



## **COURSES OF INSTRUCTION**

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In the following list of courses, the credit value of each course in semester units is indicated by a number in parentheses after the course number.

To make it possible for a greater number of courses to be offered to the students of Imperial Valley, many courses in specialized fields are offered in alternate years only. The student should take this into consideration when making long-range program plans.

Course descriptions followed by the notation (CSU, UC) indicate that the course is transferable to the California State University system, to the University of California system, or both. A student should contact his/her counselor to determine which courses are applicable to his/her educational objective.

### COURSE NUMBERING

- 001-099** Non-Transferable/Non-Degree Applicable or Non-Transferable/AA-AS Degree Applicable Only
- 100-199** Freshmen Level Courses\*
- 200-299** Sophomore Level Courses\*
- 800** Community Education (Non-Credit)
- 900** Community Education (Fee Based)

*\*Courses numbered 100-299 are offered at the baccalaureate level. They meet requirements for Associate Degrees and are generally articulated for transfer with four year institutions to meet major, general education, breadth or elective credit requirements. Students should check with their counselors regarding transferability of courses to the California State University, the University of California, private/independent colleges, and out-of-state colleges and universities.*

The various technologies used for delivery of instruction may include some combination of print, voice, video, and data delivered via the Internet using the Blackboard and/or Canvas learning management systems. Both platforms are easy-to-use, menu-driven applications that are fully compliant with section 508 of the American Disabilities Act. Students must be enrolled in a class to access these sites.

### Common Courses

**Honors (297)** Advanced academic experiences associated with general education courses. This course provides supplemental instruction to reinforce achievement of the learning objectives of a course in the same discipline under the supervision of the instructor of the designated course. Learning activities may employ a variety of self-paced multimedia learning systems, language labs, print and electronic resources, laboratory, or field research arrangements to assist the student in reaching specific learning objectives. Recommended for students in a subject area offered by the division or students requesting study in depth in a particular area. Limited offerings. Interdisciplinary conference, with readings, discussion, and reports. Maximum credit 2.0 units.

**Special Topics** These are course offerings designed in specific disciplines to test new curriculum before adopting it as part of an academic program. Maximum credit 3.0 units.

**Independent Study (199/299)** These courses are academic opportunities for students who are capable of independent work and demonstrate the need or desire for additional study, beyond the regular curriculum. These courses are not intended to replace existing courses in the discipline. In this course, students will have a written contract with their instructor for activities such as: preparing problem analysis, engaging in primary research, preparing reports, and meeting with the instructor at specific intervals. Maximum credit 3.0 units.

### COURSE IDENTIFICATION NUMBERING SYSTEM (C-ID)

The Course Identification Numbering System (C-ID) is a statewide numbering system independent from the course numbers assigned by local California community colleges. A C-ID number next to a course signals that participating California colleges and universities have determined that courses offered by other California community colleges are comparable in content and scope to courses offered on their own campuses, regardless of their unique titles or local course number. Thus, if a schedule of classes or catalog lists a course bearing a C-ID number, for example COMM 110, students at that college can be assured that it will be accepted in lieu of a course bearing the C-ID COMM 110 designation at another community college. In other words, the C-ID designation can be used to identify comparable courses at different community colleges. However, students should always go to [www.assist.org](http://www.assist.org) to confirm how each college's course will be accepted at a particular four-year college or university for transfer credit.

The C-ID numbering system is useful for students attending more than one community college and is applied to many of the transferable courses students need as preparation for transfer. Because these course requirements may change and because courses may be modified and qualified for or deleted from the C-ID database, students should always check with a counselor to determine how C-ID designated courses fit into their educational plans for transfer.

Students may consult the ASSIST database at [www.assist.org](http://www.assist.org) for specific information on C-ID course designations. Counselors can always help students interpret or explain this information.

### Winter and Summer Sessions

Winter and Summer session calendars and admission requirements may be found in the Winter Schedule of classes which is published in the Fall Semester and the Summer Schedule of Classes which is published during the Spring Semester.

