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, Kihei, Lahaina, Lana‘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 portion any course offered through the University of Hawai‘i system. Many instructors require the use of Laulima. You will need your username and password to log in and see your courses. It is accessed by computer using the internet. Use the Mozilla Firefox browser (not Internet Explorer) to go to: laulima.hawaii.edu

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 (see a counselor about transferring prerequisites that were completed outside the system into the College Banner database); 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 evaluations, or 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 UH System Wide Foundations and Diversifications Designations
The following codes are used UH System-wide 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
HAP Hawaiian, Asian, Pacific Issues

Codes for UHMC AA Degree Requirements
The following codes are category designations for AA Requirements (pages 13-14) and Course Descriptions (pages 90-142)
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
FN Foundations Numeracy
FO Foundations Oral
IN Individual (Human Understanding)
CO Community (Human Understanding)
HE Human Expression
EA Environmental Awareness
EL Environmental Awareness Lab (course satisfies the Lab requirement)
AP Asia/Pacific requirement
HI Hawai‘i Emphasis requirement
Accounting (ACC)

D. Grooms, R. Klein, J. Moore

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.

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 Criminal Investigation
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 relationship 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. (CO)

220 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.

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.

230 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.

231 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.
Examines Hawaiian resource conservation practices to current governmental policies, rules, and regulations. Introduces Native Hawaiian resource conservation practices to current governmental policies, rules, and regulations. 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.

293 Administration of Justice Internship
Prereq: AJ 101 with grade C or better, 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 without limit for credit.) 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., 1 hr. lect./2 hr. lab

104 Food Safety and 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., 1 hr. lect.

113 Organic Certification
Outlines the requirements for certified organic farms. Examines the process of transitioning to organic farming. Examines and evaluates record keeping requirements and accepted products and practices. 1cr., 1 hr. 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., 2 hr. lect./2 hr. lab (EA, EL, 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., 2 hr. 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., 2 hr. lect./2 hr. lab (EA, DB, DY)

194v Turfgrass Work Practicum
Prereq: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent.
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.) 1-3 cr., 5-15 hr. 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. 4 cr., 3 hr. lect./2 hr. lab (EA, EL, 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. 3 cr., 2 hr. lect./2 hr. 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. 3 cr., 3 hr. 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. 1 cr., 3 hr. 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. 2 cr., 3 hr. 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., 2 hr. lect./2 hr. 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., 2 hr. lect./6 hr. lab

251 Sustainable Crop Production
Prereq or coreq: AG 103 and AG 104, 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., 2 hr. lect./6 hr. 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., 6 hr. 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 Hawaii. 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. 4hr., 6hr. lect./lab (EA, HI)

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. 3cr., 2hr. lect./2hr. 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 Hawaii. 3cr., 2hr. lect./2hr. lab

264 Plant Propagation
Prereq: AG 200, or consent.
Introduces theoretical and applied aspects of sexual and asexual reproduction of plants. Propagation of selected plants by seed, cuttings, grafting, budding, layering, and division. 3cr., 2hr. lect./2hr. 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. 4cr., 6hr. lect./lab (EA, EL, 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 Hawaii. Includes environmental factors, structures, materials, sanitation, pests, and diseases. 3cr., 2hr. lect./2hr. lab

269 Ornamental Plant Materials
Presents identification, use, propagation, and cultural requirements of trees, shrubs, vines, and ground covers used in Hawaiian landscapes. 3cr., 2hr. lect./2hr. lab

281 Weed Science
Recommended: Placement at least ENG 22, and MATH 18 with grade C or better or placement at least MATH 82, or consent. Teaches weed classification, identification, ecology, and principles of weed control. Emphasizes properties, uses, action, and safety of herbicides and pesticides. 3cr., 2hr. lect./2hr. lab

Anthropology (ANTH)

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

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

210L 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. 1cr., 3hr. lab (EA, EL)

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 make-up, origins of that make-up, and the pre-history of human biological and cultural development. 3cr., 3hr. lect. (EA, IN, 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 human health and disease and how it relates to cultural practices, belief systems, and environmental factors. Seeks to bridge the health sciences and anthropology by focusing on how social and environmental factors affect health. Explores alternative ways of understanding and treating disease. Includes ethnomedicine, the traditional healing and health practices of a selection of cultures, paleopathology, epidemiology, and human adaptation. 3cr., 3hr. lect.

