

ACCOUNTING (ACC)

ACC 201 INTRO TO FINANCIAL ACCOUNTING (3)

Prerequisite: Placement in ENG 100

An introduction to accounting principles and practices used to record and communicate financial information. Analyze methods for valuing assets, liabilities, and equity of an organization. (3 hrs. lect. per week)

ACC 202 INTRO TO MANAGERIAL ACCOUNTING (3)

Prerequisite: "C" or higher in ACC 201

An introduction to managerial accounting methods for evaluating performance including cost accounting, budgeting, break-even analysis, ratio analysis, standard cost systems, and reporting for internal decision making. (3 hrs. lect. per week)

ADMINISTRATION OF JUSTICE (AJ)

AJ 101 INTRODUCTION TO ADMINISTRATION OF JUSTICE (3)

Prerequisite: Placement in ENG 100

This is a comprehensive course on crime and its causes including the history and philosophy of the administration of justice in America, the development of the criminal justice system, identification of the various subsystems, role expectations and their interrelationships. Theories of crime, punishment, adjudication and rehabilitation and training for professionalism in the entire system are also explored. (3 hrs. lect. per week)

AJ 103 CRIMINAL INVESTIGATION (3)

Prerequisite or Co-requisite: AJ 101

This course covers the basic principles of criminal investigation including: the human aspects of dealing with the public, case preparation, the collection and preservation of physical evidence, crime scene search, fingerprinting, casts, photographs and laboratory assistance. (3 hrs. lect. per week)

AJ 137 PATROL PROCEDURES (3)

Prerequisite or Co-requisite: AJ 101

This course will cover the duties and responsibilities of the patrol divisions of law enforcement agencies. The organization, operation and effectiveness of patrol will be examined and evaluated. The student will become familiar with the various methods departments use to accomplish the patrol mission such as team policing, beat plans and unique solutions like bicycles, all terrain vehicles and aircraft. (3 hrs. lect. per week)

AJ 138 CRIMINAL JUSTICE SYSTEM REPORTS AND COMMUNICATIONS (3)

Prerequisite or Co-requisite: AJ 101

This course will introduce the student to the methods of producing accurate, concise and detailed reports, the processing and the study of communications common to the administration of justice practitioner. This course will involve critical thinking and evaluative writing. (3 hrs. lect. per week)

AJ 139 COMPUTER APPLICATION IN CRIMINAL JUSTICE (3)

Prerequisite or Co-requisite: AJ 101

The student will become familiar with the modern technological advances and applications of the computer relative to investigation, record keeping, crime analysis, trends and patterns. The importance and significance of statistics is stressed and computer aided dispatch is examined. (3 hrs. lect. per week)

AJ 150 CORRECTIONAL PROCESS (3)

Prerequisite or Co-requisite: AJ 101

Provides an overview of the historical development of corrections and the philosophy of punishment. Current correctional institutions such as prisons, detention facilities, and community-based programs and their management and effectiveness will be examined. (3 hrs. lect. per week)

AJ 180 INTRODUCTION TO HOMELAND SECURITY (3)

Prerequisite or Co-requisite: AJ 101

This course provides a history of terrorism, focusing on the terrorists, their motivations and ideologies, and how they operate and execute terrorist attacks. The course examines the current responses to domestic and international terrorism along with analyzing future trends within the global war on terrorism. The course will discuss the theoretical perspectives of terrorism within criminology, criminal justice, sociology, and psychology. The course will present the use of the Internet, improvised explosives, and religious extremism found within modern terrorism. (3 hrs. lect. per week)

AJ 193V COOPERATIVE EDUCATION (1-4)

Prerequisite: Placement in ENG 100

Instructor approval required.

AJ majors only

This course provides students with the opportunity to acquire on-the-job experience related to classroom instruction in Administration of Justice. Students may enroll 4 times for a maximum of 12 credits. Four (4) credits can be applied to AJ elective requirements. (5 hours work experience per week per credit)

AJ 200 PRINCIPLES OF HAWAII JUSTICE SYSTEM (3)

Prerequisite or Co-requisite: AJ 101

This course provides an examination of the basic Fourth, Fifth, and Sixth Amendment procedural principles that govern the interaction of the police and suspects in the investigation of crime. Beginning with the initial encounter, the course will examine the constitutional guidelines developed to regulate police behavior in the areas of investigatory stops, searches and seizures, arrests, interrogations, *Miranda*, and electronic surveillance. The effects of failing to follow these judicially mandated guidelines will also be explored. (3 hrs. lect. per week)

AJ 208 CRIMINOLOGY (3)

Prerequisite or Co-requisite: AJ 101

The course will explore theories of crime causation, its measurement and impact, and overall societal reaction to crime and offenders. The focus is the exploration

of possible programs and policies to achieve a combination of crime reduction and social justice. May be taken on a CR/N basis. (3 hrs. lect. per week)

AJ 210 JUVENILE JUSTICE (3)

Prerequisite or Co-requisite: AJ 101

This course provides the administration of justice student with a basic and practical understanding of the legal principles involved in juvenile delinquency problems. Analysis of legislative and judicial responses to juvenile behavioral problems provide realistic and meaningful insights into the functioning of the juvenile justice processes. (3 hrs. lect. per week)

AJ 220 CONSTITUTIONAL LAW (3)

Prerequisite or Co-requisite: AJ 101

This course provides an overview of the development of the doctrines of federalism, separation of powers, and checks and balances theories as well as judicial review. Specific topics include sources of federal legislative power, commerce, taxing, spending, presidential and military powers, power of states to regulate and tax interstate commerce, preemption, the due process clause of the Fourteenth Amendment, equal protection, and First Amendment rights. Selected Supreme Court cases interpreting the U.S. Constitution are also examined. (3 hrs. lect. per week)

AJ 221 CRIMINAL LAW (3)

Prerequisite or Co-requisite: AJ 101

This course examines society's control of unwanted behavior through law. The particular focus is on the general principles of substantive criminal law. Topics include principles of criminal liability - *actus reus*, *mens rea*, causation, uncompleted crimes, and criminal defenses. General elements of crimes are covered including crimes against persons, habitation, property, and public order and morals. Applicable provisions of the Hawai'i Penal Code will also be discussed. (3 hrs. lect. per week)

AJ 224 RULES OF EVIDENCE (3)

Prerequisite or Co-requisite: AJ 101

This course is a thorough study of evidence rules with specific emphasis on the application of these rules in preparing and presenting evidence. This includes a discussion of the history and approach to the study of evidence, proof by evidence and substitutes. General admissibility tests, evidence by witness testimony, documents and real evidence are examined. (3 hrs. lect. per week)

AJ 230 PRINCIPLES OF POLICE SUPERVISION (3)

Prerequisite or Co-requisite: AJ 101

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

AJ 233 POLICE ORGANIZATION AND MANAGEMENT (3)

Prerequisite or Co-requisite: AJ 101

The principles of organization and administration in the law enforcement community are examined along with such topics as organizational structures, managerial philosophies, personnel issues and leadership. (3 hrs. lect. per week)

AJ 234 POLICE AND COMMUNITY RELATIONS (3)

Prerequisite or Co-requisite: AJ 101

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

AJ 235 ETHICS IN THE CRIMINAL JUSTICE SYSTEM (3)

Prerequisite or Co-requisite: AJ 101

An identification and analysis of the diverse ethical issues encountered in the Criminal Justice System. Traditional ethical theories will be examined and applied to such topics as discretion, plea bargaining, bail, wiretapping, privacy, punishment, and prisoners' rights. (3 hrs. lect. per week)

AJ 280 CURRENT ISSUES IN THE ADMINISTRATION OF JUSTICE (3)

Prerequisite or Co-requisite: AJ 101

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

AJ 283 SUBSTANCE ABUSE IN SOCIETY (3)

Prerequisite or Co-requisite: AJ 101

This course covers the historical development of drug enforcement in relation to changing social mores. Emphasis is placed on the detection and identification of illegal drugs and their suppression through enforcement and investigation. Tactics of enforcement will be presented along with a study of pertinent statutory and case law. The effects of rehabilitation and treatment will be explored. May be taken on a CR/N basis. (3 hrs. lect. per week)

AERONAUTICS MAINTENANCE TECHNOLOGY (AERO)

AERO 130 GENERAL AIRCRAFT MAINTENANCE I (7)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 103

Co-requisite: AERO 131

AERO majors only.

Blueprint reading, mechanical drawing, non-destructive testing, basic heat treating, aircraft ground handling, cleaning and corrosion control,

fundamentals of applied mathematics, use of technical manuals and other maintenance functions as specified by Federal Aviation Regulation Part 147. (250 hrs. lect./lab. over 8 weeks)

AERO 131 ADVANCED GENERAL AIRCRAFT MAINTENANCE II (7)

Prerequisite or Co-requisite: "C" in AERO 130

AERO majors only.

Fundamentals of direct and alternating current electricity, and fundamentals of applied physics; calculate and measure electrical power volts, amps, and resistance; use electrical diagrams; perform weight and balance operations in accordance with Federal Aviation Regulation Part 147. (250 hrs. lect./lab. over 8 weeks)

AERO 132 POWERPLANT MAINTENANCE I (7)

Prerequisite: "C" in AERO 130 and in 131

Co-requisite: AERO 133

AERO majors only.

Fundamentals of piston engine construction and operation and basic powerplant indicating systems; inspect and repair opposed and radial piston engines; perform powerplant inspections; inspect engine indicating systems as specified by Federal Aviation Regulation Part 147. (250 hrs. lect./lab. over 8 weeks)

AERO 133 AIRFRAME MAINTENANCE I (7)

Prerequisite: "C" in AERO 130 and in 131

Co-requisite: AERO 132

AERO majors only.

Principles of aircraft sheetmetal structures; identification of aircraft fasteners, aircraft sheetmetal layout and fabrication; install special rivets and fasteners; inspect and repair sheetmetal structures; fabricate tubular structures and other aircraft structural maintenance functions as specified by Federal Aviation Regulation Part 147. (250 hrs. lect./lab. over 8 weeks)

AERO 134 POWERPLANT MAINTENANCE II (7)

Prerequisite: "C" in AERO 130 and in 131 and in 132

Co-requisite: AERO 135

AERO majors only.

Fundamentals of turbine engine construction and operation, piston and turbine engine fuel metering systems; inspect and service turbine engines, repair engine fuel metering components as specified in Federal Aviation Regulation Part 147. (250 hrs. lect./lab. over 8 weeks)

AERO 135 AIRFRAME MAINTENANCE II (7)

Prerequisite: "C" in AERO 130 and in 131 and in 133

Co-requisite: AERO 134

AERO majors only.

Principles of construction of aircraft wooden structures and repair of aircraft synthetic material; principles of rigging fixed and rotary winged aircraft; application of aircraft covering material, aircraft painting, rig rotary and fixed winged aircraft as specified by Federal Aviation Regulation Part 147. (250 hrs. lect./lab. over 8 weeks)

AERO 136 POWERPLANT MAINTENANCE III (7)

Prerequisite: "C" in AERO 130 and in 131 and in 132 and in 134

Co-requisite: AERO 137

AERO majors only.

Theory and operation of engine fire detection and control systems, theory of operation and construction of aircraft propellers and related components; inspect and repair engine exhaust and cooling systems, repair and balance propellers as specified in Federal Aviation Regulation Part 147. (250 hrs. lect./lab. over 8 weeks)

AERO 137 AIRFRAME MAINTENANCE III (7)

Prerequisite: "C" in AERO 130 and in 131, 133 and in 135

Co-requisite: AERO 136

AERO majors only.

Theory of operation of aircraft hydraulic, pneumatic, oxygen and auto-pilot systems; inspect and repair aircraft hydraulic, fuel, pneumatic and instrument systems and other aircraft components as specified by Federal Aviation Regulation Part 147. (250 hrs. lect./lab. over 8 weeks)

AEROSPACE STUDIES (AS)

OFFICE: 1460 Lower Campus Drive, UH Mānoa,
Phone: 956-7734

AFROTC is a nationwide program that allows students to pursue commissions (become officers) in the United States Air Force (USAF) while simultaneously attending college. Three and four year programs available. College students enrolled in the AFROTC program (known as "cadets") who successfully complete both AFROTC training and college degree requirements will graduate and simultaneously commission as Second Lieutenants in the Active Duty Air Force.

On Oahu, the AFROTC program is currently offered at University of Hawaii at Manoa, AFROTC Detachment 175. Students may register through Honolulu CC via normal course registration processes.

For more information on the AFROTC program, please visit www.manoa.hawaii.edu/undergrad/airforcerotc/.

AS 101 FOUNDATIONS OF THE UNITED STATES AIR FORCE (1)

Tuition is waived, classes are held at UH Mānoa. For more information call AFROTC at 956-7734/7762.

Study of the total force structure, strategic offensive and defensive, general purpose, and aerospace support forces of the Air Force in the contemporary world. A-F only. (1 hr. lect. per week)

AS 101L INITIAL MILITARY TRAINING I (1)

Supplement to AS 101. Tuition is waived, classes are held at UH Mānoa. For more information call AFROTC at 956-7734/7762.

Laboratory consists of activities that focus and promote the Air Force way of life. Instruction will include leadership and followership development, teamwork, physical fitness training, and activities

designed to build camaraderie and esprit de corps. Course is open to all majors. Graded on a CR/N basis. (2 hrs. lab. per week and two 1 hr. sessions of Physical Training, total 4 hrs. per week)

AS 102 FOUNDATIONS OF THE UNITED STATES AIR FORCE (1)

Tuition is waived, classes are held at UH Mānoa.

For more information call AFROTC at 956-7734/7762.

Continuation of 101. A-F only. (1 hr. lect. per week)

AS 102L INITIAL MILITARY TRAINING II (1)

Supplement to AS 102, continuation of AS 101L. Tuition is waived, classes are held at UH Mānoa. For more information, call AFROTC at 956-7734/7762.

Laboratory consists of activities that focus and promote the Air Force way of life. Instruction will include leadership and followership development, teamwork, physical fitness training, and activities designed to build camaraderie and esprit de corps. Course is open to all majors. Graded on a CR/N basis. (2 hrs. lab. per week and two 1 hr. sessions of Physical Training, total 4 hrs. per week)

AS 201 EVOLUTION OF USAF AIR AND SPACE POWER (2)

Tuition is waived, classes are held at UH Mānoa. For more information, call AFROTC at 956-7734/7762.

Study of Air Force heritage, Quality Air Force principles, ethics, and an introduction to leadership and group leadership problems. Application of written and verbal communication skills is included. A-F only. (2 hr. lect. per week)

AS 201L FIELD TRAINING PREPARATION I (1)

Instructor approval required.

Supplement to AS 201. Tuition is waived, classes are held at UH Mānoa. For more information, call AFROTC at 956-7734/7762.

Laboratory consists of preparing second-year AFROTC cadets with the skills needed to successfully complete AFROTC Field Training. Students will learn basic military skills, Field Training skills, and participate in physical fitness training. Graded on a CR/N basis. (2 hrs. lab. per week and two 1 hr. sessions of Physical Training, total 4 hrs. per week)

AS 202 EVOLUTION OF USAF AIR AND SPACE POWER (2)

Tuition is waived, classes are held at UH Mānoa.

For more information, call AFROTC at 956-7734/7762.

Continuation of 201. A-F only. (2 hr. lect. per week)

AS 202L FIELD TRAINING PREPARATION II (1)

Instructor approval required.

Tuition is waived, classes are held at UH Mānoa. For more information, call AFROTC at 956-7734/7762.

Continuation of 201L. Graded on a CR/N basis.

(2 hrs. lab. per week and two 1 hr. sessions of Physical Training, total 4 hrs. per week)

AS 251L LEADERSHIP LABORATORY (1)

Co-requisite: AS 101 and AS 201; or consent

Tuition is waived, classes are held at UH Mānoa. For more information, call AFROTC at 956-7734/7762.

Laboratory on the basic skills of leadership and

followership. Lab includes application of leadership/followership skills, various field trips to military installations, group projects, and physical training. Repeatable one time. CR/NC only. (Fall only)

AGRICULTURE (AG)

AG 100 INTRODUCTION TO AGRICULTURAL SCIENCES (3) (DB)

Recommended Prep: High School Biology

Introduction to diverse disciplines of agricultural sciences, industry, and contemporary issues in agriculture. (3 hrs. lect. per week)

AMERICAN SIGN LANGUAGE (ASL)

ASL 101 Elementary American Sign Language I (4)

This course is an introduction of American Sign Language communication. Students will acquire basic proficiency in receptive and expressive signing skills through a linguistic, communicative, and cultural approach. May be taken on a CR/N basis. (4 hrs. lect. per week)

ASL 102 Elementary American Sign Language II (4)

Prerequisite: "C" or higher in ASL 101 or instructor consent

This course continues the introduction of American Sign Language communication. Students will acquire further proficiency in receptive and expressive signing skills through a linguistic, communicative, and cultural approach. May be taken on a CR/N basis. (4 hrs. lect. per week)

ASL 201 INTERMEDIATE AMERICAN SIGN LANGUAGE I (4)

Prerequisite: "C" or higher in ASL 102

This course further develops American Sign Language skills, expanding communication to the intermediate level. Students will acquire further proficiency in receptive and expressive signing skills through a linguistic, communicative, and cultural approach. (4 hrs. lect. per week)

ASL 202 INTERMEDIATE AMERICAN SIGN LANGUAGE II (4)

Prerequisite: "C" or higher in ASL 201

This course further develops American Sign Language skills, expanding communication in the intermediate level. Students will acquire further proficiency in receptive and expressive signing skills through a linguistic, communicative, and cultural approach. (4 hrs. lect. per week)

AMERICAN STUDIES (AMST)

AMST 150 AMERICA AND THE WORLD (3)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: ENG 100

Examines America's role in world history and the influence of world affairs on U.S. culture and society. Focuses on U.S. interdependence with Africa, European, Native American, Asian, and Polynesian civilizations, from 1492 to present. (3 hrs. lect. per week)



AMST 201 THE AMERICAN EXPERIENCE: INSTITUTIONS AND MOVEMENTS (3) (DH)*Prerequisite:* Placement in ENG 100 + ENG 100S

Interdisciplinary course that examines diversity and changes in American values and institutions-political, economic, legal and social. (3 hrs. lect. per week)

AMST 202 AMERICAN EXPERIENCE: CULTURE AND THE ARTS (3) (DH)*Prerequisite:* Placement ENG 100 + ENG 100S

Interdisciplinary course that examines diversity and changes in American values and culture-literature, film, visual arts, and architecture. (3 hrs. lect. per week)

ANTHROPOLOGY (ANTH)**ANTH 135 PACIFIC ISLAND PEOPLES (3) (DH)***Recommended Prep:* Placement in ENG 100 + ENG 100S

Introduction to the peoples and cultures of the Pacific Islands. Emphasis is on cultural change and comparisons with Hawaiian ancient and modern cultures. Cross-listed as SSCI 125. (3 hrs. lect. per week)

ANTH 150 HUMAN ADAPTATIONS (3)*Recommended Prep:* Placement in ENG 100 + ENG 100S

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

ANTH 151 EMERGING HUMANITY (3)*Recommended Prep:* Placement in ENG 100 + ENG 100S

Introduction to the paleontology of human biological evolution and the archaeology of culture in the world prior to AD 1500. (3 hrs. lect. per week)

ANTH 152 CULTURE AND HUMANITY (3)*Recommended Prep:* Placement in ENG 100 + ENG 100S

Introduction to cultural anthropology. How humans create, understand, order, and modify their natural, social, supernatural, and physical environments, and make meaning and order. (3 hrs. lect. per week)

ANTH 200 CULTURAL ANTHROPOLOGY (3)*Prerequisite:* Placement in ENG 100 + ENG 100S

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

APPLIED TRADES (APTR)**APTR 193V COOPERATIVE EDUCATION (1-6)***Instructor approval required.*

This course provides students with an opportunity to gain work experience related to the program major. This course was created according to an agreement between the Department of Navy and Honolulu CC for

students under the SCEP Program through the Office of Personnel Management (OPM). Students must be recommended by the work supervisor in order to enroll. Students may enroll 4 times for a maximum of 16 credits.

(75 hrs. of supervised work experience per credit)

ARCHITECTURE, ENGINEERING AND CONSTRUCTION TECHNOLOGIES (AEC)**AEC 101 CONSTRUCTION GRAPHICS AND CONVENTIONS (3)***Prerequisite or Co-requisite:* "C" or higher in AEC 102

Recommended Prep: "C" or higher in a high school CAD drafting course, or equivalent CAD training/experience. AEC majors only.

Introduction to graphic communication and conventions as it is applied to drawing and reading construction plans using hand sketching, various computer-aided design and construction administration software. Techniques for measuring items of construction work from plans and specifications, layout, terminology, graphic standards and drafting fundamentals. Emphasis on how to locate information and cross reference with details, schedules, and specifications for clarification. Some computer architectural 3D modeling using SketchUp or similar software will be introduced. (3 hrs. lect. per week)

AEC 102 INTRODUCTION TO CAD TECHNOLOGY (4)*Prerequisite or Co-requisite:* "C" or higher in AEC 101

Recommended Prep: ICS 100 and "C" or higher in a high school CAD drafting course, or equivalent CAD training/experience.

AEC majors only.

A foundational entry-level CAD technology course in the AEC Technologies program utilizing both 2D and 3D BIM software. The first five weeks covers basic 2D drawing concepts with AutoCAD. Basic commands and operations from 2D drawing and editing tools are covered using templates and preset configurations. The remainder of the course switches to 3D drawing with an emphasis on the three-dimensional drawing tools of the Revit software. (4 hrs. lect. per week)

AEC 103 BASIC DESIGN STUDIO I (4)*Prerequisite or Co-requisite:* "C" or higher in AEC 102

Architectural Tech focus AEC majors only.

Introduction to creative design processes focusing on the investigation of composition within defining perceivable space. Hands-on exploration of materials and structures as an introduction to design processes. (4 hrs. lect.; 4 hrs. lab. per week)

AEC 104 BASIC DESIGN STUDIO II (4)*Prerequisite:* "C" or higher in AEC 103*Prerequisite or Co-requisite:* "C" or higher in AEC 210

Architectural Tech focus AEC majors only.

Continued exploration of design processes.

Introduction to digital mediums, focusing on design communication, material exploration, and creative

exploration including the relationship between digital, physical, and materials aspects of design.
(4 hrs. lect.; 4 hrs. lab. per week)

**AEC 105 INTRODUCTION TO CONSTRUCTION MANAGEMENT (3)
(FORMERLY CMGT 100)**

Prerequisite or Co-requisite: "C" or higher in AEC 101 Construction Management focus AEC majors only.
Introduction to the construction process, including a general overview of organization, relationships, practices, terminology, project types, procurement methods, industry standards, contract documents and career opportunities. (3 hrs. lect. per week)

AEC 111 INTRODUCTION TO PROFESSIONAL ETHICS (1)

Prerequisite or Co-requisite: ENG 100 AEC majors only.
This course is designed for students preparing for employment or further training in architecture, engineering, or a related professional field and who will at some point work with others – colleagues, supervisors, clients, or the general public. Solving ethical problems is often more difficult than applying technical or other specialized skills that the greatest amount of time is spent on in training. The course makes solutions of issues and dilemmas easier, which leads to greater success both on and off the job. Its focus is principally on applied ethics with minimum theoretical terminology, that is very practical – and comes with a lifetime benefit guarantee.
(1 hr. lect. per week)

AEC 118 CONSTRUCTION MATERIALS (3)

Prerequisite: "C" or higher in AEC 101 and ENG 100 Prerequisite or Co-requisite: "C" or higher in AEC 210 AEC majors only.
A broad survey of materials and products used in the building industry, their nature, characteristics, variety and uses. Concrete, masonry, wood, metals, conveying systems, electrical and mechanical systems, and other topics based on the CSI format. Emphasis on materials and construction in Hawai'i. An interactive Internet course—not a CAD or project-based course.
(3 hrs. lect. per week)

AEC 163 CONSTRUCTION LAW (3)

Prerequisite: "C" or higher in AEC 165, ENG 209, and SP 251 Construction Management focus AEC majors only.
This course focuses on understanding the relationship between contract documents and the construction process. Students will explore contractual relationships, legal roles and responsibilities, and contract types. General condition clauses that affect levels of decision making authority, project close-out, and the superintendents role as an agent of the contractor will be studied. Students will study legal issues that often result in construction disputes including differing site conditions, time and schedule impacts, change orders, and changed conditions. Students will also study contract dispute resolution including negotiations, alternatives dispute resolutions, and litigation of dispute.
(3 hrs. lect. per week)

AEC 165 CONSTRUCTION ADMINISTRATION (3)

Prerequisite: "C" or higher in AEC 105 Prerequisite or Co-requisite: "C" or higher in AEC 118 Construction Management focus AEC majors only
Proper construction documentation is essential to an economical and effective system for planning, operating, and controlling a construction project. This course will guide the student in proper forms, form development, and how to adapt forms for your organization. How to write and prepare the various plans required by government agencies is also covered. (3 hrs. lect. per week)

AEC 193V COOPERATIVE EDUCATION (1–4)

Prerequisite: Placement in ENG 100 Instructor approval required. AEC majors only.
This course provides students with the opportunity to acquire on-the-job experience related to classroom and laboratory instruction in Architecture, Engineering and Construction Technologies. Students may enroll 4 times for a maximum of 12 credits.
(5 hrs. work experience per week per credit)

AEC 203 BEGINNING DESIGN STUDIO I (4)

Prerequisite: "C" or higher in AEC 103, 104, and 237 Architectural Tech focus AEC majors only.
Continued exploration of design processes. Introduction to digital mediums, focusing on design communication, material exploration, and creative exploration including the relationship between digital, physical, and materials aspects of design.
(4 hrs. lect.; 4 hrs. lab. per week)

AEC 204 BEGINNING DESIGN STUDIO II (4)

Prerequisite: "C" or higher in AEC 203 Architectural Tech focus AEC majors only.
Development of designs and processes to study precedents and explore solutions responding to human needs in built and natural environment with emphasis on analysis and representation of architectonic space and form using hand and computer techniques.
(4 hrs. lect.; 4 hrs. lab. per week)

AEC 209 PLANNING AND SCHEDULING (4)

Prerequisite: "C" or higher in AEC 165 Prerequisite or Co-requisite: "C" or higher in AEC 211 Construction Management focus AEC majors only.
The theory and practice of planning, scheduling, and reporting for a project through the use of bar chart and Critical Path Methodology. The course provides students with a thorough understanding of project planning and scheduling principles in the construction industry. It introduces various planning and control techniques in an integrated planning and control system. It helps students develop understanding of time, cost, and resource management principles as well as the ethical issues involved. The course also provides an overview of advanced project planning concepts.
(4 hrs. lect. per week)

AEC 210 WORKING DRAWINGS I (4)*Prerequisite: "C" or higher in AEC 102**Prerequisite or Co-requisite: "C" or higher in AEC 118
AEC majors only.*

A core course in the advanced study and application of materials and methods of construction specifically related to two-story dwellings. Projects utilize light wood, steel, and/or masonry construction principles and practices. Basic residential planning, drafting expressions, architectural details, and complete working drawings. All drawing is done using computer-aided design (CAD) software. (4 hrs. lect. per week)

AEC 211 CONSTRUCTION ESTIMATING AND BIDDING (3)*Prerequisite: AEC 118; "C" or higher in AEC 160; "C" or higher in ENG 100**AEC majors only.*

This course introduces students to construction contracts, types of estimates, construction costs, cost accounting, purposes and functions. Students also gain experience in generating material quantity takeoffs from construction drawings. (3 hrs. lect. per week)

AEC 220 WORKING DRAWINGS II (4)*Prerequisite: "C" or higher in AEC 210**AEC majors only.*

A second course in the advanced study and application of materials and methods of construction specifically related to two-story dwellings. Projects utilize light wood, steel, and/or masonry construction principles and practices. Basic residential planning, drafting expressions, architectural details, and complete working drawings. All drawing is done using computer-aided design (CAD) software. (4 hrs. lect. per week)

AEC 236 Introduction to Sustainability (3)

Introduction to Sustainability provides a comprehensive overview of the interdisciplinary field of sustainability. The focus is on furnishing solutions and equipping the student with both conceptual understanding and technical skills for the workplace. We will explore one aspect of the field each week, first introducing relevant theory and presenting issues, then supplying tools for working towards solutions. Elements of sustainability will be examined, and exploration of ecosystems, social equity, environmental justice, food, energy, product life cycles, cities, and more. Techniques for management and measurement as well as case studies from around the world will be discussed. Open to non-majors. (3 hrs. lect. per week)

AEC 237 INTRODUCTION TO THE BUILT ENVIRONMENT (3)*Prerequisite or Co-requisite: "C" or higher in ENG 100*

This course explores the evolution of society's physical fabric as revealed by place, climate, culture, technology and time. The work of several well-known architects will be examined to study the impact of scientific knowledge and architectural design theory on history, culture, sociology and built form. Students

will prepare several oral presentations to validate their understanding of the course content. Fall semester only. Open to non-majors. (3 hrs. lect. per week)

AEC 260 WORKING DRAWINGS III (4)*Prerequisite: "C" or higher in AEC 220**AEC majors only.*

A third course that includes the theory and practice involved in producing and organizing working drawings using computer-aided design techniques for multi-family and commercial projects. Students are exposed to design, layout, and construction methods used in steel, concrete, masonry, and wood systems. Independent research emphasized. All drawing is done using computer-aided (CAD) software. (4 hrs. lect. per week)

AEC 261 BUILDING SERVICES (3)*Prerequisite: "C" or higher in AEC 210**Recommended Prep: AEC 118**AEC majors only.*

Preliminary and detail planning of service and mechanical equipment and facilities in multi-family, commercial, industrial, and municipal buildings. Topics include energy, thermal control, acoustics, large capacity plumbing and electrical systems, fire protection equipment, vertical transportation equipment, security systems, and service accesses. (3 hrs. lect. per week)

AEC 265 CONSTRUCTION INSPECTION (3)*Prerequisite: "C" or higher in AEC 163**Construction Management focus AEC majors only.*

This course will cover building codes and standards applicable towards building construction and the inspection processes. (3 hrs. lect. per week)

AEC 270 INTRODUCTION TO IMMERSIVE TECHNOLOGY (2)*Prerequisite or Co-requisite: AEC 220**AEC majors only.*

This course is designed to introduce students to the world of Augmented Reality (AR) and Virtual Reality (VR) technology in the context of design and construction applications. The course will cover the basics of AR and VR technology, including how it works, its applications, and its potential impact on the design and construction industry. Students will learn how to use AR and VR technology to create simulated design and inspection scenarios, and how to integrate this immersive technology with other platforms of related advanced design and construction technology. By the end of the course, students will have a solid understanding of AR and VR technology and how it can be used to enhance the design and construction process. Lecture/Lab sections will include hands-on experience with AR and VR technology, which they can apply to their projects and work. (2 hrs. lect.; 2 hrs. lab. per week)

AEC 277 LAND SURVEYING I (3)*Prerequisite: "C" or higher in ENG 100**Construction Management focus AEC majors only.*

This course is a basic course on land surveying. It provides the basic skills of plane surveying, using instruments for distance measurements, angular measurements, and determining elevations. The course provides experience with completing closed traverses and topographic surveying. Computer spreadsheets are utilized to facilitate common calculations associated with plane surveying. (2 hrs. lect.; 3 hrs. lab. per week)

AEC 278 LAND SURVEYING II (3)

Prerequisite: "C" or higher in AEC 277

Construction Management focus AEC majors only.

This course is designed to build upon the skills attained in the Land Surveying I course and prepares individuals interested in taking the Certified Surveying Technician (CST) exam. (2 hrs. lect.; 3 hrs. lab. per week)

AEC 280 SITE MODELING (3)

Prerequisite: "C" or higher in AEC 277

AEC majors only.

Introduction to civil engineering with site modeling and drawing using various 2D, 3D CAD and scanning technologies. A look at maps, surveys, scales and conventions, contours and profiles, site plans, site utilities, topographic models, excavation, retaining walls, highway layout, subdivision and block plans. (3 hrs. lect. per week)

ART (ART)

ART 101 INTRODUCTION TO THE VISUAL ARTS (3) (DA)

Prerequisite: Placement in ENG 100 + ENG 100S

Nature of visual art and its expression in various forms. Lectures, demonstrations. (3 hrs. lect. per week)

ART 107D INTRODUCTION TO DIGITAL PHOTOGRAPHY (3) (DA)

Recommended Prep: Placement in ENG 100 + ENG 100S; ART 112

Students are required to have access to a working digital camera (10+ MP, SLR preferred) plus their camera's operating instructions and application CD.