## ADMINISTRATION OF JUSTICE

### AJ 100 (3.0 Units)

#### Introduction to the Administration of Justice

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

Recommended Preparation: ENGL 009 and READ 019

The course will cover the philosophy of Administration of Justice in America and identify its various sub-systems. It will examine the roles and role expectations of criminal justice agents and their interrelationship in society. The concepts of crime causations, punishment and rehabilitation are introduced. This basic course provides a better understanding of the criminal justice system and orients the students to career opportunities. Ethics, education and training for professionalism in the system are discussed. (C-ID AJ 110) (CSU, UC)

### AJ 102 (3.0 Units)

#### Concepts of Criminal Law

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

Recommended Preparation: ENGL 110 and READ 111

The course covers the historical development of law and constitutional provisions; definitions and the classification of crime and their application to the system of administration of justice; legal research, study of case law, methodology, and concepts of law as a social force are presented. Crimes against persons, property, government, and organized crime are discussed. (C-ID AJ 120) (CSU, UC)

### AJ 104 (3.0 Units)

#### Legal Aspects of Evidence

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

Recommended Preparation: AJ 100, ENGL 009 and READ 019.

Origin, development, and philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search and seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies. (C-ID AJ 124) (CSU)

### AJ 106 (3.0 Units)

#### Principles and Procedures of the Justice System

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

Recommended Preparation: ENGL 009 and READ 019.

The course provides an examination and analysis of due process in criminal proceedings from pre-arrest through trial and appeal utilizing statutory law and state and constitutional law precedents. (C-ID AJ 122) (CSU)

### AJ 108 (3.0 Units)

#### Public Safety Report Writing

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

Prerequisite: ENGL 009 or ENGL 010 with a grade of "C" or better.

This course is an introductory course, dealing with all aspects of public safety communication. It will cover the techniques to effectively communicate facts, information, and ideas in a clear and logical manner for a variety of public safety systems reports, crime violations, incident reports, letters, memorandums, directives, and administrative reports. Emphasis on criminal justice terminology, use of English, and organization of information. Students will gain practical experience in note

taking, interviewing, report writing, and presentation of testimony in courts. (CSU)

### AJ 110 (3.0 Units)

#### Law Enforcement Community Relations

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

Recommended Preparation: ENGL 009 and READ 019.

This course examines the complex, dynamic relationship between communities and the justice system in addressing crime and conflict with an emphasis on the challenges and prospects of administering justice within a diverse multicultural population. Topics may include the consensus and conflicting values in Cultural, Religion, and the Law. Through interaction and study, the student will become aware of the relationship and role law enforcement, the courts and corrections have in our multicultural society and how that role is evolving to an ever changing population. Emphasis will be placed upon the development of positive relationships between members in the criminal justice system and the public they serve. Concepts of community-oriented policing as they apply to administration of justice issues, future trends, and training will be discussed. (C-ID AJ 160) (CSU, UC)

### AJ 121 (3.0 Units)

#### Law Enforcement Field Operations

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

Recommended Preparation: AJ 100, ENGL 009 and READ 019.

The development, function and techniques of patrol; observation skills; development, traffic and preliminary investigative duties, handling complaints and requests for service, public and community relations and basic crime prevention. The mechanics of field interviews, search and arrests, note taking and police report essentials. Familiarization with basic police equipment and handling of community crime incidents. (CSU)

### AJ 141 (3.5 Units)

#### Arrest and Firearms

**Term Hours: 45 Lec, 54 Lab**

#### Letter Grade Only

Prerequisites as required by P.O.S.T.: No felony or domestic violence convictions, able to successfully participate in physical requirements of class, U.S. Citizen or have filed for U.S. citizenship. Department of Justice fingerprint clearance.

Recommended Preparation: ENGL 009 and READ 019.

Designed to satisfy training standards set forth by the Commission on Peace Officer Standards Training (P.O.S.T.) as required by Penal Code Section 832 for Peace Officers; includes laws of arrest, search and seizure, methods of arrest, discretionary decision making, and where applicable, use and care of firearms. Supply fee may be charged. (CSU)

### AJ 160 (10.0 Units)

#### Regular Basic Course Modular Format Level III

**Term Hours: 135 Lec, 135 Lab**

#### Letter Grade Only

Prerequisites as required by P.O.S.T.: No felony or domestic violence convictions. Valid California driver license. Ability to successfully participate in physical requirements of course. U.S. citizen or have filed for U.S. citizenship. All students entering Regular Basic Course Modular Format Level III classes must acquire a DOJ Clearance letter or be employed by a sponsoring law enforcement agency prior to the first day of class. DOJ Clearance letters are invalid after 90 days.



Recommended Preparation: ENGL 009 and READ 019.