235 Peoples of the Pacific
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 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.) 3cr., 3hr. lect. (AP, CO, DH)

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. 4cr., 7hr. lect./lab
Architectural Engineering & CAD Tech (AEC)

C. Atay

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 drawing. 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. 4cr., 2hr. 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 (HE)

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., 3hr. 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, application 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 photo realistic computer images of buildings, components, and project sites. 3cr., 1hr. lect./4hr. lab

127 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. (CO, HE, 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 (HE, 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

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 (HE, DA)

115 Introduction to 2D Design
Recommended: ART 101.
Introduces the theory and practice of composing and arranging twodimensional 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 (HE, 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 (HE, DA)

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

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

170 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. (CO, DH)

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 (HE, 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 (HE, 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 (HE, 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 studying the foundations of major developments in the late 19th century and early 20th century painting styles. Examines and compares the two parallel tendencies of Structuralism and Expressionism. Teaches control and management of pictorial space and paint application. Develops personal sources of imagery, and explores the effects of scale and color interaction in personal work. 3cr., 6hr. lect./lab (HE, DA)

224 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 skills 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 (HE, DA)

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. (EA, 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 (EA, EL, 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.
Presents sheet metal repair using 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.
Explains the theory and principle of the basic skills required for automotive sheet metal panel repair. 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

**20E Basic Auto Refinishing**
Prereq: ABRP 20E, or consent.
Introduces the repairing of damaged plastic and fiberglass panels and components. 2cr., 4hr. lect./lab

**20F Refinish Equipment & Techniques**
Prereq: ABRP 20E, 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

**20E Automotive Trim and Glass**
Prereq: ABRP 20EFGHI and ABRP 22EFGHI, 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

**20F Dimensioning Collision Damage**
Prereq: ABRP 20F, 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

**20G Frame Alignment & Repair**
Prereq: ABRP 20G, or consent.
Analyzes corrective procedures in aligning conventional framed and unitized constructed vehicles. 2cr., 4hr. lect./lab

**20H Structural Sectioning**
Prereq: ABRP 20G, or consent.
Presents theory and practice of structural sectioning of conventional framed and unitized constructed vehicles. 2cr., 4hr. lect./lab

**20I Major Repairs Practicum**
Prereq: ABRP 20H, or consent.
Applies exercises in analysis and corrective methods discussed in ABRP 40EFGH on live jobs. 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 41EFGHI, or consent.
Applies specialized techniques in major collision repair on live jobs. 2cr., 4hr. lect./lab

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

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

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

**44I Advanced Management and Estimating**
Prereq: ABRP 41EFGHI, 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. Examines principles of operation, diagnosis, and repair of fuel systems and emission systems. Explains use of automotive tools and testing equipment. 4cr., 8hr. lect./lab

#### 40C Electrical/Electronics I
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. Coreq: AMT 41C. Recommended: At least 10th grade reading skill, or consent. Examines principles of operation, diagnosis, service and repair of the electrical/electronic system. Covers the electron theory, circuits and schematics, batteries, starting and charging system. Explains use of automotive tools and testing equipment. 4cr., 8hr. lect./lab

#### 40G Ignition 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, and repair of the ignition and computer systems. Explains the use of automotive tools and equipment. 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. Studies principles of operation, diagnosis, service and repair of electrical/electronic systems. Covers electrical/electronic lighting and accessory systems, including motor driven accessories, supplemental restraints, cruise control, entertainment, and module communications. Explains the use of automotive tools and testing systems. 4cr., 8hr. lect./lab

#### 43 Heating and Air Conditioning
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 automatic air conditioning, heating, and automatic climate control systems. Explains use of automotive tools and testing equipment. 3cr., 6hr. 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 standard 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

Introduction to Biochemistry (BIOC)
B. Butler, S. Calder, C. Hornick, 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. (EA, 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. (EA, DP)

Biology (BIOL)

100 Human Biology
Prereq: ENG 22 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. (IN, 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 (EA, EL, 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 BOT 101.) 4cr., 3hr. lect./3hr. lab (EA, EL, 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 (EA, EL, 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. Discuss pre-Polynesian establishment of organisms, origins of endemic species, and the influences of human populations on island ecosystems. 4cr., 3hr. lect./3hr. lab (EA, EL, 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. (EA, 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 (EA, EL, 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.  (IN, 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 an 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., 3hr. lab  (EA, EL, DY)

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

171L Introductory Biology I Laboratory  
**Prereq or coreq:** CHEM 151 or 161, or consent.  
Coreq: BIOL 171I.  
Laboratory to accompany BIOL 171.  
1cr., 3hr. lab  (EA, EL, DY)

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

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 use of corals as resources and the impacts of human activities on coral reefs.  
4cr., 3hr. lect./3hr. lab  (EA, EL, HI, DB, DY)

225 Fundamentals of Cell & Molecular Biology  
**Prereq:** BIOL 171, CHEM 161 & 161L, 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 functions, 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  (EA, EL)

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.
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. (FO, CO, 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.

301 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.

420 Global Business Strategies
Prereq: MKT 300 and MGT 310, or consent.
Focuses on understanding the global environment and the interconnections of cultural, political, legal, economic, and ethical systems. Identifies forms of business ownership and international opportunities. Explores basic concepts underlying international finance, management, marketing, and trade relations. 3cr., 3hr. lect.