This course covers the basic history and practice of digital photography. Students will learn basic camera techniques, the specific features of their own camera, and how to convert their images to digital formats. The course will provide students with basic aesthetic principles as well as specific practical techniques needed for artistic expression and/or entry into the photographic workplace. Students may enroll 2 times for a maximum of 6 credits. (3 hrs. lect./lab. per week)

ART 111 INTRODUCTION TO WATERCOLOR PAINTING (3) (DA)

Recommended Prep: Placement in ENG 100 + ENG 100S

ART 111 provides a foundation in the materials and techniques of Watercolor Painting through lectures, field trips, demonstrations and in-class painting sessions. May be taken on a CR/N basis. (6 hrs. lect./lab. per week)

ART 112 INTRODUCTION TO DIGITAL ART (3)

Recommended Prep: ICS 100; Placement in ENG 100 + ENG 100S

Introduction to the technology, vocabulary, and procedures of computer produced images; the use of computer graphics as an artist's tool. Students may enroll 2 times for a maximum of 6 credits. (2 hrs. lect.; 4 hrs. lab. per week)

ART 113 INTRODUCTION TO DRAWING (3) (DA)

Prerequisite: Placement in ENG 100 + ENG 100S

Two-dimensional visualization and rendering of forms, spaces, and ideas through a variety of approaches and media. (2 hrs. lect.; 4 hrs. lab. per week)

ART 115 INTRODUCTION TO 2D DESIGN (3)

Recommended Prep: Placement in ENG 100 + ENG 100S

Basic design concepts, elements and principles of organization. Emphasizes problem-solving and technical skills with introduction to computer. May be graded on a CR/N basis. (2 hrs. lect.; 4 hrs. lab. per week)

ART 123 INTRODUCTION TO PAINTING (3) (DA)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: ART 113

Theory and practice of painting; basic material and technical procedures will be addressed. (2 hrs. lect.; 4 hrs. lab. per week)

ART 196 SUSTAINABLE ART AND DESIGN (3) (DA)

Prerequisite: Placement in ENG 100 + ENG 100S

This course introduces students to the concepts of sustainability as it relates to Art and Design. Artists and designers who consciously implement sustainability practices will be explored, with an attention to historical context and the larger cultural meaning. Students will complete basic studio art projects that relate to sustainability. (3 hrs. lect. per week)

ART 213 INTERMEDIATE DRAWING (3) (DA)

Prerequisite: ART 113

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

ART 214 LIFE DRAWING (3)

Prerequisite: ART 113 or 213 or instructor approval

Study of the figure. Repeatable once for credit. (2 hrs. lect.; 4 hrs. lab. per week)

ART 223 INTERMEDIATE PAINTING (3)

Prerequisite: ART 123

Survey of late 19th and 20th century studio practice with emphasis on abstraction and non-representational painting. (2 hrs. lect.; 4 hrs. lab. per week)

ASIAN STUDIES (ASAN)

ASAN 100 ASIAN PERSPECTIVES (3) (DH)

Recommended Prep: Placement in ENG 100 + ENG 100S

The purpose of this course will be to raise the student's

awareness and understanding of the operation and composition of non-American cultures and societies. The skills of observation and analysis that students will acquire through this course should enable them to confront and interact with any other nonAmerican culture. (3 hrs. lect. per week)

ASAN 201 INTRODUCTION TO ASIAN STUDIES: EAST ASIA (3) (DH)

Understanding East Asia through multidisciplinary approaches. Examines the interrelationship of policies, economy, literature, religion, the arts, and history as the basis for such an understanding. May be taken by Credit by examination or audited. (3 hrs. lect. per week)

ASAN 202 INTRODUCTION TO ASIAN STUDIES: SOUTH/SOUTH EAST ASIA (3) (DH)

Understanding East Asia through multidisciplinary approaches. Examines the interrelationship of policies, economy, literature, religion, the arts, and history as the basis for such an understanding. May be taken by Credit by examination or audited. (3 hrs. lect. per week)

ASAN 241 CIVILIZATIONS OF ASIA I (3)

Recommended Prep: Placement in ENG 100 + ENG 100S
Historical survey of major civilizations of Asia from earliest times: East Asia, Southeast Asia, and South Asia. Cross-listed as HIST 241. (3 hrs. lect. per week)

ASAN 242 CIVILIZATIONS OF ASIA II (3)

Recommended Prep: Placement in ENG 100 + ENG 100S
Continuation of ASAN 241. Cross-listed as HIST 242. (3 hrs. lect. per week)

ASAN 250 ASIAN POLITICS SINCE 1900 (3)

Recommended Prep: Placement in ENG 100 + ENG 100S
This course will focus on ten Asian countries with the largest economics and populations, in order to familiarize students with the development of their politics, economics, and society. Cross-listed as POLS 250. (3 hrs. lect. per week)

ASAN 296C ASIAN POPULAR CULTURE (3) (DH)

Recommended Prep: ASAN 201, 202

Comment: No knowledge of Asian languages are required for the course. No prior knowledge or experience with Asian popular culture is necessary.

ASAN 296C is the study of Asian popular culture and of theoretical systems used for analyzing popular culture including, but not limited to, Manga, Anime, Television Drama, Music, and Film from Asia. The course will use popular culture as a means to understand Asian societies, business, cultural practices, and beliefs. Students will gain analytical skills and knowledge of Asian cultures and markets that can be used to begin working toward careers in or related to Asian popular media and culture. (3 hrs. lect. per week)

ASTRONOMY (ASTR)

ASTR 110 SURVEY OF ASTRONOMY (3) (DP)

Survey of the nature of the astronomical universe for non-science majors, with emphasis on scientific method

and development of scientific thought. (3 hrs. lect. per week)

ASTR 110L SURVEY OF ASTRONOMY LABORATORY (1)

Prerequisite: "C" or higher in MATH 24 OR placement in MATH 25

Prerequisite or Co-requisite: ASTR 110 or consent of instructor

Demonstration of astronomical principles through laboratory observations and analysis of astronomical data. Not required for ASTR 110. May be taken on a CR/N basis. (3 hrs. lab. per week)

ATMOSPHERIC SCIENCES (ATMO)

ATMO 101 INTRODUCTION TO METEOROLOGY (3)

Prerequisite: Placement in ENG 100 + ENG 100S or ESL 23

This is an introductory course intended for the non-science majors, prospective science teachers and prospective science majors. This course will include an overview of basic atmospheric physics, sun-Earth-atmosphere interrelations, pollution, major weather systems, weather forecasting, and weather in Hawai'i. (3 hrs. lect. per week)

ATMO 101L INTRODUCTION TO METEOROLOGY LAB (1)

Prerequisite or Co-requisite: ATMO 101

This introductory course is intended to accompany ATMO 101 and involves exercises with meteorological data and measurement systems, with particular focus on the characteristics of weather in Hawai'i. (3 hrs. lab. per week)

AUTO BODY REPAIR AND PAINTING (ABRP)

ABRP 73 COLLISION PREP AND PANEL ALIGNMENT (4)

Co-requisite: ABRP 75

ABRP majors only.

This course will introduce students to the auto body collision repair environment. The focal point of instruction will involve the unibody of the late model collision damaged vehicle and preparation of the vehicle for collision repair. Other areas of instruction will introduce students to the theory and practice of the adjustment and alignment of door, hood, decklid, etc. (120 hrs. total. 6 hrs. lect.; 18 hrs. lab. per week over 5 weeks)

ABRP 75 DOOR SKIN ALIGNMENT AND REPLACEMENT (2)

Co-requisite: ABRP 73

ABRP majors only.

This course will cover fundamental procedures in the removal, reinstallation, and adjustment of movable door glass. Major emphasis on the theory of removing and replacing door outer skins will also be included. (60 hrs. total. 6 hrs. lect.; 18 hrs. lab. per week over 2.5 weeks)

ABRP 78 COLLISION DAMAGE ANALYSIS (3)

Co-requisite: ABRP 79, 80

ABRP majors only.

Specific areas to be covered relate to the identification and analysis of damage through visual inspection and measuring techniques. Emphasis will be placed on the ability to identify quick telltale signs of damage. Students will also move from basic structural measuring principles, techniques, and equipment to various types of state-of-the-art frame measuring equipment. The unibody of the late model vehicle will be the focal point of instruction.

(90 hrs. total. 6 hrs. lect.; 18 hrs. lab. per week over 3.75 weeks)

ABRP 79 STRUCTURAL STRAIGHTENING TECHNIQUES (3)

Co-requisite: ABRP 78, 80

ABRP majors only.

Students will learn, practice, and demonstrate their skills as they relate to different anchoring systems, and their set-up. This course will further introduce students to the theory and practice of various straightening techniques and systems.

(90 hrs. total. 6 hrs. lect.; 18 hrs. lab. per week over 3.75 weeks)

ABRP 80 PANEL REPLACEMENT (6)

Co-requisite: ABRP 78, 79

ABRP majors only.

This course will expose students to factory attachment methods of structural/non-structural components and the proper procedures for replacing these components. The method of sectioning structural/non-structural components will also be explored.

(180 hrs. total. 6 hrs. lect.; 18 hrs. lab. per week over 7.5 weeks)

ABRP 101 FOUNDATIONS TO AUTO BODY REPAIR (12)

Prerequisite: Respirator use clearance and valid driver's license.

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

ABRP majors only

This course design is to introduce the student to the safe practices in the shop environment while developing an understanding and skill level that is pertinent to entry-level skills needed to be productive in the industry. The student will develop skills that are necessary to repair minor damages to the vehicle. The student will gain an understanding of the safe operation, proper use and general maintenance of tools and equipment required of entry-level technicians. (6 hrs. lect.; 18 hrs lab per week)

ABRP 102 INTERMEDIATE AUTO BODY REPAIR (12)

Prerequisite: ABRP 101; Respirator use clearance and valid driver's license.

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

ABRP majors only

This course will further strengthen the student's

ability to do minor metalwork and body filling while progressing them into the repair of advanced damages of the modern vehicle. The student will be introduced into the safe operation and maintenance of intermediate equipment commonly used in the repair shop. Topics of new discovery will include: composite repair; understanding the fundamentals of an equipment estimate and work order; process of full and partial panel replacement of commonly replaced components; proper vehicle pre-delivery processes. Students will be introduced to the safe handling and repair of aluminum components with an introduction to higher end welding techniques.

(6 hrs lect.; 18 hrs. lab per week)

ABRP 103 TRANSITIONING CLASS TO INDUSTRY (4)

Prerequisite: ABRP 101, ABRP 102; Respirator use clearance and valid driver's license.

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

ABRP majors only

This course is a culmination of a student's knowledge and skill development, it will give them real life experiences in the day-to-day operation of the industry. Students will be required to intern at various businesses within the State while still attending class. It is designed to hone their school training to further meet industry demands and give them an insight to the many career paths within the industry. Students will intern 5 days a week for 4 hours a day at arranged businesses by the student, instructor and business owner. Placements are based on student interest in conjunction with the fulfillment of program objectives. Students will also be required to attend class 5 days a week for 4 hours a day to further their study of the industry. (5 hrs lect.; 15 hrs. lab per week over 6 weeks)

AUTOMOTIVE TECHNOLOGY (AMT)

AMT 93V COOPERATIVE EDUCATION (1-4)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 50 OR Placement in MATH 150 or higher

Valid driver's license

Instructor approval required.

AMT majors only.

This course will provide students with the opportunity to acquire on-the-job experience related to classroom and laboratory instruction in Automotive Mechanics Technology. Students may enroll 4 times for a maximum of 12 credits.

(5 hrs. work experience per week per credit.)

AMT 121 INTRODUCTION TO AUTOMOTIVE MECHANICS (2) (FORMERLY AMT 20)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 50 OR Placement in MATH 150 or higher

Valid driver's license

Co-requisite: AMT 153 and AMT 155

AMT majors only.

This course exposes students to the policies and procedures of the Automotive Mechanics Technology

(AMT) program. Students will have an opportunity to learn about various positions in the automotive field, understand and apply shop safety, identify and explain issues related to hazardous materials, identify systems and components of an automobile, reference technical manuals appropriately, identify and use basic hand tools and precision measuring equipment, perform fastener repair and identification and understand the importance of maintenance scheduling. (60 hrs. lect./lab. per term)

**AMT 122 SURVEY OF AUTOMOTIVE TECHNOLOGY (4)
(FORMERLY AMT 22)**

Prerequisite: Valid driver's license

Recommended Prep: Auto Academy Participant
Administrative approval required.

This course covers content similar to AMT 121 - Introduction to Automotive Mechanics, but includes an internship and an overview of automotive technology. This course exposes students to the policies and procedures of the Automotive Mechanics Technology (AMT) program. Students will have an opportunity to learn about various positions in the automotive field, understand and apply shop safety, identify and explain issues related to hazardous materials, identify systems and components of an automobile, reference technical manuals appropriately, identify and use basic hand tools and precision measuring equipment, perform fastener repair and identification and understand the importance of maintenance scheduling. Students will also have an opportunity to learn about the eight general areas of automotive technology which include, Steering and Suspension, Brakes, Manual Drive Train and Axles, Automatic Transmissions and Transaxles, Electrical and Electronic Systems, Engine Repair, Heating and Air Conditioning, and Engine Performance. (20 hrs. lect./lab. per week)

AMT 130 ENGINES (8)

Prerequisite: AMT 153 and AMT 155

Co-requisite: AMT 140

Recommended Prep: Employed in the automotive industry
AMT majors only.

This course will cover shop safety, tools and all components found in the modern internal combustion engine. The course is designed to provide students with an understanding of the fundamental operation and construction of internal combustion engines. Instruction will include theory and laboratory (shop) activities in which students will learn how to inspect, service, maintain, diagnose, and repair automobile engine malfunctions. Course includes live work. (240 hrs. lect./lab. per term)

AMT 140 ELECTRICAL SYSTEMS I (4)

Prerequisite: AMT 153 & 155

Co-requisite: AMT 130

Recommended Prep: Employed in the automotive industry
AMT majors only.

This course will cover shop safety, applicable tools and equipment. It is designed to provide students with the

essential theories and practical skills to service and repair battery, starting, charging, and lighting systems. Diagnostic procedures using wiring diagrams and electrical test equipment to locate shorts, grounds, opens and resistance problems will also be covered. Course includes live work. (120 hrs. lect./lab. per term)

AMT 142 ELECTRICAL SYSTEMS II (8)

Prerequisite: AMT 146 and AMT 151; PHYS 100 & 100L or PHYS 104

Co-requisite: AMT 143

AMT majors only.

This Electrical Systems II course deals with the systematic approach to diagnosing and repairing electrical, electronic, and ignition systems. The course focuses on small motor devices, relay controls, instrument clusters, and ignition systems found in the modern vehicle. Students will be introduced to common symptoms and pinpoint test procedures used to evaluate various circuits. They will demonstrate awareness of the safety aspects, operation, and characteristics of Hybrid/Electric Vehicles. Other subject areas include basic electrical repairs, shop safety, and the proper utilization of tools and equipment. Course may include live work. (240 hrs. lect./lab. per term)

AMT 143 AIR CONDITIONING (4)

Prerequisite: AMT 146 and AMT 151

Co-requisite: AMT 142

Recommended Prep: Employed in the automotive industry
AMT majors only.

This course covers shop safety, training in specialty tools and equipment. Included are fundamental theories, diagnosis, and repair practices to automotive air conditioning systems. Presented in the course are the operation and function of the vacuum, electrical, refrigeration circuits, along with computer controlled climate control systems. Course includes live work. (120 hrs. lect./lab. per term)

AMT 146 POWERTRAIN AND MANUAL TRANSMISSIONS (5)

Prerequisite: AMT 130 and AMT 140; PHYS 100 & 100L or PHYS 104

Co-requisite: AMT 151

AMT majors only.

In this class, students will learn shop safety, proper use of related tools and equipment. The various designs of manual transmissions, differentials, and transaxles are covered in this course along with the many drive line components found in the undercarriage of the automobile. Each major component is covered in detail, including such topics as purpose, application, operation, inspection, diagnosis, and repair. Course includes live work. (150 hrs. lect./lab. per term)

AMT 151 AUTOMATIC TRANSMISSIONS/TRANSAXLES (7)

Prerequisite: AMT 130 and AMT 140

Co-requisite: AMT 146

Recommended Prep: Employed in the automotive industry
AMT majors only.

This course explains the fundamental principles of

automatic transmission designs and operations found on both Front Wheel Drive (FWD) and Rear Wheel Drive (RWD) vehicles. Service and overhaul procedures are given on various import and domestic automatic transmissions according to the manufacturer's standards. Introduction to Electronically Controlled Automatic Transmissions (ECAT) also included. (210 hrs. lect./lab. per term)

AMT 153 BRAKES (5)

Prerequisite or Co-requisite: AMT 121

Co-requisite: AMT 155

AMT majors only.

This course covers shop safety, related tools, fundamental principles of operation and practical application needed to perform repairs to automotive braking systems. Various mechanical, hydraulic, vacuum, electrical, and computer devices incorporated in the automobile's braking system will be covered. They include an introduction to Anti-lock Braking Systems manufactured by Teves, Bosch, Delco, and Kelsey-Hayes along with established troubleshooting and service procedures. Course includes live work. (150 hrs. lect./ lab. per term)

AMT 155 SUSPENSION AND STEERING (5)

Prerequisite or Co-requisite: AMT 121

Co-requisite: AMT 153

AMT majors only.

This course covers the need of today's automotive suspension system specialist. Fundamental information, repair procedures and current service practices are included. Various types of suspension and steering components found in the modern automobile are covered with steering geometry and wheel alignments of 2 and 4 wheel steering automobiles. An introduction to Supplemental Restraint Systems (air bags) also included. (150 hrs. lect./lab. per term)

AMT 167 ENGINE PERFORMANCE (12)

Prerequisite: AMT 121, 130, 140, 142, 143, 146, 151, 153, 155
AMT majors only.

This course will deal with the systematic diagnostic approach to isolate malfunctions for computerized engine control systems. Students will be introduced to various components and their relationship to others in system functions. The course covers service codes, analysis of drivability symptoms, and pin-point test procedures using modern diagnostic strategies and various state-of-the-art equipment. (360 hrs. lect./lab. per term)

BIOCHEMISTRY (BIOC)

BIOC 141 FUNDAMENTALS OF BIOCHEMISTRY (3) (DP)

Prerequisite: MATH 25

Biological chemistry stressing integration of concepts of general, inorganic, and biochemistry and applications to life chemistry. (3 hrs. lect. per week)

BIOC 142 ELEMENTS OF BIOCHEMISTRY (3) (DP)

Prerequisite: BIOC 141 or CHEM 151

Biochemical principles and concepts as applied to living systems. Includes sufficient organic chemistry to understand these principles. (3 hrs. lect. per week)

BIOLOGY (BIOL)

BIOL 100 HUMAN BIOLOGY (3) (DB)

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

BIOL 101 BIOLOGY AND SOCIETY (3) (DB)

Recommended Prep: ENG 100 or a higher-level English course; and CHEM 100 or a higher-level Chemistry course
Comment: Recommended concurrent enrollment in BIOL 101L

This course introduces non-science majors to biological science and its relevance in daily life, including cell structure and function, genetics, evolutionary theory, plant and animal structure and function, and ecology. (3 hrs. lect. per week)

BIOL 101L BIOLOGY AND SOCIETY LAB (1) (DY)

Prerequisite or Co-requisite: BIOL 101

Laboratory to accompany BIOL 101 Biology and Society.

This course introduces the scientific approach to problem-solving to students not majoring in natural sciences, and enhances understanding of major concepts in biology through experimentation. Lab topics include cell structure and functions, genetics, evolutionary theory, plant and animal structure and function, and ecology. (3 hrs. lab. per week)

BIOL 123 HAWAIIAN ENVIRONMENT SCIENCE (3) (DB)

Characteristics of science and interaction with society illustrated by topics in geology, astronomy, oceanography, and biology of Hawaiian Islands. (3 hrs. lect. per week)

BIOL 124 ENVIRONMENT AND ECOLOGY (3)

Co-requisite: BIOL 124L

Biological and physical principles affecting human/environment interaction; impact of science, technology, value and perceptions on global society and ecology; projections and options about human ecology. (3 hrs. lect. per week)

BIOL 124L ENVIRONMENT AND ECOLOGY LAB (1)

Co-requisite: BIOL 124

Laboratory experiments, field surveys/studies, demonstrations and projects illustrating topics in human ecology. (3 hrs. lab. per week)

BIOL 171 INTRODUCTION TO BIOLOGY I (3) (DB)

Co-requisite: BIOL 171L or Instructor Approval

Recommended Prep: High School Biology

Introductory biology for all life science majors.

Cell structure and chemistry; growth, reproduction, genetics, evolution, viruses, bacteria and simple eukaryotes. (3 hrs. lect. per week)

BIOL 171L INTRODUCTION TO BIOLOGY I LAB (1) (DY)

Prerequisite or Co-requisite: BIOL 171 or Instructor Approval

Recommended Prep: High School Biology

Laboratory to accompany BIOL 171.

(3 hrs. lab. per week)

BIOL 172 INTRODUCTION TO BIOLOGY II (3) (DB)

Co-requisite: BIOL 172L or Instructor Approval

Recommended Prep: High School Biology and college level reading and writing skills

Introduction to biology for all life science majors. Continuation of BIOL 171. Exploration of biology with emphasis on biological diversity, anatomy and physiology of plants and animals, ecology and the biosphere. (3 hrs. lect. per week)

BIOL 172L INTRODUCTION TO BIOLOGY II LAB (1) (DY)

Prerequisite or Co-requisite: BIOL 172 or Instructor Approval

Recommended Prep: High School Biology and college level reading and writing skills

Laboratory to accompany BIOL 172.

(3 hrs. lab. per week)

BIOL 200 CORAL REEFS (3)

The course is an introduction to the biology, ecology and geology of coral reefs. Topics include the physical and chemical properties of coral reef habitats, reef geology, the physiology, anatomy, ecology, evolution, and cultural significance of coral reef organisms. Topics are discussed in the context of sustainability, global climate change, and the management of human impacts on coral reefs. Emphasis is on Hawaii's coral reefs, but comparisons are made among reefs from other areas. (3 hrs. lect. per week)

BIOL 265 ECOLOGY AND EVOLUTIONARY BIOLOGY (3)

Prerequisite: "C" or higher in BIOL 171, BIOL 171L, BIOL 172, and BIOL 172L or Instructor Approval

Principles of ecology and evolution for life science majors stressing integrated approach and recent advance. (3 hrs. lect. per week)

BIOL 265L ECOLOGY AND EVOLUTIONARY BIOLOGY LAB (1)

Prerequisite: "C" or higher in BIOL 171, BIOL 171L, BIOL 172, and BIOL 172L or Instructor Approval

Prerequisite or Co-requisite: BIOL 265

BIOL 265L is a laboratory that accompanies BIOL 265 and emphasizes investigation in Ecology and Evolutionary Biology. (3 hrs. lab. per week)

BIOL 275 CELL AND MOLECULAR BIOLOGY (3)

Prerequisite: "C" or higher in BIOL 171, BIOL 171L, CHEM 272, and CHEM 272L or Instructor Approval

Recommended Prep: Concurrent enrollment in BIOL 275L

An integrated cell and molecular biology course for life science majors. This course is designed to give the student a fundamental understanding of the structure

and biochemistry of eukaryotic and prokaryotic cells, as well as the basic principles of molecular biology, including the modern advances in biotechnology, recombinant DNA technology, and bioinformatics. (3 hrs. lect. per week)

BIOL 275L CELL AND MOLECULAR BIOLOGY LAB (2)

Prerequisite: "C" or higher in BIOL 171, BIOL 171L, CHEM 272, and CHEM 272L or Instructor Approval

Prerequisite or Co-requisite: BIOL 275

BIOL 275L is a lecture/laboratory in cell and molecular biology for life science majors. This course is taken either concurrently or after BIOL 275. Through lectures and laboratory exercises, students will acquire fundamental understanding of the biochemistry of the cell. Students will also acquire competence in modern advances in protein chemistry, recombinant DNA technology and biotechnology. (4 hrs. lab. per week)

BOTANY (BOT)

BOT 101 GENERAL BOTANY (3) (DB)

Co-requisite: BOT 101L

This course will cover introduction to plant biology; structures and functions of plant cells, tissues, and organs such as roots, stems, leaves and flowers; concepts of biological evolution and classification; the diversity of plants; genetics; ecology; and current topics of interest: biotechnology, agriculture and pollution effects on plants. (3 hrs. lect. per week)

BOT 101L GENERAL BOTANY LABORATORY (1) (DY)

Co-requisite: BOT 101

Laboratory sessions will involve specific application of lecture material. Laboratory observations, experiments and field trips will illustrate the basic principles of plant biology, plant propagation and environmental issues affecting plant growth. Students will be exposed to diverse farming technologies for sustainable food production. (3 hrs. lab. per week)

BOT 105 MEA KANU: HAWAIIAN PLANTS & THEIR USES (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

This course explores the cultural uses of plants by humans in the Hawaiian archipelago and elsewhere in Polynesia. Focus will be upon those plants that were originally found in Hawai'i when early settlers came and those plants that were brought by them. Cross-listed as HWST 105. (3 hrs. lect. per week)

BOT 130 PLANTS IN THE HAWAIIAN ENVIRONMENT (3)

Co-requisite: BOT 130L

This course is a study of some of the plants which grow in Hawai'i. Plants will be identified and discussed in regard to their form and structure. Evolution and ecology of the plants will also be considered. (3 hrs. lect. per week)

BOT 130L PLANTS IN THE HAWAIIAN ENVIRONMENT LABORATORY (1)

Co-requisite: BOT 130

Laboratories will involve specific application of lecture material and several field trips to various parts of O'ahu. (3 hrs. lab. per week)

BUSINESS LAW (BLAW)

BLAW 200 LEGAL ENVIRONMENT OF BUSINESS (3)

Prerequisite: ENG 100 or Placement in ENG 201-296;

MATH 25 or Placement in MATH 100 or higher

Introduction to the legal environment of business operations with particular attention to principles of law relating to contracts, agency, partnerships, and corporations. May be taken on a CR/N basis. (3 hrs. lect. per week)

CARPENTRY TECHNOLOGY (CARP)

CARP 20 CARPENTRY BASICS (3)

Prerequisite: Placement in ENG 100 ; MATH 50 or

Placement in MATH 150 or higher

Co-requisite: CARP 26 and CARP 30

CARP majors only.

This course provides an overview of the tools, materials, and safety practices currently used in the industry. The safe use, care and maintenance of hand and power tools is emphasized. (6 hrs. lect./lab. per week)

CARP 22 CONCRETE FORMS (11)

CARP majors only.

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

CARP 26 CARPENTRY I (9)

Co-requisite: CARP 20 and CARP 30

This course provides students with an opportunity to acquire basic skills required for success in the Carpentry Trade. Students will complete projects using appropriate tools, materials, procedures and safety practices currently used in the industry. (18 hrs. lect./lab. per week)

CARP 30 BLUEPRINT READING FOR CARPENTERS (3)

Co-requisite: CARP 20 and CARP 26

CARP majors only.

The interpretation of symbols, conventions, legends, abbreviations, dimensioning techniques, visualization of subject projects, techniques and procedures for extraction from a set of construction drawings, information for accurate construction and the preparation of necessary drawings and sketches as required by the carpenter. (3 hrs. lect. per week)

CARP 41 ROUGH FRAMING AND EXTERIOR FINISH (11)

CARP majors only.

This course is designed to show students the basics of good house construction. Topics include layout and construction techniques of the various parts of a building—footings, foundations, wall and roof framings, roofings, exterior sidings, and door and window frames. City and County of Honolulu and Uniform Building Code regulations are introduced. (5 hrs. lect.; 18 hrs. lab. per week)

CARP 42 FINISHING (11)

CARP majors only.

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

CHEMISTRY (CHEM)

CHEM 100 CHEMISTRY AND SOCIETY (3) (DP)

Co-requisite: CHEM 100L

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

CHEM 100L CHEMISTRY AND SOCIETY LABORATORY (1) (DY)

Co-requisite: CHEM 100

Experiments illustrating the role of chemistry in society to the nonscientist. (3 hrs. lab. per week)

CHEM 105 ENVIRONMENTAL CHEMISTRY (4) (DP) + (DY)

Prerequisite: ENG 100 + ENG 100T OR ESL 13 & 14 OR

Placement in ENG 100 + ENG 100S or ESL 23;

Placement in MATH 24 or higher or Completion of MATH 50

OESM and FIRE majors (LBRT: Request Instructor Approval)

Introductory chemistry course covering basic and applied chemistry necessary for understanding toxicological and environmental effects of chemicals. Coordinated lecture and laboratory activities in basic chemistry, hazardous materials, applied biochemistry, and environmental chemistry. (3 hrs. lect.; 3 hrs. lab. per week)

CHEM 105C COSMETIC CHEMISTRY (3) (DP)

Co-requisite: COSM 30, COSM 31, COSM 32, and COSM 33
COSM majors only.

Application of chemical principles to cosmetology. The course content will include: atomic structure, chemical bonding, acids and bases, hair structure, shampoos, bleaches and tints, waving and hair straightening. (3 hrs. lect. per week)

CHEM 131 PREPARATION FOR GENERAL CHEMISTRY (3)

Prerequisite: MATH 25 OR Placement in MATH 103
For students lacking preparation in chemistry. Provides background in algebra and elementary concepts of chemistry in preparation for entering the General Chemistry sequence. May be taken on a CR/N basis. (3 hrs. lect. per week)

CHEM 151 ELEMENTARY SURVEY OF CHEMISTRY (3) (DP)

Prerequisite: MATH 25 OR Placement in MATH 103
Intended to provide the beginning student with a non-rigorous, but adequate, background in the fundamentals of chemistry. Suitable for students preparing for training in the life sciences and for those seeking a practical approach to chemistry. (3 hrs. lect. per week)

CHEM 151L ELEMENTARY SURVEY OF CHEMISTRY LABORATORY (1) (DY)

Prerequisite: MATH 25 OR Placement in MATH 103
Co-requisite: CHEM 151
Experiments introducing laboratory techniques and illustrating chemical principles. (3 hrs. lab. per week)

CHEM 161 GENERAL CHEMISTRY I (3) (DP)

Prerequisite: MATH 103, OR Placement in MATH 135
Co-requisite: CHEM 161L
Basic principles of chemistry including stoichiometry. Introduction to solution phase chemistry. Gas phase chemistry. Introduction to thermodynamics, including enthalpies of formation and reaction. Introduction to atomic structure, periodic trends, chemical bonding, molecular structure. (3 hrs. lect. per week)

CHEM 161L GENERAL CHEMISTRY I LABORATORY (1) (DY)

Prerequisite: MATH 103, OR Placement in MATH 135
Co-requisite: CHEM 161
Laboratory experiments illustrating concepts of chemistry discussed in CHEM 161. (3 hrs. lab. per week)

CHEM 162 GENERAL CHEMISTRY II (3) (DP)

Prerequisite: CHEM 161 and MATH 135 OR Placement in MATH 140
Co-requisite: CHEM 162L
(Continuation of CHEM 161) Liquids and solids. Solutions and colligative properties. Continuation of thermodynamics, including entropy and free energy. Principles and applications of chemical equilibrium, including acid-base chemistry (titrations, buffers). Kinetics. Redox reactions and electrochemistry. (3 hrs. lect. per week)

CHEM 162L GENERAL CHEMISTRY II LABORATORY (1) (DY)

Prerequisite: CHEM 161L and MATH 135 OR Placement in MATH 140
Co-requisite: CHEM 162
Laboratory experiments illustrating concepts of chemistry discussed in CHEM 162. (3 hrs. lab. per week)

CIVIL ENGINEERING (CE)**CE 270 APPLIED MECHANICS I (3)**

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

CE 271 APPLIED MECHANICS II (3)

Prerequisite: "C" or higher in CE 270 and in MATH 242
Dynamics of particle and rigid bodies; force-acceleration; impulse-momentum; work-energy. (3 hrs. lect. per week)

COMMUNICATION ARTS (CA)**CA 100 SURVEY OF GRAPHIC STYLES (3)**

Prerequisite: Placement in ENG 100
The history, theory and criticism of communication arts since the industrial revolution, including how technology has been integrated into its production. The course will include an overview of production methods used in the communication arts today. (3 hrs. lect. per week)

CA 101 POWER OF ADVERTISING (3)

Prerequisite: Placement in ENG 100
A look at the world of mass communications and its interrelationship to our culture. This course studies the impact and relevance of mass media on our society as technology moves us even farther into the information age. Emphasis is on how media affects and manipulates popular culture today through the understanding of the relationship between mass communication and culture. (3 hrs. lect. per week)

CA 121 ART AND MEDIA PREPARATION I (4)

CA majors only.
Art and Media Preparation I focuses on the preparation and the creation of media assets of art work for printing and web delivery. Emphasis is on Illustrator and PhotoShop for direct and indirect input to include drawing, tracing, manipulating, and motion imaging for importing/exporting. (4 hrs. lect./demo. per week)

CA 122 COPY PREPARATION (4)

CA majors only.
Copy Preparation focuses on preparing text for print production and web delivery using appropriate programs in combination with applicable hardware. Emphasis is on skill development in typesetting to include understanding type fundamentals, fonts, typographic imaging for special effects, as well as type for the web. (4 hrs. lect./demo. per week)

CA 123 COLOR THEORY AND ISSUES (4)

CA majors only.
Color is the study of basic color theories that focuses on understanding hue, value and saturation as it applies to the perception of color and color mixing to



control contrasts, illusions, and spatial effects. Some of the issues include: digital color and its differences from pigment-based color; color spaces; hexadecimal colors on through digital display concerns on resolution and its effect on color. (4 hrs. lect. per week)

CA 125 BEGINNING GRAPHIC DESIGN (4)

CA majors only.