Designed to satisfy the Regular Basic Course Modular Format Level III training standards as set forth by the Commission on Peace Officer Standards and Training (P.O.S.T.). Includes professionalism and ethics, laws of arrest, search and seizure, vehicle operations, report writing, First Aid/CPR, traffic control, arrest and control tactics and weaponry, use of force, custody, and use and care of firearms. Supply fee may be charged. Designed to prepare students to be hired by a law enforcement agency as a Reserve Officer Level III. (CSU)

### **AJ 162 (13.5 Units)**

#### **Regular Basic Course Modular Format Level II**

**Term Hours: 207 Lec, 108 Lab**

**Letter Grade Only**

Prerequisites: AJ 141 and AJ 142 or AJ 160 as required by P.O.S.T. before January 1, 2007 or AJ 142 or AJ 160 after January 1, 2007, compliant with 832 P.C. Successful completion, within the last three years of First Aid and CPR training for public safety personnel as prescribed by the Emergency Medical Services Authority (EMSA) and set forth in the California Code of Regulations, Title 22, Division 9, Chapter 1.5 100005-100028. No felony or domestic violence convictions. Valid California driver's license. Ability to successfully participate in physical requirements of course. All students entering Regular Basic Course Modular Format Level II classes must acquire a DOJ Clearance letter or be employed by a sponsoring law enforcement agency prior to first day of class. DOJ Clearance letters are invalid after 90 days.

Recommended Preparation: PE 100 or PE 101, ENGL 009, and READ 019. Designed to satisfy Regular Basic Course Modular Format Level II. Training standards are set forth by the Commission on Peace Officer Standards and Training (P.O.S.T.). Includes law, patrol techniques, arrest and control, use of force, investigative report writing, cultural diversity, firearms and chemical agents, presentation of evidence, etc. and required state exams. Supply fee may be charged. Designed to prepare student to be hired by a law enforcement agency as a Level II Reserve Officer. (CSU)

### **AJ 164 (17.5 Units)**

#### **Regular Basic Course Modular Format Level I**

**Term Hours: 255 Lec, 180 Lab**

**Letter Grade Only**

Prerequisites: AJ 162. No felony or domestic violence convictions. Valid California Driver's License. All students entering Regular Basic Course Modular Format Level I class must acquire a DOJ Clearance letter or be employed by a sponsoring law enforcement agency prior to the first day of class. DOJ Clearance letters are invalid after 90 days. Passing scores on the PELLETB test and the P.O.S.T. Work Sample Test Battery (Physical Fitness Test).

Designed to satisfy Regular Basic Course Modular Format Level I. Training standards are set forth by the Commission on Peace Officer Standards and Training (P.O.S.T.). Includes law, patrol techniques, arrest and control, use of force, investigative report writing, cultural diversity, firearms and chemical agents, presentation of evidence, weapons law, crimes against children, juvenile law, controlled substances, ABC law, emergency vehicle operations, domestic violence, traffic enforcement, accident investigation, lifetime fitness, gangs, etc. and required state exams. Supply fee may be charged. Designed to prepare student to be hired by a law enforcement agency as a Level I Reserve Officer or full-time Peace Officer in the State of California. (CSU)

### **AJ 222 (3.0 Units)**

#### **Criminal Investigation**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ENGL 009 and READ 019.

The course addresses the techniques, procedures, and ethical issues in the investigative process, crime scene searches, interviewing and interrogating, surveillance, source of information, utility of evidence, scientific analysis of evidence and the role of the investigator in the trial process. (C-ID AJ 140) (CSU)

### **AJ 223 (3.0 Units)**

#### **Juvenile Control**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ENGL 009 and READ 019.

Techniques of handling juvenile offenders and victims; prevention and repression of delinquency; diagnosis and referral; organization of community resources; juvenile law and juvenile procedures. (C-ID AJ 220) (CSU)

### **AJ 224 (3.0 Units)**

#### **Criminology**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ENGL 009 and READ 019.

This course explores the nature of crime, measurement and research of crime, the extent of crime, major theories of crime causation, criminal typologies, criminal justice system response to crime, and societal reaction to crime. (Same as SOC 224) (C-ID SOCI 160) (CSU)

## **AGRICULTURE**

### **AG 110 (3.0 Units)**

#### **Environmental Science**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ENGL 009 and READ 019.

This course is designed to provide students with an overview and understanding of the relationships between human populations and the natural environment. The class will focus on basic concepts of science and ecosystem theory, human impacts on the biosphere, air, water, land, and environmental problems faced by the Imperial Valley that have regional and global consequences, and some of the proposed solutions. Field trips and activities may be included in this course. (Same as ENVS 110) (CSU, UC)