495 ABIT Capstone I
Prereq: BUS 318, BUS 320, MGT 400, and ICS 418, all with grade C or better, or consent.
Provides the skills necessary to utilize and demonstrate the tools and understanding developed during the ABIT program. Includes strategy formulation and implementation, competitive analysis, and e-commerce as models for problem solving and decision-making in an organizational setting. A comprehensive business and marketing plan is required. 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 the Capstone I project using latest Internet technologies. 3cr., 3hr. lect.

Business Technology (BUSN)
C. Pascual

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 of a calculator to perform business computations. 1cr., 1.25hr. lect./lab, 1hr. 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., 3.5hr. 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. Integrates knowledge of the Internet and the 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 (FI)

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.
This course 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 will gain insight into customer behavior and attitudes and will develop strategies to create positive customer relationships encountered in various situations on the job. 3cr., 3hr. lect./lab

165  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

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.

167  Information Resource Management
Prereq: BUSN 150 or ICS 101 either with grade C or better, or consent.
Provides students with experience in 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.

183  Executive Transcription
Prereq or coreq: ENG 100, 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 will be 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. 1-3cr., 1.25hr. Seminar/Minimum 75 documented field experience hours per credit (e.g., 1cr.=75hrs; 2cr.=150hrs.)

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. 3cr., 3hr. 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 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. 3cr., 3hr. 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. 3cr., 3hr. 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. 3cr., 3hr. lect./lab

292  Integrated Office Procedures  
Prereq: ENG 22 or 55 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. 3cr., 3hr. lect./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. 3cr., 4hr. 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. 3cr., 4hr. 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., 4hr. 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., 4hr. lect./lab

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.
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. 4cr., 3hr. lect./3hr. lab (FN, 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. 3cr., 3hr. lect. (FN)

161L General Chemistry Laboratory I

Coreq: CHEM 161, or consent.

Presents laboratory experiments illustrating fundamental principles of chemistry. 1cr., 3hr. lab (DP)

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. 3cr., 3hr. lect. (FN, DP)

162L General Chemistry Laboratory II

Coreq: CHEM 162, or consent.

Presents laboratory experiments illustrating fundamental principles of chemistry. 1cr., 3hr. 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 confident and effective communicator in a variety of business and organizational settings. (Crosslisted as BUS 130.) 3cr., 3hr. lect. (FO, HE, 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. (FO, IN, 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. (FO, CO, DS)

215 Conflict Resolution & Mediation

**Prereq**: COM 145 or BUS/COM 130 or PSY 100 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. (CO, 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.

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. Majors that require one or more semesters at the 193v or 293v level are Administration of Justice, Electronic and Computer Engineering Technology, Business Technology.

393v, 493v Work-Based Learning
Prereq: Students must be upper division program majors, or consent.
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. ABIT degree majors are required to complete Cooperative Education.

Cooperative Vocational Education (CVE)

J. Patao
See Special Curricula section for details.

93v, 193v, 293v Work-Based Learning

Culinary Arts (CULN)

D. Louie, B. Marquez, 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.

114 Introduction to Beverage Department
Prereq: CA in CULN, or consent.
Meets the basic needs of cooks with regards to alcoholic beverages used in the restaurant industry. Surveys the following areas: basic production processes of alcoholic beverages, bar set-up 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 what it means to serve alcoholic beverages responsibly. 1cr., 1hr. 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 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, CULN 122, CULN 150 all with Grade C or better, or consent.
Identifies and uses tools, equipment, supplies and foods 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, CULN 122, CULN 150 all with Grade C or better, or consent.
Identifies and uses tools, equipment 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 ala carte and banquet food production as found in quality hotels and specialty restaurants.  5cr., 2hr. lect./9hrs. 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 centerpieces, 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 confectionery 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 confectionery products. Emphasizes the techniques required to produce items such as soufflés, parfait, 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./lab

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

282 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 a continuation of the development of skills and concepts introduced in DANCE 131.  3cr., 4hr. lect./lab (HE, DA)

292v 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.)  1-3cr., 1hr. lect., 3hr. practicum per week per credit

294v Dance (DNCE)  
131 Modern Dance I  
Prereq: DANCE 131, or consent.  
Provides an introduction to basic modern dance technique skills and explores the creative process through dance.  3cr., 4hr. lect./lab (HE, DA)

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

141 Jazz Dance I  
Prereq or coreq: DANCE 131, or consent.  
Introduces the fundamental techniques of jazz dance to the beginning student and encourages creativity through movement and music.  3cr., 4hr. lect./lab (HE, DA)

150 Survey of Dance  
Prereq or coreq: DANCE 131 or 132, or consent.  
Provides a survey of contemporary western dance including ballet, modern dance and jazz, with emphasis on appreciation and understanding of dance as an art form.  3cr., 3hr. lect. (DA)

