 4cr., 3hr. lect./9hr. lab
261 Advanced Electro-Cardiogram Interpretation
Prereq: NURS 259 (or concurrent), or licensed RN or LPN, or consent.
Develops advanced nursing theory related to interpretation of 12-lead EKG. Focuses on EKG changes that occur with myocardial infarction, axis deviation, artificial pacemaker, defibrillation, and cardioversion. 1cr., 1hr. lect.

262 Gerontological Nursing: A Tele-Health & Community-Based Perspective
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Discusses and applies nursing theory and nursing process in care of geriatric clients in varied community based settings. Focuses on the concepts of primary, secondary, tertiary prevention, including tele-health and tele-nursing interventions. 3cr., 3hr. focused disc.

262L Gerontological Nursing: A Tele-Health & Community-Based Perspective Lab
Prereq: NURS 262 (or concurrent), and ENG 22 or 55 with grade C or better or placement at ENG 100, or consent.
Applies nursing process in care of geriatric clients in varied community based settings: long term care, home care, and ambulatory care. Tele-health and tele-nursing interventions applied to the care of the elderly in community settings is stressed. 1cr., 3hr. lab

301 Introduction to Evidence-Based Practice & Health Promotion
Prereq: Registered Nurse Licensure, or consent.
Introduces the Hawaii Statewide Nursing Consortium (HSNC) competencies and spiraling of concepts and is based on the assumption of student responsibility for learning. Places emphasis on research evidence to support nursing care. 3cr., 3hr. lect.

320 Health & Illness II: Family Health
Prereq: NURS 230 with grade B or better.
Introduces the learner to assessment and common interventions (including relevant technical procedures) for care of clients across the lifespan, including pregnancy and childbirth. In this course the family is the client and is viewed in both health and illness. Nursing practice is guided by combinations of family theories and associated assessment tools. Clinical practice guidelines and/or standardized procedures in normal developmental processes of the family and in disease and illness are considered in relationship to their impact on providing culturally sensitive, client-centered care. (Letter grade only.) 9cr., 3hr. lect./18hr. lab

360 Health & Illness III
Prereq: NURS 320 with grade C or better.
Builds on Health and Illness I and II, focusing on more complex and/or unstable client care situations some of which require strong recognition skills and rapid decision-making. The evidence base supporting appropriate focused assessment and effective, efficient nursing intervention is explored. Life span and developmental factors, cultural variables, and legal aspects of care frame the ethical decision-making employed in client choices for treatment or palliative care within the acute care, psychiatric, and home health settings. Case scenarios incorporate prioritizing care needs, delegation and supervision, family and client teaching for discharge planning, home health care and/or end of life care. (Letter grade only.) 9cr., 3hr. lect./18hr. lab

366 Advanced Cardio-Pulmonary Theory
Prereq: NURS 360 with grade C or better (or concurrent), or licensed RN, or consent.
Develops advanced nursing theory related to the care of clients and the support of significant others and the care for clients with cardiopulmonary adaptations. Focuses on anatomy, physiology, and physical assessment of the cardiac and respiratory systems. Applies the nursing process to specific cardiac and respiratory disorders. 3cr., 3hr. lect.

Occupational Safety & Health (OSH)

20 Introduction to Occupational Safety & Health I
Familiarizes student with practical applications of the William-Steiger Occupational Safety and Health Act of 1970 USDL. 1cr., 15hr. lect. per semester
### Oceanography (OCN)

**A. Coopersmith, J. Pye**

**64 Hawaiian Marine Life Identification**  
Recommended: Enrollment in Marine Option Program.  
Teaches field identification of fishes, invertebrates, and marine algae. Studies ecology of coral reef species. Requires memorization of scientific names. Practices identification in the classroom and in the ocean for field research purposes. *This course does not fulfill Natural Science core requirements. This course does fulfill requirements for acceptance into Quantitative Underwater Ecological Surveying Techniques (QUEST).* 1cr., 1hr. lect./lab

**101 Intro to Marine Option Program**  
Explores the University of Hawai‘i system wide Marine Option Program through HITS interactive television, discussions, and field trips. *This course does not fulfill Natural Science core requirements.* 1cr., 1hr. lect.