### **AG 120 (3.0 Units)**

#### **Soil Science**

**Term Hours: 36 Lec, 54 Lab**

**Letter Grade Only**

Recommended Preparation: MATH 081 and CHEM 100

This course provides a basic knowledge of the physical, chemical, and biological properties of soils and their characteristics. Includes fundamental soil properties, soil-plant relationships, soil formation, fertilization and soil management, salinity, pH, erosion management, soil moisture and non-agricultural uses. Laboratory required. Laboratory topics include soil type, classification, soil reaction, soil fertility and physical properties of soil. (C-ID AG-PS 128L) (CSU, UC)

**AG 130 (3.0 Units)**  
**Agricultural Economics**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Introduction to the economic aspects of agricultural management. The role of agricultural resources in economic growth. Survey of trade, policy, and marketing activities of agriculture. (CSU, UC)

**AG 132 (3.0 Units)**  
**Business Management**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: BUS 124

A study of management theories and processes as they apply in the contemporary business world. The course is based on the application of the four functions of management - planning, organizing, leading, and controlling - in the effective achievement of organizational objectives. Management activities are practiced in organizational situations using case studies, simulations, and class projects. (Same as BUS 132) (CSU)

**AG 134 (3.0 Units)**  
**Agricultural Business Organization**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: AG/BUS 132

Study of farm technological advance, marketing, consumer demand, and other such factors as determinants of growth, types, and forms of agricultural business organization. Farm and farm-related businesses considered from standpoint of primary functions, services, and problems, including investments, mortgage and working capital requirements, credit and collections, business with banks, failures and reorganization. Emphasis on California farm-related industries. (CSU)

**AG 136 (3.0 Units)**  
**Agricultural Sales, Communication, and Service Management**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Supervision of people who sell agricultural products and services. Selecting, training, directing, and evaluating personnel. Self-management, communication, and interpersonal skills necessary in developing managerial abilities, leadership qualities, and facilitating teamwork within the agribusiness sector will be explored. Methods of payment, use of advertising, promotion, incentives, and customer service topics will be discussed. (CSU)

**AG 138 (3.0 Units)**  
**Computer Applications in Agriculture**  
**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade or Pass/No Pass**

Recommended Preparation: CIS 101

This course introduces students to computerized technology relating to agriculture. Computer applications including word-processing, spreadsheets, databases, presentation managers, Geographic Information Systems (GIS) and how these apply to agriculture will be covered. Also included will be accessing information through the Internet particularly market and scientific information. Specialized agriculture software: farm and herd management, financial, decision aiding will be presented through demonstration, student usage, or web access. (CID AG-AB 108) (CSU)

**AG 140 (4.0 Units)**  
**Principles of Plant Science**  
**Term Hours: 54 Lec, 54 Lab**  
**Letter Grade Only**

An introduction to plant science that examines agricultural, forest, landscape and other significant uses of plants. Included are structure, growth processes, propagation, physiology, genetic improvement and biotechnology, ecology, soil environment, biological competitors and symbionts of plants. The production, harvest, and utilization of the principle crops grown in California and the Imperial Valley will be included. Laboratory work is required. (C-ID AG-PS 106L) (CSU, UC)

**AG 142 (3.0 Units)**  
**Introduction to Biofuel Input and Production**  
**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

This course will introduce the student to the various agriculture commodities and byproducts that have been used and are under investigation for the purpose of producing renewable energy for combustion and electricity. Focus will include crops products such as corn, sugar cane, soy and other oil crops, algae and various crop residue products. Discussion will also examine potential economic feasibility of producing other plant products for biomass that are commonly thought of as "weeds". (CSU)

**AG 160 (3.0 Units)**  
**Food and Fiber in a Changing World**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Relationship of agriculture and natural resources to society. Where do our food and fiber come from? How does agriculture affect the dynamics of our society? What are the issues and opportunities in agriculture now and in the future? (CSU)

**AG 170 (3.0 Units)**  
**Principles of Entomology**  
**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

This course covers the principles of the classification, identification, anatomy, physiology, ecology, management, and collecting of arthropods (i.e., insects, spiders, mites, etc.), with emphasis on those of importance to agriculture. (CSU, UC)