180 Dance Production I  
Prereq or coreq: DANCE 131 or 132, or consent.  
Provides an opportunity for creation and performance of a dance piece. Addresses all aspects of production.  1cr., 2hr. 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, claims processing, accounting, patient needs and follow-up, marketing techniques, maintaining and ordering of dental supplies. 3cr., 3hr. 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.) 2cr., 2hr. 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, alginites, composites, resins, and amalgams. Includes supervised clinical experience in dental and periodontal charting, and dental assisting functions. (Letter grade only.) 5cr., 1hr. lect./9hr. lab/2hr. 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.) 4cr., 12hr. 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 elastomeric impression materials, condensations silicone and polysiloxane/polyvinyl elastomeric impression materials. (Letter grade only.) 1cr., 2hr. 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.) 3cr., 2hr. lect./2hr. 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., 4hr. 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, endodontic, 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 de-contamination, sterilization procedures, tray set-up preparation and protocols, 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

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. 3 cr., 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, or licensed dentist or dental hygienist.
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, curette, subgingival irritation, and hypersensitivity. 2cr., 1hr. lect./2hr./lect/lab.

258 Periodontics 2 and Advanced Clinical Techniques
Prereq: DH 257 with grade C or better.
Focuses on diagnosis, treatment planning, and therapeutic procedures. Explains preventive and therapeutic measures within scope and responsibility of the dental hygienist. Utilizes advanced instrumentation in periodontal treatment. Compares types of periodontal surgery and therapies. Determines rationale and criteria for periodontal referral. 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 modalities, periodontal disease, trauma, and dental anomalies. Includes clinical lab experience of taking and interpreting x-rays on clients. 1cr., 2hr. lect/lab

268 Advanced Dental Radiology and Interpretation

Prereq: DH 267 with grade C or better.
Expands clinical lab experience taking and interpreting x-rays on clients. Includes advanced radiographic identification and interpretation utilizing dental x-ray films, panoramic, cephalometric, and other extraoral radiographs. Analyzes future trends in radiographic imaging. 1cr., 2hr. lect/lab

269 Clinical Dental Radiology and Interpretation

Prereq: DH 268 with grade C or better.
Expands experience obtaining and interpreting x-rays on clients. Includes advanced radiographic identification and interpretation utilizing dental x-ray films, panoramic, cephalometric, and other extraoral radiographs. 1cr., 2hr. lect/lab

Digital Media (DMED)

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. sem., 75 documented field experience hours per credit (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. sem., 75 documented field experience hours per credit (1cr.=75hr, 2cr.=150hr., 3cr.=225hr.)
Directed Study (DIRS)
Prereq: Consent.
See Special Curriculum 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. (AP, HE, 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 (FO, HE, 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./2 hr. lab (FO, HE, DA)

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

East Asian Languages (EALA)
H. DeLeon

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. (AP)

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. (CO, 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. (CO, 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. (CO, 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.

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 BUS 150.) 3cr., 3hr. lect. (DS)
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 of Children in Group Settings  
Prereq: ED 131, or consent. 
Addresses positive ways to support children’s social-emotional development. Focuses on adult-child and child-child interactions and relationships. (Cross-listed as FAMR 140.) 3cr., 3hr. lect.

152  Early Literacy Development  
Prereq: ENG 19 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 (IN)

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. (CO)
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 nonprofit management, budgeting, and financial planning. Gives student 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, all 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)

C. Atay, A. Carson

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, 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.
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

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

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
193 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. Provides work practicum credits based on one credit for each 75 hours of supervised work. 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.) 1-3 cr., 75 hr./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, multivibrator circuits, data control circuits, and troubleshooting of digital circuits. 4 cr., 6 hr. lect./lab

205 Digital Computer Technology II
Prereq: ETRO 201 and at least MATH 107 or 135, or consent.
Introduces digital computer and microprocessor technology including memory circuits, microprocessor architecture, addressing modes, programming, stack operations, subroutines, input and output operations, microcomputer subsystems and interfacing, troubleshooting of computer circuits. 4 cr., 6 hr. 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.) 3 cr., 3 hr. 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. 4 cr., 6 hr. 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. 3 cr., 4 hr. lect./lab

293 Internship II
Prereq: ETRO 193a, 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 skills. 3 cr., 4 hr. 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. 3 cr., 3 hr. 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 multi-function 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. 3 cr., 4 hr. 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 4 cr., 6 hr. 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 generation and transmission system. Utilizes computer programming and modeling. Includes laboratory exercises and inquiry-based activities. 3cr., 4hr. 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, photocathodes, 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. Overviews 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, irradiances, 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 inquiries 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 (CO)

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)

C. Atay, A. Carson

20B  Energy Conservation in the Home
Prereq: ENRG 101 (or concurrent), or consent.
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

20C  Energy Conservation in the Condominium
Prereq: ENRG 101 (or concurrent), or consent.
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 least ENG 22, and MATH 18 or placement at least MATH 82, or consent. Recommended: ICS 101 or BUSN 150, and placement at ENG 108.
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.
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.

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**English (ENG)**  
A. Andaluz, E. Engh, T. Marmack, M. Matsuda, L. Nagle

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 100, or consent.** 
Discovers 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.