**140 Open Water SCUBA Certification**  
Covers the full spectrum of diving activities. Discusses equipment and its maintenance, dive physiology and physics, safety procedures, dive planning, dive tables, and environmental conditions. Teaches skills for safe diving by means of classroom lectures and open-water sessions, including seven ocean dives. Students successfully completing the course receive an Open Water Certification card from an internationally recognized SCUBA training organization. *Total cost of $145 includes equipment rental, textbook, workbook, diving logbook and tables, and certification. (Credit/No-Credit only.)* 2cr., 48hr. per semester

**191v Field Experience in Marine Naturalist Training**  
Prereq: Enrollment in Certificate of Competence Marine Naturalist I or II program or Marine Option Program, or consent. Provides internship experiences in marine-related agencies and businesses. *This course does not fulfill Natural Science core requirements. (May be repeated for a maximum of 9 credits.)* 1-3cr., 1-3hr. lect./lab

**201 Science of the Sea**  
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, and MATH 18 with grade C or better or placement at least MATH 82, or consent.  
Introduces basic concepts of geological, physical, chemical, and biological oceanography. Emphasizes relationships between land-based and marine-based sciences. 3cr., 3hr. lect.  (DP)

**201L Science of the Sea Laboratory**  
Prereq: OCN 201 with grade C or better (or concurrent); and at least MATH 82 with grade C or better or placement at least MATH 100, or consent.  
Introduces instrumentation and methods used in oceanographic observations and research. Demonstrates oceanographic principles through laboratory and field data collection and analysis. 1cr., 3hr. lab.  (DY)

**250 Statistical Applications in Marine Science**  
Prereq: OCN 201 or ZOOL 200 either with grade C or better, or consent.  
Introduces design of field experiments including collection and analysis of ecological data. Uses computer software for statistical analysis. Requires completion of a project using data collected in the field followed by both written and oral reports. 3cr., 2hr. lect./2hr. lab

**270 Communicating Ocean Sciences**  
Prereq: OCN 201 or ZOOL 200 either with grade C or better, or enrollment in Marine Option Program, or consent.  
Combines instruction on effective ways of communicating scientific knowledge with direct experiences in K-12 classrooms or informal education sites. Emphasizes and demonstrates inquiry-based teaching methods and learning pedagogy. 3cr., 3hr. lect.

**293v Ocean Internships & Research**  
Prereq: Enrolled in Marine Option Program.  
Prereq or coreq: OCN 201 and ZOOL 200. With faculty guidance, students design and carry out marine-related internships, practical research projects, or field experiences on or off campus. *This course does not fulfill Natural Science core requirements. (May be repeated for a maximum of 9 credits.)* 1-3cr.

### Pacific Island Studies (PACS)

**108 Pacific Worlds: An Introduction to Pacific Island Studies**  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Introduces students to the geography, societies, histories, cultures, contemporary issues, and the arts of Oceania, including Hawaii. Combines lecture and discussion that emphasizes Pacific Islander perspectives and experiences. 3cr., 3hr lect.  (HI, DS)

### Pharmacology (PHRM)

**A. Scharnhorst**

**103 Introduction to Pharmacology**  
Prereq: BIOL 100 with grade C or better, or consent. Recommended: NURS 100 with grade C or better.  
Surveys scope of pharmacology including drug standards, classifications, common drugs within each classifications, drugs commonly used in the prevention, diagnosis, and treatment of disease, legislation of drugs, and administration of drugs. 1cr., 3hr. lect. for 5 wks.