An introductory course in graphic design solutions, to include the application of art and communication skills to problem solve for visual solutions for business and industry needs. Emphasis is on design fundamentals; communicative concepts, strategy, and problem solving processes; typography; as well as various delivery formats. Students may enroll 2 times for a maximum of 8 credits. (4 hrs. lect. per week)

CA 131 ART AND MEDIA PREPARATION II (4)

Prerequisite: CA 121

Art and Media Preparation II focuses on the preparation and the creation of media assets of art work for printing and web delivery. Emphasis is on digital photographs and basic video editing to prepare video clips for use as assets in other media. Topics to also include color and color correction, calibration and compression issues. (4 hrs. lect. per week)

CA 132 PAGE COMPOSITION (4)

Prerequisite: CA 121 and CA 122

CA majors only.

Page Composition is a design and layout course for preparing digital files primarily for offset print production while addressing web layout differences. Emphasis is on composing layouts for brochures, newspaper ads and other print formats incorporating special effects, as well as single, spot and full color separations and trapping. (4 hrs. lect. per week)

CA 134 DIGITAL PHOTOGRAPHY (4)

Introduction to digital photography. Emphasis on tools, techniques, and software used to acquire and manipulate digital images. Digital camera required. (4 hrs. lect. per week)

CA 135 TYPOGRAPHIC DESIGN (4)

Prerequisite: CA 122

Prerequisite or Co-requisite: CA 125

CA majors only

A design course emphasizing the function of type to convey a message, establish a mood, attract attention, and/or create emphasis through typographic design projects that use type as the primary element in composition. Topics to include historical and contemporary type issues as well as web specific issues. Students may enroll 2 times for a maximum of 8 credits. (4 hrs. lect./demo. per week)

CA 142 PAGE AND WEB LAYOUT (4)

Prerequisite: CA 131 and CA 132

CA majors only.

A composing course for preparing and managing digital media assets and layouts for web delivery and print production. Emphasis is on multiple

deliveries and encompasses understanding of internet technologies and services. (4 hrs. lect. per week)

CA 143 PREPRESS AND DIGITAL PRINTING (4)

Prerequisite: CA 123 and CA 132

CA majors only.

Prepress and Digital Printing focuses on correcting and printing composited page layout files. Emphasis is on the preparation of the mechanical to successfully output to a digital device. Topics include color management, preflighting, printing, line conversion, full color separation, as well as hard and soft proofing. Students may enroll 2 times for a maximum of 8 credits. (4 hrs. lect. per week)

CA 145 GRAPHIC DESIGN (4)

Prerequisite: CA 100, 101, 123, 132, 135

CA majors only.

An advanced course in design solutions for various print related needs such as posters, brochures, publications, symbols and corporate systems. Topics to include web design principles as well. Communication skills to include oral, written and visual presentation. Students may enroll 2 times for a maximum of 8 credits. (4 hrs. lect. per week)

CA 146 ADVERTISING DESIGN (4)

Prerequisite: CA 100, 101, 123, 132, 135

CA majors only.

An advanced design course for planning and producing promotional and advertising material primarily for print media in consumer advertisements, direct advertising, point of purchase and public relations. Emphasis is on art direction and techniques used in the development of an ad campaign. Topics will include web and social media issues. Students may enroll 2 times for a maximum of 8 credits. (4 hrs. lect. per week)

CA 150 SPECIAL PROJECTS (4)

Prerequisite: CA 132

CA majors only.

An advanced course that provides students with on-the-job experience in a classroom environment. Emphasis is on producing posters, brochures, and other publications from conception to finish printed material. Extensive use of computer and other media skills. (4 hrs. lect. per week)

CA 152 THE BUSINESS OF ADVERTISING (4)

Prerequisite: CA 101

Prerequisite or Co-requisite: CA 145 or CA 146

CA majors only.

Overview of the structure of the advertising industry including an in-depth look at current business practice and employment in the various areas of the industry. (4 hrs. lect. per week)

CA 155 PORTFOLIO PRESENTATION AND REVIEW (4)

Prerequisite: CA 145

CA majors only.

Preparation, presentation, and review of a professional visual portfolio as required for employment in



Communications Art and related fields. Emphasis on developing a cohesive presentation format of projects reflecting various skills. (4 hrs. lect. per week)

CA 193V COOPERATIVE EDUCATION (1-4)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 24 OR Placement in MATH 25 or higher
Instructor approval required.

CA majors only.

This course will provide students with the opportunity to acquire on-the-job experience related to classroom and laboratory instruction in Communication Arts.

Students may enroll 4 times for a maximum of 12 credits. (5 hrs. work experience per week per credit)

COMPUTING, SECURITY, AND NETWORKING TECHNOLOGY (CSNT)

[Formerly Computing, Electronics, and Networking Technology (CENT)]

(See also Information and Computer Science)

CSNT 110 INTRODUCTION TO INFORMATION SYSTEMS (3)

Prerequisite: Placement in ENG 100; Placement in MATH 103 or MATH 135 or higher

Recommended Prep: ICS 100 or ICS 101 or comparable experience using office applications

This course provides an overview of Information Technology and introduces Internet resources and the fundamental concepts and skills of software development. Topics related to Internet resources include terminology, file formats, naming conventions, and current issues related to the Internet. Students will also learn basic programming skills and software development including discussion of compilers, interpreters, clients and servers, naming issues, programming languages and syntax. Another course may be substituted if ICS 111 has already been completed. Cross-listed as ICS 110P.

(2 hrs. lect.; 3 hrs. lab. per week)

CSNT 116 SECURITY AWARENESS CONCEPTS AND PRINCIPLES (1)

Prerequisite: ICS 100 or ICS 101

This course provides a basic survey of IT security awareness and data confidentiality, using a broad, easy to understand approach that explains the value of securing data, both for individuals and organizations. The class provides an overview of legislation, local, state, and federal privacy policies and liability of individuals and institutions related to data confidentiality and integrity. The course introduces risk management, security policies, and common threats and countermeasures. The course also presents best practices in access control and password policies.

(1 hr. lect. per week)

CSNT 130 ICT SUPPORT I (3)

Prerequisite: Placement in ENG 100; Placement in MATH 103 or MATH 135 or higher

Recommended Prep: ICS 100 or ICS 101 or comparable experience using office applications

This course introduces students to Information and Communications Technology (ICT) support topics. Students will learn essential concepts and skills to install, configure, and maintain mobile and portable devices, PCs, peripheral devices, networking, hardware, virtualization and cloud computing. Students will also learn how to troubleshoot hardware and networks. This course is based on ICT industry certification standards. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 131 ICT SUPPORT II (3)

Prerequisite: CSNT 130

This course introduces students to Information and Communications Technology (ICT) support topics. Students will learn essential concepts and skills to install, configure, and maintain operating systems, security, and software. Students will also learn professional safety and operational procedures. This course is based on ICT industry certification standards. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 132 ICT SUPPORT (4)

Prerequisite: Placement in ENG 100; Placement in MATH 103 or MATH 135 or higher

Recommended Prep: ICS 100 or ICS 101 or comparable experience using office applications

This course will provide the student with an introduction to Information and Communication Technology (ICT) support. The student will learn how to install, configure and maintain devices, PCs and software. Additional topics in wired and wireless networking, security and troubleshooting are also covered in this course. This course is based upon ICT industry certification standards. (3 hrs. lect.; 3 hrs. lab. per week)

CSNT 140 COMPUTER NETWORKING I (4)

Prerequisite: CSNT 130 or CSNT 132

This course introduces network architectures, models, protocols, and networking elements that connect users, devices, applications, and data through the internet across modern computer networks, including IP addressing and Ethernet fundamentals. Students will also learn switching concepts and technologies, and routing concepts and operations that support small-to-medium business networks, including wireless local area networks (WLANs) and security concepts and practices.

(2 hrs. lect.; 6 hrs. lab. per week)

CSNT 140A COMPUTER NETWORKING IA (3)

Prerequisite: Placement in ENG 100; Placement in MATH 103 or MATH 135 or higher

Prerequisite or Co-requisite: CSNT 130 or CSNT 132

Recommended Prep: ICS 100 or ICS 101 or comparable experience using office applications

This course introduces the architectures, models, protocols, and networking elements that connect users, devices, applications and data through the internet and across modern computer networks - including IP addressing and Ethernet fundamentals. By the end of the course, students can build simple local area networks (LANs) that integrate IP addressing

schemes, foundational network security, and perform basic configurations for routers and switches. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 140B COMPUTER NETWORKING IB (3)

Prerequisite: CSNT 140A

This course focuses on switching technologies and router operations that support small-to-medium business networks and includes wireless local area networks (WLANs) and security concepts. Students learn key switching and routing concepts. They can perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 228 SYSTEM ADMINISTRATION & TCP/IP NETWORKING WITH UNIX/LINUX (4)

Prerequisite: CSNT 110 or ICS 110P, AND CSNT 140A or CSNT 140

The System Administration component of this course uses the Linux operating systems to introduce essential knowledge and skills for maintaining a computer that uses UNIX or Linux operating system. Students install the operating system, maintain user accounts, manage file systems and processes, install and configure software, and perform routine system maintenance and backup functions. Development and use of command line skills for navigation and management of Unix-like systems is a major focus of this course. The TCP/IP Networking with Unix/Linux component of this course examines protocols commonly used in TCP/IP networks. Students use graphical and command line protocol analyzers to examine data packets at the bit level for a various protocols including Ethernet, Address Resolution Protocol (ARP), Internet Control Messaging Protocol (ICMP), the User Datagram Protocol (UDP), Transmission Control Protocol (TCP), and the Domain Name System (DNS). (3 hrs. lect., 3 hrs. lab. per week)

CSNT 231 TELECOMMUNICATIONS (3)

Prerequisite: CSNT 140B or CSNT 140

Recommended Prep: CSNT 240 and PHYS 105

This course provides an introduction to telecommunication systems with an emphasis on digital data communication. Topics include wiring, testing, troubleshooting, transmission media and techniques, VOIP protocols, wireless and security, cellular technology, mobile technology, IoT (Internet of Things), and the emerging technologies of data communication. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 240 COMPUTER NETWORKING II (3)

Prerequisite: CSNT 140 or 140B

This course describes the architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. This course covers wide area network (WAN) technologies and quality of service (QoS) mechanisms used for secure remote access. The course also introduces software-defined networking,

virtualization, and automation concepts that support the digitalization of networks. Student gain skills to configure and troubleshoot enterprise networks and learn to identify and protect against cybersecurity threats. They are introduced to network management tools and learn key concepts of software-defined networking, including controller-based architectures and how application programming interfaces (APIs) enable network automation. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 253 LINUX SYSTEM ADMINISTRATION (3)

Prerequisite: CSNT 140B and CSNT 228

This course focuses on the concepts, knowledge, and skills required to install, operate, maintain, upgrade, administer, and secure a Linux system in a networked environment. Students perform the tasks expected of a system administrator for administering and maintaining a Linux system. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 270 NETWORK OPERATING SYSTEMS I (3)

Prerequisite: CSNT 140B or CSNT 140

This course covers the installation, configuration and administration of a Windows network server/workstation environment. This course will also provide the student with an introduction to cloud computing along with an introduction to basic Windows scripting with PowerShell. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 275 SECURITY ESSENTIALS (4)

Prerequisite: CSNT 140 or CSNT 140B; AND CSNT 228

Prerequisite or Co-requisite: CSNT 270

Recommended Prep: CSNT 240

This course will provide the student an introduction to the basics of information security. Topics include risk identification and mitigation; security controls used to maintain confidentiality, integrity and availability; and the identification of appropriate technologies and products used to secure an information system. Awareness of applicable policies, laws and regulations, infrastructure, application, and information security are also discussed in this course. (3 hrs. lect.; 3 hrs. lab. per week)

CSNT 280 DATABASE SYSTEMS I (3)

Prerequisite: CSNT 110 or ICS 110P

Prerequisite or Co-requisite: CSNT 131 or CSNT 132

CSNT, ISA and ICS majors only

CSNT 280 is a prerequisite for the CSNT APC program.

This course will introduce the student to the field of database systems. Students will learn concepts, principles, and types of database models including: flat file, relational, object relational and object-oriented. Extensive coverage of modeling and design of common database systems like relational databases will be the major focus of this course. Students will learn concepts and principles of database query languages, such as structured query language (SQL). (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 281 INTRODUCTION TO DATA ANALYTICS & MACHINE LEARNING (3)**(FORMERLY CSNT 180 AND 184)***Prerequisite: CSNT 110 and MATH 115**Prerequisite or Co-requisite: CSNT 280*

This course provides an overview of changes in technology and culture driving the development of new data science and analytics occupational areas, the data analytics process lifecycle, fundamental concepts and applications of machine learning, and tools and resources available for analytics projects. Students will learn about various machine learning algorithms and gain an understanding of the advantages and shortcomings of each. Using various tools and methods, they will perform data collection, exploration, and preparation; apply machine learning methods to analyze and represent data; and use visualization tools to determine which aspects of data to emphasize. (2 hr. lect.; 3 hrs. lab. per week)

CSNT 282 ANALYTICS SYSTEMS (3)*Prerequisite: Placement in ENG 100; Placement in MATH 103; ICS 100 or ICS 101***(FORMERLY CSNT 181 AND 185)**

This course will introduce students to using industry developed and supported data analytics systems. Students will work with actual industry data analytics platforms and will perform the typical functions of a data practitioner. Activities include defining the project, sourcing and entering data into the system, as well as analyzing and visualizing the data. Students will gain experience in participating in a data analytics project and applying the skills of a data practitioner. Basic data analytics solutions and advanced industry data solutions in Machine Learning, Deep Learning and Artificial Intelligence will be explored. Possible industry data solution providers include Splunk, Microsoft Azure, Nvidia and AWS. (2 hr. lect.; 3 hrs. lab. per week)

CSNT 285 INTRODUCTION TO INTERNET APPLICATIONS/WEB APPLICATIONS (3)*Prerequisite: ICS 111 and CSNT 280*

This course will introduce the student to the fields of Internet applications and Web applications. Students will learn concepts, technologies, and principles that support these applications including the development of an application architecture, an interface design, implementation of business rules and storage of data necessary for modern interactive applications. Students will also become familiar with special considerations to be accounted for when developing these types of applications including performance, security and other related issues. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 290V CSNT INTERNSHIP (1-4)*Prerequisite: CSNT 140**Instructor approval required.**CSNT majors only.*

CSNT Internship provides instruction and hands-on work experience related to the major field of interest,

under the guidance of an Honolulu CC faculty member and a work site supervisor. The semester's study should be comprehensive, covering as many aspects of the career field as possible. Emphasis is placed on integrating classroom and laboratory instruction with real world experience. In addition to work production and technical skills, particular attention will be directed towards workplace ethics and the student's ability to demonstrate positive work habits. Under special circumstances, and with prior approval, CSNT 290V/293V may be repeated for up to 8 credits. However, only 3 credits can be applied toward CSNT program requirements.

(5 hrs. work experience per week per credit)

CSNT 293V COOPERATIVE EDUCATION (1-4)*Prerequisite: CSNT 140**Instructor approval required.**CSNT majors only.*

Cooperative Education provides instruction and paid hands-on work experience related to CSNT, under the guidance of an Honolulu CC faculty member and a work site supervisor. The semester's study should be comprehensive, covering as many aspects of the career field as possible. Emphasis is placed on integrating classroom and laboratory instruction with real world experience. In addition to work production and technical skills, particular attention will be directed towards workplace ethics and the student's ability to demonstrate positive work habits. Under special circumstances, and with prior approval, CSNT 290V/293V may be repeated for up to 8 credits. However, only 3 credits can be applied toward CSNT program requirements.

(5 hrs. work experience per week per credit)

CSNT 310 NETWORK SECURITY (3)*Prerequisite or Co-requisite: CSNT 275*

This course introduces the student to the various methodologies for defending a network. Security is presented from the perspective of Defense in Depth. The students will be exposed to information system vulnerabilities and threats along with various methods of mitigation. The student will be introduced to the concepts, principles, types and topologies of firewalls including: packet filtering, proxy firewalls, application gateways, and stateful inspection. This course will expose the student to the various defense methodologies associated with Virtual Private Networks (VPN), Host Intrusion Detection Systems (HIDS) and Network Intrusion Detection Systems (NIDS). The student will also be introduced to securing wireless, voice, and video systems. Securing Internet and collaborative applications will also be discussed. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 315 NETWORK MANAGEMENT (3)*Prerequisite or Co-requisite: CSNT 275*

This course is designed to introduce students to the basics of managing a computer network. This course will cover the role of the network manager in developing and maintaining a computer networking

environment. Concepts such as network planning, network administration, traffic monitoring, and network performance will be covered. Students will learn how to use network management tools. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 330 ETHICAL HACKING (3)

Prerequisite: CSNT 275

This course will provide the student with an overview of common methods and techniques used by attackers to penetrate and exploit a network or information system. Also featured in this course are the protocols and technologies used to build networked systems and the methods and controls which can be used to protect them. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 331 TELECOMMUNICATIONS II (3)

Prerequisite: CSNT 140B or CSNT 140, AND CSNT 231

Recommended Prep: CSNT 345

This course explores technologies and trends transforming connection-oriented networks such as cellular 5G, wireless (WiFi-6), optical fiber (SONET) technologies, software defined networking (SD-WAN), cybersecurity, artificial intelligence and machine learning, network virtualization, cloud computing, and edge computing. Additional topics may include traffic engineering, quality of service, virtual private networks. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 336 MALWARE ANALYSIS (3)

Prerequisite: CSNT 275

Recommended Prep: CSNT 330

This course will introduce students to modern malware analysis techniques using industry tools and techniques. Students will work with malicious artifacts and will perform analysis of malware typical of what is seen in modern intrusions. Activities include analyzing code, reverse engineering functionality, understanding persistence, and defending against malicious code. Industry tools such as NSA's Ghidra and IDAPPro will be used along with deploying defensive measures such as YARA and Snort. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 340 ENTERPRISE CORE NETWORKING (3)

Prerequisite: CSNT 140B or CSNT 140

Recommended Prep: CSNT 240

CSNT 340 includes implementation of core enterprise network technologies including dual stack (IPv4 and IPv6) architecture, virtualization, infrastructure, network assurance, security, and automation. Supports the Implementing Cisco Enterprise Network Core Technologies (ENCOR 350-401) certification exam. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 345 ENTERPRISE ADVANCED ROUTING AND SERVICES (3)

Prerequisite: CSNT 140B or CSNT 140

Recommended Prep: CSNT 240 and CSNT 340

CSNT 345 includes implementation and troubleshooting of advanced routing technologies and services including Layer 3, VPN services, infrastructure security, and infrastructure services.

This course supports the Implementing Cisco Enterprise Advanced Routing and Services (ENARSI 300-410) certification exam.

(2 hrs. lect.; 3 hrs. lab. per week)

CSNT 375 VIRTUALIZATION (3)

Prerequisite: CSNT 275

Recommended Prep: CSNT 240

This course will provide the student with a foundation in server and client virtualization. The student will install, configure and manage a server virtual environment. Virtual machines, live motion, monitoring, resource management, virtual networking, data recovery, high availability and fault tolerance are also covered in this course. Data center storage is also a featured topic of this course. Students may enroll 2 times for a maximum of 6 credits. (2 hrs. lect.; 3 hrs. lab. per week)

CSNT 377 CLOUD INFRASTRUCTURE AND SERVICES (3)

Prerequisite: CSNT 240 and CSNT 275

This course will provide the student with an introduction to the technologies used to support traditional, virtualized, and cloud data center environments. Cloud deployment and service models, cloud infrastructure, and the key considerations in migrating to a cloud environment, are covered in this course. Backup/recovery, business continuity, security, and management of cloud environments are topics also covered in this course.

(2 hrs. lect.; 3 hrs. lab. per week)

CSNT 390 SPECIAL TOPICS IN CSNT (3)

Prerequisite or Co-requisite: ENG 200 or 209; AND MATH 103 or MATH 135 or higher

Instructor approval required.

This course will provide the student with the opportunity to develop skills in a specialized field of Information Technology. The content of this course will change as technology changes. The student should check with the instructor beforehand to determine the specific content of this course. May be taken twice for a maximum of 6 credits.

(2 hrs. lect.; 3 hrs. lab. per week)

COSMETOLOGY (COSM)

COSM 20 ELEMENTARY COSMETOLOGY THEORY (3)

Prerequisite: High School diploma or equivalent

Co-requisite: COSM 21, 22, 23 and HDFS 296

Recommended Prep: Placement in ENG 100 and MATH 100

COSM majors only.

Covers basic theory in hygiene and personal grooming; safety and infection control, salon ecology, design decisions, the law of color, the structure, diseases and disorders of hair, skin and nails. The Hawaii Revised Statutes 438 and 439; Hawaii Administrative Rules, Title 16, Chapter 78; Title 11, Board of Health Chapter 11.

(3 hrs. lect. minimum per week)

COSM 21 ELEMENTARY NATURAL HAIR SERVICES (6)

Prerequisite: High School diploma or equivalent,
Placement in ENG 100

Co-requisite: COSM 20, 22, 23 and HDFS 296

Recommended Prep: ENG 100 and MATH 100

COSM majors only.

Comment: Students must purchase a basic Cosmetology Kit and textbooks on the first day of class. Students are required to wear a uniform for safety while in the program; covered soft sole shoes (protects feet from chemical splashes, injury, and slipping on wet surfaces). Full length solid black pants or slacks (to protect legs from chemical spills and the color black will hide stains). Black "polo" type shirt with no logos (the "polo" style shirt is a unisex style for comfort). A black smock is also for protection and comfort.

Elementary natural hair services will look at the use of art and science for hair sculpting and design. This course will introduce you to the "how" and "why" of hair sculpture and hair design. The students will learn how using procedural steps to achieve predictable results in hair services. After the introduction and demonstration of each area the students will be performing the techniques focusing on accuracy of each hair sculpture and hair design under the supervision of an instructor.

(3 hrs. lect. and 9 hrs. lab = 12 hrs. min. per week)

Additional Course Information: The National Industry Skills Standards for cosmetology abilities: problem sensitivity, arm-hand steadiness, finger dexterity, near vision, visualization, manual dexterity, depth perception, oral comprehension, and oral expression. As a salon professional you will be spending long hours standing, bending, reaching and repeating the same motions. "Cosmetology Fundamentals a Designer's Approach" By Pivot Point International

COSM 22 Elementary Chemical Hair Services (4)

Prerequisite: High School Diploma or equivalent;
Placement in ENG 100

Co-requisite: COSM 20, 21, 23 and HDFS 296

Recommended Prep: ENG 100 and MATH 100

COSM majors only.

Comment: Students must purchase a basic Cosmetology kit and textbooks. Students are required to wear the department dress code for safety while in the program; covered soft sole shoes (protects feet from chemical splashes, injury, and slipping on wet surfaces).

Elementary chemical hair services looks at the use of art, science and math for hair color, and texture services. Understanding the procedures and application techniques to achieve predictable results. After the introduction and demonstration of each area the students will be given the opportunity to practice, focusing on accuracy in various services using chemicals under the supervision of an instructor. (12 hrs. lab min. per week)

Additional Course Information: The National Industry Skills Standards for cosmetology abilities; problem sensitivity, arm-hand steadiness, finger dexterity, near vision, visualization, manual dexterity, depth

perception, oral comprehension and oral expression.

As a salon professional you will be spending long hours standing, bending, reaching and repeating the same motion. "Cosmetology Fundamentals a Designers Approach" By Pivot Point International

COSM 23 BASIC HAIR, SKIN AND NAIL CARE SKILLS (2)

Prerequisite: High School diploma or equivalent

Co-requisite: COSM 20, 21, 22 and HDFS 296

Recommended Prep: Placement in ENG 100 and MATH 100

COSM majors only.

The introduction of why and how to perform maintenance services for promoting healthy hair, skin and nails. This course will include the safety and infection control measures necessary for the industry. (2 hrs. lect.; 6 hrs. lab. minimum per week)

COSM 30 INTERMEDIATE COSMETOLOGY THEORY (3)

Prerequisite: "C" or higher in COSM 20, 21, 22, 23

Co-requisite: COSM 31, 32, 33, and CHEM 105C

COSM majors only.

Students will be introduced to theory of anatomy, electricity, and Hawaii Revised Statutes, Hawaii Administrative Rules, and Board of Health laws that govern the Cosmetology industry.

(3 hrs. lect. minimum per week)

COSM 31 INTERMEDIATE COSMETOLOGY CLINIC (5)

Prerequisite: "C" or higher in COSM 20, 21, 22, 23

Co-requisite: COSM 30, 32, 33 and CHEM 105C

COSM majors only.

Comment: Students must have tools and implements required for the Cosmetology program and for the Intermediate courses. Students are required to be in the department dress code for safety and professional guidelines for the Cosmetology industry.

The students engage in practice of the skills they have acquired in their training on guests from the community in a beauty salon atmosphere.

(15 hrs. lab. minimum per week)

COSM 32 INTERMEDIATE COSMETOLOGY SKILLS (6)

Prerequisite: "C" or higher in COSM 20, 21, 22, 23

Co-requisite: COSM 30, 31, 33 and CHEM 105C

COSM majors only.

Comment: Student must have tools and implements required for the Cosmetology program and for the Intermediate courses. Students are required to be in the department dress code for safety and professional guidelines for the Cosmetology industry.

Intermediate cosmetology skills takes an up close and personal look at the art and sciences in the areas in skin care treatments, men's hair sculpting, nail treatments, advanced chemical texturizing, makeup techniques, and advanced wet and thermal hair design. A design connection of art principals and elements are used to see the overall bigger picture of what can be achieved. After the introduction and demonstration of each area, the student will be performing the techniques, focusing on accurate application to produce predictable results. (3 hrs. lect.; 9 hrs. lab. minimum per week)

COSM 33 LIFE SKILLS FOR COSMETOLOGY (1)

Prerequisite: "C" or higher in COSM 20, 21, 22, 23

Co-requisite: COSM 30, 31, 32 and CHEM 105C

COSM majors only.

This course contains essential life skills that will create a personal foundation for learners. As a salon professional dealing with the public every day, these skills are particularly important, and they will touch on skills for character development, interpersonal relationships, professional communication, career planning and self-management.

(1 hr. lect. per week)

COSM 40 ADVANCED COSMETOLOGY THEORY (3)

Prerequisite: "C" or higher in COSM 30, 31, 32, 33

Co-requisite: COSM 41, 42, 43, and PHIL 101

COSM majors only.

Students will be introduced to the theory of salon business and chemistry. Students may also review hair texture, hair color, nails, skin and the Hawai'i Revised Statutes, Hawai'i Administrative Rules, and Board of Health laws that govern the cosmetology industry.

(3 hrs. lect. minimum per week)

COSM 41 ADVANCED COSMETOLOGY CLINIC (5)

Prerequisite: "C" or higher in COSM 30, 31, 32, 33

Co-requisite: COSM 40, 42, 43, and PHIL 101

COSM majors only.

Comment: Students must have tools and implements required for the Cosmetology program and for the Advanced courses. Students are required to be in the department dress code for safety and to follow professional guidelines for the Cosmetology industry. Students engage in practice of the advanced skills they have acquired in their training on guests from the community in a beauty salon atmosphere. The students continue their product recommendation skills in retailing. (15 hrs. lab. minimum per week)

COSM 42 ADVANCED COSMETOLOGY (6)

Prerequisite: "C" or higher COSM 30, 31, 32, 33

Co-requisite: COSM 40, 41, 43, and PHIL 101

COSM majors only.

Comment: Students must have tools and implements required for the Cosmetology program and for the advanced courses. Students are required to be in the department's dress code to follow safety and professional guidelines for the Cosmetology industry.

Advanced cosmetology skills looks at the art and sciences of using combinations of skills learned in previous courses. Students will be introduced to formal long-hair design and wigs and hair additions. Advanced procedural steps are applied to hair services to achieve a finished look in preparation for the entry level positions in the industry.

(3 hrs. lect., 9 hrs. lab. per week minimum)

COSM 43 SALON MANAGEMENT (1)

Prerequisite: "C" or higher in COSM 30, 31, 32, 33

Co-requisite: COSM 40, 41, 42, and PHIL 101

COSM majors only.

The students learn salon management skills, with the emphasis on how to build and maintain a clientele necessary to become successful in the cosmetology industry.

(1 hr. lect. per week)

COSM 50V COSMETOLOGY THEORY AND PRACTICE (2-12)

Prerequisite: "C" or higher in COSM 40, 41, 42, 43

Instructor approval required.

COSM majors only.

Comment: Students will be expected to follow the department's dress code and supply their own Cosmetology kits, including tools and textbooks. Continuation of cosmetology theory and lab. Hours attended apply toward the 1800 hours required to qualify for the Cosmetology Licensing State Board Examination. Students may enroll 2 times for a maximum of 12 credits. Student will register for the credits that will cover the minimum hours required to qualify for the Hawai'i State Board licensing examination. Some students may register for more credits than others.

(2 hr. lect., 10 hrs. lab. minimum per week)

COSM 80V COSMETOLOGY INSTRUCTOR TRAINING (1-13)

Prerequisite: Valid Cosmetology license, one year Cosmetology full-time work experience and meet all the Hawai'i State Cosmetology Board Teacher Training requirements; AND Placement in ENG 100.

Instructor approval required.

COSM majors only.

The application of teaching principles in the area of cosmetology with the development of communication skills in theoretical and technical knowledge acquired from experience in the field of cosmetology. Techniques of individual and group instruction in laboratory and related classes; evaluation of various methods. Student may meet criteria to take Hawai'i State Cosmetology Board Teacher's Exam for license. Repeatable until 13 credits are earned.

(40 hrs. lect./lab. maximum per week)

COSM 93V COOPERATIVE EDUCATION (1-4)

Prerequisite: "C" or higher in COSM 20, 21, 22, 23 and COSM 30, 31, 32, 33; 1200 clock hours in Cosmetology;

Proof of medical insurance.

Instructor approval required.

COSM majors only.

This course will provide students with the opportunity to acquire on-the-job experience related to classroom and laboratory instruction in Cosmetology. Students may enroll 2 times for a maximum of 4 credits.

(5 hrs. work experience per week per credit)

DIESEL MECHANICS TECHNOLOGY (DISL)

(Course hours are expressed as total hours for a term.)

DISL 20 TECHNICAL PRACTICES (2)

Prerequisite: Placement in ENG 100; MATH 50 or

Placement in MATH 150 or higher

Co-requisite: DISL 22, DISL 24, DISL 27

DISL majors only.

Classroom instruction and laboratory training in the identification, selection, safety procedures, use, and maintenance of protective hardware; lubricants and sealants; hand power tools; cleaning and lifting equipment; and precision measuring tools. The course also discusses hazardous waste.

(60 hrs. lect./lab. per term)

DISL 22 R & R COMPONENTS (3)

Prerequisite or Co-requisite: DISL 20

Co-requisite: DISL 24, DISL 27

DISL majors only.

Classroom instruction and hands-on training in the safe and proper techniques for the removal and replacement of S-Cam brakes, spring brake chamber, diaphragm, and wedge brakes; differentials, transmissions, and clutch assemblies; axle shafts, wheel bearings, and wheels (tire and rim assembly); front and rear spring assemblies, spring center bolts; walking beams; torque arms; drive shafts; and batteries, starters, fan belts, headlight and stop light bulbs. Adjustment of brakes, clutches, torque arms, wheel bearings, fan belts, and headlights follows manufacturer's specifications.