**AG 220 (3.0 Units)**  
**Irrigation and Drainage**  
**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

Recommended Preparation: AG 120

This course covers the fundamental principles and practices of irrigation. History of irrigation with emphasis on the Imperial Valley, water law, plant-soil-water measurement, methods of irrigation, structures, crop water needs, problems and practices in soil reclamation, drainage systems, and drainage requirements for irrigated agriculture will be discussed. (CSU)

**AG 230 (3.0 Units)**  
**Fertilizers and Soil Amendments**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: AG 120

This course covers the nature of fertilizers and soil amendments, their properties, methods of application, and effects on plants, soils, and the environment. The composition, value, and use of fertilizer materials and soil amendments are discussed. Methods employed in the production, distribution, and application of fertilizers and soil amendments are described. (CSU)

**AG 245 (3.0 Units)**  
**Plant Propagation/Production**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

Plant propagation and production practices with emphasis on nursery operations including sexual and asexual reproduction, planting, transplanting, fertilizing, plant pest and disease control; structures and site layout; preparation and use of propagating and planting mediums; use and maintenance of common tools and equipment; regulations pertaining to plant production. Laboratory required. (CSU)

**AG 260 (3.0 Units)**  
**Plant Protection and Integrated Pest Management**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Identification of pests (arthropods, rodents, and plant diseases) and beneficial (arthropods and diseases) in the crop system. Methods of reducing damage to acceptable levels with biological, chemical, and cultural controls. Laws and safety requirements for using spray equipment and pesticides in California. (CSU)

**AG 270 (3.0 Units)**  
**Weeds and Weed Control**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course covers the classification, life cycles, characteristics, and management of weeds with emphasis on common and noxious weeds of California. It looks at chemicals and equipment as well as cultural, mechanical, and biological control methods used in managing weeds on cultivated land, in irrigation ditches, on the range, and on wasteland. Poisonous weeds, their effects, and prevention are discussed. (CSU)

## **AIR CONDITIONING AND REFRIGERATION**

**ACR 101 (3.0 Units)**  
**Air Conditioning and Refrigeration Systems**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

This is a course of study in heating, ventilation, air conditioning, and refrigeration trade. This course includes the study of the laws of thermodynamics, the refrigeration cycle, brazing of refrigerant lines, understanding the use of and maintenance of heating, ventilation, air conditioning, and refrigeration equipment, applicable safety practices, and the proper use of refrigerants. (CSU)

**ACR 102 (3.0 Units)**  
**Residential Air Conditioning Systems**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

This course of study includes the installation of residential heating, ventilation, air conditioning and refrigeration systems. This course is comprised of the study of building and electrical codes, HVAC/R installation materials, brazing of line sets, installing split systems, installing heat pumps, installing gas packs, and applicable safety practices. (CSU)

**ACR 103 (3.0 Units)**  
**Air Conditioning Electrical Circuits and Controls**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

This is a course of study in electrical circuits and controls used in the heating, ventilation, air conditioning, and refrigeration industry. This course is comprised of the study of Ohms Law, electrical meters and test equipment, wiring materials, wiring diagrams and schematics, electrical components, installation of controls, layout of electrical circuits, and safety practices. (CSU)

**ACR 104 (3.0 Units)**  
**Air Conditioning Heating Systems**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

This course of study includes heating systems used in the heating, ventilation, air conditioning and refrigeration industry. This course is comprised of the study of natural gas, fuel oil, propane, and electric burner assemblies and ignition systems, and heat exchangers, venting, control circuits, electric coils, installation practices, applicable building codes, and safety procedures. (CSU)

**ACR 105 (2.0 Units)**  
**Heat Load Calculation and Measurements**

**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

This course of study includes theories and factors that affect heating and cooling loads, on residential and light commercial buildings. Calculations and measurement techniques of proper capacity and unit size will be studied and applied to residential and light commercial buildings. (CSU)

**ACR 106 (3.0 Units)**  
**Air Conditioning Ventilation Duct Systems**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

This is a course of study covering duct systems used in the heating, ventilation, air conditioning, and refrigeration industry. This course is comprised of the study of designing duct systems, duct materials, layout procedures, shop and hand tools, sheet metal ducts and components, duct board and flex duct components, and safety practices. (CSU)

## ALCOHOL AND DRUG STUDIES

### **ADS 101 (3.0 Units)**

#### **Alcoholism - Intervention, Treatment, and Recovery**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course will serve as an introduction to assessment and treatment approaches to alcoholism and drug abuse. Alcoholism will be studied in its social and clinical context. Attention will be given to the basic theoretical approaches to the disease. This course will examine the various components of intervention, treatment, recovery, and resources. (CSU)