102  College Reading Skills  
**Prereq: ENG 21 with grade C or better, or placement at ENG 100 or 102, 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 their comprehension and critical thinking. 3cr., 3hr. lect.

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. (HE, 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)

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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)

ENG 225  Writing for Science and Technology  
**Prereq: ENG 100 with grade C or better, or consent.** 
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. 3cr., 3 hr. lect.

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.  
(CO, DL)

Note: These 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.  
(CO, 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.  (CO, 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.  (CO, 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.  (CO, 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.  (CO, 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.  (CO, 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.  (CO, 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, transi-tional, and modern Hawaiian literature. Studies and analyzes universal problems in selected literary works. 3cr., 3hr. lect.  (CO, 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 feminality. Studies and analyzes universal problems in selected literary works. 3cr., 3hr. lect.  (CO, DL)

257R The Bible as Literature
Prereq: ENG 100 with grade C or better, or consent.
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.

258 Advanced Research Writing
Prereq: ENG 20 or 201 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.

257 Colonial Literature of the Pacific
Prereq: ENG 100 with grade C or better and ENG 210 or 250, 251, 252, 253, 254, 255, 256, 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.
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 217, 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./lab

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 (HE)

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. (HE)

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. (AP, HSL)

102  Beginning Filipino II
Continues FIL 101. Includes speaking, listening, reading, and writing skills of basic Tagalog. 4cr., 4hr. lect. (AP, 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.
Finance (FIN)
D. Bhattacharya, 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.

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. (IN, 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. (IN, 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. (DP)

Geographic Information Systems (GIS)

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 ICS 150.) 4cr., 6hr. lect./lab (EA)

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 (EA, EL)

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. (EA, 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 (EA, EL, 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 inquiry. Introduces the unique characteristics of the natural and cultural landscapes of Hawai‘i. 3cr., 3hr. lect. (CO, 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. (CO)

Geology & Geophysics (GG)
D. Grooms

101 Introduction to Geology
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, and MATH 18 or placement at least MATH 82, or consent.
Presents principles of physical geology including the composition and structure of the earth, its evolution over geologic time, and processes shaping the earth’s crust including continental drift, volcanism, earthquakes, and erosion. Field trips. 4cr., 3hr. lect./3hr. lab, 1 all-day field trip (EA, EL, 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. (EA, HI, DP)
**Hawaiian (HAW)**

*K. Dukelow, K. Ka‘eo, S. K. Raymond*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereq.</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>101</td>
<td>Elementary Hawaiian I</td>
<td>HAW 101, or consent.</td>
<td>4cr., 5hr. lect./lab</td>
<td>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. (IN, HI, HSL)</td>
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<tr>
<td>102</td>
<td>Elementary Hawaiian II</td>
<td>HAW 101, or consent.</td>
<td>4cr., 5hr. lect./lab</td>
<td>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. (IN, HI, HSL)</td>
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<tr>
<td>201</td>
<td>Intermediate Hawaiian I</td>
<td>HAW 201, or consent.</td>
<td>4cr., 5hr. lect./lab</td>
<td>Prereq: 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. (IN, HI, HSL)</td>
</tr>
<tr>
<td>202</td>
<td>Intermediate Hawaiian II</td>
<td>HAW 201, or consent.</td>
<td>4cr., 5hr. lect./lab</td>
<td>Prereq: HAW 202. 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 needs. (IN, HI, HSL)</td>
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<tr>
<td>221</td>
<td>Hawaiian Conversation</td>
<td>HAW 202, or consent.</td>
<td>3cr., 3hr. lect.</td>
<td>Prereq: HAW 202. Practices systematic control of spoken Hawaiian. Further develops vocabulary for accurate, mature expression. (CO, HI, HSL)</td>
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<tr>
<td>261</td>
<td>Hawaiian Literature in Translation</td>
<td>ENG 100 with grade C or better, or consent.</td>
<td>3cr., 3hr. lect.</td>
<td>Prereq: ENG 100. 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. (CO, HI, DL)</td>
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<tr>
<td>262</td>
<td>Hawaiian Literature</td>
<td>HAW 202 and 261 both with grade C or better, or consent.</td>
<td>3cr., 3hr. lect.</td>
<td>Prereq: HAW 202 and 261. 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. (CO, HI, DL)</td>
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</tbody>
</table>
Hawaiian Studies (HWST)

K. Dukelow, K. Ka‘eo, 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.  (CO, 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.  (CO, 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.  (CO, EA, 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.  (AP, CO, HI, DH)

111 The Hawaiian ‘Ohana
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.  (CO, 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  (HE, HI, DA)

207 Malama Ahupua’a: Resource Management
Prereq: HWST 107 with grade C or better, or consent.
Examines the ahupua‘a system: its mythologies, 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.  (EA, 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  (CO, EA, HI, DS)

213 Hawaiian Ethnozoology
Identifies endemic, indigenous, and Polynesian introduced fauna of Hawai‘i. Examines the many uses of Hawai‘i’s fauna as expressed in home and family. 3cr., 3hr. lect.  (EA, HI, DH)

217 Hawaiian Mythology
Prereq: HWST 107 or HAW 102, or consent.
Examines culture of Hawaiian people as expressed in mythical heroes, heroines, and their kinolau as the basis of traditional Hawaiian metaphor. 3cr., 3hr. lect.  (CO, HE, HI, DH)

262 Pana Maui: Maui’s Sacred Hawaiian Places
Prereq: HWST 107 or HAW 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.  (CO, HE, 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.  (CO, HE, HI, DH)

Health (HLTH)

N. Johnson

31 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.