(90 hrs. lect./lab. per term)

DISL 24 OPERATOR ORIENTATION (2)

Prerequisite or Co-requisite: DISL 20

Co-requisite: DISL 22, DISL 27

DISL majors only.

Classroom instruction and laboratory training in safely moving a diesel truck in and out of a work stall. Instruction includes pre-trip inspection procedures; use of mirrors, guide persons, monitor gauges; starting and stopping the engine; applying service and parking brakes; moving forward and backward in a straight line, stopping on command, and turning in a forward and backward direction. Training also includes hoisting, tilting, and stacking pallets with a forklift. This course develops some of the competencies required for a CDL license. (60 hrs. lect./lab. per term)

DISL 27 PREVENTATIVE MAINTENANCE (5)

Prerequisite or Co-requisite: DISL 20

Co-requisite: DISL 22, DISL 24

DISL majors only.

Classroom instruction and laboratory training in correct procedures and practices of medium/heavy duty truck inspection. Students will learn to perform entry-level technician inspection tasks.

(150 hrs. lect./lab. per term)

DISL 31 DRIVE TRAIN (4)

Prerequisite: DISL 20

Co-requisite: DISL 41

Classroom instruction and laboratory training covering both standard (single and multiple countershaft) manual transmissions. Specifically, through the disassembly, inspection, assembly, and adjustment of transmissions, a foundation will be provided for an understanding of the operating principles, basic components, and proper rebuilding and trouble shooting methods for transmissions. Also included will be Classroom instruction and laboratory training covering the disassembly, inspection, identification, and adjustment of several different models of differentials. Specifically, work stations will include: single reduction, two speed planetary reduction, and double reduction and interaxle differentials. Course exit competencies will include the ability to: disassemble and assemble; inspect parts; set bearing preload, backlash, and endplay; identify tooth contact pattern; and check gear runout and torque fasteners. All of these tasks will be performed to the required manufacturer specifications as found in the component manuals. (120 hrs. lect./lab. per term)

DISL 34 BRAKES - AIR AND HYDRAULIC (5)

Prerequisite: DISL 20

Co-requisite: DISL 36, DISL 56

DISL majors only.

Classroom instruction and laboratory training covering air and hydraulic brake systems utilizing cutaways, training boards, components, and truck systems. Instruction in air brakes will include the assembly of a complete working system, followed by troubleshooting problems in the system. Also included will be proper brake adjustments and system testing, as well as repairs and safety when working with compressed air and spring brake chambers. Instruction in hydraulic brakes will include brake components, systems, troubleshooting and repairs, cutting drums and discs, and brake adjustments. Instruction will also include Air and Hydraulic Antilock Brake Systems (ABS) and Automatic Traction Control (ATC).

(150 hrs. lect./lab. per term)

DISL 36 SUSPENSION AND STEERING (5)

Prerequisite: DISL 20

Co-requisite: DISL 34, DISL 56

DISL majors only.

Classroom instruction and laboratory training in suspension and steering component names and functions; frame inspection and repair; alignment of all axles; proper jacking and support of frame; overhaul of steering gear box and king pins; inspection of springs and hangars; driveline angle; checking and adjustment to front end caster, camber, toe, height, and tire balance; KPI and centering of gear box. Laboratory instruction will also include the disassembly, inspection, assembly, and adjustment of actual truck suspension systems, and computerized wheel alignment. (150 hrs. lect./lab. per term)

DISL 41 DIESEL ENGINES (8)

Prerequisite: DISL 20

Co-requisite: DISL 31

Instruction will center around the theory and operation of two and four cycle diesel engines. Instruction will include the disassembly, reassembly, maintenance, and repair of Detroit Diesel, Cummins Diesel, Caterpillar Diesel, and International Diesel engines. Cooling systems, lubrication, air and exhaust systems, fuel delivery and injection systems, and starting systems will also be covered. (240 hrs. lect./lab. per term)

DISL 52 ELECTRICAL/ELECTRONIC SYSTEMS (8)

Prerequisite: DISL 20

Prerequisite or Co-requisite: PHYS 100 & 100L, or PHYS 104

Co-requisite: DISL 61

DISL majors only.

Classroom instruction and laboratory training covering the purpose, design, theory, and operating principles of electrical/electronic systems. Special emphasis will be placed on developing the skills required to test, service, and repair electrical/electronic components and associated systems. (240 hrs. lect./lab. per term)

DISL 56 HYDRAULICS (2)

Prerequisite: DISL 20

Co-requisite: DISL 34, DISL 36

DISL majors only.

Instruction beginning with the fundamentals of hydraulic theory followed by instruction in the service, repair, and overhaul of the hydraulic circuits used on both stationary and mobile machinery. (60 hrs. lect./lab. per term)

DISL 61 HEATING, VENTILATION, AND AIR CONDITIONING (4)

Prerequisite: DISL 20

Co-requisite: DISL 52

This course covers shop safety, training in specialty tools and equipment. Included are fundamental theories, diagnosis, and repair practices to automotive air conditioning systems. Presented in the course are the operation and function of the vacuum, electrical, and refrigeration circuits, along with computer controlled climate control systems. (120 hrs. lect./lab. per term)

EARLY CHILDHOOD EDUCATION (ECED)

ECED 105 INTRODUCTION TO EARLY CHILDHOOD EDUCATION (3)

Prerequisite: Placement in ENG 100

Introduces and explores the nature of the field of early childhood education and care. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 110 DEVELOPMENTALLY APPROPRIATE PRACTICES (3)

Introduces concepts of developmentally appropriate practice and the importance of play. Provides an overview of and experience with the knowledge

and skills necessary for working with children birth through age eight, including children with special needs. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 115 HEALTH, SAFETY AND NUTRITION FOR THE YOUNG CHILD (3)

Prerequisite: Placement in ENG 100

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. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 131 EARLY CHILDHOOD DEVELOPMENT: THEORY INTO PRACTICE (3)

Prerequisite: Placement in ENG 100

Introduces principles of human development from conception through age eight and how this informs practice. Focuses on the relationships between physical, cognitive, emotional and social aspects of the individual during this period. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 140 GUIDING YOUNG CHILDREN IN GROUP SETTINGS (3)

Prerequisite: Placement in ENG 100; "C" or higher in ECED 131

Addresses positive ways to support children's social-emotional development. Focuses on adult-child and child-child interactions and relationships. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 151F FIELD EXPERIENCE PRACTICUM #1 IN EARLY CHILDHOOD (3)

Prerequisite: Placement in ENG 100; "C" or higher in ECED 110 and in ECED 131 or HDFS 230

Prerequisite or Co-requisite: ECED 140

Co-requisite: ECED 151S

Instructor approval required.

A field-based practicum that serves as a mid-program supervised work experience in an early childhood education and care setting. It is designed to support students in integrating content knowledge with practice. May be taken on a CR/N basis. Students must be concurrently enrolled in ECED 151S. (15 hrs. practicum per week)

ECED 151S FIELD EXPERIENCE PRACTICUM #1 IN EARLY CHILDHOOD EDUCATION SEMINAR (1)

Prerequisite: Placement in ENG 100; "C" or higher in ECED 110 and in ECED 131 or HDFS 230

Prerequisite or Co-requisite: ECED 140

Corequisite: ECED 151F

Instructor approval required.

A discussion seminar designed to accompany ECED 151F and to support students as they integrate content knowledge with practice. May be taken on a CR/N basis. Students must be concurrently enrolled in ECED 151F. (1 hr. lect. per week)

ECED 152 EARLY LITERACY DEVELOPMENT (3)*Prerequisite: Placement in ENG 100*

This course begins with a survey of the history and contemporary issues and trends in early literacy development. It includes an in-depth exploration of how young children learn to read and write and what teachers and caregivers need to know and be able to do to support literacy development from birth through the primary years. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 158 THE HAWAIIAN CULTURE FOR YOUNG CHILDREN (3)*Prerequisite: Placement in ENG 100; "C" or higher in ECED 110*

This course gives an overview of the culture of Hawai'i that can be brought into the preschool classroom. Students will explore and study different aspects of the culture to identify understandings of the culture that are appropriate for young children. Individually and as a group, the students will develop appropriate activities and experiences for young children. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 170 INTRODUCTION TO WORKING WITH INFANTS AND TODDLERS (3)*Prerequisite: Placement in ENG 100*

Provides an overview of the basic skills needed for working with infants and toddlers and their families in group care settings. Focuses on interactive aspects of child development. Introduces infant-toddler caregiving routines and environments, and caregiver roles. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 245 CHILD, FAMILY AND COMMUNITY (3)*Prerequisite: ENG 100; "C" or higher in ECED 105*

Develops communication skills and other strategies for building effective relationships with diverse families and relevant community members. Introduces students to the local resources available for family referral. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 263 LANGUAGE AND CREATIVE EXPRESSION CURRICULUM (3)*Prerequisite: ENG 100; "C" or higher in ECED 110 and ECED 131*

Addresses creative and language disciplines, stages of development for each, and how these relate to appropriate early childhood curriculum. Includes designing curriculum for language, literacy, literature, and creative expression (art, music, & creative movement/dance) based on observation of children. Students must have contact with preschool children in a formal setting for observation and implementation of course assignments. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 264 INQUIRY AND PHYSICAL CURRICULUM (3)*Prerequisite: ENG 100; "C" or higher in ECED 110 and ECED 131*

Addresses physical development and inquiry disciplines, stages of development for each, and

how these relate to appropriate early childhood curriculum. Includes designing curriculum for physical development, and inquiry (math, science, and social studies) based on observation of children. Introduces integrated curriculum based on science and social studies topics. Students must have contact with preschool children in a formal setting for observation and implementation of course assignments. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 265 CHILDREN'S LITERATURE FOR EARLY CHILDHOOD TEACHERS (3)*Prerequisite: ENG 100; "C" or higher in ECED 110*

A survey of literature for young children with a focus on presenting picture books in early childhood classrooms. This course will provide an overview of exemplary authors and illustrators of children's literature, picture book genres, storytelling, and ways to incorporate literature throughout the early childhood curriculum. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 275 INCLUSION OF CHILDREN WITH SPECIAL NEEDS (3)*Prerequisite: ENG 100; "C" or higher in ECED 131*

Introduces the field of special education. Examines best practices for the education of young children with exceptionalities, with an emphasis on inclusion. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 296A INFANT AND TODDLER SEMINAR: FIELD EXPERIENCE, ENVIRONMENTS AND RELATIONSHIPS IN EARLY CHILDHOOD EDUCATION II (3)*Prerequisite: ENG 100; "C" or higher in ECED 131 or HDFS 230, and in ECED 151F, ECED 151S, and ECED 170**Recommended Prep: ECED 115 and ECED 245**Instructor approval required.*

Seminar for the Infant/Toddler Advanced Field Experience class which provides a culminating supervised work experience in an early childhood education and care setting with infants and toddlers. It is designed to support students in integrating content knowledge with practice, focusing on the environment, teaching and caregiving, curriculum, current issues and trends in the field, and relationships with children, families, and colleagues. May be taken on a CR/N basis. (3 hrs. lect. per week)

ECED 296C PRESCHOOL SEMINAR: FIELD EXPERIENCE IN EARLY CHILDHOOD EDUCATION II (2)*Prerequisite: ENG 100; "C" or higher in ECED 131 or HDFS 230, and in ECED 151F, and ECED 151S**Prerequisite or Co-requisite: ECED 263 and ECED 264**Co-requisite: ECED 296P**Recommended Prep: ECED 115 and ECED 245**Instructor approval required.*

Seminar to accompany the Preschool Laboratory Field Experience II class which is the culminating supervised work experience in an early childhood education and care setting. The seminar is designed to support students in integrating content knowledge with practice. May be taken on a CR/N basis. (2 hrs. lect. per week)

ECED 296I INFANT-TODDLER LABORATORY: FIELD EXPERIENCE IN EARLY CHILDHOOD EDUCATION II (2)

Prerequisite: ENG 100; "C" or higher in ECED 131 or HDFS 230, and in ECED 151F, ECED 151S, and ECED 170
Co-requisite: ECED 296A

Recommended Prep: ECED 115 and ECED 245

Instructor approval required.

Provides a culminating supervised work experience in an early childhood education and care setting with infants and toddlers. It is designed to support students in integrating content knowledge with practice. May be taken on a CR/N basis. (6 hrs. lab. per week)

ECED 296P PRESCHOOL LABORATORY: FIELD EXPERIENCE IN EARLY CHILDHOOD EDUCATION II (2)

Prerequisite: ENG 100; "C" or higher in ECED 131 or HDFS 230, and in ECED 151F and ECED 151S

Prerequisite or Co-requisite: ECED 263 and ECED 264
Co-requisite: ECED 296C

Recommended Prep: ECED 115 and ECED 245

Instructor approval required.

Provides a culminating supervised work experience in an early childhood education and care setting. It is designed to support students in integrating content knowledge with practice. May be taken on a CR/N basis. (6 hrs. lab. per week)

EARTH SCIENCES (ERTH)

[Formerly Geology & Geophysics (GG)]

**ERTH 101 INTRODUCTION TO GEOLOGY (3) (DP)
(FORMERLY GG 101)**

The study of Earth, the natural physical environment, landscape, rocks and minerals, rivers and oceans, volcanos, earthquakes, plate tectonics and other internal processes; the effects of human actions on Planet Earth. (3 hrs. lect. per week)

**ERTH 101L INTRODUCTORY GEOLOGY LABORATORY (1) (DY)
(FORMERLY GG 101L)**

Prerequisite or Co-requisite: EARTH 101 or EARTH 103

The study of rocks and minerals, topographic and geologic maps and cross sections. (3 hrs. lab. per week)

**ERTH 103 GEOLOGY OF THE HAWAIIAN ISLANDS (3) (DP)
(FORMERLY GG 103)**

Recommended Prep: Placement in ENG 100 + ENG 100S

Survey of Hawaiian rocks, minerals, volcanism, erosion, sedimentation, landscape evolution, geologic history, and regional geology. (3 hrs. lect. per week)

EAST ASIAN LANGUAGE AND LITERATURE (EALL)

EALL 271 JAPANESE LITERATURE IN TRANSLATION (TRADITIONAL) (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

No knowledge of Japanese language is required.

Survey of traditional Japanese literature from ancient times to the mid-nineteenth century. Cross-listed as ENG 271. (3 hrs. lect. per week)

EALL 272 JAPANESE LITERATURE IN TRANSLATION (MODERN) (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

No knowledge of Japanese language is required.

Survey from mid-nineteenth century to the present. Major emphasis on fiction. Cross-listed as ENG 272. (3 hrs. lect. per week)

ECONOMICS (ECON)

ECON 120 INTRODUCTION TO ECONOMICS (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S;

Placement in MATH 100 or higher

A broad introduction to understanding the functioning of economic systems and the problems of national economic performance in the United States. The problems of resource allocation in a market economy are also considered. Maximum of 6 credits transferable to UH Mānoa for any 2 of the following 3 courses: ECON 120, 130, 131. Note: This course does not satisfy requirements for Economics or Business majors at UH Mānoa. (3 hrs. lect. per week)

ECON 130 PRINCIPLES OF ECONOMICS I:

MICROECONOMICS (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S;

Placement in MATH 100 or higher

Economic behavior of individuals and of business firms in a market economy. Analysis of how commodity and factor prices are determined. Examination of current problems in resource allocation. Maximum of 6 credits transferable to UH Mānoa for any 2 of the following 3 courses: ECON 120, 130, 131. Note: This course satisfies requirements for Economics and Business majors at UH Mānoa. (3 hrs. lect. per week)

ECON 131 PRINCIPLES OF ECONOMICS II:

MACROECONOMICS (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S;

Placement in MATH 100 or higher

Analysis of economic systems with emphasis on the forces determining levels and changes of national income in the U.S. economy. Describes basic economic institutions within the context of government policies concerning unemployment, inflation and growth. Maximum of 6 credits transferable to UH Mānoa for any 2 of the following 3 courses: ECON 120, 130, 131. Note: This course satisfies requirements for Economics and Business majors at UH Mānoa. (3 hrs. lect. per week)

ELECTRICAL ENGINEERING (EE)

EE 150 INTRODUCTION TO COMPUTER PROGRAMMING METHODS (3)

Prerequisite: MATH 140

Introductory course on computer programming methods; emphasis on planning, writing, debugging of programs, together with basic applications. (3 hrs. lect. per week)

EE 160 PROGRAMMING FOR ENGINEERS (4)

Prerequisite: MATH 135

EE 160, a course for prospective engineers, is an introductory course on computer programming and modern computing environments with an emphasis on algorithm and program design, implementation, and debugging. A hands-on laboratory to develop and practice programming skills is included. (3 hrs. lect.; 3 hrs. lab. per week)

EE 211 BASIC CIRCUIT ANALYSIS I (4)

Prerequisite or Co-requisite: MATH 243 OR Placement in MATH 244; AND Physics 272

Linear circuits, time-domain analysis, transient and steady-state responses, phasors, impedance and admittance; network or system functions, frequency response and filtering, resonance. (3 hrs. lect.; 3 hrs. lab. per week)

EE 213 BASIC CIRCUIT ANALYSIS II (4)

Prerequisite: "C" or higher in EE 211

Prerequisite or Co-requisite: MATH 244

This is the second semester course in circuit analysis. It incorporates lecture and a lab to cover topics in advanced circuit analysis and in measuring instruments and techniques. (3 hrs. lect.; 3 hrs. lab. per week)

EE 296 SOPHOMORE PROJECT (3)

Prerequisite: "C" or higher in PHYS 170 or consent of instructor

EE 296 is a sophomore level individual or team project undertaken with pre-engineering faculty who give direction and guidance. The project provides design experience and develops practical skills for pre-engineering students intending to transfer to a four-year engineering program and major in Electrical Engineering. (2 hrs. lect.; 3 hrs. lab. per week)

ELECTRICAL INSTALLATION AND MAINTENANCE TECHNOLOGY (EIMT)

EIMT 30 ELECTRICAL INSTALLATION THEORY I (4)

Co-requisite: EIMT 32

EIMT majors only.

This course is designed to develop knowledge of basic and advanced residential wiring with emphasis on the National Electrical Code and the principles of residential blueprint reading. (5 hrs. lect. per week)

EIMT 32 ELECTRICAL INSTALLATION I (6)

Co-requisite: EIMT 30

EIMT majors only.

This course is designed to provide the basic and

advanced knowledge in residential wiring techniques. Laboratory exercises are designed to give students practical experience in different wiring techniques. (18 hrs. lab. per week)

EIMT 40 ELECTRICAL INSTALLATION THEORY II (4)

Prerequisite: "C" in EIMT 50 and in 52

Co-requisite: EIMT 42

EIMT majors only.

This course will take students into the more complex commercial and industrial wiring techniques with emphasis on the National Electrical Code and the principles of commercial and industrial blueprint reading. (5 hrs. lect. per week)

EIMT 42 ELECTRICAL INSTALLATION II (6)

Prerequisite: "C" in EIMT 50 and in EIMT 52

Co-requisite: EIMT 40

EIMT majors only.

A course designed to advance the student to a higher level of electrical installation skills. This course will take students into more complex commercial and industrial wiring techniques. (18 hrs. lab. per week)

EIMT 44 AC/DC SYSTEMS AND EQUIPMENT (4)

Prerequisite: "C" in EIMT 30 and in EIMT 32

Co-requisite: EIMT 46

EIMT majors only.

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

EIMT 46 ELECTRICAL MAINTENANCE AND REPAIR (6)

Prerequisite: "C" in EIMT 30 and in EIMT 32

Co-requisite: EIMT 44

EIMT majors only.

This course consists of supervised lab activities combining trade practices and related technical instruction to provide the most effective means of developing the students' mechanical, manipulative, and troubleshooting skills. Emphasis is placed on methods of installation, maintenance, troubleshooting and repair of electrical machinery and related control equipment. (18 hrs. lab. per week)

EIMT 50 SOLID STATE CONTROL (4)

Prerequisite: "C" in EIMT 44 and in EIMT 46

Co-requisites: EIMT 52

EIMT majors only.

This is a course designed to introduce students to the principles and application of solid state control. The topics to be covered include the fundamentals of solid state devices; digital logic; solid state fire alarm and security systems; solid state motor control; programmable controllers. (5 hrs. lect. per week)

EIMT 52 SOLID STATE CONTROL LAB (6)

Prerequisite: "C" in EIMT 44 and in EIMT 46

Co-requisite: EIMT 50

EIMT majors only.

This is a lab course designed to give students a



working knowledge and hands on experience with solid state control devices and systems. Students will learn how to install, maintain, troubleshoot, and repair a variety of solid state components and systems. (18 hrs. lab. per week)

EIMT 93V COOPERATIVE EDUCATION (1-4)

Prerequisite: MATH 50 or Placement in MATH 150 or higher

Instructor approval required.

EIMT majors only.

This course will provide students with the opportunity to acquire on-the-job experience related to classroom and laboratory instruction in electricity. Students may enroll 4 times for a maximum of 12 credits.

(5 hrs. work experience per week per credit)

ENGLISH (ENG)

ENG 100 COMPOSITION I (3)

Prerequisite: Placement in ENG 100, OR "C" or higher in ESL 23 AND ESL 24, OR "C" or higher in IS 125

Introduction to the rhetorical, conceptual, and stylistic demands of writing at the college level. Instruction in the composing process, search strategies, and writing from sources. (3 hrs. lect. per week)

ENG 100S COMPOSITION SUPPLEMENT I (1)

Prerequisite: Placement in ENG 100 with ENG 100S co-requisite

Co-requisite: ENG 100

ENG 100S is taken in conjunction with ENG 100. Together these courses combine support designed to allow students to complete college English in a single semester. Graded on a CR/N basis. (3-6 hrs. lect. per week)

ENG 100T COMPOSITION SUPPLEMENT II (2)

Prerequisite: Placement in ENG 100 with ENG 100T co-requisite

Co-requisite ENG 100

ENG 100T is taken in conjunction with ENG 100. Together these courses combine instruction support designed to allow students to complete college English in a single semester. This co-requisite also requires mandatory writing center tutoring. Graded on a CR/N basis. (3-6 hrs. lect. per week)

ENG 200 COMPOSITION II (3)

(FORMERLY ENG 210)

Prerequisite: "C" or higher in ENG 100

A writing intensive composition course that provides advanced study of rhetorical, conceptual, and stylistic techniques of writing. The course emphasizes argumentative papers supported by research, including methods of investigation, discovery, analysis, and documentation. (3 hrs. lect. per week)

ENG 201 INTRODUCTION TO CREATIVE WRITING (3)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

Introduction to three genres of creative writing and

practice in writing poems and short stories which includes creative writing assignments, discussion of professional works, and discussion of each student's writing. (3 hrs. lect. per week)

ENG 207 Fiction Workshop (3)

(FORMERLY ENG 202)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

This course is a writing workshop designed for students with some knowledge of fiction writing. Through the creation of original short stories and the analysis of published work and student drafts, students will gain knowledge and experience as well as develop creativity within the fiction genre. (3 hrs. lect. per week)

ENG 209 BUSINESS AND MANAGERIAL WRITING (3)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

A study of business and managerial writing. Practice in writing letters, memos, procedures and reports, including a recommendation report requiring research, problem definition and solution proposals. (3 hrs. lect. per week)

ENG 250 AMERICAN LITERATURE (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

A study and analysis of major works of American literature with equal emphasis placed upon works created before and after 1900. Novels, short stories, poems, and modern drama are studied. (3 hrs. lect. per week)

ENG 251 BRITISH LITERATURE TO 1800 (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

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

ENG 252 BRITISH LITERATURE AFTER 1800 (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

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

ENG 253 WORLD LITERATURE TO 1600 (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

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

ENG 254 WORLD LITERATURE AFTER 1600 (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

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



ENG 255 SHORT STORY AND NOVEL (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

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

ENG 256 POETRY AND DRAMA (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

Study and criticism of drama, biography, and poetry, their evolution and form. (3 hrs. lect. per week)

ENG 257A LITERARY PERSPECTIVES IN JAPANESE ANIME (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

This course examines Japanese Anime as a commentary on society and culture. With a primary focus on anime as an expression of these themes the topics will include community, identity, history, and gender identity. (3 hrs. lect. per week)

ENG 257B BASEBALL IN LITERATURE (3)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

Although sports are often overlooked in discussions of literature, this course examines the many rich writings on baseball and its impact on society. The course analyzes the different themes, including humor, drama, and love of the game. Feel what it is like to sit in an outfield bleacher, watching the last inning with the score tied 1-1. (3 hrs. lect. per week)

ENG 257C COMEDY AND SATIRE IN LITERATURE (3)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

A study of comedy and satire in literature, examining how humor works in writing, looking at the differences of satire, parody, dark humor and light humor. The course analyzes famous and not-so-famous examples of literary humor and explores the social issue behind the surface meaning. (3 hrs. lect. per week)

ENG 257E WILD WRITING: ENVIRONMENTAL AND ECOLOGICAL NON-FICTION (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

An examination of ecology and environmental studies, thought, and policy through reading and writing about works of ecological and environmental non-fiction prose concerning people and the planet. The course will focus on basic terminology and concepts of ecological and environmental issues in texts that explore human attitudes toward the wild, the world, and their shifting borders. The focus includes multiple and multi-faceted views of how human beings live, might live, and should live in the world we inhabit today. (3 hrs. lect. per week)

ENG 257F WOMEN IN LITERATURE (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

A thematic study of women in literature. Readings from various types of literature: novels, plays,

short stories, and poetry. Focus includes women in various cultures, traditional myths and roles of women, contemporary alternatives, and famous women writers. (3 hrs. lect. per week)

ENG 257G MANGA AS LITERATURE (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

Course explores the history of manga and its relationships to culture, history, identity, politics, gender, and sexuality in Japan and in other countries. Course will analyze the aesthetics, themes, and structure of manga and the development of audiences and sub-genres as well as its popularization across the world and connections to anime. (3 hrs. lect. per week)

ENG 257H HIP-HOP LITERATURE AND URBAN CULTURE (3)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

An examination of hip-hop and urban culture as a movement of artistic, social, and political resistance to racial, economic, and gender oppression. With a primary focus on literature, criticism, spoken word poetry, and rap, topics will include language, community, identity, justice, history, and politics. (3 hrs. lect. per week)

ENG 257K LITERATURE ON HAWAII-LOCAL AND NON-LOCAL PERSPECTIVES (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

In an exploration of writings on Hawai'i, the class will compare local and non-local authors through readings, discussions, essays, and journals to discover and critique the perspectives of the authors. The class will analyze the writings on social issues, cultural awareness, exploitation, political implications, religious influence, and other impressions of Hawaii. (3 hrs. lect. per week)

ENG 257M CROSS-CULTURAL PERSPECTIVES IN ASIAN/PACIFIC LITERATURE (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

Although stereotypes of both Asian and Pacific Islanders have existed through history, writers in English, in both groups, have emerged to tell their stories, battling misconceptions. The course studies and analyzes Asian and Pacific writers who deal with issues like colonialism, immigration, and marginalism. The works will be read as pieces of literatures while carefully considering their poetic and narrative forms. (3 hrs. lect. per week)

ENG 257N BOOKS AT THE MOVIES (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

This course examines the adaptation of classic and contemporary works from literature to film and the varied techniques for translating a literary work into a cinematic work. The course analyzes the themes, topics, story-telling structure, strategies, and devices employed in both literature and film. The primary focus is on literature, emphasizing

how a work of words is adapted to film and how comparisons between works in the two arts informs our understanding and increases our appreciation. The course also addresses the ongoing history of the adaptation of literature to film and the many ways each art encourages and influences the other. (3 hrs. lect. per week)

ENG 257O OKINAWAN LITERATURE (3) (DL)

Prerequisite: "C" or higher in ENG 100 OR Placement in ENG 201-296

Course explores the world of Okinawan literature from translations of early poems to contemporary works by Okinawan writers in Okinawa and around the world. Students will learn how literature expresses the culture, history, values, and conflicts of the Okinawan people. The course also discusses how literature expresses, contests, and develops Okinawan identity. May be taken on a CR/N basis. (3 hrs. lect. per week)

ENG 257P LITERATURE AND THE SEA (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

This course examines how the sea functions as a physical, philosophical, and psychological setting. Through close textual analysis, the course explores the symbolic power of the ocean: what does our tropological understanding of the sea reveal about humanity? Is the sea a metaphor for predominantly feminine or masculine imagery? How do descriptions of the sea change according to culture and economic system? (3 hrs. lect. per week)

ENG 257S COMICS, SUPERHEROES, AND SOCIETY (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

While comic books are often derided for being immature examples of escapist entertainment or, as in the 1950s, for encouraging perverse behavior, comic books and superheroes have always provided an excellent barometer for measuring American society in general—Superman, Captain America, and others as instruments for propaganda; the Fantastic Four, Iron Man and Hulk as expressions of American Cold War power yet also reflecting social anxieties about nuclear war; Spider-Man, Dr. Strange and others embracing the values of the counter-culture and the Punisher and Frank Miller's *The Dark Knight Returns* embodying the Reagan-era backlash against the counter-culture; *The X-Men* and multiculturalism and gay rights. (3 hrs. lect. per week)

ENG 257X SCIENCE FICTION (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

This course explores the interplay of science, technology, and literature and examines the authors' world views, philosophical and religious thought and the impact of science and technology on life, art, and the imagination. How these works resist potential dehumanizing aspects of technology and how technological development can encroach upon identity will be discussed. (3 hrs. lect. per week)

ENG 257Y YOUNG ADULT NOVEL (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

This course examines the young adult novel, both contemporary and classic, and analyzes and evaluates the themes, topics, structure, storytelling techniques, and literary devices appearing in young adult literature. The primary focus will be on literature, particularly the novel, and the rise of writing about and for young adults in the twentieth century and beyond. Among others, areas of focus include issues of identity, family, community, and tensions social, economic, and political as encountered by teens becoming adults. The course also examines the genre of young adult literature as a twentieth-century phenomenon for teen readers and the publishing world as well as the growing tradition of translating young adult novels into films. (3 hrs. lect. per week)

ENG 257Z LITERATURE AND GLOBALIZATION (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

A study of literary representations of globalization. Through readings of various genres, the course examines how literary works thematize the social and cultural effects of the global flows of capital, technology, information, commodities, and people. (3 hrs. lect. per week)

ENG 268 LITERARY NONFICTION (3)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

This course is an introduction to the genre of literary nonfiction. The course provides an opportunity to study and practice the techniques of what is sometimes known as New Journalism or even New New Journalism. Cross listed as JOUR 268. (3 hrs. lect. per week)

ENG 271 JAPANESE LITERATURE IN TRANSLATION (TRADITIONAL) (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

Survey of traditional Japanese literature from ancient times to the mid-nineteenth century. Cross-listed as EALL 271. (3 hrs. lect. per week)

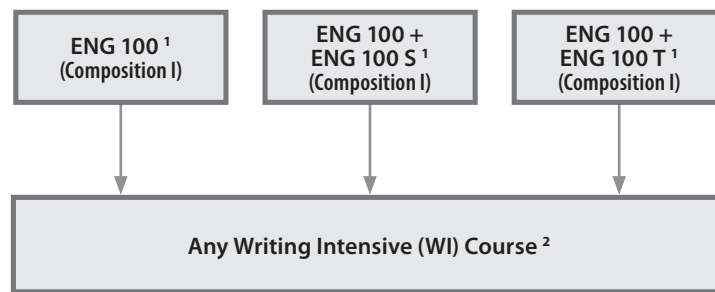
ENG 272 JAPANESE LITERATURE IN TRANSLATION (MODERN) (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

Survey from mid-nineteenth century to the present. Major emphasis on fiction. Cross-listed as EALL 272. (3 hrs. lect. per week)

College Level English Sequence Chart

HONOLULU CC PLACEMENT POLICY: All students place in ENG 100. Based on Smarter Balanced, high school grade point average, HiSet, GED, CLEP or other measures, students may be required to take ENG 100 with supplementary courses ENG 100S or ENG 100T. Writing samples may also be used to determine whether supplementary instruction is required.