**104 Pharmacological Treatment of Disease**  
Prereq: PHRM 103 with grade C or better, or consent. Recommended: NURS 100 with grade C or better.  
Explains medications commonly used in the prevention, diagnosis, and treatment of diseases. Discusses pharmacological actions, side effects, and related responsibilities.  (Letter grade only.) 1cr., 3hr. lect. for 5 wks.

**105 Administration of Medications**  
Prereq: PHRM 104 and NURS 100 both with grade C or better, or consent.  
Applies basic concepts required for medication administration as a delegated task in community-based settings such as assisted living, day care, or care homes. Demonstrates choice of equipment, proper technique, hazards, complications, and patient care. Administer subcutaneous, intradermal injections, preparation and administration of oral medications, and immunizations.  (Letter grade only.) 1cr., 6hr. lect./lab for 5 wks.
106 Introduction to Pharmacy Technology
Prereq: BIOL 100, and BUSN 189 or MATH 18 or higher with grade C or better, or consent.
Introduces students to the role and responsibilities of the pharmacy technician in the current health care environment. Describes basic pharmacy functions in retail, institutional, home health, and ambulatory care settings. (Letter grade only.) 3cr., 3hr. lect. (DH)

203 General Pharmacology
Prereq: ZOOL 141, or BIOL 141 (HawCC), or BIOL 243 (UH-Hilo), or ZOOL 240 (LCC), or consent.
Discusses drugs with emphasis on sites and mechanism of action, toxicity, fate, and uses of major therapeutic agents. 3cr., 3hr. lect. (DB)

Philosophy (PHIL)
B. Clark

100 Introduction to Philosophy: Survey of Problems
Introduces the great philosophical issues, theories, and controversies. 3cr., 3hr. lect. (DH)

101 Introduction to Philosophy: Morals & Society
Recommended: PHIL 100.
Introduces issues of social and individual values, obligations, rights, and responsibilities. 3cr., 3hr. lect. (DH)

102 Introduction to Philosophy: Asian Traditions
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Explores universal philosophical themes and problems from the Asian perspective. Focuses on Indian, Chinese, and Japanese traditions. 3cr., 3hr. lect. (DH)

109 Reasoning and Critical Thinking
Recommended: ENG 100, and ENG 102 or 210.
Studies informal logic, practical reasoning, argument, and the use and misuse of language. Emphasizes the development of critical thinking skills. 3cr., 3hr. lect. (DH)

110 Introduction to Logic
Prereq: ENG 100 with grade C or better, or consent.
Develops the basic technique of logical analysis. Emphasizes symbolic logic, truth, validity, formal and informal fallacies. Examines inductive and deductive reasoning, and the criteria of evidence for reliable beliefs. Students who seek to apply PHIL 110 to fulfill the AA up to the 2007 catalog (and appropriate AS and AAS) degree requirements in Quantitative Reasoning must place into MATH 100 or higher. 3cr., 3hr. lect. (FS)

301 Ethical Theory
Prereq: ENG 100, and ENG 210 or 316 or PHIL 100, 101, 102, or 110, both with grade C or better, or consent.
Investigates problems and methods in theory of moral conduct and decision-making. Discusses primary source materials, meta-ethics, and normative theories as well as applied ethics. 3cr., 3hr. lect. (DH)

323 Professional Ethics
Prereq: ENG 100, or consent.
Examines major ethical theories and principles relevant to decision-making in professional situations. Includes experiential and self reflective methodologies as well as theoretical perspectives. 3cr., 3hr. lect. (DH)

Physics (PHYS)

50 Technical Physics
Prereq: MATH 18 with grade C or better, or placement at least MATH 82, or consent.
Introduces principles of mechanics and properties of matter, heat, sound, electricity, magnetism, and light. Also introduces methods of measurement using both mechanical and electrical instruments. Emphasizes practical applications of physical principles. 3cr., 3hr. lect./disc./demonstration