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. 2cr., 4hr. lect./lab
122 Introduction to Physical Therapy Support Skills
Prereq: Certificate of Competence for Therapeutic Activity Aide I, or consent.
Provides a theoretical understanding of working with adults and children with disabilities or neuropathologies in home and community settings; supports families, parents and caregivers. Students learn to perform scenarios of therapeutic interventions and learn to work with therapists and allied health professionals who provide assessment, planning, and delivery of appropriate related services. Values that will be promoted include a) family-centered care, b) cultural sensitivity, c) age-appropriate activities, d) functional skills, and e) collaborative teamwork. Prepares Therapeutic Activity Aides to work under the supervision of a registered Physical Therapist. 3cr., 3hr. lect.

123 Practicum in Physical Therapy Support Skills
Prereq: Certificate of Competence for Therapeutic Activity Aide I, or consent.
Provides basic standard patient care skills and training in the use of common techniques such as transfers, positioning, therapeutic exercise, mobility and assistive devices. Values that will be promoted include a) family-centered care, b) cultural sensitivity, c) age-appropriate activities, d) functional skills, and e) collaborative teamwork. Prepares Therapeutic Activity Aides to work under the supervision of a registered Physical Therapist. 2cr., 4hr. lect./lab

125 Survey of Medical Terminology
Prereq: ENG 19 with grade C or better or placement at least ENG 22, or consent.
Surveys medical terminology including: prefixes, suffixes, and word roots; pronunciation, spelling and definition of selected medical words dealing with all human body systems; commonly used abbreviations; and use of the medical dictionary. 1cr., 1hr. lect.

126 Introduction to Speech/Language Pathology Support Skills
Prereq: Certificate of Competence for Therapeutic Activity Aide I.
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 communication behavior, the nature of communication disorders, and the interaction of speech pathology and audiology with other allied health fields. Values to be promoted include a) family-centered care, b) cultural sensitivity, c) age-appropriate activities, d) functional skills, and e) collaborative teamwork. 3cr., 3hr. 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 pathology, 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 II 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.
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.  
(CO, 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.  
(CO, DH)  

284 History of Hawai‘i  
Surveys the economic, political, and social history of Hawai‘i from earliest times to the present. Emphasizes the history of Hawai‘i since the time of European contact. 3cr., 3hr. lect.  
(CO, 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 from pre-contact to present day. Covers prehistoric migrational patterns, historical movements, and present day distributions, including western colonization and current problems. (Croslisted as ANTH 235.) 3cr., 3hr. lect.  
(AP, CO, 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 grade C 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.  

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
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. (CO)

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. (CO)

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 including Early Childhood Education. Discusses theories and practices of counseling and interviewing individuals and groups. Gives students opportunities to practice skills through role-playing. Not intended to be preparation for counseling professionals. 3cr., 3hr. lect. (IN)

193v Work Practicum & Discussion in Community Service
Prereq: Permission of instructor; and HSER 110, HSER 140/248, and ENG 100. Supervised work experience. Provides individualized in-service training in community services. Includes weekly seminar giving students opportunity to discuss practicum experiences. (May be repeated for a maximum of 12 credits. Responsibilities increase with each repeat.) 2-4cr., 1hr. disc./2.5-15hr. practicum

245 Group Counseling
Prereq: HSER 140, and ENG 22 with grade C or better or placement at ENG 100, 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. (CO)

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. 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 conditioning, and socialization factors. Reviews partner, child, and elder abuse within the family and multi-generational effects. Examines legal issues, prevalence and outcome data, contemporary theory, 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. Presents a comprehensive review of drug actions on the body and the effects of drug use in our society. Provides an understanding of chemical dependency, its assessment and various treatment modalities. 3cr., 3hr. lect. (CO)

270 Substance Abuse Counseling
Prereq: HSER 140, and ENG 22 with grade C or better or placement at ENG 100, or consent. Provides theoretical and experiential training in the prevention, intervention, and treatment applicable to a heterogeneous substance abuse population. Identifies ethical and legal issues of working with this population. 3cr., 3hr. lect. (CO)

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 service 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.
126 | Humanities

**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. 3 cr., 3 hr. lect. (IN, HE, 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 world-wide 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. 3 cr., 3 hr. lect. (DH)