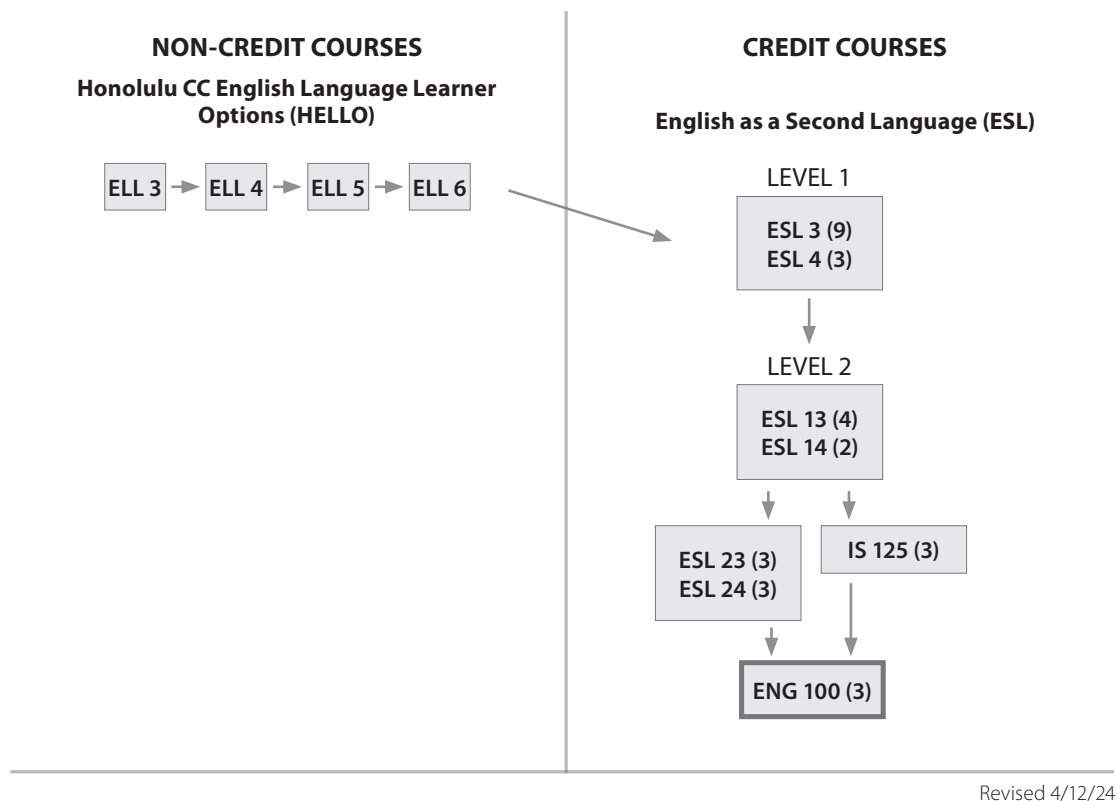
Revised 2/28/19

Notes:

- ¹ ENG 100 with ENG 100S or ENG 100T allow students to complete ENG 100 in one semester.
- ² A grade of "C" or higher is required in ENG 100 to enroll in Writing Intensive (WI) courses.

English For Non-Native Speakers Sequence Chart

This chart illustrates the sequence of ESL and HELLO courses offered at Honolulu CC for non-native students. Levels are determined by placement tests or other evaluations.



ENGLISH AS A SECOND LANGUAGE (ESL)

NOTE: Non-credit Hon CC English Language Learner Options (HELLO) courses are also available.

ESL 3 COLLEGE READING/WRITING SKILLS (9)

Prerequisite: ICE 6 OR Placement in ESL 3

Co-requisite: ESL 4

This course will provide students with a foundation in reading and writing skills necessary to succeed in subsequent English, Liberal Arts, and Technical/Occupational courses. There are two components to this class: students will read authentic pieces of writing, written for native speakers of English, and will focus on vocabulary development and comprehension. Writing assignments based on the readings will also be done. (9 hrs. lect. per week)

ESL 4 GRAMMAR I (3)

Prerequisite: Placement in ESL 4 or Instructor Approval

Co-requisite: ESL 3

This course is a study and practice of high-beginning to intermediate grammar. It will provide students with a solid foundation in grammar to succeed in subsequent English and Liberal Arts courses. (3 hrs. lect. per week)

ESL 13 COLLEGE READING/WRITING SKILLS II (4)

Prerequisite: "C" or higher in ESL 3 OR Placement in ESL 13

Co-requisite: ESL 14

This course will provide the student with advanced reading and writing skills necessary to succeed in subsequent English, Liberal Arts, and Technical/Occupational courses. There are two components to this class: students will read authentic pieces of writing, written for native speakers of English, and will focus on vocabulary development and comprehension. Writing assignments based on the readings will also be done. (4 hrs. lect. per week)

ESL 14 GRAMMAR II (2)

Prerequisite: "C" or higher in ESL 4 OR Placement in ESL 14

Co-requisite: ESL 13

This course is a study and practice of intermediate to advanced grammar. Common grammar problem areas will be focused on with required written compositions based on those specific grammar points. It will provide students with a solid foundation in grammar to succeed in subsequent English, liberal arts, and technical/occupational courses. (2 hrs. lect. per week)

ESL 23 INTRODUCTION TO EXPOSITORY WRITING FOR NNS (3)

Prerequisite: ESL 13

Co-requisite: ESL 24

This course provides intensive study of structure, usage, and vocabulary of English as a necessary prelude to effective writing. Emphasis is placed on the development of paragraphs to communicate ideas in short papers. Students are encouraged to exercise critical thinking and clear, correct language in their writing. (3 hrs. lect. per week)

ESL 24 GRAMMAR III (3)

Prerequisite: ESL 14

Co-requisite: ESL 23

This course is a study and practice of advanced grammar, covering such topics as verb tense, passive voice, gerunds, infinitives, adjective clauses, indirect speech, and embedded questions. Problematic grammar areas for non-native speakers of English (NNS) at the high intermediate/advanced level will be focused on with subsequent written compositions based on those specific grammar points. (3 hrs. lect. per week)

ESL 100 COMPOSITION I FOR NON-NATIVE SPEAKERS OF ENGLISH (3)

Prerequisite: Placement in ENG 100, OR "C" or higher in ESL 23 AND ESL 24, OR "C" or higher in IS 125

ESL100 is designed for advanced, non-native speakers that focuses on critical reading and expository college-level writing. This course provides extensive practice using the writing process to complete the composition and revision of essays and other forms of expository writing including analysis, interpretation, and research writing using a variety of sources. By the end of this course, students will complete a minimum of 5000 words of quality writing. (3 hrs. lect. per week)

ESL 124 TOPICS IN ENGLISH FOR PROFESSIONS (1)

This course teaches non-native English speakers vocabulary and expressions used by specific professions. Classes provide hands-on, content-rich educational experiences that encourage active engagement with advanced English terminology used in such fields as health care, travel, real estate, among others. (3 hrs. lect. per week for 5 weeks)

ENTREPRENEURSHIP (ENT)

ENT 195A SOCIAL MEDIA MARKETING (1)

ENT 195A offers a hands on approach to developing your social media brand, creating and managing your social media strategy, and expanding your digital audience. (1 hrs. lect. per week)

ENT 195B ENTREPRENEURSHIP AND COMMUNICATION (1)

ENT 195B will introduce students to the process of pitching and presenting a business idea, interviewing for an internship, and interviewing business owners, potential customers, and other stakeholders (1 hrs. lect. per week)

ENT 195C FINANCIAL MANAGEMENT FOR ENTREPRENEURS (1)

This course provides students with an introduction to the basics of finance for small businesses, including managing cash flow. (1 hrs. lect. per week)

ENT 195V ENTREPRENEURSHIP EXPERIENCES (1-3)

Prerequisite: Instructor approval required

ENT 195V offers a practicum or short-term internship to gain professional business experience. Students will be required to spend three hours per week per credit directly working on their project. (6 credits maximum for all enrollments)

FASHION TECHNOLOGY (FT)

FT 111 ART AND DESIGN IN FASHION (3)

A survey of fashion as it relates to art and design. Line, color, balance, proportion are studied providing guidelines to understanding fashion and how it communicates personal image to society. (3 hrs. lect. per week)

FT 125 FASHION SHOW PRODUCTION (3)

Comprehensive practical and virtual experience including all factors required for the preparation and production of fashion shows, clinics, and other fashion promotions. (3 hrs. lect. per week)

FT 129 TEXTILE ART (3)

(FORMERLY FT 29)

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

FT 200 CULTURE, GENDER AND APPEARANCE (3)

Prerequisite: Placement in ENG 100

Social construction of gender within culture and its visual expression through appearance. Analysis of role, identity, conformity, and deviance in human appearance. (3 hrs. lect. per week)

FT 205 BASIC APPAREL CONSTRUCTION (4)

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

FT 215 BLOCK PATTERN DESIGN I (3)

Prerequisite or Co-requisite: FT 205

Principles of pattern making for women's apparel through manipulation of pattern blocks. (2 hrs. lect.; 3 hrs. lab. per week)

FT 216 FASHION ILLUSTRATION (3)

Principles and techniques of sketching the fashion figure including garment details and fabric drape. Development of a personal style of illustration. Introduction to use of computers for illustration. (3 hrs. lect. per week)

FT 217 BLOCK PATTERN DESIGN II (3)

Prerequisite: FT 205 & FT 215; Placement in ENG 100

Prerequisite or Co-requisite: MATH 100

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory. Expanding and refining the technical and production methods of flat patternmaking. Applying construction and alteration techniques to samples and final garments. (2 hrs. lect.; 3 hrs. lab. per week)

FT 221 TEXTILES I (3)

(FORMERLY FT 140)

Prerequisite: Placement in ENG 100 + ENG 100S

Introduction to fibers, fabric structure, and how finishes relate to selection and care. Interrelationship between textile characteristics, properties, and end uses. (3 hrs. lect. per week)

FT 228 INTRODUCTION TO INDUSTRIAL SEWING (3)

(FORMERLY FT 28)

Prerequisite: FT 205 & FT 215

Prerequisite or Co-requisite: FT 217

Note: Projects and Notebook samples are required to be only sewn on Industrial Equipment which is located in the Fashion Technology Department.

An introduction to apparel manufacturing with emphasis on various stitch and seam types utilizing industrial machines and attachments. Career opportunities and industry terminology will also be covered in this course. (2 hrs. lect.; 3 hrs. lab. per week)

FT 230 CREATIVE LINE DESIGN - CAPSTONE (3)

(FORMERLY FT 30)

Prerequisite: FT 217 & 236

Prerequisite or Co-requisite: FT 125

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory. Capstone Course: The creative process of apparel design is emphasized by developing and producing a line of garments within a collection for industry or entrepreneurship. (2 hrs. lect.; 3 hrs. lab. per week)

FT 236 DRAPING (3)

(FORMERLY FT 36)

Prerequisite: FT 217

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory. Basic fundamentals of draping with standard and individual forms. (2 hrs. lect.; 3 hrs. lab. per week)

FT 237 PATTERN GRADING (3)

Prerequisite or Co-requisite: FT 205 & 215

Principles of proportionally increasing or decreasing a master pattern according to a prescribed set of body measurements. Applications include basic, intermediate and advance designs. Includes use of the grading machine. (2 hrs. lect.; 3 hrs. lab. per week)

FT 241 APPAREL DRAFT DESIGN (3)

(FORMERLY FT 41)

Prerequisite: FT 217

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory. Basic slopers are drafted from a set of measurements using a fit form or standardized industry measurements. Translating design sketches into flat patterns and constructing the finished garments. (2 hr. lect.; 3 hrs. lab. per week)

FT 243 CUTTING ROOM FUNCTIONS (3)

(FORMERLY FT 43)

Prerequisite: FT 205 & 215

Develop an understanding of industry methods and techniques of marking, laying, and cutting garments in quantity with emphasis on fabric yield. Includes a demonstration of the Gerber Technology Accumark System. (3 hrs. lect. per week)



FT 260 GERBER COMPUTER AIDED DESIGN I - GRADE AND MARKING (3)**(FORMERLY FT 160)***Prerequisite:* FT 217 & 237*Prerequisite or Co-requisite:* FT 243*FT majors only.*

Course covers the knowledge and skills required to use the Gerber Technology (GT) System to grade and digitize patterns and to prepare production markers. It also covers the GT system hardware capabilities as well as software program. (2 hrs. lect.; 3 hrs. lab. per week)

FT 270 GERBER COMPUTER AIDED DESIGN II - PATTERN AND DESIGN (3)**(FORMERLY FT 170)***Prerequisite or Co-requisite:* FT 260*FT majors only.*

Comment: This is a computerized pattern making course as applied in the garment industry.

This course covers the capabilities of the Gerber Technology (GT) Pattern Design System-PDS and Silhouette. This system is designed to use CAD for specific industry application in pattern making and design. (2 hrs. lect.; 3 hrs. lab. per week)

FT 289 MEN'S FASHION DESIGNING (3)**(FORMERLY FT 98)***Prerequisite:* FT 217

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory.

Introduction to concepts and techniques in men's fashion designing: custom drafting, sewing and fitting. (2 hrs. lect.; 3 hrs. lab. per week)

FT 290A FT SPECIAL TOPIC - ALTERATIONS (3)*Prerequisite or Co-requisite:* FT 217*FT majors only.*

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory. Students must have internet access, laptop/mobile device with speaker, webcam and microphone. Before first day of instruction, email your instructor for information.

Alterations and adjustments made to various parts of a garment to make a better fit. (2 hrs. lect.; 3 hrs. lab. per week)

FT 290B FT SPECIAL TOPIC - BRIDAL (3)**(FORMERLY FT 290)***Prerequisite:* FT 217*Instructor approval required.*

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory. Special topics in fashion technology.

(2 hrs. lect.; 3 hrs. lab. per week)

FT 290E FT SPECIAL TOPIC - EMBELLISHMENTS (3)**(FORMERLY FT 298)***Prerequisite:* FT 217*Prerequisite or Co-requisite:* FT 236*Instructor approval required.*

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory. Special topics in fashion technology.

(2 hrs. lect.; 3 hrs. lab. per week)

FT 290K FT SPECIAL TOPIC - KNITS (3)**(FORMERLY FT 290)***Prerequisite:* FT 217*Instructor approval required.*

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory. Special topics in fashion technology.

(2 hrs. lect.; 3 hrs. lab. per week)

FT 290S FT SPECIAL TOPIC - SWIMWEAR (3)**(FORMERLY FT 290)***Prerequisite:* FT 217*Instructor approval required.*

Highly recommended: Daily access to a working sewing machine. The Fashion Technology program currently uses the Bernina #1008 model in our sewing laboratory. Special topics in fashion technology.

(2 hrs. lect.; 3 hrs. lab. per week)

NOTE: The following courses have been accepted at the University of Hawai'i at Mānoa in the Human Resources Department. These are subject to change without prior notice.

Honolulu CC:	FDM:
FT 111	FDM elective
FT 125	FDM elective
FT 129	FDM elective
FT 200	FDM 200
FT 205	FDM 205
FT 215	FDM 215
FT 216	FDM 216
FT 217	FDM elective
FT 221	FDM 221
FT 228	FDM elective
FT 230	FDM elective
FT 236	FDM elective
FT 237	FDM elective
FT 241	FDM elective
FT 243	FDM elective
FT 260	FDM elective
FT 270	FDM elective
FT 289	FDM elective
FT 290B	FDM elective
FT 290E	FDM elective
FT 290K	FDM elective
FT 290S	FDM elective



FIRE AND ENVIRONMENTAL EMERGENCY RESPONSE (FIRE)

FIRE 100 INTRODUCTION TO FIRE PROTECTION (3)

Prerequisite: Placement in ENG 100; MATH 50 or Placement in MATH 150 or higher

FIRE majors only.

History and philosophy of fire protection. Introduction to fire agencies; current fire legislation, career orientation, recruitment and training programs, classification and pay systems, employee organization. This course is designed as a general background for vocational students. May be taken on a CR/N basis. (3 hrs. lect. per week)

FIRE 102 FUNDAMENTALS OF FIRE PREVENTION (3)

Prerequisite: Placement in ENG 100; MATH 50 or Placement in MATH 150 or higher

FIRE majors only.

Introduction to modern fire prevention, public relations involved, introduction to national and local codes used in prevention. An overview of public prevention programs, new technologies used in prevention, inspection procedures and guidelines, current problems, legislation, and enforcement of fire prevention. May be taken on a CR/N basis. (3 hrs. lect. per week)

FIRE 107 FIRE FIGHTING TACTICS AND STRATEGIES (3)

Prerequisite: CHEM 105 and FIRE 102

FIRE majors only.

Introduction to Fireground planning and coordination, extinguishment tactics and strategies, functions of different fire companies, various tactical operations, types of extinguishment agents and uses. Pre-planning and command systems, size and types of incidents. Discussion of modern fire problems and suppression tactics and strategies involved. May be taken on a CR/N basis. (3 hrs. lect. per week)

FIRE 111 MANAGEMENT IN THE FIRE SERVICE (3)

Prerequisite: FIRE 207

FIRE majors only.

An overview of fire service management theories and application principles in the fire service. Management by objective. Current fire safety education, problem identification and program development strategies are introduced. Fireground management functions; management of financial resources, physical resources, and facilities. May be taken on a CR/N basis. (3 hrs. lect. per week)

FIRE 117 BASIC RESCUE IN THE FIRE SERVICE (3)

Prerequisite: Placement in ENG 100; MATH 50 or Placement in MATH 150 or higher

Recommended Prep: FIRE 100 and FIRE 102

FIRE majors only.

To introduce definitions, terminology, and provide students with a basic knowledge of rescue. To understand the four phases of rescue: locate and access victims, stabilize the situation, and transport the victims to safety while managing injuries and avoiding risk or injury to the victims or rescuers. May be taken on a CR/N basis. (3 hrs. lect. per week)

FIRE 119B EMERGENCY MEDICAL TECHNICIAN (3.5)

Prerequisite: Minimum of 12 FIRE credits

Co-requisite: FIRE 119C

FIRE majors only.

This course is the first in a series of two EMT Basic courses. This course is designed to develop specific medical skills used in emergency response. Students should be prepared to do practical labs both in class and in a hospital setting. Students are required to pay a lab fee and purchase a limited liability coverage policy while participating in this course. Course will include ambulance ride-along activity. (3 hrs. lect.; 1.5 hrs. lab. per week)

FIRE 119C EMERGENCY MEDICAL TECHNICIAN-BASIC (3.5)

Prerequisite: Minimum of 12 FIRE credits

Co-requisite: FIRE 119B

FIRE majors only.

This course is the second in series of the EMT Basic curriculum. This course is designed to develop specific medical skills in responding to medical emergencies. Students are required to continue practical lab experiences that were started in FIRE 119B. (3 hrs. lect.; 1.5 hrs. lab. per week)

FIRE 150 INDUSTRIAL FIRE PROTECTION (3)

Prerequisite: Placement in ENG 100; MATH 50 or Placement in MATH 150 or higher

Recommended Prep: FIRE 100 and FIRE 102

Basic fire protection-prevention course for industry. Includes planning, managing and training for fire emergencies. Cross-listed as OESM 150. May be taken on a CR/N basis. (3 hrs. lect. per week)

FIRE 152 WILDLAND FIRE CONTROL FIELD METHODS (3)

Prerequisite or Co-requisite: FIRE 151

Introduction to wildland fire suppression field strategies, tactics and techniques. The course is structured around hands-on training in an outdoor environment. Students are familiarized with tools, techniques and how to best apply them in the wildland fire context. (90 hrs. lect./lab. per term)

FIRE 193V COOPERATIVE EDUCATION (1-6)

Prerequisite: Placement in ENG 100; MATH 50 or Placement in MATH 150 or higher

Instructor approval required.

FIRE majors only.

This course provides students with the opportunity to acquire on-the-job experience related to classroom instruction in Fire and Environmental Emergency Response emphasizing technical and interpersonal aspects. Students may enroll 4 times for a maximum of 12 credits. 6 credits can be applied to FIRE elective requirements. (5 hrs. work experience per week per credit)

FIRE 207 HAZARDOUS MATERIALS AWARENESS AND OPERATIONS (3)

Prerequisite: CHEM 105 and FIRE 100

FIRE majors only.

Students are introduced to initial response for Hazardous Material Incidents. Topics include: personal safety, NFPA standards, OSHA and EPA

regulations, toxicology, Incident Command System, decontamination, chemical resources, initial response, assessment, goal systems, and tactical options for HAZ MAT incidents. Meets Basic Concepts and Awareness levels as provided by NFPA. The curriculum that will now be used is designed to Nationally certify individuals in Hazardous Materials Operations and Hazardous Materials Awareness. The students will complete a National examination issued by National Fire Protection Professional Qualifications Board (Pro Board) upon completion of this course. Students will need a grade of 70% in order to pass the Pro Board examination. Students who do not pass the exam may receive a passing grade in the course, but will need the Pro Board certification in order to enter the final semester of Pro Board certification courses FIRE 280A (12 credits) and 280B (4 credits) for Firefighter I. (3 hrs. lect. per week)

FIRE 209 HAZARDOUS MATERIALS TECHNICIAN (3)

Prerequisite: Placement in ENG 100; MATH 50 or Placement in MATH 150 or higher

Recommended Prep: FIRE 203, 207, and CHEM 105

This course is one of the final courses in a series of courses that were developed to increase responders awareness and capabilities to respond to hazardous materials incidents. May be taken on a CR/N basis. (3 hrs. lect. per week)

FIRE 218 EMERGENCY RESPONSE FOR HAZARDOUS MATERIALS (4)

Prerequisite: Placement in ENG 100; MATH 50 or Placement in MATH 150 or higher

Recommended Prep: FIRE 203

FIRE majors only.

This course provides students with hands-on instruction in safety and emergency response to chemical and physical exposures in industrial and field settings. Topics discussed include: hazard analysis, contingency planning, proper use and selection of PPE, site control and evaluation, field sampling and monitoring, and proper use of instruments. This course satisfies the requirement for generalized employee training under OSHA (1910.120). Cross-listed as OESM 218. (3 hrs. lect.; 3 hrs. lab. per week)

FIRE 280A FIREFIGHTER I AND II (12)

Prerequisite: FIRE 100, 102, 107, 111, 119B, 119C, and 207

Co-requisite: FIRE 280B

Instructor approval required.

FIRE majors only.

This course will provide students with the knowledge and skills to function as an integral member of a firefighting team under direct supervision in hazardous conditions. The course is completed online in a virtual classroom. The co-requisite course, FIRE 280B, involves practical skill training. Completion of both courses will result in Fire Fighter I and 2 certification. (12 hrs. lect. per week)

FIRE 280B FIREFIGHTER I AND II LAB (8)

Prerequisite: FIRE 100, 102, 107, 111 119B, 119C, and 207

Co-requisite: FIRE 280A

Instructor approval required.

FIRE majors only.

This course will provide students with the knowledge and skills to function as an integral member of a firefighting team under direct supervision in hazardous conditions. The program consists of two courses. The course involves practical skill training. The co-requisite course, FIRE 280A, is completed in an online virtual classroom. Completion of both courses will result in Fire Fighter 1 and 2 certification. (16 hrs. lect./lab. per week)

FOOD SCIENCE AND HUMAN NUTRITION (FSHN)

FSHN 185 THE SCIENCE OF HUMAN NUTRITION (3) (DB)

Recommended Prep: ENG 100

Integration of basic natural science concepts in the study of human nutrition. Emphasis on nutrient food sources, functions, interrelationships and requirements throughout the life cycle. The course requires a substantial amount of reading and writing. Fulfillment of the ENG 100 recommendation is highly encouraged. Lectures supplemented with individualized instructional activities. (3 hrs. lect. per week)

NOTE: FSHN 185 is accepted as a natural science requirement at the University of Hawai'i at Mānoa, UH West O'ahu, and at other community colleges.

GEOGRAPHY AND ENVIRONMENT (GEO)

GEO 101 THE NATURAL ENVIRONMENT (3) (DP)

Recommended Prep: Placement in MATH 24

Geography and Environment 101 is a survey of the global physical environment using an Earth systems science approach. In this course, you will be introduced to techniques and concepts used to investigate the geographic distribution of physical phenomena on Earth. Patterns and processes of climatic, geomorphic, and biological systems are examined. Global environmental issues are explored in light of the concepts covered. The lectures will include a number of examples from Hawai'i, where unique combinations of global tectonic and atmospheric processes, and geographic isolation have resulted in an extraordinary array of environmental and biotic diversity. Geography and Environment 101 fulfills the Physical Sciences diversification (DP) general education requirement for an associate degree at Honolulu Community College and a baccalaureate degree at the University of Hawai'i at Manoa, and the sustainability-related designation, an option for students who are interested in sustainability issues. (3 hrs. lect. per week)

GEO 101L THE NATURAL ENVIRONMENT LABORATORY (1) (DY)

Recommended Prep: Placement in MATH 24

This course is an introduction to techniques used to investigate the geographic distribution of physical phenomena on Earth. The laboratory exercises will include a number of examples from Hawai'i,

where unique combinations of global tectonic and atmospheric processes, and geographic isolation have resulted in an extraordinary array of environmental and biotic diversity. May be taken on a CR/N basis. (3 hrs. lab. per week)

GEO 102 WORLD REGIONAL GEOGRAPHY (3)

Prerequisite: Placement in ENG 100 + ENG 100S

Survey of the world's major geographic regions with focus on the interrelationships between the physical and human elements of these regions. Geographic aspects of contemporary economic, social, and political conditions will be studied. (3 hrs. lect. per week)

GEO 122 GEOGRAPHY OF HAWAII (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

Examines Hawai'i as a unique, special place. Physical geography (volcanoes, erosion, climate, water resources, natural hazards), cultural geography (pre-contact society, the monarchy, economic change, agriculture, tourism, energy, population, land use, transportation, and urbanization), and regional geography of each island will be presented. (3 hrs. lect. per week)

HAWAIIAN (HAW) *

HAW 101 ELEMENTARY HAWAIIAN I (4)

This course is the first half of Elementary Hawaiian that teaches basic listening, speaking, reading, and writing skills. (4 hrs. lect. per week)

HAW 102 ELEMENTARY HAWAIIAN II (4)

Prerequisite: "C" or higher in HAW 101

This course is the second half of Elementary Hawaiian that teaches basic listening, speaking, reading, and writing skills. (4 hrs. lect. per week)

HAW 110 EVOLUTION OF HAWAII'S LANGUAGES (3)

This course examines the evolution of Hawai'i's languages through the impacts of global cross-cultural exchanges, relationships, and social development in Hawai'i. (3 hrs. lect. per week)

HAW 201 INTERMEDIATE HAWAIIAN I (4)

Prerequisite: "C" or higher in HAW 102

This course is the first half of Intermediate Hawaiian. Language learning requires competence in four areas of skill, including listening, speaking, reading, and writing. (4 hrs. lect. per week)

HAW 202 INTERMEDIATE HAWAIIAN II (4)

Prerequisite: "C" or higher in HAW 201

This course is the second half of Intermediate Hawaiian. Language learning requires competence in four areas of skill, including listening, speaking, reading, and writing. (4 hrs. lect. per week)

HAW 261 HAWAIIAN LITERATURE IN ENGLISH (3) (DL)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296

A literary and cultural experience of the indigenous Hawaiian culture through reading and analyzing

selected major works in English translations. (3 hrs. lect. per week)

* Native speakers may not take language courses for credit.

HAWAIIAN STUDIES (HWST)

HWST 105 MEA KANU: HAWAIIAN PLANTS AND THEIR USES (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

This course explores the cultural uses of plants by humans in the Hawaiian archipelago and elsewhere in Polynesia. Focus will be upon those plants that were originally found in Hawai'i when early settlers came and those plants that were brought by them. Cross-listed as BOT 105. (3 hrs. lect./demo. per week)

HWST 107 HAWAII: CENTER OF THE PACIFIC (3) (DH)

Prerequisite: Placement in ENG 100 + ENG 100S

An introduction to the unique aspects of the native point of view in Hawai'i and in the larger Pacific with regards to origins, language, religion, land, art, history, and modern issues. (3 hrs. lect. per week)

HWST 110 HUAKA'I WA'A: INTRODUCTION TO HAWAIIAN VOYAGING (3)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: Familiarity with Hawaiian language and culture

Introduces student to modern Hawaiian canoe voyaging through an examination of the science and narratives of ancient voyaging, the history of the modern revival of voyaging, and the Hawaiian navigator's toolkit. May be taken on a CR/N basis. (3 hrs. lect. per week)

HWST 110L WA'A HO'OKELE: HAWAIIAN SAILING CANOES LAB (1)

Prerequisite or Co-requisite: HWST 110

Recommended Prep: Some ocean experience and experience on boats. Knowledge of one's susceptibility to seasickness and ways of preventing or dealing with seasickness, as needed.

Comment: Concurrent enrollment in or completion of HWST 110 with a "C" or higher grade. Students must pass a swim test during the first three weeks of class: Students will be asked to swim 500 meters and stay afloat for one hour in deep water. Students should also have the ability to jump onto the deck of a boat that is 1-2 feet below the pier level. Some heavy lifting (e.g. pulling up an anchor) may be required.

This course introduces students to the knowledge and skills needed to sail canoes in coastal waters. Students will apply the knowledge acquired in HWST 110 in hands-on activities. Students may enroll 2 times for a maximum of 2 credits. May be taken on a CR/N basis. (3 hrs. lab. per week)

HWST 128 INTRODUCTION TO HULA KAHIKO (3) (DA)

An introduction to hula and oli (chant) covering the fundamentals of traditional dance and practices, language, and regional traditions. (2 hrs. lect., 2 hrs. lab per week)

HWST 129 INTRODUCTION TO HULA 'AUANA (3) (DA)*Recommended Prep: HAW 101*

An introduction to hula 'auana covering the fundamentals of contemporary Hawaiian dance, music, practices, language, poetry, and regional traditions. (2 hrs. lect., 2 hrs. lab per week)

HWST 135 KĀLAĪ LĀ'AU: HAWAIIAN WOODWORK AND WOOD CARVING (3) (DA)*Recommended Prep: HWST 107 and/or 105*

This is a Hawaiian cultural woodwork and wood carving project class. This class will involve the development of two to three introductory woodworking projects of Hawaiian cultural significance or ceremonial use. Through this class the students will develop both the skills needed to work effectively and safely with wood, and the cultural knowledge important to the pieces developed. As a project class, there will be specific projects and themes set by the instructor of general Hawaiian cultural interest. Students will learn different aspects and solutions in carving and creating Hawaiian cultural projects. May be taken on a CR/N basis. (6 hrs. per week)

HWST 207 MĀLAMA AHUPUA'A: HAWAIIAN PERSPECTIVES IN AHUPUA'A (3) (DH)*Prerequisite: "C" or higher in HWST 107; "C" or higher in ENG 100*

Comment: Transportation may be required for off campus visits to different ahupua'a or wahi pana. HWST 207 will examine 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 and exploration of its relevance in modern society. The primary focus of this course will be the Hawaiian land division: the Ahupua'a. Through an understanding of the ahupua'a, students will become familiar with perspective on Hawaiian resource management and Hawaiians' relationship with the 'āina. May be taken on a CR/N basis. (3 hrs. lect. per week)

HWST 228 HULA KAHIKO (3) (DA)*Prerequisite: "B" or higher in HWST 128**Recommended Prep: HAW 101; HWST 107*

Students refine and enhance skills learned in HWST 128. (2 hrs. lect., 2 hrs. lab per week)

HWST 229 HULA 'AUANA (3) (DA)*Prerequisite: "B" or higher in HWST 129**Recommended Prep: HAW 101**Instructor approval required*

Students refine and enhance skills learned in HWST 129. (2 hrs. lect., 2 hrs. lab per week)

HWST 255 INTRO TO THE HAWAIIAN KINGDOM (3)*Recommended Prep: HWST 107; Placement in ENG 100 + ENG 100S*

HWST 255 focuses on the Hawaiian Kingdom era covering two major historical periods: the first from 1810 until 1893; the second from 1893 to the present. This course focuses primarily on the first historical

period, allowing the legal, political, and economic conclusions from that era to inform and provide for us a continuity into the second historical period. Major topics addressed in this course are: unification; the Hawaiian Constitutions; recognition and nationhood in 1843; feudal and allodial land systems; the Hawaiian economy; the Hawaiian monarchs; the occupation of the Hawaiian Islands; issues and methods of de-occupation; historical, political, legal, and economic global contexts. (3 hrs. lect. per week)

HWST 270 HAWAIIAN MYTHOLOGY (3) (DL)*Prerequisite: HWST 107 or HAW 101; "C" or higher in ENG 100**Recommended Prep: HAW 102*

Survey of gods, 'aumakua, kupua, mythical heroes, heroines, and their kinolau as the basis of traditional Hawaiian metaphor. This course will investigate and analyze oral and written Hawaiian literary sources. (3 hrs. lect. per week)

HWST 275A PANA O'AHU (3)*Prerequisite: "C" or higher in HWST 107; "C" or higher in ENG 100**Recommended Prep: HAW 101*

This course will survey and explore storied sites of O'ahu and examine their geographical, historical, mythological, and cultural significance from a Hawaiian perspective as it pertains to Hawaiian Deities. Students will become familiar with various methods of knowing a place, researching Hawaiian resources, and developing critical thinking and writing skills. This course will include a substantial amount of Hawaiian language words and terminology. (3 hrs. lect. per week)

HWST 281 HO'OKELE I: HAWAIIAN ASTRONOMY AND NAVIGATION (3) (DP)*Prerequisite: Placement in ENG 100 + ENG 100S or Instructor Approval**Recommended Prep: HWST 110 and HWST 107.**Familiarity with Hawaiian language and culture.*

An introduction to Hawaiian views of astronomy and navigation, with a focus on celestial bodies and how they are used as a basic wayfinding tool by Polynesian Voyaging Society trained navigators. Repeatable one time. May be taken on a CR/N basis. (3 hrs. lect. per week)

HWST 281L HO'OKELE I: HAWAIIAN ASTRONOMY AND NAVIGATION LAB (1) (DY)*Prerequisite: Placement in ENG 100 + ENG 100S, or Instructor Approval**Prerequisite or Co-requisite: HWST 281**Recommended Prep: HWST 110 and HWST 107*

Stargazing laboratory to accompany HWST 281. Repeatable one time. May be taken on a CR/N basis. (3 hrs. lab per week)

HWST 282 HO'OKELE II: HAWAIIAN VOYAGING AND SEAMANSHIP (3) (DH)*Prerequisite: Placement in ENG 100 + ENG 100S or Instructor Approval**Recommended Prep: HWST 107, HWST 110, and HWST 281*

An introduction to traditional knowledge of Hawaiian voyaging and navigation and to the modern revival of voyaging arts in Hawai'i and Oceania. Students will learn seamanship skills needed to sail double hulled canoes; and plan voyages based on weather and sea conditions. May be taken on a CR/N basis. (3 hrs. lect. per week)

HWST 282L Ho'okele II: Hawaiian Voyaging and Seamanship Lab (1)

Prerequisite: Placement in ENG 100 + ENG 100S or Instructor Approval

Prerequisite or Co-requisite: HWST 282

Recommended Prep: HWST 107, HWST 110, and HWST 281. Some ocean and boat/canoe experience. Knowledge of one's susceptibility to seasickness and ways of preventing or dealing with seasickness, as needed.