105 Principles of Technology
Prereq: MATH 82 with grade C or better or placement at least MATH 103, or consent.
Presents fundamental theories and problem solving methods in physics as they relate to technology and its applications. Introduces experimental methods in physics and applications of modern technology to experimental science. (Letter grade only.) 4cr., 3hr. lect./3hr. lab (DP, DY)

151 College Physics I
Prereq: MATH 140 or placement at least MATH 205.
Presents fundamental theories and problem solving methods in mechanics, heat, and sound. Emphasizes applications of physical principles. Introduces experimental methods in mechanics, heat, and sound. 4cr., 3hr. lect./3hr. lab (DP, DY)

152 College Physics II
Prereq: PHYS 151.
Discusses electricity, magnetism, optics, and modern physics. Introduces experimental methods in electricity, magnetism, and optics. The second of a two-semester course in college physics. 4cr., 3hr. lect./3hr. lab (DP, DY)

170 General Physics I
Prereq: MATH 205 (or concurrent).
Presents fundamental principles in classical mechanics, thermodynamics and wave motion. Emphasizes the mathematical techniques used in the explanation of physical phenomena. Introduces experimental methods in mechanics, heat, and sound with the emphasis on error analysis, measurement techniques, and report writing. For students majoring in the physical sciences, engineering, or mathematics. 5cr., 4hr. lect./3hr. lab (DP, DY)

219 Physics for Engineering Technology
Prereq: PHYS 105 or higher, and ETRO 112, both with grade C or better, or consent. Coreq: MATH 219 and ETRO 305
Applies graphical simulations, computational analysis, and computer modeling in the study of electromagnetic systems. Studies electric charges and electromagnetic field theory. Investigates Maxwell’s equations by utilizing applied graphical simulations and computational analysis. Includes hands-on exercises and inquiries. 3cr., 4hr. lect./lab (DP, DY)

272 General Physics II
Prereq: PHYS 170 with grade C or better, and MATH 206 (or concurrent).
Presents fundamental principles in electricity, magnetism, and geometrical optics. Introduces experimental methods in electricity, magnetism, electronics, and optics with emphasis on error analysis, measurement techniques, and report writing. For students majoring in the physical sciences, engineering, or mathematics. 4cr., 3hr. lect./3hr. lab (DP, DY)

Political Science (POLS)
D. Haytko-Paoa

110 Introduction to Political Science
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Studies political institutions, systems, behavior, and issues. Analyzes American national government. Includes study of presidency, interest groups, elections, and general theories of the American political system. 3cr., 3hr. lect. (DS)
120  Introduction to World Politics  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Studies current topics in international politics from cross-national perspectives.  
Examines foreign policy of the United States.  Introduces students to the political, cultural, social, and economic forces shaping the new global order.  
3cr., 3hr. lect.  (DS)

180  Intro to Hawaiian Politics  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Examines contemporary Hawai‘i political institutions, processes, issues, and personalities at the State and County levels, Hawai‘i’s place in the national and international political arenas, and the future of politics in Hawai‘i.  Emphasis is placed on citizen roles and responsibilities in local politics.  
3cr., 3hr. lect.  (HI, DS)

Psychology (PSY)  
R. Azman, L. Yankowski

100  Survey of Psychology  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Surveys the major areas in the field of psychology.  Analyzes the major perspectives in the field and how these perspectives apply to human behavior.  Studies memory, learning, personality, therapy, and abnormal behavior.  
3cr., 3hr. lect.  (DS)

103  Introduction to Psychological Writing and Research Skills  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Recommended coreq or prereq: PSY 100.  
Introduces students to the APA writing style and format for writing term papers and conducting research in psychology.  Prepares students with skills necessary to learn and write about basic and complex psychological concepts.  
2cr., 2hr. lect.  (DS)

170  Psychology of Adjustment  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Examines current psychological research in the field of adjustment and provides various coping mechanisms in dealing with life’s problems.  Stresses personal as well as societal concerns.  Studies stress, love, marriage, divorce, suicide, death and dying, and psychological therapies.  
3cr., 3hr. lect.  (DS)