410 Literature and Popular Culture
Prereq: ENG 100 with C or better; and HUM 100 or 400, or DRAM 280, or ENG 210, 250, 251, 252, 253, 254, 255, 256, or 257(E,F,R) with C or better, or consent.
Examines how cultures and societies are shaped, influenced, stereotyped, and appreciated from literary sources. Analyzes literary sources, film, painting, architecture, and historical research to contextualize a culture, including Hawai’i’s, and how it is represented to the outside world. (CO)

**Ilokano (ILO)**

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. 4 cr., 4 hr. lect. (AP, HSL)

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

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

C. Atay, A. Carson

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. 3 cr., 6 hr. lect./lab

111 Introduction 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 compilers. Introduces programming concepts, algorithms, and problem solving techniques using high-level object-oriented programming languages. Meets ACM CS 1 course standards. 4 cr., 4 hr. lect./lab

**Information and Computer Science (ICS)**

D. Bhattacharya, D. Kruse, D. Naho’olewa

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. 3 cr., 3 hr. lect./lab

102 Internet Resources
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. 3 cr., 3 hr. lect./lab

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. 3 cr., 3 hr. 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 manipu-
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 (EA)

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. (HE, 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/ct.

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.) 3cr., 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 214.) 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 exploits 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., 4hr. 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. 3cr., 3hr. 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. (Crosslisted as ART 218.) 3cr., 3hr. 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. 3cr., 3hr. 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. 4cr., 4hr. lect./lab
283 Advanced Computer Graphics Design
Prereq: ICS 261, or consent.
Reviews the 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. 3cr., 3hr. 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. 3cr., 3hr. 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.) 1-3cr., 75hrs./ct.

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. 4cr., 4hr. 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. 3cr., 3hr. 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. 3cr., 3hr. 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 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.

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)
C. Shishido

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. (IN)

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)
H. DeLeon

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. (AP, 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. (AP, 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. (AP, 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. (AP, 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.

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**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.  
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

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**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. (CO)

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**Maintenance (MAIN)**

C. Atay, A. Carson  

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

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**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.  
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.

400 Managing the Growing Business
Prereq: MGT 310, or consent.
Addresses the dynamics of growth. Includes leadership and management challenges associated with stages of organizational growth, organization design requirements, and the ever-present change process. 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.

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.

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.

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 information, 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
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, BUS, BUSN, HOST**

MATH 18 → MATH 82 → MATH 100 or MATH 115

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 203

MATH 18 → MATH 82 → MATH 103 → MATH 135

MATH 205 → MATH 206 → MATH 231 → MATH 232

**BAS ENGT Engineering Technology**

MATH 18 → MATH 82 → MATH 107 → MATH 219
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 exponential and logarithmic functions. 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 number systems, consumer math, linear and exponential growth, inductive patterns, mathematical art, probability, statistics, set theory, and logic. 3cr., 3hr. lect.  (FS, FN)

103 College Algebra  
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.
Analyzes and interprets the behavior and nature of functions including linear, polynomial, exponential, log, absolute value, and piecewise-defined functions; solves systems of equations; models and solves real world applications. 3cr., 3hr. lect.  (FS, FN)

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.  (FN)

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, FN)

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, FN)

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, FN)

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, FN)

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, FN)

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, FN)

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, FN)

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, FN)

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)

Music (MUS)
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. (CO, 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. (HE, 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 (HE, 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 (HE, 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 (HE, DA)

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 (HE, 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. (HE, 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 (HE, 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 (HE, 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 (HE, DA)

167 Evolution of American Popular Music
Traces the history of American popular music, including soul, blues, rhythm and blues, country and western, Dixieland, gospel, folk, and rock. 3cr., 3hr. lect. (CO, DH)

180 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 (HE, 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 (HE, DA)

253 Basic Experiences of Music
Introduces components of music, specifically time, pitch, media, musical expression, and form. Demonstrates how these interact with each other to comprise a musical experience. Presents correlation between music and brain development in early childhood. Intended for Education majors. 3cr., 3hr. lect./1hr. lab (HE, DA)

271 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 (HE, DH)

272 Digital Recording Techniques
Prereq: MUS 271, or consent. Recommended: MUS 108 or 121C or 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 (HE, DH)

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 22, 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/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 pathophysiologic 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 evidence-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 220 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

255 Child Health Nursing II
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 255L.
Uses the nursing process to assist children and their families with complex health problems. (Letter grade only.) 1cr., 1hr. lect.

255L Child Health Nursing II Lab
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 255.
Applies the nursing process to the primary, secondary, and tertiary prevention/interventions for children and their families with complex problems in the acute care setting. (Letter grade only.) 1cr., 3hr. lab

257 Adult Health Nursing IV
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 257L.
Focuses on use of the nursing process to assist clients and families with complex stressors: neurologic, reproductive, and regulatory problems. Emphasizes nursing theory related to physiological, psychological, socio-cultural, developmental, and spiritual variables as the client moves along the wellness-illness continuum. Includes care of the client and family in emergency settings. (Letter grade only.) 2cr., 2hr. lect.