Comment: Students will demonstrate basic swimming and will be provided personal flotation devices if unable to demonstrate basic swimming. Students should have the ability to jump onto the deck of a vessel that is 1-2 feet below the pier level. Some heavy lifting (e.g. pulling up an anchor) may be required.

A sailing laboratory to accompany HWST 282. This lab provides an introduction to voyaging and seamanship skills, including care and maintenance of sailing canoes. Repeatable one time. May be taken on a CR/N basis.

(3 hrs. lab per week)

HWST 284 He Moku He Wa'a: An Island is a Canoe (3)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: HWST 107, HWST 282

Comment: Students will demonstrate basic swimming and will be provided personal flotation devices if unable to demonstrate basic swimming. Students should have the ability to jump onto the deck of a boat that is 1-2 feet below the pier level. Some heavy lifting (e.g. lifting an anchor) may be required.

This course explores the metaphor of an island being a canoe through a survey of traditional resource management in Hawai'i, its relevance in contemporary society and a survey of voyaging including non-instrument navigation, sail planning and skills needed to sail double hulled canoes. This course also provides students with hands-on experience in voyaging and malama 'āina and examining the connections between the two. Students may enroll 2 times for a maximum of 6 credits. May be taken on a CR/N basis.

(3 hrs. lect. per week)

HWST 285 La'au Lapau: Hawaiian Medicinal Herbs (4) (DH)

Prerequisite: HWST 107 or Instructor approval

Presentation of Hawaiian medicinal herbs including basic philosophy, identification, utilization, and preparation of such herbs for human ailments. Students may enroll 2 times for a maximum of 8 credits. May taken on a CR/N basis.

(3 hrs. lect.; 3 hrs. lab per week)

HISTORY (HIST)

HIST 151 World History to 1500 (3)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: ENG 100

A global and historical survey focusing on human societies and cross-cultural interactions to 1500 C.E. This course analyzes the historical development of human societies and their cultural traditions in all parts of the world, including Africa, the Americas, Asia, Europe, and Oceania. (3 hrs. lect. per week)

HIST 152 World History since 1500 (3)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: ENG 100

A global and historical survey focusing on human societies and cross-cultural interactions since 1500 C.E. History 152 explores the dynamic relationships within and between representative modern societies, nations, states and cultures. (3 hrs. lect. per week)

HIST 231 Modern European Civilization I (3) (DH)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: ENG 100

Historical survey of political evolution and major economic, social and cultural developments taking place in Europe. HIST 231-(1500-1815); HIST 232 (1815- present). (3 hrs. lect. per week)

HIST 232 Modern European Civilization II (3) (DH)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: ENG 100

Historical survey of political evolution and major economic, social and cultural developments taking place in Europe. HIST 231-(1500-1815); HIST 232 (1815- present). (3 hrs. lect. per week)

HIST 241 Civilizations of Asia I (3)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: ENG 100

Historical survey of major civilizations of Asia from earliest times to 1500: East Asia, Southeast Asia, and South Asia. Cross-listed as ASAN 241. Credit may be received for HIST 241 or ASAN 241, but not both. (3 hrs. lect. per week)

HIST 242 Civilizations of Asia II (3)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: ENG 100

Continuation of HIST 241. Survey of major civilizations of Asia from 1500 to the present: East Asia, Southeast Asia, and South Asia. Cross-listed as ASAN 242. Credit may be received for HIST 242 or for ASAN 242, but not both. (3 hrs. lect. per week)

HIST 246 The Vietnam War (3) (DH)

Prerequisite: ENG 100

Instructor approval required.

Historical survey of the Vietnam War, covering the history of military and political affairs related to the nation of Vietnam from 1945 to 1975.

(3 hrs. lect. per week)

HIST 250 WORLD HISTORY AND FILM (3) (DH)*Prerequisite: "C" or higher in ENG 100*

This course examines our varying interpretations of the meaning of global historical events as they have been explored through film. The course will involve viewing films about historical events and issues, and using these films as a pathway to understanding the stories we tell ourselves about our own past and the purposes behind those stories. The course will further explore the use of metaphor and narrative, and perspective in the writing of history. May be taken on a CR/N basis. (3 hrs. lect. per week)

HIST 281 INTRODUCTION TO AMERICAN HISTORY I (3) (DH)*Prerequisite: Placement in ENG 100 + ENG 100S**Recommended Prep: HIST 152*

Interpretative survey from the earliest settlement to 1865. (3 hrs. lect. per week)

HIST 282 INTRODUCTION TO AMERICAN HISTORY II (3) (DH)*Prerequisite: Placement in ENG 100 + ENG 100S**Recommended Prep: HIST 152*

Interpretative survey from 1865 to the present. (3 hrs. lect. per week)

HIST 284 HISTORY OF THE HAWAIIAN ISLANDS (3)*Prerequisite: ENG 100*

Survey of the social, political, and economic history of Hawai'i from the earliest times to the present. (3 hrs. lect. per week)

HIST 288 OCEANIA HISTORY (3) (DH)*Prerequisite: ENG 100*

Development from precolonial to modern times; early settlement, cultural contact, colonization, contemporary problems. (3 hrs. lect. per week)

HIST 296E WORLD ENVIRONMENTAL HISTORY (3) (DH)*Prerequisite: "C" or higher in ENG 100, OR**Placement in ENG 201-296**Recommended Prep: HIST 151 and/or HIST 152*

Survey of interactions between humans and the natural world from ancient eras to the present. Topics include environmental impacts of agriculture, urbanization, colonization and industrialization, as well as how development of human societies have been influenced by surrounding environments. (3 hrs. lect. per week)

HIST 296M TOPICS IN HISTORY: INTRODUCTION TO ASIAN AMERICAN HISTORY (3) (DH)*Prerequisite: Placement in ENG 100 + ENG 100S**Recommended Prep: HIST 152*

This course analyzes the historical development of Asian American communities in the Americas and Hawai'i. Emphasis will be placed on situating the movements of Asians within local, regional, and transnational frameworks. Students will analyze the significance of race, gender, and class in shaping the experiences of Asian American communities. The communities covered include Chinese, Filipino, Japanese, Korean, South Asian, and Southeast Asian Americans. (3 hrs. lect. per week)

HUMAN DEVELOPMENT AND FAMILY STUDIES (HDFS)

[FORMERLY FAMILY RESOURCES (FAMR)]**HDFS 100 PERSONAL AND PROFESSIONAL DEVELOPMENT (3) (FORMERLY FAMR 100)***Prerequisite: Placement in ENG 100 + ENG 100S*

Intended for those who wish to expand their self-awareness and explore personal and professional choices. Topics include self awareness, self image, identity, emotional intelligence, motivation, goal setting, job interviewing, time management, and personal financial literacy. May be taken on a CR/N basis. (3 hrs. lect. per week)

HDFS 133 DYNAMICS OF FAMILY VIOLENCE (3) (FORMERLY FAMR 133)*Recommended Prep: Placement in ENG 100*

Overview of family violence which includes physical and sexual abuse of children, spousal assault, violence between siblings, abuse of the disabled, physical abuse and neglect as well as financial abuse of the elderly. Cultural/political trends to "criminalize" family violence. (3 hrs. lect. per week)

HDFS 141 PARENTING (3)**(FORMERLY FAMR 141)***Prerequisite: Placement in ENG 100 + ENG 100S*

Parenting theories, methods, skills, issues, and resources; parent-child relations over the life span and in various family and cultural contexts. May be taken on a CR/N basis. (3 hrs. lect. per week)

HDFS 230 HUMAN DEVELOPMENT (3) (DS) (FORMERLY FAMR 230)*Prerequisite: Placement in ENG 100*

Concepts, issues, and theories of human growth and development from conception to death and a systems approach to inquiry into factors affecting growth and development. (3 hrs. lect. per week)

HDFS 244 AGING (3) (FORMERLY FAMR 244)*Prerequisite: Placement in ENG 100*

Basic course in the study of developmental process and problems of aging. Students will be guided to look at aging from a systems approach. Sociological, biological, and cognitive development of the aging individual will be discussed. (3 hrs. lect. per week)

HDFS 296 WORKING WITH PEOPLE (3) (FORMERLY FAMR 296)*Recommended Prep: Placement in ENG 100*

Focuses on knowledge and skills needed in working with people. Topics include communication barriers and enhancers, conflict management, procrastination, stress and anger management, and group problem-solving skills. (3 hrs. lect. per week)

HUMAN SERVICES (HSER)

HSER 121 FAMILY DYNAMICS AND THE SOCIAL WORK INTERVIEW (3)

Recommended Prep: ENG 100

An introductory course in the field of social work/human services. Topics include a brief overview of social work values, ethics and basic practice principles; understanding family dynamics and the process of the initial social work interview. (3 hrs. lect. per week)

HSER 140 INDIVIDUAL COUNSELING (3)

Recommended Prep: ENG 100

An introduction to individual counseling which focuses on developing and enhancing basic counseling skills. May be taken on a CR/N basis. (3 hrs. lect. per week)

HSER 150 GROUP COUNSELING (3)

Recommended Prep: Placement in ENG 100

Issues and methods in the use of small groups to promote personal growth, therapeutic interaction, and social change. Group formation, maintenance, and termination, group dynamics; and roles/skills appropriate to group leadership and membership. (3 hrs. lect. per week)

HSER 170 SUBSTANCE ABUSE COUNSELING (3)

Recommended Prep: HSER 140; and Placement in ENG 100

Designed for people interested in pursuing work in addiction treatment. Covers physical and psycho-social effects of substance abuse; screening, assessment, and counseling skills, as well as ethical and legal issues. May be taken on a CR/N basis. (3 hrs. lect. per week)

HSER 190 PRACTICUM SEMINAR (1)

Co-requisite: HSER 191V

This seminar course provides an opportunity for students to discuss problems experienced in work practicum and to develop counseling, guidance, problem-solving, and evaluation competencies. This course may be repeated. Students must be concurrently enrolled in HSER 191V Human Services Practicum (1 credit). (1 hr. lect. per week)

HSER 191V HUMAN SERVICES PRACTICUM (1-3)

Supervised work experience in a human services or community service agency. Practicum is generally an unpaid practical work experience. May be repeated until 9 credits are earned. Responsibilities increase with each repeat. Concurrent enrollment in HSER 190 (Practicum Seminar) is recommended. (1 cr.-5 hrs.; 2 cr.-10 hrs.; 3 cr.-15 hrs. per week for practicum)

HUMANITIES (HUM)

HUM 193V COOPERATIVE EDUCATION (1-4)

Instructor approval required.

This course will provide students with the opportunity to acquire on-the-job experience related to classroom and laboratory instruction in Humanities. Students may enroll 4 times for a maximum of 12 credits. (5 hrs. work experience per week per credit)

INDUSTRIAL EDUCATION (IED)

IEDB 100 BLUEPRINT READING (3)

(FORMERLY BLPR 22)

A basic course designed primarily for students in the construction trades. Topics include principles of graphic representation, basic building construction, interpretation of working drawings, and building specifications. (45 hrs. lect. per term)

IEDD 101 BASIC DRAFTING AND BLUEPRINT READING (3)

Pearl Harbor Naval Shipyard Applied Trades majors only.

A basic mechanical drawing course designed for Pearl Harbor Naval Shipyard Apprenticeship Program students. Includes the use of drafting instruments, technical terminology, drawing scales, linework, lettering, orthographic projection, auxiliary and sectional views, assemblies and pictorials, threads and welds, and basic ship drawings. Lecture, demonstration, and exercise drawing. Topics developed in related shop work apart from this course. (10 hrs. lect./lab. per week over 5 weeks)

INFORMATION AND COMPUTER SCIENCE (ICS)

(See also Computing, Security, & Networking Technology)

ICS 100 COMPUTING LITERACY AND APPLICATIONS (3)

Recommended Prep: ENG 100 + ENG 100S OR

Placement in ENG 100

An introductory survey of computers and their role in the information world emphasizing computer terminology, hardware, and software. Opportunities for "hands-on" experience using applications software may include spreadsheets, word processing, presentations and communications. (3 hrs. lect. per week plus lab assignments.)

ICS 101 DIGITAL TOOLS FOR THE INFORMATION WORLD (3)

Prerequisite: ENG 100 + ENG 100S OR Placement in ENG 100

Fundamental information technology concepts and computing terminology, productivity software for problem solving, computer technology trends and impact on individuals and society. Emphasizes the utilization of operating systems and the production of professional documents, spreadsheets, presentations, databases, and web pages. Meets requirements for College of Business (UHM and UHH) and UHM's Biology program and Botany Department. (3 hrs. lect. per week)

ICS 102 INTRODUCTION TO INTERNET RESOURCES (3)

Recommended Prep: ICS 100 or ICS 101

This course is primarily concerned with learning how to make dynamic web pages using HTML5/CSS and JavaScript. Students will learn how to make their web pages user-friendly, user-interactive and attractive to positively affect the viewer's impression of the contents. At the same time, students will participate in discussions of how a user's view of a web page, as well as the World Wide Web in general, can impact what

society believes. The assignments will use JavaScript to teach students with little or no experience with programming the basics of programming. JavaScript will be used to give the students exposure to basic economics and basic statistics to help equip students to make sense of the large amount of information about things that affect their environment and society in general. (3 hrs. lect. per week)

ICS 110P INTRODUCTION TO INFORMATION SYSTEMS (3)

Prerequisite: ENG 100 + ENG 100S OR Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 103 or MATH 135 or higher; and ICS 100 or ICS 101

This course provides an overview of Information Technology and introduces Internet resources and the fundamental concepts and skills of software development. Topics related to Internet resources include terminology, file formats, naming conventions, and current issues related to the Internet. Students will also learn basic programming skills and software development including discussion of compilers, interpreters, clients and servers, naming issues, programming languages and syntax. Cross-listed as CSNT 110. (2 hrs. lect.; 3 hrs. lab. per week)

ICS 111 INTRODUCTION TO COMPUTER SCIENCE I (USING JAVA) (4)

Prerequisite: MATH 103 OR Placement in MATH 135 or higher

An overview of the fundamentals of computer science emphasizing problem solving, algorithm development, implementation, and debugging/testing using an object-oriented programming language. (4 hrs. lect. per week)

ICS 141 DISCRETE MATHEMATICS FOR COMPUTER SCIENCE I (3)

Prerequisite: MATH 135

Prerequisite or Co-requisite: ICS 111

Recommended Prep: MATH 241

Includes logic, sets, functions, matrices, algorithmic concepts, mathematical reasoning, recursion, counting techniques, probability theory. (3 hrs. lect. per week)

ICS 211 INTRODUCTION TO COMPUTER SCIENCE II (USING JAVA) (3)

Prerequisite: ICS 111

Reinforce and strengthen problem-solving skills using more advanced features of programming languages and algorithms such as recursion, pointers, and memory management. Emphasize the use of data structures such as arrays, lists, stacks, and queues. (3 hrs. lect. per week)

INTERDISCIPLINARY STUDIES (IS)

IS 100 UH MANOA TRANSFER SEMINAR (1)

This course is designed to help facilitate your transition to University of Hawaii at Manoa by exploring your major, improving your knowledge of the university and its resources, assisting you in understanding the transfer process, and building relationships with other transfer students. (1 hr. lect. per week)

IS 103 INTRODUCTION TO COLLEGE (1)

This course is designed to orient students to the college setting. Students will be able to identify college resources, explain important policies, demonstrate knowledge of registration procedures, discuss definition of success and evaluate their important life roles. Students may enroll 2 times for a maximum of 1 credit. (1 hr. lect. per week)

IS 105 CAREER AND MAJOR EXPLORATION (3)

A systematic exploration of individual values, personality, interests, skills, and career resources. Emphasis is placed on decision making, defining goals, and developing strategies to achieve those goals. (3 hr. lect. per week)

IS 125 ACADEMIC FUNDAMENTALS FOR COLLEGE SUCCESS (3)

Prerequisite: "C" or higher in ESL 13 and ESL 14, or Instructor Approval

Recommended Prep: Two years of high school English. A minimum score of 400 on the WIDA Access Test for English learners in the Hawai'i State Dept. of Education system

This course provides students with preparation for college-level courses, with an emphasis on supporting students in the areas of writing, composition, grammar, and reading comprehension skills in the transfer, career, and professional contexts (CTE). Students will learn how to navigate successfully in college courses, be introduced to dedicated campus contacts, explore degree options, and education and training needed to reach their goals. (3 hr. lect. per week)

JAPANESE (JPN) *

JPN 101 ELEMENTARY JAPANESE I (4)

This course is the first half of Elementary Japanese that teaches basic listening, speaking, reading, and writing skills. May be taken on a CR/N basis. (4 hrs. lect. per week)

JPN 102 ELEMENTARY JAPANESE II (4)

Prerequisite: "C" or higher in JPN 101 or instructor consent

This course is the second half of Elementary Japanese that further develops basic listening, speaking, reading, and writing skills. May be taken on a CR/N basis. (4 hrs. lect. per week)

JPN 124 JAPANESE FOR PROFESSIONS (1)

This course teaches Japanese vocabulary, expressions, and etiquette of specific professions. Classes provide hands-on, content-rich educational experiences that encourage active engagement with advanced Japanese terminology used in such fields as health care, real estate, business, among others. Each session focuses on one area of expertise. May be taken on a CR/N basis. (3 hrs. lect. per week for 5 weeks)

JPN 142 JAPANESE FOR HOSPITALITY (3)

Japanese 142 (3 credits) is a conversational Japanese course focusing on developing basic Japanese language skills most relevant to Hawaii's retail,



restaurant, and hotel industries. Japanese etiquette that accompanies topics is also covered. No previous Japanese language learning experience is necessary for this course. (3 hrs. lect. per week)

JPN 143 JAPANESE FOR SERVICE INDUSTRY (3)

Japanese 143 (3 credits) is a conversational Japanese course focusing on developing Japanese language skills used in the area of the service industry, such as transportation, tourism, hair salons, nail salons, spas, etc. Japanese etiquette topics are also covered. No previous Japanese language learning experience is necessary for this course. (3 hrs. lect. per week)

JPN 201 INTERMEDIATE JAPANESE I (4)

Prerequisite: "C" or higher in JPN 102 or instructor consent
This course is the first half of Intermediate Japanese that further develops listening, speaking, reading, and writing skills. May be taken on a CR/N basis. (4 hrs. lect. per week)

JPN 202 INTERMEDIATE JAPANESE II (4)

Prerequisite: "C" or higher in JPN 201 or instructor consent
This course is the second half of Intermediate Japanese that further develops listening, speaking, reading, and writing skills. May be taken on a CR/N basis. (4 hrs. lect. per week)

JPN 280 Teaching Practicum in Japanese (4)

Prerequisite: Native, near-native, or advanced level competence of Japanese
This teaching practicum course helps students learn to teach elementary to intermediate courses of the language. The course is open to native, near-native, or advance level of competence of Japanese. May be taken on a CR/N basis. (3 hrs. lect; 3 hrs. lab per week)

** Native speakers may not take language courses for credit, with the exception of JPN 280.*

JOURNALISM (JOUR)

JOUR 150 THE MEDIA AND SOCIETY (3) (DS)

Historical and technological development of communications media in relation to freedom of expression, the role of the media in contemporary society, with emphasis on the economic, social and political effects. (3 hrs. lect. per week)

JOUR 204 WRITING FOR THE WEB AND SOCIAL MEDIA (3)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296
An introduction to the theory and practice of writing for the Internet. Application of theory to the unique story-telling style required for communicating effectively on the Web. (3 hrs. lect. per week)

JOUR 205 NEWS WRITING (3)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296
Fundamentals of news style, reporting, etc. (3 hrs. lect. per week)

JOUR 268 LITERARY NONFICTION (3)

Prerequisite: "C" or higher in ENG 100, OR Placement in ENG 201-296
This course is an introduction to the genre of literary nonfiction. The course provides an opportunity to study and practice the techniques of what is sometimes known as New Journalism or even New New Journalism. Cross listed as ENG 268. (3 hrs. lect. per week)

KINESIOLOGY & LEISURE SCIENCE (KLS)

KLS 195 PERSONAL HEALTH AND WELLNESS (3)

Recommended Prep: ENG 100 + ENG 100S or ESL 23, OR Placement in ENG 100
Scientifically based information will be presented to help the student make decisions and take responsibility for his/her own health and health-related behaviors. The student will develop a personal, daily physical activity/exercise program, in which he/she will participate and be monitored. (3 hrs. lect. per week)

KOREAN (KOR)

KOR 101 ELEMENTARY KOREAN I (4)

Korean 101 is the first half of Elementary Korean that teaches basic listening, speaking, reading, and writing skills including Hangul. May be taken on a CR/N basis. (4 hrs. lect. per week)

KOR 102 ELEMENTARY KOREAN II (4)

Prerequisite: "C" or higher in KOR 101 or instructor consent
This course is the second half of Elementary Korean that further develops basic listening, speaking, reading, and writing skills. May be taken on a CR/N basis. (4 hrs. lect. per week)

KOR 201 INTERMEDIATE KOREAN I (4)

Prerequisite: "C" or higher in KOR 102 or instructor consent
This course is the first half of Intermediate Korean that further develops listening, speaking, reading, and writing skills. May be taken on a CR/N basis. (4 hrs. lect. per week)

KOR 202 INTERMEDIATE KOREAN II (4)

Prerequisite: "C" or higher in KOR 201 or instructor consent
This course is the second half of Intermediate Korean that further develops listening, speaking, reading, and writing skills. May be taken on a CR/N basis. (4 hrs. lect. per week)

KOR 280 TEACHING PRACTICUM IN KOREAN (4)

Prerequisite: Native, near-native, or advance level competence of Korean
This teaching practicum course helps students learn to teach elementary to intermediate courses of the language. This course is open to native, near-native, or advance level of competence of Korean. May be taken on a CR/N basis. (3 hrs. lect; 3 hrs. lab per week)
** Native speakers may not take language courses for credit, with the exception of KOR 280.*

LINGUISTICS (LING)

LING 102 INTRODUCTION TO THE STUDY OF LANGUAGE (3) (DL)

Prerequisite: Placement in ENG 100 OR Instructor Approval
Introduction to the study of language and language-related issues, its relevance to contemporary issues in society, and local language issues. The main objective of this course is to provide students with an opportunity to examine language from a linguist's perspective—one from an analytical and scientific point of view. Students will learn how language is integrated within cognition, culture, history, and society. (3 hrs. lect. per week)

Marine Biology

(See ZOOL 200)

MATHEMATICS (MATH)

MATH 24 ELEMENTARY ALGEBRA I (3)

Prerequisite: Placement in MATH 24
Recommended Prep: Math prerequisites should be completed within the last two (2) years.
MATH 24 represents the first course in a two-course sequence covering elementary algebra topics. Topics include operations with real numbers, linear equations and inequalities, graphing, linear systems, and applications. (3 hrs. lect. per week)

MATH 25 ELEMENTARY ALGEBRA II (3)

Prerequisite: "C" or higher in MATH 24 or "C" or higher in MATH 75X OR Placement in MATH 25
Recommended Prep: Math prerequisites should be completed within the last two (2) years.
MATH 25 represents the second course in a two-course sequence covering elementary algebra topics. Topics include properties of exponents, operations on polynomials, factoring, rational expressions and equations, roots and radicals, quadratic equations, and applications. (3 hrs. lect. per week)

MATH 50 TECHNICAL MATHEMATICS (3)

Recommended Prep: Math prerequisites should be completed within the last two (2) years.
Introduction to algebra, graphs, unit conversions, solving linear and systems of linear equations, working with formulas, quadratic formula, and GCF factoring. Developing skills in problem solving for students interested in Vocational-Technical programs. (3 hrs. lect. per week)

MATH 50P TECHNICAL MATHEMATICS (3)

Major Restriction: Applied Trades AS
Basic algebra, geometry, and measurements as applied to shop problems. Solving algebraic equations and geometry with formulas. Developing skills in problems solving and analysis. Restricted to students in the Pearl Harbor Naval Shipyard (PHNSY) (9 hrs. lect. per week)

MATH 75X INTRODUCTION TO MATHEMATICAL REASONING (4)

This course prepares students for the College transfer-level Non-Calculus pathway: MATH 100, MATH 111,

MATH 115, MATH 150. Course topics include ratio and percent, unit conversions, graphs, basic algebra, solving linear equations, working with formulas, and also includes system of linear equations with substitution, quadratic formula, and GCF factoring. (3 hrs. lect.; 3 hrs. lab per week)

MATH 100 SURVEY OF MATHEMATICS (3)

Prerequisite: "C" or higher in MATH 25 OR "C" or higher in MATH 75X or Placement in MATH 100 or higher.
Recommended Prep: Placement in ENG 100 with ENG 100S or ESL 23; Math prerequisites should be completed within the last two (2) years.

Designed to develop quantitative and analytical reasoning abilities including real-world problems. Course covers inductive and deductive reasoning, set theory, logic with truth tables, numeration systems in history, basic probability, descriptive statistics, and may include additional topics. Does not satisfy the prerequisite for Math 103. (3 hrs. lect. per week)

MATH 103 COLLEGE ALGEBRA (3)

Prerequisite: "C" or higher in MATH 25 or equivalent, OR Placement in MATH 103 or higher
Recommended Prep: Math prerequisites should be completed within the last two (2) years.

An extension of the elementary algebra sequence designed to prepare students for precalculus. Topics include simplification of algebraic and radical expressions, factoring, solution of linear, quadratic, absolute value and literal equations and inequalities, complex numbers, solution of linear and quadratic systems, logarithms and an introduction to functions and their graphs. (3 hrs. lect. per week)

MATH 111 MATH FOR ELEMENTARY TEACHERS I (3)

Prerequisite: "C" or higher in MATH 25 OR "C" or higher in MATH 75X OR Placement in MATH 100 or higher AND a "C" or higher in ENG 100
Recommended Prep: Math prerequisite is completed within the last two (2) years.
Elementary Education majors only.
Comment: Recommended for prospective elementary education majors.

MATH 111 is the first of a two-course sequence designed to give prospective elementary education majors the depth of understanding necessary to teach mathematics in the elementary classroom. Topics include numbers (whole and rational), operations and their properties, patterns, and basic geometry. The emphasis is on understanding and communicating mathematical ideas using reasoning and developing a growth mindset in learning mathematics. It is recommended that students needing both MATH 111 and MATH 112 take the courses in sequential semesters and from the same institution. (3 hrs. lect. per week)

MATH 112 MATH FOR ELEMENTARY TEACHERS II (3)

Prerequisite: "C" or higher in MATH 111 AND "C" or higher in ENG 100
Recommended Prep: Math prerequisite is completed within the last two (2) years.
Elementary Education majors only.
MATH 112 is the second of a two-course sequence

designed to provide a rigorous background in mathematical concepts and reasoning for students intending careers in elementary education. Topics include patterns and algebra, probability, measurements, connections to other parts of mathematics and applications. The emphasis is a thorough understanding, and ability to communicate/present mathematical ideas based on a growth mindset in learning mathematics.
(3 hrs. lect. per week)

MATH 115 INTRODUCTION TO STATISTICS AND PROBABILITY (3)

Prerequisite: "C" or higher in MATH 25 OR "C" or higher MATH 75X OR Placement in MATH 115

Recommended Prep: Math prerequisites should be completed within the last two (2) years. Placement in ENG 100 or ESL 23

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, linear regression and correlation in order to solve problems.
(3 hrs. lect. per week)

MATH 135 PRECALCULUS: ELEMENTARY FUNCTIONS (3)

Prerequisite: "C" or higher in MATH 103 OR Placement in MATH 135

Recommended Prep: Math prerequisites should be completed within the last two (2) years.

Investigates linear, quadratic, polynomial, rational, exponential, logarithmic functions, and related topics. This course is the first part of the precalculus sequence. (3 hrs. lect. per week)

MATH 140 PRECALCULUS: TRIGONOMETRY AND ANALYTIC GEOMETRY (3)

Prerequisite: "C" or higher in MATH 135 OR Placement in MATH 140

Recommended Prep: Math prerequisites should be completed within the last two (2) years.

Studies trigonometric functions, analytic geometry, polar coordinates, vectors, and related topics. This course is the second part of the precalculus sequence.
(3 hrs. lect. per week)

MATH 150 TECHNICAL COLLEGE MATHEMATICS (3)

Prerequisite: "C" or higher in MATH 25/50/75X OR Placement in MATH 150

Recommended Prep: Math prerequisites should be completed within the last two (2) years.

Calculating geometric perimeters, areas, and volumes. Trigonometry ratios for angles and values. Solving right and oblique triangles with trigonometry. Graphing trigonometry and vectors. Adding vectors with trigonometry and determine component vectors. Solve applied work-related problems.
(3 hrs. lect. per week)

MATH 150P TECHNICAL COLLEGE MATHEMATICS (3)

Prerequisite: "C" or higher in MATH 50P

Major Restriction: Applied Trades AS

Recommended Prep: Math prerequisites should be completed within the last two (2) years.

Geometric angles of polygons and circles, including chord, tangent, arc, interior and exterior angle theorems. Trigonometry for right triangles and oblique triangles. Law of Sines & Law of Cosines, Graphing vectors, adding vectors with trigonometry, and determine component vectors. Solve course topics in applied work-related problems. Restricted to students in the Pearl Harbor Naval Shipyard program (PHNSY). (9 hrs. lect. per week)

MATH 203 CALCULUS FOR BUSINESS AND SOCIAL SCIENCES (3)

Prerequisite: "C" or higher in MATH 135 or Placement in MATH 140

Recommended Prep: Math prerequisites should be completed within the last two (2) years.

Basic concepts; differentiation and integration; applications to management, finance, economics, and the social sciences. (3 hrs. lect. per week)

MATH 241 CALCULUS I (4)

Prerequisite: "C" or higher in MATH 140 OR Placement in MATH 241

Recommended Prep: Math prerequisites should be completed within the last two (2) years.

Basic concepts, techniques and applications of differentiation; introduction to integration.
(5 hrs. lect. per week)

MATH 242 CALCULUS II (4)

Prerequisite: "C" or higher in MATH 241 OR Placement in MATH 242

Recommended Prep: Math prerequisites should be completed within the last two (2) years.

Differentiation and integration of trigonometric, exponential, and logarithmic functions; introduction to hyperbolic functions; techniques and applications of integration; infinite sequences and series.
(5 hrs. lect. per week)

MATH 243 CALCULUS III (3)

Prerequisite: "C" or higher in MATH 242 OR Placement in MATH 243

Recommended Prep: Math prerequisites should be completed within the last two (2) years.