202  Psychology of Women  
Prereq: PSY 100 with grade C or better, or consent.  Recommended: ENG 100 with grade C or better, or consent.  
Surveys topics in psychology relevant to women’s lives: socialization of gender, mental health, achievement, motivation, lifespan issues, cultural topics, and other related issues.  
3cr., 3hr. lect.  (DS)

213  Statistical Techniques  
Prereq: PSY 100 and MATH 100 or 115 both with grade C or better, or consent.  
Teaches students to interpret statistics successfully by providing sound decision-making skills in analyzing various research and applied statistical problems found throughout the psychological discipline.  Examines descriptive statistics, z-tests, t-tests, F tests, chi-square tests, and correlational and regression analyses.  Explains ANOVA.  Denotes uses and abuses of statistics.  
4cr., 3hr. lect./3hr. lab  (DS)

214  Research Methods  
Prereq: PSY 213 with grade C or better, or consent.  
Recommended: PSY 103 with grade C or better.  
Surveys knowledge needed in reading, developing, and interpreting psychological research.  Examines ethical issues in research, writing in APA style, and the scientific method using multiple research designs.  
4cr., 3hr. lect./3hr. lab  (DS)

240  Developmental Psychology  
Prereq: PSY 100 with grade C or better, or consent.  Recommended: At least ENG 100 with grade C or better.  
Examines the principle features of each life stage from prenatal through aging and death.  Considers emotional, cognitive, physical, and social development at each stage.  
3cr., 3hr. lect.  (DS)

250  Social Psychology  
Prereq: PSY 100, or consent.  
Introduces methods of research in social psychology and covers the topics of attitudes and attitude change; prejudice and discrimination; social perception, affiliation, attraction, and liking; prosocial behavior and altruism; aggression and violence; compliance and obedience; group structure and dynamics; environmental and urban influences.  
3cr., 3hr. lect.  (DS)

251  Human Sexuality  
Prereq: PSY 100, or consent.  
Examines topics in the field of human sexuality including anatomy/physiology, sexual response, and sexual themes in society.  Emphasizes understanding of one’s sexuality through decision-making and communication skills.  
3cr., 3hr. lect.  (DS)

253  Conflict Resolution & Mediation  
Prereq: PSY 100 or BUS/COM 130 or COM 145 any with grade C or better, or consent.  Recommended: ENG 100 with grade C or better.  
Examines the reasons for conflict and the different approaches for seeking resolution for conflict.  Studies personal and societal value systems, the psychology of how people respond to conflict, the impact of culture on conflict styles, communication skills useful in dealing with conflict, and alternative resolution strategies.  Practices mediation skills as a third party intervention method.  (Crosslisted as COM 215.)  
3cr., 3hr. lect.  (DS)

260  Psychology of Personality  
Prereq: PSY 100, or consent.  
Studies major personality theories in the field of psychology.  Compares and contrasts each theory based on specific criteria.  Examines how personality could be understood within a cultural-social environment.  
3cr., 3hr. lect.  (DS)

353  Conflict Management & Resolution  
Prereq: Either PSY 100 or SOC 100 with grade C or better, and one of (with grade C or better): BUS/COM 130, COM 145, COM 210, or PSY 253/COM 215; or consent.  
Examines human communication in relational conflict.  Analyzes the relationships among personal history, culture, gender, power, and communication.  Applies practices of Alternative Dispute Resolution (ADR) processes in assessing and intervening in conflict situations using mediation and negotiation techniques in both personal and professional contexts.  Includes Western, Eastern, and Hawaiian approaches to conflict management and resolution.  (Crosslisted as COM 353)  
3cr., 3hr. lect.  (DS)