257L Adult Health Nursing IV Lab
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 257.
Applies primary, secondary, tertiary prevention/interventions with clients and families in community-based and acute care settings. Develops skill in care of clients and families with complex neurologic, reproductive, and regulatory problems. Focuses on leadership-management-caregiving roles in a variety of settings. Includes care of clients in emergency settings. (Letter grade only.) 1cr., 1hr. lect.
301 Introduction to Evidence-Based Practice and 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 and Illness II: Family Health
Prereq: NURS 230 with grade C 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.) 10cr., 4hr. lect./18hr. lab

360 Health and 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

362 Professionalism in Nursing II
Prereq: NURS 320 with grade C or better. Focuses on nursing responsibility with regard to current issues in nursing and health care. Included is the nurse’s role as a contributing member of the profession and the community. The theoretical basis for designing and implementing systems of nursing at the beginning level of patient management in an institutional setting will be explored. Principles of organizational structure, leadership, decision-making, priority setting, and change will be discussed. (Letter grade only.) 1cr., 1hr. lect.

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). 3cr., 3hr. 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.
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.

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.

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. (IN, DH)

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

109 Reasoning and Critical Thinking
Prereq: 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. (IN, 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)

S. Kan

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)

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 (EA, EL, FN, DP DY)

152 College Physics II
Prereq: PHYS 151.
Discusses electricity, magnetism, optics, and modern physics. Introduces experimental methods 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. 5cr., 4hr. lect./3hr. lab (EA, EL, FN, 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

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 (EA, EL, FN, 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. (CO, 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. Analyzes foreign policy of the United States. Introduces students to the political, cultural, social, and economic forces shaping the new global order. 3cr., 3hr. lect. (CO, DS)

180 Introduction 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. (CO, 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. (IN, 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 the 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. (IN, 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. (CO, 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 (FN, 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. (IN, 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. (CO, DS)

251 Human Sexuality  
Prereq: PSY 100, or consent.
Examines topic areas 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. (IN, 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.
Explores 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. (CO, 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. (IN, 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 55, 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)

Science (SCI)

J. Boswell, S. Calder, A. Coopersmith, S. Irwin

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 at BIOL 101.) 4cr., 3hr. lect./3hr. lab (EA, EL, DB, DY)

122 Intro to Science: Physical Science  
Prereq: ENG 22 with grade C or better or placement at ENG 100, or consent. Recommended: MATH 18 with grade C or better, or placement at least MATH 82.
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 (EA, EL, DP, DY)
**Social Science (SSCI)**

*B. Clark, L. Yankowski*

**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.

**Sociology (SOC)**

*R. Daniels, D. Haytko-Paoa*

**100 Survey of General Sociology**

Introduces study of basic social relationships. Treats socialization, concept of culture, social stratification, prejudice, cultural change, and trends in modern society. 3cr., 3hr. lect. (CO, CG, 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. (CO, DS)

**231 Introduction to Juvenile Delinquency**

Studies principles and procedures of arrest, detention, petition, summons, records, and adjudication of juvenile offenders. Introduces organization and function of the juvenile court, community diversion practices, and organization of the Family Court. Reviews Hawai‘i’s statutes and United States Supreme Court decisions affecting juvenile rights of due process. Considers societal context of juvenile problems, delinquency prevention, and treatment. (Croslisted as AJ 210.) 3cr., 3hr. lect. (CO, DS)

**251 Introduction to Sociology of the Family**

Analyzes family patterns, mate selection, parent-child interaction, socialization of roles, functions, family trends, and a cross-cultural look at the contemporary family. 3cr., 3hr. lect. (CO, DS)

**Spanish (SPAN)**

*M. Fleming*

**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)

**102 Elementary Spanish II**

Prereq: SPAN 101, or consent.

Continues SPAN 101. Introduces additional verb tenses and continues to expand Spanish speaking, listening, reading, and writing. 4cr., 4hr. lect. (HSL)

**201 Intermediate Spanish I**

Prereq: SPAN 102, or consent.

Second level course in Spanish listening, reading, speaking, and writing. Introduces more advanced patterns and vocabulary words. Introduces basic literature. 3cr., 3hr. lect. (HSL)

**202 Intermediate Spanish II**

Prereq: SPAN 201, or consent.

Continues SPAN 201. Completes introduction of major grammatical patterns of standard Spanish in reading, listening, writing, and speaking. 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. (CO)

**Speech (SP)**

*R. St. John*

**151 Personal & Public Speech**

Recommended: Placement at ENG 100.

Introduces the major elements of speech. Develops competence in two-person, small group, and public speaking situations. 3cr., 3hr. lect./disc. (FO, HE, 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. (EA)

**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. (EA)
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. (EA, CO)

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

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. Treats brazing, flame cutting, welding of aluminum, stainless steel, and other metals. 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, C. Hornick  
101 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 BIOL 103.) 4cr., 3hr. lect./3hr. lab (EA, EL, DB, DY)