Functions of several variables, vectors and 3-dimensional analytic geometry, partial Functions of several variables, vectors and 3-dimensional analytic geometry, partial differentiation and applications, parametric equations, polar coordinates.
(3 hrs. lect. per week)

MATH 244 CALCULUS IV (3)

Prerequisite: "C" or higher in MATH 243 OR Placement in MATH 244

Recommended Prep: Math prerequisites should be completed within the last two (2) years.

Multiple integrals, line integrals, surface integrals, and applications, introduction to ordinary differential equations. (3 hrs. lect. per week)

MICROBIOLOGY (MICR)

MICR 130 GENERAL MICROBIOLOGY (3) (DB)

An introductory course to the world of micro-organisms, with emphasis on bacteria, but including algae, fungi, protozoa, and viruses; their structure, growth and development, reproduction, and classification; and, their effects on people and their environment. Also included are selected topics in medical microbiology, immunology, and applied microbiology including food, industrial, sanitation, and public health microbiology. (3 hrs. lect. per week)

MICR 140L GENERAL MICROBIOLOGY LABORATORY (2) (DY)

Prerequisite or Co-requisite: MICR 130

Laboratory illustrating fundamental principles and techniques of microbiology. (4 hrs. lab. per week)

MILITARY SCIENCE & LEADERSHIP (MSL)

A weekly one-hour leadership laboratory is required for courses numbered 200 and above. This laboratory is optional for the 100-level courses. The laboratory includes practical application of leadership skills, drills and ceremonies, basic soldiering skills, and Army Physical Fitness Training (APFT).

MSL 100 INTRODUCTION TO PHYSICAL FITNESS (1)

Hands-on participatory course following the Army's physical fitness program. Classes conducted three days per week with Army ROTC cadets. Focus is on aerobic conditioning, muscular strength and endurance. Repeatable 3 times. A-F only. (4.5 hrs. lab. per week)

MSL 101 INTRODUCTION TO MILITARY SCIENCE I (2)

Introduces cadets to personal challenges and competencies critical for effective leadership; personal development of life skills such as goal setting, time management, physical fitness, and stress management related to leadership, officership, and the Army profession. Focus on developing basic knowledge and comprehension of Army Leadership Dimensions while understanding the ROTC program, its purpose in the Army, and its advantages for the student. (2 hrs. lect. per week)

MSL 101L INTRODUCTION TO MILITARY SCIENCE I LAB (1)

Co-requisite: MSL 101

Practical application in adventure training, Army field craft, rifle marksmanship, land navigation, drill and ceremonies, physical training. (2 hrs. lab. per week)

MSL 102 INTRODUCTION TO MILITARY SCIENCE II (2)

Overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback and using effective writing skills. Explores leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. Cadre role models and building stronger relationships among cadets through common experience and practical interaction are critical. (2 hrs. lect. per week)

MSL 102L INTRODUCTION TO MILITARY SCIENCE II LAB (1)

Co-requisite: MSL 102

Practical application in adventure training, Army field craft, rifle marksmanship, land navigation, drill and ceremonies, physical training. (2 hrs. lab. per week)

MSL 201 INTERMEDIATE MILITARY SCIENCE I (3)

Explores creative and innovative tactical leadership strategies and styles through historical case studies and engaging in interactive student exercises. Cadets practice aspects of personal motivation and team building by planning, executing, and assessing team exercises. Focus is on continued development of leadership values and attributes through understanding of rank, uniform, customs and courtesies. (2.5 hrs. lect.; 2 hrs. lab. per week)

MSL 202 INTERMEDIATE MILITARY SCIENCE II (3)

Challenges of leading complex, contemporary operational environments. Dimensions of cross-cultural challenges of leadership in a constantly changing world are highlighted and applied to practical Army leadership tasks and situations. Cadets develop greater self awareness as they practice communication and team building skills, and tactics in real world scenarios. Provides a smooth transition to UHM MSL 301. (2.5 hrs. lect.; 2 hrs. lab. per week)

MSL 203 ROTC BASIC CAMP (6)

Instructor approval required.

Four-week summer course conducted at Ft. Knox, Kentucky. Substitutes for ROTC basic course (101, 102, 201, and 202) and fulfills course requirement for admission to ROTC advanced courses. Credit will be given for MSL 203 or basic courses, but not both.

MUSIC (MUS)

MUS 106 INTRODUCTION TO MUSIC LITERATURE (3)

Prerequisite: Placement in ENG 100 + ENG 100S

This is a music appreciation course with an emphasis on developing listening skills. Music of all periods is surveyed. Concert attendance supplements discussion of various styles of music. (3 hrs. lect. per week)

MUS 107 MUSIC IN WORLD CULTURES (3)

Prerequisite: Placement in ENG 100 + ENG 100S

An introduction to the field of ethnomusicology, in which historical, religious, social and political aspects of a society are studied in relationship to its music traditions and culture. In addition to these aspects, the musical elements of each culture are analyzed for the types of instruments, form/structure, context, activities, and music aesthetics. May be taken on a CR/N basis. (3 hrs. lect. per week)

MUS 114 COLLEGE CHORUS (2)

Music 114 is a performance-oriented course for students interested in singing in a large ensemble. The selected repertoire is drawn from a range of classical, popular (jazz, musical theatre, pop) and Polynesian/ethnic choral literature. Rehearsal and

performing practices as well as basic music reading are included in the course of study. An extra-curricular concert is scheduled at the end of the semester. Previous choral experience is not required. (1 hr. lect. /2 hrs. lab. per week)

MUS 121B VOICE 1 (2)

MUS 121B is the first of a three-semester sequence in learning solo singing skills. Concepts and skills introduced in the class include proper breath control and support, developing and discovering vocal production and potential, basic musicianship, song interpretation, and the basic principles of performing. (1 hr. lect. /2 hrs. lab. per week)

MUS 121D GUITAR 1 (2)

Comment: Students must supply their own guitar. Basic principles of classical guitar performance. Relevant problems in guitar literature at the elementary level. May be taken on a CR/N basis. (1 hr. lect.; 2 hrs. lab. per week)

MUS 121Z 'UKULELE 1 (2)

Comment: Students must supply their own 'ukulele (soprano, concert, or tenor.) An introduction to basic principles of playing the 'ukulele. Concepts and skills introduced in the class include basic musicianship, tuning, chord structures, basic strumming techniques, and principles of accompanying and performing. May be taken on a CR/N basis. (1 hr. lect; 2 hrs. lab. per week)

MUS 122D GUITAR 2 (2)

Prerequisite: MUS 121D, or Instructor Approval
Comment: Students must supply their own guitar. Basic principles of classical guitar performance. Relevant problems in guitar literature at the intermediate-early advanced level. May be taken on a CR/N basis. (1 hr. lect.; 2 hrs. lab. per week)

MUS 122Z 'UKULELE 2 (2)

Prerequisite: MUS 121Z or Instructor Approval
Comment: Students must supply their own 'ukulele (soprano, concert, or tenor.) An intermediate level performance course reinforcing the music concepts/principles of MUS 121Z. Concepts and skills introduced in the class include: basic musicianship, chord identification and progressions, strumming and picking techniques, and the principles of arranging and performing. May be taken on a CR/N basis. (3 hrs. lect./lab. per week)

MUS 253 ELEMENTARY MUSIC IN ACTION (3)

Prerequisite: Placement in ENG 100 + ENG 100S
An exploration of theory and practice of music for prospective school teachers. Examines the elements of music-pitch, time, form and performance media. These elements are explored and applied thru singing, playing of ukulele, piano and percussion instrument, listening, movement, notation of music, performing from notation and analysis of music both aurally and from musical scores. The creative use of musical elements is emphasized in this course. May be taken on a CR/N basis. (3 hrs. lect. per week)

MUSIC & ENTERTAINMENT LEARNING EXPERIENCE (MELE)

MELE 101 SURVEY OF MUSIC & ENTERTAINMENT BUSINESS (3)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 24, OR Placement in MATH 25
Attention is given to the practical application, theoretical foundations, in-depth analysis of organizations as well as general overview of the career opportunities found in the music & entertainment industry. May be taken on a CR/N basis. (3 hrs. lect. per week)

MELE 102 SURVEY OF RECORDING TECHNOLOGY (3)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 24, OR Placement in MATH 25
A study of the major areas of recording technology as related to the music industry. The student receives an overall view of analog and digital technology with attention to its innovations, history and effect on the industry. May be taken on a CR/N basis. (3 hrs. lect. per week)

MELE 103 INTRO TO MUSIC THEORY & SONGWRITING (3)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 24, OR Placement in MATH 25
Recommended Prep: ENG 100
MELE majors only.
An introduction to the fundamentals of music theory and songwriting for the contemporary music industry. Topics such as critical listening skills, song form analysis, scales & chords, music notation and digital audio workstation (DAW) music production will help to strengthen the student's understanding of the tools involved in the songwriting process. (3 hrs. lect. per week)

MELE 104 SONGWRITING APPLICATIONS IN MEDIA (3)

Prerequisite: "C" or higher in MELE 103
MELE majors only.
A study of the application of songwriting techniques for use in media productions. Students create their own original compositions with an emphasis on pitching them to recording artists, podcasts, advertising, and film & television. May be taken on a CR/N basis. (3 hrs. lect. per week)

MELE 201 RECORD LABEL & MUSIC PUBLISHING OPERATIONS (3)

Prerequisite: "C" or higher in MELE 101
A study of the operational activities found in the recorded music and music publishing business, with an emphasis on key areas of activity such as artists and repertoire(A&R), sales, distribution, creative services, business affairs, and music licensing. May be taken on a CR/N basis. (3 hrs. lect. per week)

MELE 202 PUBLIC RELATIONS & MEDIA TOOLS (3)

Prerequisite: "C" or higher in MELE 201
A practical and theoretical survey in the conceptualization, design and execution of effective public relations in the music & entertainment industry and its influence in other media environments, including social media, film & television, and special

events. Students engage in creative activities such as short form content creation for websites, blogs, podcasts, and YouTube. May be taken on a CR/N basis. (3 hrs. lect. per week)

MELE 203 INTELLECTUAL PROPERTIES IN THE MUSIC & ENTERTAINMENT INDUSTRY (3)

Prerequisite: "C" or higher in MELE 204

A comprehensive study of intellectual property, the rationale for intellectual property protection, current issues involving intellectual property, international intellectual property issues, and the role of intellectual property in the music and entertainment industry. The types of intellectual property covered include copyrights, trademarks, trade secrets, and patents. Primary emphasis will be on copyright since that is an area of intellectual property most relevant to the music & entertainment industry. (3 hrs. lect. per week)

MELE 204 MUSIC PUBLISHING IN THE ENTERTAINMENT INDUSTRY (3)

Prerequisite: "C" or higher in MELE 201 and in MELE 202

A study of the major income streams found in music publishing. Fundamental topics such as types of deals, contracts, music licensing, foreign publishing, and catalog development will be discussed. Students form their own independent music publishing companies and learn the process of signing a songwriter, cutting a demo, and pitching their songs to the appropriate parties. (2 hrs. lect.; 2 hrs. lab. per week)

MELE 205 CONCERT AND EVENT PRODUCTION (3)

Prerequisite: "C" or higher in MELE 201 and 202

Recommended Prep: ENG 100

MELE majors only.

A survey of the concert & special events business with primary emphasis given to the organizations involved in the production and presentation of small to large scale events found in the music & entertainment industry. Students learn the fundamental skills to successfully plan, produce, and present an end-of-semester concert/special event. (2 hrs. lect.; 2 hrs. lab. per week)

MELE 206 MUSIC SUPERVISION (3)

Prerequisite: "C" or higher in MELE 201 and 202

MELE majors only.

A survey of the music supervision business with primary emphasis on developing a student's musical vision and style to best suit any creative media project. Students learn the fundamental skills needed to identify, secure, and supervise music-related content. (3 hrs. lect. per week)

MELE 211 AUDIO ENGINEERING I (4)

Prerequisite: "C" or higher in ENG 100, and in MELE 212, and in MELE 214

MELE majors only.

A detailed study of the technical characteristics and performance of each component of the recording studio. Topics include basic studio electronic signal flow, tape machine operations, dynamic processing, basic microphone use, studio acoustics, session

procedures and the role of the assistant engineer. Emphasis is placed on developing audio perception skills for recording engineers. May be taken on a CR/N basis. (2 hrs. lect.; 4 hrs. lab. per week)

MELE 212 DIGITAL AUDIO: THEORY AND WORKSTATIONS (3)

Prerequisite: "C" or higher in MELE 102

Co-requisite: MELE 214

MELE majors only.

This course is an introductory study into digital audio and the digital audio workstation (DAW). Topics include, but not limited to, digital audio theory, software and hardware components of a DAW, MIDI, ProTools basics for engineers and industry applications. May be taken on a CR/N basis. (3 hrs. lect. per week)

MELE 213 STUDIO PRODUCTION (3)

Prerequisite: "C" or higher in MELE 212

Prerequisite or Co-requisite: MELE 211

MELE majors only.

An in-depth study of the producer and the production of recorded music product. Students will create "demo" and "master" projects under the guidance of the instructor. May be taken on a CR/N basis. (3 hrs. lect. per week)

MELE 214 ELECTRONICS FOR AUDIO ENGINEERS (4)

Co-requisite: MELE 212

MELE majors only.

This course is an introduction to Electronics for Audio Engineers. Topics include DC circuits, AC circuits, Signal flow, Semiconductors, Studio Design and Audio over IP. (2 hrs. lect.; 4 hrs. lab. per week)

MELE 215 SOUND REINFORCEMENT (4)

Prerequisite: "C" or higher in MELE 102, and in ENG 100

MELE majors only.

A practicum based study of equipment, systems concepts, design, and acoustical problems involved in sound reinforcement for live performances and touring as related to professional concert situations. Lab hours required. May be taken on a CR/N basis. (2 hrs. lect.; 4 hrs. lab. per week)

MELE 216 LIVE AUDIO FOR MEDIA (4)

Prerequisite: "C" or higher in MELE 102, and in ENG 100

MELE majors only.

A hands on approach to the study of equipment, systems concepts, design, and acoustical problems involved in Live Audio for Media. Topics include, but are not limited to, Audio for Video at Live Events, A/V and Conferencing, Field and Set Recording, and Audio for Internet Mediums. (2 hrs. lect.; 4 hrs. lab. per week)

MELE 220 AUDIO ENGINEERING II (4)

Prerequisite: "C" or higher in MELE 211 and in MELE 212

MELE majors only.

A continuation of MELE 211, this course is an advanced study of the technical characteristics and performance of each component of the recording studio. Topics include advanced studio electronics and signal flow, computer-based digital recording and editing, analog

and digital tape machine operations, automated console operations, condenser microphones, spatial signal processing, and the role of the audio engineer. The development of audio perception skills for recording engineers is emphasized. Lab hours required. (2 hrs. lect.; 4 hrs. lab. per week)

MELE 222 ADVANCED DIGITAL AUDIO: THEORY AND WORKSTATIONS (3)

Prerequisite: "C" or higher in MELE 212

MELE majors only.

This course is an advanced study into digital audio and the digital audio workstation (DAW). Topics include, but are not limited to, digital audio theory, software and hardware components of a DAW, MIDI, ProTools basics for engineers and industry applications. May be taken on a CR/N basis. (3 hrs. lect. per week)

MELE 275 PRACTICUM (4)

Instructor approval required based on completion of 40 MELE program hours.

MELE majors only.

Practicum is a capstone course designed to provide students who have successfully completed program course work and program hours to intern at selected music and entertainment industry businesses. (150 hours of independent, supervised work to fulfill MELE graduation requirement)
(1 hr. lect.; 9 hrs. Practicum per week)

MELE 311 AUDIO POST PRODUCTION I (3)

Prerequisite: MELE 212 or junior standing

This course is an introduction to Audio Post Production. Topics include, but are not limited to Dialogue, ADR, Sound Effects and design. This course supports the Creative Media concentration at the University of Hawai'i West Oahu. May be taken on a CR/N basis. (3 hrs. lect. per week)

MELE 320 AUDIO POST PRODUCTION II (3)

Prerequisite: MELE 311

This course is a study in advanced Audio Post Production. Topics include, but are not limited to Foley, Re-Recording Mixing and Surround Sound. This course supports the Creative Media concentration at the University of Hawai'i West Oahu. May be taken on a CR/N basis. (3 hrs. lect. per week)

OCCUPATIONAL AND ENVIRONMENTAL SAFETY MANAGEMENT (OESM)

OESM 101 INTRODUCTION TO OCCUPATIONAL SAFETY AND HEALTH (3)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 100/103/115

An overview of the development and implementation of basic safety and health principles and techniques; identification of factors of causation, techniques of investigation and reporting and environment effects; survey of regulations and professional guidelines. Required for OESM majors. (3 hrs. lect. per week)

OESM 102 SAFETY AND HEALTH STANDARDS, CODES AND REGULATIONS (3)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 100/103/115

Recommended Prep: OESM 101

History of the enactment of OSHA and other implementing legislation; an over-view of professional trends and career opportunities in occupational safety and health; occupational injuries and illness—scope of the problem, cost factors and causal factors of safety; concepts and techniques of inspections; emphasis on HIOSH standards for general industry. Required for OESM majors. (3 hrs. lect. per week)

OESM 103 INTRODUCTION TO ERGONOMICS (3)

Prerequisite: OESM 101

An introduction to the basic issues of ergonomics and their occupational applications, focusing on how to adapt the tasks to workers. Topics include work station design, man and machine interaction, lighting, load handling, and shift work. (3 hrs. lect. per week)

OESM 104 OCCUPATIONAL-RELATED DISEASES (3)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 100/103/115

Basic information on major occupational diseases, how toxic materials and harmful physical agents affect the body, and methods of prevention. The course will cover required occupational health program and other related laws and regulations. Required for OESM majors. (3 hrs. lect. per week)

OESM 105 INTRODUCTION TO INDUSTRIAL HYGIENE (3)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 100/103/115

Recommended Prep: CHEM 100 and OESM 104

This course will acquaint students with the recognition, evaluation and control of hazards related to air contaminants, skin irritants, noise, temperature extremes, illumination and radiation. Required for OESM majors. (3 hrs. lect. per week)

OESM 106 INTRODUCTION TO ENVIRONMENTAL HEALTH (3)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 100/103/115

This course will help students develop understanding on the extent of environmental problems, how they affect the ecosystem and the workplace, how to investigate environmental problems, and pertinent environmental laws and regulations. Required for OESM majors. (3 hrs. lect. per week)

OESM 145 OCCUPATIONAL SAFETY AND HEALTH IN CONSTRUCTION (3)

Prerequisite: Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 100/103/115

Recommended Prep: OESM 101

Comprehensive overview of techniques and procedures to insure effective control of hazards and accidents in construction and allied industries; emphasis on applicable OSHA and HIOSH standards and related codes. (3 hrs. lect. per week)

OESM 147 ELECTRICAL SAFETY (3)*Prerequisite or Co-requisite: OESM 102*

Overview of the hazards, safe practices and methods in working with electrical energy, including the review and application of OSHA and HIOSH standards. (3 hrs. lect. per week)

OESM 150 INDUSTRIAL FIRE PROTECTION (3)*Prerequisite: OESM 101 and OESM 102*

Basic fire protection-prevention course for industry. Includes planning, managing and training for fire emergencies. Cross-listed as FIRE 150. Credit may be received for FIRE 150 or for OESM 150, but not both. (3 hrs. lect. per week)

OESM 153 ACCIDENT INVESTIGATION TECHNIQUES (3)*Prerequisite: OESM 101 and OESM 102*

Professional and scientific approach to accident investigation, including accident causation, discovering hazardous conditions and practices, and establishing relevant facts. (3 hrs. lect. per week)

OESM 160 LABOR AND MANAGEMENT: SAFETY PARTNERS (3)*Prerequisite: OESM 101*

Interaction of labor-management relations/laws with the education, implementation, and enforcement of occupational safety and health. Prepares students for the world of labor relations, labor laws, contract provisions, grievances, complaints, liability, and other challenges. (3 hrs. lect. per week)

OESM 193V COOPERATIVE EDUCATION (1-4)*Prerequisite: Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 100/103/115**Instructor approval required.**OESM majors only.*

This course will provide students with the opportunity to acquire on-the-job experience related to class-room and laboratory instruction in Occupational and Environmental Safety Management. Students may enroll 4 times for a maximum of 12 credits. It will not fulfill OESM electives. A minimum of one credit is required for the Associate in Science degree. May be taken on a CR/N basis. (5 hrs. work experience per week per credit)

OESM 200 MANAGING WORKERS COMPENSATION (3)*Prerequisite: OESM 101*

An introduction to the principles of Workers Compensation and management of this responsibility. Survey course covering the principles and techniques of Workers Compensation. (3 hrs. lect. per week)

OESM 205 PHYSICAL HAZARDS CONTROL (3)*Prerequisite: OESM 101**Recommended Prep: Placement in ENG 100*

Scope and application of systems safety: application of human engineering concepts and techniques with emphasis on human reliability and error; application of occupation safety and health requirements in purchasing and contracting, plant and job layout; principles and application of electrical and electronic safety; principles and application of manual and

mechanical equipment, elevators, chemical safety; high pressure and compressed gas system; hand and portable power tools; shop production, tools and equipment; introduction to construction safety; and, special industry hazards unique to the Hawaiian industrial environment. (3 hrs. lect. per week)

OESM 208 TECHNIQUES OF INDUSTRIAL HYGIENE (3)*Prerequisite: OESM 105*

An overview of the basic principles of industrial hygiene monitoring instruments and the principles governing their selection and uses with practical applications under professional supervision. Required for OESM majors. (3 hrs. lect. per week)

OESM 210 SAFETY PROGRAM MANAGEMENT (3)*Prerequisite: OESM 101**Recommended Prep: OESM 102*

This course will acquaint students with the fundamentals of management and their application to safety program development and organization. Emphasis will be given to the concepts of responsibility, accountability and authority as applied to occupational safety and health. Required for OESM majors. (3 hrs. lect. per week)

OESM 218 EMERGENCY RESPONSE FOR HAZARDOUS MATERIALS (4)*Prerequisite: Placement in ENG 100; "C" or higher in MATH 25, OR Placement in MATH 100/103/115**Recommended Prep: OESM 106*

This course provides students with hands-on instruction in safety and emergency response to chemical and physical exposures in industrial and field settings. Topics discussed include: hazard analysis, contingency planning, proper use and selection of PPE, site control and evaluation, field sampling and monitoring, and proper use of instruments. This course satisfies the requirements for generalized employee training under OSHA (1910.120). Cross-listed as FIRE 218. Credit may be received for FIRE 218 or for OESM 218, but not both. (4 hrs. lect. per week)

OCEANOGRAPHY (OCN)**OCN 101 MARINE OPTION PROGRAM SEMINAR (1)**

This course provides an orientation to the Marine Option Program (MOP) and reviews the requirements of the MOP certificate. The course explores opportunities for internships, projects and careers related to water environments. The course will present guidelines on proposal writing, project implementation, data collection and interpretation, and final report preparation and presentation. May be taken on a CR/N basis. (1 hr. lect. per week)

**OCN 102 INTRODUCTION TO THE ENVIRONMENT AND SUSTAINABILITY (3) (DB)
(FORMERLY SCI 101)**

This course will introduce students to the basic principles of environmental science and sustainability as they apply to analysis of environmental systems on a global scale. The integrated natures of ocean, terrestrial and atmospheric systems will be introduced by first

introducing the Earth's major ecosystems and then discussing their coupled integration. The concepts of sustainability will be infused into the course with an emphasis on the importance of sustaining resources and mitigating pollution to ecosystems. This issue of sustainability will be approached from the perspective of the impact that 9 billion or more people will impose upon the planet's resources and ecosystems. Similarly, this course will include the concepts of sustainability with Native Hawaiian culture and indigenous knowledge. May be taken on a CR/N basis. (3 hrs. lect. per week)

OCN 201 SCIENCE OF THE SEA (3) (DP)

This course offers a descriptive and non-mathematical survey of geological, physical, chemical and biological oceanography, providing the student with a broad understanding of the sea floor and its features; chemical properties of sea water and its motions; life in the sea and its interaction with the environment. (3 hrs. lect. per week)

OCN 201L SCIENCE OF THE SEA LABORATORY (1) (DY)

Prerequisite or Co-requisite: OCN 201

OCN 201L is designed as a lab course to provide experiential education in basic oceanography. Through lab experiments, computer-aided data collection and analysis, field trips and visual observations, students will learn about earth, ocean and atmospheric interactions, ecological concepts, ocean resource utilization and management, environmental pollution and its impacts on world oceans. It will complement lectures in OCN 201 class. (3 hrs. lab. per week)

(See also ZOOLOGY for Marine Biology)

PHILOSOPHY (PHIL)

PHIL 100 INTRO PHILOSOPHY (3) (DH)

Recommended Prep: Placement in ENG 100 + ENG 100S
Great philosophical issues, theories, and controversies. (3 hrs. lect. per week)

PHIL 101 MORALS AND SOCIETY (3) (DH)

Recommended Prep: Placement in ENG 100 + ENG 100S
Philosophy 101 is a study of and deliberation on contemporary ethical issues through the perspective of classical and contemporary philosophical theories. (3 hrs. lect. per week)

PHIL 102 ASIAN TRADITIONS (3)

Recommended Prep: Placement in ENG 100 + ENG 100S
Universal themes and problems, with an emphasis on the Asian perspective. (3 hrs. lect. per week)

PHIL 109 REASONING AND CRITICAL THINKING (3)

Recommended Prep: Placement in ENG 100 + ENG 100S
The course studies practical reasoning, informal logical argument, and the use and misuse of language. The course emphasizes the development of critical thinking skills by showing students how to examine and assess arguments and persuasive appeals, and make reliable

inferences from information when the evidence leaves us unsure of what is true. Understanding and appreciating the application of logical tools of critical thinking to evaluate personal and public policy decisions are the aims of this course. The historical and philosophical context of the value of logical and critical thinking will be integrated fully into the course. May be taken on a CR/N basis. (3 hrs. lect. per week)

PHIL 110 INTRO TO DEDUCTIVE LOGIC (3)

Recommended Prep: Placement in ENG 100 + ENG 100S
Development of basic techniques of analysis and an understanding of the principles and concepts involved in clear thinking. Logical validity, deductive and inductive reasoning, fallacious arguments, symbolic logic, and scientific method as applied to criteria of reasonable evidence will be emphasized. (3 hrs. lect. per week)

PHIL 111 INTRO TO INDUCTIVE LOGIC (3)

Recommended Prep: Placement in ENG 100 + ENG 100S; qualification for MATH 100

An introduction to inductive reasoning focusing on the role of probability. The focus of the course is on methods to assess non-deductive, uncertain, and risky inferences from a background of decision and probability theory. Students will learn calculation and inference techniques for assessing conclusions from evidence when the evidence provides an uncertain situation for truth. Competing theories of probability and the role of probability in evidence and knowledge acquisition will be covered. The use of probability in the news media, the sciences, and academia will be critically assessed. (3 hrs. lect. per week)

PHIL 120 SCIENCE, TECH, AND VALUES (3)

Prerequisite: ENG 100 or Placement in ENG 201-296

An Introductory course addressing the relationship between science, technology, and human values with a focus on contemporary problems posed by developments in modern science. May be taken on a CR/N basis. (3 hrs. lect. per week)

PHIL 204 PHILOSOPHY AND FILM (3)

Recommended Prep: Placement in ENG 100 + ENG 100S
This course analyzes a group of movies in light of the philosophical themes they embody. Movies implicitly and explicitly reflect specific philosophical themes, positions and ideas. Students will identify, articulate and critically evaluate these themes, positions and ideas in relation to traditional philosophical arguments and their own developing philosophy. (3 hrs. lect. per week)

PHIL 211 ANCIENT PHILOSOPHY (3)

Recommended Prep: Placement in ENG 100 + ENG 100S
An introduction to the history of Western philosophy from the Presocratics to the Hellenistic Era based on translations of original texts. (3 hrs. lect. per week)

PHIL 213 MODERN PHILOSOPHY (3)

Recommended Prep: Placement in ENG 100 + ENG 100S
An introduction to the history of Western philosophy from the 17th century based on texts or translations of "modern works." (3 hrs. lect. per week)

PHIL 255 COSMOLOGY (3)*Prerequisite: ENG 100*

An interdisciplinary study of science and philosophy from a humanistic perspective. A scientific description of the Universe and its constituents and its implications for human life will be discussed. Also, the central philosophical problems of cosmology will be discussed: the problem of understanding the world—including ourselves, and our knowledge, as part of the world. (3 hrs. lect. per week)

PHYSICS (PHYS)**PHYS 100 SURVEY OF PHYSICS (3) (DP)***Co-requisite: PHYS 100L*

An introductory course in physics for the non-science major, covering basic concepts and principles as related to everyday life, with emphasis on the interaction between society and physics—the most basic of all the sciences. (3 hrs. lect. per week)

PHYS 100L SURVEY OF PHYSICS LABORATORY (1) (DY)*Co-requisite: PHYS 100*

Simple experiments in the basic concepts of physics, illustrating the role of physics in society to the nonscientist. (3 hrs. lab. per week)

PHYS 103 PHYSICS FOR ELECTRICAL TECHNOLOGY (4)*Prerequisite: "C" or higher in MATH 103/150 OR Placement in MATH 135 or higher**EIMT majors only.*

A one semester introductory lecture/lab physics course covering select topics in Newtonian mechanics, with an emphasis on fundamental concepts in electricity and magnetism, and DC and AC circuits. (3 hrs. lect.; 3 hrs. lab. per week)

PHYS 104 PHYSICS FOR TRANSPORTATION TECHNOLOGY (4)*Prerequisite: "C" or higher MATH 103/150 or Placement in MATH 135 or higher**AMT and DISL majors only*

A one semester introductory lecture/lab physics course covering select topics in Newtonian mechanics, fluids, thermodynamics, electricity and magnetism, and DC circuits. (3 hrs. lect.; 3 hrs. lab. per week)

PHYS 105 PRINCIPLES OF TECHNOLOGY (4) (DP)+(DY)*Prerequisite: MATH 103 or MATH 135 or higher*

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 experimental science. (3 hrs. lect.; 3 hrs. lab. per week)

PHYS 105P PHYSICS FOR APPLIED TRADES (3)*Prerequisite: "C" or higher in MATH 103/150P or Placement in MATH 135 or higher**APTR majors only*

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 experimental science. (3 hrs. lect. per week)

PHYS 151 COLLEGE PHYSICS I (3) (DP)*Prerequisite: "C" or higher in MATH 140 or placement in MATH 241 or higher**Co-requisite: PHYS 151L*

PHYS 151 is the first half of a two semester, algebra-based, introductory physics sequence. The topics covered include Newtonian mechanics, work and energy, fluid mechanics, thermodynamics, and wave motion. (3 hrs. lect. per week)

PHYS 151L COLLEGE PHYSICS I LABORATORY (1) (DY)*Co-requisite: PHYS 151*

PHYS 151L is the laboratory course that accompanies PHYS 151 lecture. The scheduled experiments are designed to help reinforce selected topics introduced in the lecture course. These topics include Newtonian mechanics, work and energy, fluid mechanics, thermodynamics, and wave motion. (3 hrs. lab. per week)

PHYS 152 COLLEGE PHYSICS II (3) (DP)*Prerequisite: PHYS 151**Co-requisite: PHYS 152L*

PHYS 152 is the second half of a two-semester, algebra-based, introductory physics sequence. The topics covered include electricity, magnetism, circuits, optics, and select topics in modern physics. (3 hrs. lect. per week)

PHYS 152L COLLEGE PHYSICS II LABORATORY (1) (DY)*Co-requisite: PHYS 152*

PHYS 152L is the laboratory course that accompanies PHYS 152 lecture. The scheduled experiments are designed to help reinforce selected topics introduced in the lecture. These topics include electricity, magnetism, circuits, optics, and selected topics in modern physics. (3 hrs. lab. per week)

PHYS 170 GENERAL PHYSICS I (4) (DP)*Prerequisite or Co-requisite: MATH 242 OR Placement in MATH 243*

Calculus-based mechanics of particles and rigid bodies; kinematics, force, energy, momentum, rotation, gravitation, fluids, oscillations and waves. Intended for physical science and engineering majors. (4 hrs. lect. per week)

PHYS 170L GENERAL PHYSICS I LAB (1) (DY)*Prerequisite or Co-requisite: PHYS 170*

A lab course designed to complement PHYS 170. (3 hrs. lab. per week)