Religion (REL)  
B. Clark

150  Intro to the World’s Major Religions  
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.  
Introduces basic elements of the world’s major religions: Hinduism, Buddhism, Taoism, Confucianism, Judaism, Christianity, and Islam.  Emphasizes themes in the great Asian traditions.  
3cr., 3hr. lect.  (FBC)
205 Hawaiian Religion
Examines the religions, ethics, and morals of Native Hawaiians from migration period to the post-contact era. The concepts of Kapu, Mana, and Kahuna are investigated and integrated with those of dualism and primordial gods. 3cr., 3hr. lect. (HI)

### Sociology (SOC)

#### 100 Survey of General Sociology
Introductory study of basic social relationships. Treats socialization, concept of culture, social stratification, prejudice, cultural change, and trends in modern society. 3cr., 3hr. lect. (DS)

#### 218 Introduction to Social Problems
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Discusses and analyzes a number of modern social problems. Evaluates proposed solutions to problems. 3cr., 3hr. lect. (DS)

### Science (SCI)

#### 121 Introduction to Science: Biological Science
Prereq: ENG 22 with grade C or better or placement at ENG 100.
Introduces characteristics of science, historical development of scientific concepts, and interactions of society with science, illustrated by topics from biological sciences. (Crosslisted as BIOL 101.)
4cr., 3hr. lect./3hr. lab (DB, DY)

#### 122 Introduction to Science: Physical Science
Prereq: ENG 22 with grade C or better or placement at ENG 100.
Introduces characteristics of science, historical development of scientific concepts, and interactions of society with science, illustrated by topics from physical sciences.
4cr., 3hr. lect./3hr. lab (DB, DY)

### Social Science (SSCI)

#### 135 Informal Reasoning
Studies informal logic, fallacious reasoning, argument construction, and the use and misuse of language. Emphasizes development of critical thinking skills useful in reasoning about everyday political and social issues. 3cr., 3hr. lect.

### Spanish (SPAN)

#### 101 Elementary Spanish I
Introduces speaking, listening, reading, and writing skills of basic Spanish. Includes basic sentence structures. Designed for students with little or no Spanish background.
4cr., 4hr. lect. (HSL)

#### 202 Intermediate Spanish II
Prereq: SPAN 201, or consent.
Continues to explore different literary forms. 3cr., 3hr. lect. (HSL)

#### 272 Hispanic Culture
Prereq: SPAN 201 with grade C or better, or consent.
Acquaints students with a variety of Hispanic countries and their culture, using film, short story, poetry, CD-ROM, and guest speakers. Uses previously acquired Spanish language skills to explore and appreciate Hispanic culture. Taught in Spanish and English. 3cr., 3hr. lect.
251 Principles of Effective Public Speaking
Prereq: ENG 22 with grade C or better, or placement at ENG 100 or consent. Recommended: ENG 100.
Develops speech composition and delivery skills by providing extensive practice in preparing and presenting effective public speeches. Emphasizes critical thinking, clear reasoning, appropriate support, organization, outlining, audience analysis, and lively delivery skills. 3cr., 3hr. lect./disc. (DA)

Sustainable Science Management (SSM)
T. Botkin, J. Taylor

101 Introduction to Science of Sustainability
Prereq: ENG 19 with grade C or better or placement at least ENG 22, and MATH 18 or placement at least MATH 82; or consent. Recommended: Placement at ENG 100.
Introduces the science of sustainability including vocabulary and basic concepts in green building, water and wastewater, waste management, sustainable land use and planning, unique dimensions to island sustainability, transportation, sustainable materials choices and supply chains, energy efficiency, and policy strategies. 3cr., 3hr. lect. (DP)

201 Sustainable Building Design, Construction and Operations
Prereq: SSM 101 and ENRG 101 both with grade C or better, or consent.
Introduces principles of green building design and operations, including site planning and zoning, construction practices, energy efficiency, economics of green building, benefits and barriers, and the LEED rating system. 3cr., 3hr. lect. (DP)