### **ADS 110 (3.0 Units)**

#### **Physiological Effects of Alcohol and Drugs**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

The course is designed to provide the student with information on the processing systems of the body and how they react to alcohol and drugs. This course will seek to explain where and how drugs act and why. The course will bring about an understanding of how drugs influence consciousness, mood and feeling. It will enable students to understand that both the internal and external environments have important effects on the well-being of the individual. (CSU)

### **ADS 120 (3.0 Units)**

#### **Introduction to Counseling**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Recommended Preparation: PSY 101 and SOC 101

A study of the theory, process, and practice of interviewing and counseling in community service and other counseling situations. The course is designed to assist the student to gain knowledge and develop skills in order to help a client or interviewee in counseling situations. Theories of counseling and basic helping skills will be presented, demonstrated, and practiced. (Same as PSY 120) (CSU)

### **ADS 130 (3.0 Units)**

#### **Group Leadership and Group Process**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course will introduce the student to group theory and process, and how groups affect the whole social scene. It will examine membership in and leadership of various kinds of groups, emphasizing group process. Consideration will be given to goals and strategies of social change and the necessity for social change in relation to personal and social values. The factors involved in problems of communications, effective emotional responses and personal growth also will be highlighted, emphasizing the group process as a means of changing behavior. (Same as PSY 130) (CSU)

### **ADS 150 (3.0 Units)**

#### **Sociology of Minority Groups**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course examines the social construction of race including the social, political and historical factors that shape race. Discussion topics include how race is interpreted across large aggregate categories such as ethnicity, gender, class, immigration status and sexuality. Additionally this course will provide how the concept of race is affected by the colonial experience and the forming of contemporary society. (Same as SOC 150) (CSU, UC)

### **ADS 176 (1.0 Unit)**

#### **Sex and Gambling Addiction**

**Term Hours: 18 Lec, 0 Lab**

#### **Letter Grade Only**

This one unit course is an introduction to addictive, nonsubstance related disorders. Issues addressed will include sex and love addiction, gambling addiction, and compulsive spending. It will provide training in the application of appropriate therapeutic models and interventions. (CSU)

### **ADS 177 (1.0 Unit)**

#### **Anger Management**

**Term Hours: 18 Lec, 0 Lab**

#### **Letter Grade Only**

An introduction to the theories and interventions for the management of anger and violence. This one unit class includes intimate abuse and child abuse with special emphasis on brief intervention and emotive behavioral therapies. (CSU)

### **ADS 178 (1.0 Unit)**

#### **Life Skills**

**Term Hours: 18 Lec, 0 Lab**

#### **Letter Grade Only**

An in-depth overview of the skills to better living for those in recovery from abuse and addiction. This course compliments the curriculum for counseling students and is an enhancement for professionals. (CSU)

### **ADS 200 (3.0 Units)**

#### **Family Counseling Approaches to Alcohol and Drug Abuse**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

A course designed to present basic ideas and theories about family dynamics, particularly as they apply to the family of the substance abuser, and to explore strategies for counseling the client's family. The approach is highly experiential in format and students will participate in exercises frequently to incorporate new skills and theory. (CSU)

### **ADS 210 (3.0 Units)**

#### **Crisis Intervention and Referral Techniques**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Techniques used for brief therapy crisis intervention, intake interviewing and referral will be studied and practiced. Special attention will be given to the process of intervention, admitting, and recording of information as it pertains to alcohol and drug abuse clients. Through an experiential format, participants will learn and practice skills in brief therapy, different levels of client communication and intake interviewing. (Same as PSY 210) (CSU)

### **ADS 220 (3.0 Units)**

#### **Practicum**

**Term Hours: 18 Lec, 108 Lab**

#### **Letter Grade Only**

Recommended Preparation: ADS/PSY 120, PSY 101 and SOC 101

A course designed to provide opportunity for the student in Psychology, Human Relations, or Alcohol and Drug Studies to gain experience under supervised conditions such as those involving mental health, child development, youth corrections, welfare, homes for the neglected, homes for the aged, youth recreation, rehabilitation centers for people with physical limitations, and educational settings. Students will be supervised by qualified instructional staff and professionally trained personnel. (Same as PSY 220) (CSU)

**ADS 221 (3.0 Units)****Practicum****Term Hours: 18 Lec, 108 Lab****Letter Grade Only**

Prerequisite: ADS/PSY 220 with a grade of "C" or better.