PHYS 272 GENERAL PHYSICS II (3) (DP)*Prerequisite: PHYS 170 and PHYS 170L**Co-requisite: PHYS 272L*

Electricity and magnetism; geometrical optics. (3 hrs. lect. per week)

PHYS 272L GENERAL PHYSICS II LAB (1) (DY)*Prerequisite or Co-requisite: PHYS 272*

Experimental analysis in electricity and magnetism and optics. (3 hrs. lab. per week)

PHYS 274 GENERAL PHYSICS III (3) (DP)

Prerequisite: PHYS 272 and 272L OR PHYS 152 and 152L
Prerequisite or Co-requisite: MATH 243 OR Placement in MATH 244

Relativity, introduction to quantum mechanics, atomic and nuclear physics, physical optics.
(3 hrs. lect. per week)

PHYSIOLOGY (PHYL)

PHYL 141 HUMAN ANATOMY & PHYSIOLOGY I (3) (DB)

Prerequisite or Co-requisite: PHYL 141L

Recommended Prep: BIOL 171 and CHEM 161

Anatomy, histology, physiology, biochemistry, genetics of human organ systems presented in integrated anatomy-physiology format. (3 hrs. lect. per week)

PHYL 141L HUMAN ANATOMY & PHYSIOLOGY I LAB (1) (DY)

Prerequisite or Co-requisite: PHYL 141

Recommended Prep: BIOL 171 and CHEM 161

Anatomy, histology, physiology, biochemistry, genetics of human organ systems presented in integrated anatomy-physiology format. (3 hrs. lab. per week)

PHYL 142 HUMAN ANATOMY & PHYSIOLOGY II (3) (DB)

Prerequisite: PHYL 141

Prerequisite or Co-requisite: PHYL 142L

Recommended Prep: BIOL 171 and CHEM 161

PHYL 142 Human Anatomy and Physiology II is a continuation of PHYL 141. This course covers the anatomy, histology, physiology, biochemistry, and genetics of human organ systems presented in integrated anatomy-physiology format.
(3 hrs. lect. per week)

PHYL 142L HUMAN ANATOMY & PHYSIOLOGY II LAB (1) (DY)

Prerequisite: PHYL 141L

Prerequisite or Co-requisite: PHYL 142

Recommended Prep: BIOL 171 and CHEM 161

PHYL 142L Human Anatomy and Physiology II Lab is a continuation of PHYL 141L. This course covers the anatomy, histology, physiology, biochemistry, and genetics of human organ systems presented in integrated anatomy-physiology format.
(3 hrs. lab. per week)

POLITICAL SCIENCE (POLS)

POLS 110 INTRODUCTION TO POLITICAL SCIENCE (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

An introduction to political problems, systems, ideologies and processes. (3 hrs. lect. per week)

POLS 120 INTRODUCTION TO WORLD POLITICS (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

Contemporary world politics, including theories and analysis; historical background; nations, states and nonstate actors; economic development and globalization in the North and South; war; international law; human rights; and, the environment.
(3 hrs. lect. per week)

POLS 130 INTRODUCTION TO AMERICAN POLITICS (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

An introduction to American politics, including the Constitution, federalism, civil rights, the media, political participation, parties, elections, special interests, Congress, the Presidency, the bureaucracy, the courts, civil rights, the economy and foreign policy. May be taken on a CR/N basis. (3 hrs. lect. per week)

POLS 180 INTRODUCTION TO HAWAII POLITICS (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

An examination of 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.
(3 hrs. lect. per week)

POLS 250 ASIAN POLITICS SINCE 1900 (3)

Prerequisite: Placement in ENG 100 + ENG 100S

This course will focus on ten Asian countries with the largest economics and populations, in order to familiarize students with the development of their politics, economics, and society. Cross-listed as ASAN 250. (3 hrs. lect. per week)

PSYCHOLOGY (PSY)

PSY 100 SURVEY OF PSYCHOLOGY (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

Survey of the field of psychology including methodology, individual differences, neuroscience, sensation and perception, learning, memory, thinking and intelligence, development, personality, social psychology, and abnormal psychology.
(3 hrs. lect. per week)

PSY 180 PSYCHOLOGY OF WORK (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

Introduction to psychological aspects of work-related phenomena with emphasis on importance of human relations in work settings. Focuses on application of industrial organizational theory to understanding problems in worker morale, impression management, career assessment, organizational versus individual goals. (3 hrs. lect. per week)

PSY 212 SURVEY OF RESEARCH METHODS (3) (DS)

Prerequisite: "C" or higher in PSY 100

This is a lecture-based course surveying experimental and non-experimental methods and the issues involved in psychological science and research. Topics include the scientific method, conducting literature reviews, and the American Psychological Association writing style. (3 hrs. lect. per week)

PSY 220 INTRODUCTION TO BEHAVIORAL PSYCHOLOGY (3) (DS)

Prerequisite: "C" or higher in PSY 100

This course provides an introduction to behavioral psychology, covering principles and theories of learning and behavior. Topics covered include classical conditioning, operant conditioning, behavior

modification, and application of findings from laboratory research to various areas of psychology and other social sciences. (3 hrs. lect. per week)

PSY 225 STATISTICAL TECHNIQUES (3) (DS)

Prerequisite: "C" or higher in PSY 100 and MATH 100 or higher

Frequency distributions; graphic methods; central tendency; variability; correlation; reliability; tests of significance. (3 hrs. lect. per week)

PSY 230 INTRODUCTION TO PSYCHOBIOLOGY (3) (DB)

Prerequisite: "C" or higher in PSY 100

Survey of the study of behavior from a natural sciences viewpoint. Evolution, ethological analysis of behavior, behavior genetics, neural mechanisms, drugs and behavior, biological development. (3 hrs. lect. per week)

PSY 240 DEVELOPMENTAL PSYCHOLOGY (3) (DS)

Prerequisite: "C" or higher in PSY 100

Emotional, mental, physical, social development from infancy to adulthood; interests and abilities at different age levels. (3 hrs. lect. per week)

PSY 250 SOCIAL PSYCHOLOGY (3) (DS)

Prerequisite: "C" or higher in PSY 100

Cognitive, behavioral and emotional effects of people: interpersonal relations, attribution, attitudes, group behavior, stereotypes, social roles, aggression, helping, self-concept; and applications. (3 hrs. lect. per week)

PSY 260 PSYCHOLOGY OF PERSONALITY (3) (DS)

Prerequisite: "C" or higher in PSY 100

Scientific study of personality, its meaning, assessment, development, and relation to cultural-social determinants. (3 hrs. lect. per week)

PSY 270 INTRODUCTION TO CLINICAL PSYCHOLOGY (3) (DS)

Prerequisite: "C" or higher in PSY 100

History, theories, types of psychological problems, methods of assessment, forms of intervention, current developments. (3 hrs. lect. per week)

REFRIGERATION AND AIR CONDITIONING TECHNOLOGY (RAC)

RAC 21 BASIC REFRIGERATION (12)

Prerequisite or Co-requisite: MATH 50, OR Placement in MATH 150 or higher.

RAC majors only.

Principles of physics applicable to mechanical and absorption cycles. Heat energy, heat transfer, properties of matter, change of state, laws of gases, temperature-pressure relationship, thermodynamic principles in the mechanical cycle, compressors, condensers, receivers, refrigerant controls, evaporators and accessories. Hand tools, fasteners, special refrigeration tools, tube bending, flaring, soldering, compressor overhaul, condensing unit overhaul, refrigeration system construction, operation, test and repair. Safety and Physics content applicable to the RAC area. (24 hrs. lect./lab. per week)

RAC 32 COMMERCIAL REFRIGERATION (12)

Prerequisite: RAC 21

RAC majors only.

Commercial systems: application, servicing, heat loads and piping. Absorption principles and special refrigeration devices and application. Advanced maintenance, trouble-shooting and repair of domestic and commercial units. Introduction to the concepts, theories and application of electricity as they apply to refrigeration and air conditioning. (24 hrs. lect./lab. per week)

RAC 40 AIR CONDITIONING I (12)

Prerequisite: RAC 32

RAC majors only.

Second portion of electrical fundamentals. Topics include motors, control devices, control systems and trouble-shooting. Chemistry of air, air and human comfort, psychrometric properties of air, the psychrometric chart, problems for the conditioned air supply, conduction, solar transmission, occupancy and equipment heat gains and losses, coil load and total air supply. (24 hrs. lect./lab. per week)

RAC 50 AIR CONDITIONING II (12)

Prerequisite: RAC 40

RAC majors only.

Duct sizing, duct devices, system design, system balance, control systems, double-duct systems, hydraulic systems, centrifugal systems, and heat pumps. Advanced maintenance, trouble-shooting, system balance, control setup, water testing and engineering studies on central station chill water air conditioning system and operation of a maintenance shop. Safety and Physics content applicable to the RAC area. (24 hrs. lect./lab. per week)

RELIGION (REL)

REL 150 INTRODUCTION TO THE WORLD'S MAJOR RELIGIONS (3)

Recommended Prep: Placement in ENG 100 + ENG 100S

Introduction to the world's living religions: Hinduism, Buddhism, Shintoism, Confucianism, Taoism, Judaism, Christianity, Islam. (3 hrs. lect. per week)

REL 151 RELIGION AND THE MEANING OF EXISTENCE (3) (DH)

Recommended Prep: Placement in ENG 100 + ENG 100S

Introduction to basic ideas and issues of contemporary religious thought related to the question: "What is the meaning of existence?" May be taken on a CR/N basis. (3 hrs. lect. per week)

REL 201 UNDERSTANDING THE NEW TESTAMENT (3)

Recommended Prep: Placement in ENG 100 + ENG 100S

Origin and development of early Christian message as set forth in New Testament, with special attention to Jesus and Paul. (3 hrs. lect. per week)

REL 203 UNDERSTANDING CHINESE RELIGIONS (3)

Recommended Prep: Placement in ENG 100 + ENG 100S

Taoist, Confucian, Buddhist, Maoist and folk beliefs and practices in social and historical context. (3 hrs. lect. per week)

REL 204 UNDERSTANDING JAPANESE RELIGIONS (3)

Recommended Prep: Placement in ENG 100 + ENG 100S

A survey of major aspects of Japanese religion including Shinto, Buddhism and modern new religions. The various traditions will be viewed within their historical and social contexts. Emphasis will be placed on issues of contemporary significance. (3 hrs. lect. per week)

REL 207 UNDERSTANDING BUDDHISM (3)

Recommended Prep: Placement in ENG 100 + ENG 100S

Survey of major forms and practices. (3 hrs. lect. per week)

REL 210 UNDERSTANDING CHRISTIANITY (3) (DH)

Recommended Prep: Placement in ENG 100 + ENG 100S

History of Ideas concentrating on those events, persons, and issues which have had the greatest impact on the evolution of Christianity. May be graded on a CR/N basis. (3 hrs. lect. per week)

SCIENCE (SCI)

SCI 193V COOPERATIVE EDUCATION (1-4)

Instructor approval required.

This course will provide students with the opportunity to acquire on-the-job experience related to classroom and laboratory instruction in Science. Students may enroll 4 times for a maximum of 12 credits. (5 hrs. work experience per week per credit)

SCI 295V SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) RESEARCH EXPERIENCE (1-3) (DY)

Instructor approval required.

SCI 295 offers a research experience in science, technology, engineering and/or mathematics, emphasizing the application of the scientific method to a specific project. Students may enroll 3 times for a maximum of 6 credits.

(Students will be required to spend three hours per week per credit directly working on their project.)

SHEET METAL AND PLASTICS TECHNOLOGY (SMP)

SMP 20 HAND TOOL AND MACHINE PROCESSES (4)

Co-requisite: SMP 21 & 22 & 23

SMP majors only.

Develop skills and safety practices in the use of hand tools and machines. The techniques of soldering, drilling, punching, riveting, seaming, and other tools and machine operations. The characteristics and uses of sheet metal, supplies, fastening devices and plastics. (2 hrs. lect.; 6 hrs. lab. per week)

SMP 21 SHOP PROBLEMS (3)

Co-requisite: SMP 20 & 22 & 23

SMP majors only.

To provide students with the essential principles and concepts related to sheet metal work to enable them to understand and solve everyday problems encountered in the shop. Students will develop the

necessary skills and knowledge through the study and practice of actual sheet metal shop problems using terminologies and standards in current use throughout the country. (3 hrs. lect. per week)

SMP 22 FABRICATION PROCESSES (ARCHITECTURAL) (4)

Co-requisite: SMP 20 & 21 & 23

SMP majors only.

Emphasis on variously shaped gutters, gutter miters, hangers, flashing of all types, downspout, expansion joints and other similar work. Standard installation practices. (2 hrs. lect.; 6 hrs. lab. per week)

SMP 23 INTRODUCTION TO SURFACE DEVELOPMENT (2)

Co-requisite: SMP 20 & 21 & 22

SMP majors only.

Construction of geometrical figures. Concept of multi-view drawings and the planes of projection. Principles of parallel and radial line development and triangulation. Simple patterns. (1 hr. lect., 3 hrs. lab. per week)

SMP 24 ADVANCED FABRICATION PROCESSES (ARCHITECTURAL) (4)

Prerequisite: SMP 23

Co-requisite: SMP 25 and SMP 26

SMP majors only.

Skills in the fabrication of mitered transitional roof jacks, cornices, skylights, louvers, roof ventilators and complex roofing seams. Different methods of installation. (2 hrs. lect.; 6 hrs. lab. per week)

SMP 25 AIR CONDITIONING FABRICATION (4)

Co-requisite: SMP 24 and SMP 26

SMP majors only.

Training in fabricating air conditioning and ventilating duct work. Seams, locks, hangers, fastening devices, vanned turned elbows and other basic fittings that are commonly used. Standard installation practices. (2 hrs. lect.; 6 hrs. lab. per week)

SMP 26 PATTERN DEVELOPMENT I (2)

Co-requisite: SMP 24 and SMP 25

SMP majors only.

Patterns for various types of transitions. Square to round, oval to round and other fittings in this area. Patterns for the basic fittings that are commonly used. Standard installation practices. (1 hr. lect., 3 hrs. lab. per week)

SMP 41 ADVANCED AIR CONDITIONING FABRICATION (4)

Prerequisite: SMP 26

SMP majors only.

Fabrication of complex fittings in both high and low velocity air conditioning systems. Various types of reinforcing and transverse seams, sealants and insulation. (2 hrs. lect.; 6 hrs. lab. per week)

SMP 43 PATTERN DEVELOPMENT II (2)

Prerequisite: SMP 26

SMP majors only.

In this course patterns are developed for low, medium and high pressure air conditioning systems. Patterns for fittings used in blow pipe work are included in this course. (1 hr. lect., 3 hrs. lab. per week)

SMP 44 BLOW PIPE FABRICATION (4)*Prerequisite: SMP 43**SMP majors only.*

The emphasis is on round work in such areas as blow pipe, air conditioning duct, and ventilation systems. Included in this course is the fabrication of canopies and hoods for machines.

(2 hrs. lect.; 6 hrs. lab. per week)

SMP 45 ADVANCED FABRICATION (GENERAL) (4)*Prerequisite: SMP 41**Co-requisite: SMP 44 & 46 & 49**SMP majors only.*

The emphasis of this course is on fabricating complex work in all areas of sheet metal. Field trips to shops that specialize in kitchen equipment; spiral pipe and other specialty shops are part of this course.

(2 hrs. lect.; 6 hrs. lab. per week)

SMP 46 PATTERN DEVELOPMENT III (2)*Prerequisite: SMP 43**SMP majors only.*

Pattern development, emphasizing complex, intersecting problems and short-cut methods that are practical in industry. (1 hr. lect.; 3 hrs. lab. per week)

SMP 49 ADVANCED SHOP PROBLEMS (2)*Prerequisite: SMP 21**SMP majors only.*

To provide the second-year sheet metal majors with the specialized technical knowledge and problem solving techniques to be able to understand and find effective solutions to advanced shop problems expected to be encountered in the sheet metal industry. (2 hrs. lect. per week)

SMP 93V COOPERATIVE EDUCATION (1-9)*Instructor approval required.**SMP majors only.*

This course will provide students with the opportunity to acquire on-the-job experience related to classroom and laboratory instruction in Sheet Metal and Plastics. Students may enroll 4 times for a maximum of 12 credits. (5 hrs. work experience per week per credit)

SOCIAL SCIENCES (SSCI)**SSCI 120 HAWAII'S PEOPLE (3)**

A survey of ethnic subcultures in America, with emphasis on Hawai'i's ethnic mosaic. The critical framework covers dominant-subordinate relationships in both a historical and modern setting. The processes of prejudice, discrimination, identity, cyclical patterns of ethnic relations, acculturation, assimilation, contention, submission, revitalization and the psychology of racism will be applied to the major ethnic minorities of Hawai'i. (3 hrs. lect. per week)

SSCI 125 PACIFIC ISLAND PEOPLES (3) (DH)

Recommended Prep: ENG 100 + ENG 100S or ESL 23, OR Placement in ENG 100

This course is a survey of Pacific Island societies, using social science perspectives to analyze the effects of environmental constraints, cultural tradition, historical

experience, political and economic development, and social change upon the peoples of Melanesia, Micronesia, and Polynesia. It will give students an understanding of the major problems and alternative futures which Pacific island communities now face. Cross-listed as ANTH 135. (3 hrs. lect. per week)

SSCI 193V COOPERATIVE EDUCATION (1-4)*Instructor approval required.*

This course will provide students with the opportunity to acquire on-the-job experience related to classroom and laboratory instruction in the Social Sciences. Students may enroll 4 times for a maximum of 12 credits. (5 hrs. work experience per week per credit)

SSCI 250 GENDER AND SOCIETY (3)

An introduction to social science perspectives and research findings on the effect of sex/gender roles on individuals, their communities and larger social institutions such as family, education, employment and government. (3 hrs. lect. per week)

SOCIAL WORK (SW)**SW 200 THE FIELD OF SOCIAL WORK (3)**

Recommended Prep: ENG 100 + ENG 100S or ESL 23, OR Placement in ENG 100

Orientation to the profession of social work; the nature and scope of social work, historical development, values and philosophy, methods of practice, and selected fields of practice. (3 hrs. lect. per week)

SOCIOLOGY (SOC)**SOC 100 SURVEY OF GENERAL SOCIOLOGY (3) (DS)***Prerequisite: Placement in ENG 100 + ENG 100S*

Basic social relationships, norms, social structures and processes affecting social change. (3 hrs. lect. per week)

SOC 212 INTRODUCTION TO THE SOCIOLOGY OF JAPAN (3) (DS)*Prerequisite: Placement in ENG 100 + ENG 100S*

This course offers an introduction to the persistence and change in economy, policy, religion, education, family, and other institutions of modern Japan. Both structure and culture of Japanese society will be examined. May be taken on a CR/N basis. (3 hrs. lect. per week)

SOC 214 INTRODUCTION TO RACE AND ETHNIC RELATIONS (3) (DS)*Prerequisite: Placement in ENG 100 + ENG 100S*

This course will acquaint students with the problems and dynamics of race and ethnic relations in comparative local, national, and world perspectives. Theory and research related to the social, economic, and political problems of ethnic and racial groups, and their existence and accommodation within societies will be reviewed and analyzed. (3 hrs. lect. per week)

SOC 218 INTRODUCTION TO SOCIAL PROBLEMS (3) (DS)*Prerequisite: Placement in ENG 100 + ENG 100S*

Introduction to Social Problems will acquaint students

with the variety of social problems facing our society today. Local social problems will be emphasized. Sociological research and theories related to crime and delinquency, drug and alcohol abuse, sexual deviance, ethnic relations, economic disruption and unemployment, social consequences of sexism, and family disorganization will be discussed and students will be required to conduct a small research project in a selected area. (3 hrs. lect. per week)

SOC 231 INTRODUCTION TO JUVENILE DELINQUENCY (3) (DS)

Prerequisite: Placement in ENG 100 + ENG 100S

Forms of juvenile deviance; conditions and processes that result in the alienation and deviance of youth. Juvenile corrections as an institutionalized societal response. May be taken on a CR/N basis. (3 hrs. lect. per week)

SOC 251 INTRODUCTION TO SOCIOLOGY OF THE FAMILY (3)

Prerequisite: Placement in ENG 100 + ENG 100S

Family patterns, mate selection, parent-child interaction, socialization of roles, legal sanctions, and current trends in family organization and functions. (3 hrs. lect. per week)

SPEECH (SP)

SP 151 PERSONAL AND PUBLIC SPEECH (3) (DA)

Recommended Prep: Placement in ENG 100 + ENG 100S

This course introduces students to the basic principles of human communication. Perceptual processes, cultural awareness, verbal and nonverbal communication, and effective listening techniques are discussed. Students also receive practice in improving their competency in the areas of informative and persuasive speaking, and in interpersonal and small group communication. (3 hrs. lect. per week)

SP 170 INTRODUCTION TO NONVERBAL COMMUNICATION (3) (DS)

Recommended Prep: Placement in ENG 100 + ENG 100S

This introductory course is designed to survey the basic principles of nonverbal communication. Students will gain knowledge about the communication value associated with the use of body movements, facial expressions, eye behavior, physical appearance, voice, touch, space, smell, time, and environmental features. Emphasis will be placed on developing a keener sensitivity to nonverbal behavior through lectures, discussions, exercises, and practical experimentation. (3 hrs. lect. per week)

SP 181 INTRODUCTION TO INTERPERSONAL COMMUNICATION (3) (DS)

Recommended Prep: Placement in ENG 100 + ENG 100S

This course introduces students to the basic principles of interpersonal communication. Students will gain an understanding of the various stages of a relationship, how to deal with conflict in a relationship, and various assertive communication strategies. Students will research and write about interpersonal communication in a clear, logical, and inventive manner. (3 hrs. lect. per week)

SP 251 PRINCIPLES OF EFFECTIVE PUBLIC SPEAKING (3) (DA)

Recommended Prep: SP 151 or Placement in ENG 100

This course provides students with the opportunity to improve their public speaking skills through extensive practice in speech preparation and delivery techniques. Emphasis is given to audience analysis, gathering supporting materials, and organization, in addition to other speechmaking techniques for a variety of speaking occasions. (3 hrs. lect. per week)

SP 253 ARGUMENTATION AND DEBATE (3)

Recommended Prep: Placement in ENG 100 + ENG 100S, SP 151

Argument as a technique in the investigation of social problems; formal and informal practice in the use of evidence, proof, refutation, and argument. May be taken on a CR/N basis. (3 hrs. lect. per week)

SP 290 INTERVIEWING (3)

Recommended Prep: SP 151

Speech 290 provides an introduction to the principles of interviewing. In addition to discussing theoretical material, students will have opportunities to serve as both interviewers and interviewees in a variety of in-class interviewing activities. Students will participate in survey interviews, employment interviews, counseling interviews, and persuasive interviews. May be taken on a CR/N basis. (3 hrs. lect. per week)

THEATRE (THEA)

THEA 101 INTRODUCTION TO DRAMA AND THEATRE (3)

Prerequisite: Placement in ENG 100 + ENG 100S

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

THEA 201 INTRODUCTION TO THE ART OF THE FILM (3)

Recommended Prep: Placement in ENG 100 + ENG 100S

Introduction to aesthetic aspects of silent and sound movies. Technical subjects analyzed only as they relate to theme and style. (3 hrs. lect. per week)

WELDING TECHNOLOGY (WELD)

**WELD 100 WELDING FOR TRADES AND INDUSTRY (3)
(FORMERLY WELD 19)
(FOR NON-MAJORS)**

Introduction to the various methods of welding, including electric, oxyacetylene, and oxyacetylene cutting. (90 hrs. lect./lab. per term)

**WELD 121 HAND AND SHOP TOOLS (2)
(FORMERLY WELD 21)**

Co-requisite: WELD 160, 162, 164, 166, 168

WELD majors only.

Instruction in the care and use of hand and power tools. Safe operation of metal shears, abrasive cutters, sanders, grinders, and hydraulic benders. (60 hrs. lect./lab. per term)

WELD 152 INTRODUCTION TO ARC I (3)**(FORMERLY WELD 52)***Prerequisite: Placement in ENG 100; MATH 50 OR**Placement in MATH 150 or higher**Prerequisite or Co-requisite: IEDB 100**Co-requisite: WELD 154, 156, 158**WELD majors only.*

Fundamentals of oxyacetylene and arc welding.

Proper use and operation of oxyacetylene equipment.

Operation and use of various types of welding

machines. Electrode identification and arc welding

terminology. Welding on carbon steel in the flat fillet

position. (90 hrs. lect./lab. per term)

WELD 154 INTRODUCTION TO ARC II (2)**(FORMERLY WELD 54)***Prerequisite or Co-requisite: WELD 152**Co-requisite: WELD 156, 158**WELD majors only.*

Introduction to the horizontal position. Single and multi-pass fillet welding on carbon steel using E6010 or E6011, and E7018 electrodes. (60 hrs. lect./lab. per term)

WELD 156 INTRODUCTION TO ARC III (2)**(FORMERLY WELD 56)***Prerequisite or Co-requisite: WELD 154**Co-requisite: WELD 152, 158**WELD majors only.*

Introduction to the vertical position. Single and multi-pass fillet welding on carbon steel using E6010 or E6011, and E7018 electrodes. (60 hrs. lect./lab. per term)

WELD 158 INTRODUCTION TO ARC IV (2)**(FORMERLY WELD 58)***Prerequisite or Co-requisite: WELD 156**Co-requisite: WELD 152, 154**WELD majors only.*

Introduction to the overhead position. Single and multi-pass fillet welding on carbon steel using E6010 or E6011, and E7018 electrodes. (60 hrs. lect./lab. per term)

WELD 160 ADVANCED ARC WELDING I (2)**(FORMERLY WELD 60)***Prerequisite: Placement in ENG 100; MATH 50 OR**Placement in MATH 150 or higher**Co-requisite: WELD 121, 162, 164, 166, 168**WELD majors only.*

Single and multi-pass groove welding, on carbon steel, using E7018 electrodes. Welding to be done in the 1G (flat) and 2G (horizontal) positions. (60 hrs. lect./lab. per term)

WELD 162 ADVANCED ARC WELDING II (3)**(FORMERLY WELD 62)***Prerequisite or Co-requisite: WELD 160**Co-requisite: WELD 121, 164, 166, 168**WELD majors only.*

Single and multi-pass groove welding on carbon steel using E7018 electrodes. Welding to be done in the 3G (vertical up) position. Limited thickness Guided Bend Test will be administered. (90 hrs. lect./lab. per term)

WELD 164 ADVANCED ARC WELDING III (3)**(FORMERLY WELD 64)***Prerequisite or Co-requisite: WELD 162**Co-requisite: WELD 121, 160, 166, 168**WELD majors only.*

Single and multi-pass groove welding on carbon steel plate using E7018 electrodes in the 4G (overhead) position. Limited thickness Guided Bend Test will be administered. (90 hrs. lect./lab. per term)

WELD 166 PLASMA AND AIR CARBON ARC CUTTING (1)**(FORMERLY WELD 66)***Co-requisite: WELD 121, 160, 162, 164, 168**WELD majors only.*

Care and safe use of plasma and air carbon arc cutting process will be covered. Cutting operations will be done on carbon steel, aluminum, and stainless steel. (30 hrs. lect./lab. per term)

WELD 168 BLUEPRINT READING FOR WELDERS (3)**(FORMERLY WELD 68)***Prerequisite: IEDB 100**Co-requisite: WELD 121, 160, 162, 164, 166**WELD majors only.*

A basic course in blueprint interpretation designed primarily for Welding Technology majors. Emphasis will be placed on welding symbols and their significance. Basic instruction in structural shapes and estimating will also be covered. (45 hrs. lect. per term)

WELD 170 OXYACETYLENE WELDING I (2)**(FORMERLY WELD 70)***Prerequisite: Placement in ENG 100; MATH 50 OR**Placement in MATH 150 or higher**Co-requisite: WELD 172, 174, 176, 178**WELD majors only.*

Care and use of oxyacetylene equipment. Fusion welding on steel in the flat and horizontal positions. (60 hrs. lect./lab. per term)

WELD 172 OXYACETYLENE WELDING II (2)**(FORMERLY WELD 72)***Co-requisite: WELD 170, 174, 176, 178**WELD majors only.*

Care and use of oxyacetylene equipment. Braze welding on steel in the flat and horizontal positions. (60 hrs. lect./lab. per term)

WELD 174 TIG WELDING I (2)**(FORMERLY WELD 74)***Co-requisite: WELD 170, 172, 176, 178**WELD majors only.*

Theory, practice and application of the TIG welding process. Welding of carbon steel and stainless steel. (60 hrs. lect./lab. per term)

WELD 176 TIG WELDING II (2)**(FORMERLY WELD 76)***Co-requisite: WELD 170, 172, 174, 178**WELD majors only.*

Theory, practice and application of the TIG welding process in the welding of aluminum. (60 hrs. lect./lab. per term)

Students are recommended to complete their college-level English and Math classes within their first two semesters of college.

WELD 178 FABRICATION TECHNIQUES (4)
(FORMERLY WELD 78)

Co-requisite: WELD 170, 172, 174, 176

WELD majors only.

Introduction to the layout and fabrication of welded structures, jigs, and fixtures. Interpretation and practical applications of blueprints and sketches. Miter cuts and the identification and processing of metals. (120 hrs. lect./lab. per term)

WELD 180 GAS METAL AND FLUX CORED ARC WELDING (5)
(FORMERLY WELD 80)

Prerequisite: Placement in ENG 100; MATH 50 OR

Placement in MATH 150 or higher

Co-requisite: WELD 182, 184

WELD majors only.

Theory, practice, and applications of Gas Metal and Flux Cored Arc Welding processes including safety and manipulative skills. Welding of carbon steel and aluminum. (150 hrs. lect./lab. per term)

WELD 182 WELDING INSPECTION AND TESTING PRINCIPLES (1)
(FORMERLY WELD 82)

Co-requisite: WELD 180, 184

WELD majors only.

Introduction to welding codes and qualifications. Visual, destructive, and nondestructive methods will be covered. (30 hrs. lect./lab. per term)

WELD 184 ADVANCED FABRICATION TECHNIQUES (4)
(FORMERLY WELD 84)

Co-requisite: WELD 180, 182

WELD majors only.

Emphasis on the use of various types of equipment together with the interpretation of blueprints and sketches to perform practical work assignments. (120 hrs. lect./lab. per term)

WOMEN, GENDER, & SEXUALITY STUDIES (WGSS)

[Formerly Women's Studies (WS)]

WGSS 151 INTRO TO WOMEN, GENDER, & SEXUALITY STUDIES (3) (DS)

(FORMERLY WS 151)

Recommended Prep: Placement in ENG 100 + ENG 100S

Introduction to feminist interdisciplinary analysis from global and critical perspectives; relationships between women and men from Asia-Pacific, Hawaiian, and other cultures, with a focus on gender, race, class, and sexual dynamics; exploration of women's negotiations with institutional dynamics. (3 hrs. lect. per week)

WGSS 230 GENDER AND SPORT (3) (DS)
(FORMERLY WS 230)

Prerequisite: Placement in ENG 100 + ENG 100S

Recommended Prep: ENG 100

Explores the influence of gender in sport from cultural, psychosocial, and political perspectives. Examines

women's and men's role as participants, spectators, and employees of sport and sports organizations. (3 hrs. lect. per week)

WORK CYCLE (WORK)

WORK 194V COOPERATIVE EDUCATION - FEDERAL WORK CYCLE (1-6)

Instructor approval required. Acceptance in Federal Coop Ed Program required.

This course is for students accepted in a Federal Cooperative Education program. During the Work Cycle, students are assigned work experiences related to academic studies or career goals. Students may enroll 6 times for credit with instructor approval, up to a total of 24 credits.

(5 hrs. work experience per week per credit)

ZOOLOGY (ZOO)

ZOOL 200 MARINE BIOLOGY (3) (DB)

Co-requisite: ZOOL 200L

Lectures in this course provide an introduction to the marine flora and fauna, including those of the Hawaiian waters. A knowledge of the physical, biological and ecological characteristics of the marine environment is important for understanding the life systems of the ocean. The course will cover coral reef organisms, deep sea life, fisheries, farming the ocean, marine resources and the effects of pollution on marine life; with special emphasis on the Hawaiian marine environment. May be taken on a CR/N basis. (3 hrs. lect. per week)

ZOOL 200L MARINE BIOLOGY LAB (1) (DY)

Prerequisites or Co-requisite: ZOOL 200

Companion laboratory to ZOOL 200, Marine Biology. Practical, hands-on experiences in marine biology. Laboratory/field trip class. May be taken on a CR/N basis. (3 hrs. lab.)

(See also OCEANOGRAPHY)