202 Sustainable Island Communities
Prereq: SSM 101, or consent.
Introduces and examines concepts for sustainability on islands, specifically Hawai‘i. Examines unique aspects to island sustainability including land use planning, waste management, sustainable tourism, renewable energy resources, and natural resource management. Compares island communities to sustainable urban environments. 3cr., 3hr. lect. (DP)

301 Sustainable Organizations
Prereq: SSM 202, MATH 115, and MATH 135 all with grade C or better, or consent. Construct and analyze a business case framework for sustainability-related activities; calculate the carbon footprint of a facility, organization, or set of purchases; identify sustainability metrics for an organization; and perform a sustainability assessment of an organization. 3cr., 3hr. lect. (DP)

302 Environmental Health
Prereq: SM 202, BIOL 124, BIOL 124L, CHEM 151, and MATH 135, all with grade C or better, or consent. Recommended: CHEM 161 & 161L.
Evaluates the impact that chemical, physical, and biological agents have on environmental ecosystems. Examines how political, economic, and demographic diversity affects the natural environment with particular emphasis on island settings. 3cr., 3hr. lect. (DB)

375 Renewable Energy Conversions and Processes
Prereq: SSM 201, CHEM 151, ENRG 103, and MATH 203, all with grade C or better, or consent. Analyzes and demonstrates systems conversion of power sources to energy. Examines conversions of solar photovoltaic cells, wind turbines, wave technology, tidal technology, small and large scale hydro power technology, bio-mass, bio-fuel, waste to energy, and fuel cell technology. 3cr., 3hr. lect.

392v Sustainability Internship
Prereq: SSM 201 and SSM major, or consent.
Applies skills to workplace in an occupation within the student’s area of interest in sustainable science management. Provides practical experience to develop knowledge and skills in the application of theory to actual problems in a non-classroom setting. Develops employment skills in the sustainable science management areas of energy, renewable energy, energy management, waste management, water and wastewater, policy, and related fields. Prepares students for the senior capstone project. Evaluation performed jointly by instructor and employment supervisor. 3cr., 3hr. lect.

401 Environmental Law, Policy and Justice
Prereq: SSM 101, BLAW 200, SOC 100, and ENG 209, all with grade C or better; or consent.
Introduces legal and policy issues of environmental protection and decision-making. Explores the interplay of property rights, ecosystems integrity, interest group politics and jurisdictional sovereignty in the formulation and implementation of federal, state, local, and international environmental policy, keeping in the context of sustainability goals. 3cr., 3hr. lect. (DS)

402 Water Resources Management
Prereq: SSM 202, MATH 203, BIOL 124, 124L, and CHEM 151, all with grade C or better, or consent.
Provides technical skills and principles in the areas of hydraulics, hydrology, water quality, pollution, distribution systems, and basic wastewater treatment processes. Examines ways to manage fresh water resources with emphasis on island water and wastewater management techniques. Introduces water quality techniques and parameters as well as wastewater treatment process and related policies. Discusses water reuse and recycling practices in Maui County. 3cr., 3hr. lect. (DP)

403 Renewable Energy Integration
Prereq: SSM 301, 375, 401, MATH 203, and MGT 310, all with grade C or better, or consent.
Analyzes and describes issues for integrating renewable energy onto a grid structure, the fundamentals of a smart grid and energy storage technologies. Introduces software tools applicable to a smart grid such as a OSI-Pi system software and ES Select tool. Explores electrical energy storage technologies and feasibility for intended applications. 3cr., 3hr lect. (DP)