A continuation of ADS/PSY 220 with an emphasis in gaining further experience in the same institution or agency or a different institution or agency. (Same as PSY 221) (CSU)

**ADS 230 (3.0 Units)****Alcohol and Drug Prevention and Education****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ADS 101 and ADS 110

This course will review the history, theories, models and state-of-the-art approaches to the prevention field. It will provide experiential learning which will enable students to examine and explore their own values and behaviors as they relate to the use and abuse of alcohol and other drugs. Prevention programs and activities appropriate for the individual, community, campus, parent/family and work site will be reviewed. Strategies such as public policies, media information-dissemination, ethnic and cultural specific approaches will be presented and assessed. (CSU)

**ADS 240 (3.0 Units)****Ethics and Legal Standard in Addiction Counseling****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

This course reviews ethical and legal standards required by the industry, state entities, or federal entities and affecting the practice of addiction prevention and addiction counseling of adults and minors. Course will address specific requirements of the judicial system, Department of Children's Protective Services, the Department of Adult Protective Services, and the Department of Mental Health. (CSU)

**ALLIED HEALTH PROFESSIONS****AHP 060 (5.5 Units)****Health Assistant****Term Hours: 63 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: AHP 100.

This course will prepare the health assistant for certification by the State of California as an entry-level worker on a health care team in a long-term care facility. The course is structured to provide theory and practical application of skills needed to function as a nurse assistant. Additional materials fee apply. (Nontransferable, AA/AS degree only)

**AHP 062 (1.5 Units)****Home Health Aide****Term Hours: 18 Lec, 27 Lab****Letter Grade Only**

Prerequisite: Certification as a Health Assistant required.

This course will prepare the student for certification by the State of California as a home health aide. The curriculum is structured to provide the theory and practice skills needed to care for individuals in the home environment. (Nontransferable, nondegree applicable)

**AHP 090 (2.0 Units)****Introduction to Health Science****Term Hours: 36 Lec, 0 Lab****Letter Grade Only**

This course is an introduction to health science professions. The course will focus on individual programs as well as how those professions collaborate and interrelate. Introduction to health care, professionalism, team building/collaboration, medical terminology, and ethical/legal issues will be explored. New and emerging professions and issues will be discussed. Major health problems will be explored and the impact of lifestyle, total environment, social and political issues analyzed. (Nontransferable, AA/AS degree only)

**AHP 100 (3.0 Units)****Medical Terminology****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Course of study is designed to develop competency in the accurate use of medical vocabulary to include anatomy, physiology, diseases, and descriptive terms to prepare students for entry-level positions as medical transcribers, clinical editors, health insurance processors, and patient administration specialists. (CSU)

**AMERICAN INDIAN STUDIES****AIS 106 (3.0 Units)****Indians of North America****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

An introductory course studying native cultures of Canada, the United States, and Mexico utilizing archaeological and ethno-historical materials. The pre-historic migration of humans into the Americas and their adaptations to a diverse geography and environment. (Same as ANTH 106) (CSU, UC)

**AIS 108 (3.0 Units)****Indians of the Southwest****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

A course designed to study the diverse geography and ecology of the Southwest and its prehistoric Hohokam, Anasazi, and Mogollon cultures; the influence of trade and crafts from Mexico; cultural diversity of customs and traditions, languages, social organizations, healing practices and supernatural beliefs of Native Americans of Arizona and New Mexico. (Same as ANTH 108) (CSU, UC)

**AMERICAN SIGN LANGUAGE****AMSL 100 (4.0 Units)****American Sign Language 1****Term Hours: 54 Lec, 36 Lab****Letter Grade or Pass/No Pass**

An introduction to American Sign Language and fingerspelling. The course will focus on conversational skills, grammar and vocabulary as it is used in the Deaf community. Deaf culture will be examined. (CSU, UC)



**AMSL 102 (4.0 Units)**  
**American Sign Language 2**  
**Term Hours: 54 Lec, 36 Lab**  
**Letter Grade or Pass/No Pass**

Recommended Preparation: AMSL 100.

This course is a continuation of American Sign Language 1. Receptive and expressive skills will be further developed through vocabulary enrichment, grammar, practice and interactive conversational exercises. Deaf Culture norms and traditions will be studied in this class. (CSU, UC)

**AMSL 104 (3.0 Units)**  
**Fingerspelling and Numbers**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

Recommended Preparation: AMSL 100.