495 SSM Capstone I
Prereq: SSM 301, 302, 375, 401, 402, MGT 322, and ENG 316, all with grade C or better, or consent.
Provides an opportunity to demonstrate the techniques and understanding developed throughout the BAS Sustainable Science Management program in a final project. Includes energy auditing, computational analysis, sustainable strategic planning and financial assessment, water and resource conservation, impacts to human and ecosystem health, land use and transportation, policy and regulatory analysis, and social equity and ethical considerations. 3cr., 3hr lect.
496 SSM Capstone II  
Prereq: SSM 495 with grade C or better, or consent.
Provides an opportunity to demonstrate the techniques and understanding developed throughout the BAS Sustainable Science Management program in a final project. Includes energy auditing, computational analysis, sustainable strategic planning and financial assessment, water and resource conservation, impacts to human and ecosystem health, land use and transportation, policy and regulatory analysis, and social equity and ethical consideration. 3cr., 3hr lect.

Telecommunications (TCOM)  
M. Albert  
261 Introduction to Studio Production  
Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent. Introduces the student to the world of TV studio production. Designed to give a working knowledge of video as it is utilized in broadcasting, cable operations, corporations, education, and independent production. Emphasizes video as a profession, video communications, and the proper use and understanding of studio equipment. 3cr., 1hr lect./5hr lab (DA)

Topics & Issues  
90v, 190v, 290v, 390v, 490v.  
See section on Special Curricula for details. Note: For 190v courses in the Humanities, up to three credits of different topics may be used as general electives in the AA, AS, and AAS degrees; up to three additional credits may be used to satisfy a Humanities requirement, for a total of no more than six Topics credits.

Welding (WELD)  
19B Introduction to Welding for Trades  
Coreq: WELD 19C or WELD 19D. Introduces theory and practice of gas welding of ferrous metals. Includes procedures in flat, horizontal, and overhead work. Designed as a support course for trades. 1cr., 2hr lect./lab

19C Welding for Automotive Applications  
Prereq: WELD 19B. Introduces theory and practice of arc welding of ferrous metals dealing with automotive applications. Includes procedures in flat, horizontal, and overhead work. Designed as a support course for trades. 1cr., 2hr lect./lab

19D Welding for Construction Applications  
Prereq: WELD 19B. Introduces theory and practices of arc welding of ferrous metals dealing with building construction applications. Includes procedures in flat, horizontal, and overhead work. Designed as a support course for trades. 1cr., 2hr lect./lab

32C Introduction to TIG Welding  
Prereq: WELD 32B, or consent. Introduces theory of Tungsten Inert Gas (TIG) welding of ferrous and non-ferrous metals. Develops practical skills in TIG welding techniques and emphasizes safe equipment operating procedures. 2cr., 4hr lect./lab

Work Practicum (WP)  
WP 151v.  
See section on Special Curricula for details.

Zoology (ZOOL)  
B. Butler, S. Calder, A. Coopersmith  
101 Principles of Zoology  
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, or consent. Surveys major animal groups with emphasis on structure, physiology, development, reproduction, evolution, ecology, behavior, and interactions with humans. (Crosslisted as BIOL 103.) 4cr., 3hr lect./3hr lab (DB, DY)

141 Human Anatomy & Physiology I  
Prereq: BIOL 100 or ZOOL 101 or BIOC 241 or BIOL 101 or SCI 121 or high school biology any with grade B or better, and ENG 22 or 55 with grade C or better or placement at ENG 100, or consent. Covers anatomy, physiology, and biochemistry of humans including terminology, cell structure, tissues, skin, and the skeletal, muscular, and nervous systems. 4cr., 3hr lect./3hr lab (DB, DY)

142 Human Anatomy & Physiology II  
Prereq: ZOOL 141, or consent. Covers anatomy, physiology, and biochemistry of humans including metabolism, genetics, and the cardiovascular, respiratory, digestive, excretory, endocrine, and reproductive systems. 4cr., 3hr lect./3hr lab (DB, DY)

200 Marine Biology  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent. Surveys physical and biological characteristics of the marine environment. Discusses local marine flora and fauna. Surveys topics including fisheries, aquaculture, pollution, and marine resources. 4cr., 3hr lect./3hr lab (DB, DY)