Introduction to the American manual alphabet (fingerspelling), including numbers, loan signs, acronyms, and abbreviations commonly used in the Deaf community. Extensive drills and practice in both expressive and receptive skills. (CSU)

**AMSL 110 (3.0 Units)**  
**Introduction to Deaf Culture**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

Introduction to Deaf Culture examines the experience of a minority culture—its common past, present debates, and promise for the future. Deaf cultural values, characteristics and dynamics will be discussed as well as issues related to minority dynamics. Organizations and individual perceptions of self in relation to group identity, along with political views as examined through articles, books, and videotapes. (CSU, UC)

**AMSL 112 (3.0 Units)**  
**Interpreting as a Profession**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: AMSL 100.

This course provides a historical framework for the principles, roles, responsibilities, and standard practices of the interpreting profession. Instruction on national testing standards, preparation for certification, and the necessity of ethics as outlined in the Interpreting Code of Ethics. (CSU)

**AMSL 200 (3.0 Units)**  
**American Sign Language 3**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

Recommended Preparation: AMSL 102.

Continues development of American Sign Language conversational skills. Techniques of facial expression, body movement, and specialization as it relates to American Sign Language and Deaf Culture will be studied. (CSU, UC)

**AMSL 202 (3.0 Units)**  
**American Sign Language 4**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

Recommended Preparation: AMSL 200.

The course is a continuation of the American Sign Language skills and fluency developed in AMSL 200. The course increases or strengthens students' expressive and receptive vocabulary competency; however, the major focus of the course continues to be on the expansion of students' skills in the idiomatic usage of conversational ASL, awareness of

ASL grammar, usage and syntax, and facility in expressive sign language at the intermediate level. The students will expand their knowledge and understanding of Deaf Culture. (CSU, UC)

**AMSL 204 (3.0 Units)**  
**American Sign Language 5**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

Recommended Preparation: AMSL 202.

AMSL 204 continues, at the intermediate level, the development of the American Sign Language proficiency students acquired in AMSL 202. Students continue to expand their awareness of ASL conventions, grammar, and vocabulary, including a continued review of topical signs and idioms. Students develop a greater competency in their receptive understanding of extended ASL discourse and in their expression of extended ideas, concepts and stories in ASL. Their expressive competency in discussion of ideas includes an expression of their understanding of Deaf culture. Students continue the growth of their technical awareness of Deaf culture and ASL linguistics. (CSU, UC)

**AMSL 210 (3.0 Units)**  
**Interpreting American Sign Language 1**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

Recommended Preparation: AMSL 204.

AMSL 210 focuses students' sign language facility on the development of English to ASL interpreting skills. The primary focus of the training is on interpreting in educational and consumer settings, along with continued development of idiomatic sign skills. Students are presented and are asked to discuss in the target language the primary elements of the code of ethics. Students continue the intense review of Deaf culture and ASL linguistics started in AMSL 204. (CSU)

**AMSL 212 (3.0 Units)**  
**Interpreting American Sign Language 2**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

Recommended Preparation: AMSL 210.

AMSL 212 focuses students' sign language facility on the development of English to AMSL interpreting skills. The primary focus of the training is on interpreting in medical, legal, mental health and other specialized settings, along with continued development of related idiomatic and vocabulary sign skills. Students are presented and are asked to discuss in the target language the case studies related to the interpreter code of ethics. (CSU)

**AMSL 220 (3.0 Units)**  
**Linguistics of American Sign Language**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: Completion or co-enrollment in AMSL 202.

This course introduces the basic components of linguistics underpinning any language. It focuses on discovering how ASL satisfies these components, and linguistic comparisons between ASL and English. Topics covered include phonology, morphology, syntax, semantics and lexis. This course will focus on comparative and applied linguistics, and also examine structural and theoretical linguistics. Students will learn ASL idioms, advanced mouth morphemes and classifiers, as well as advanced loan signs. This course ultimately aims to apply linguistic knowledge, resulting in increased fluency in ASL, both expressively and receptively. This course will be conducted in ASL. (CSU, UC)

## ANTHROPOLOGY

### **ANTH 100 (3.0 Units)**

#### **Physical Anthropology**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Physical anthropology is the study of humans as biological beings subject to the forces of both evolution and culture. Physical anthropology studies humans in a biological context and explains our relationship to other primates and the rest of the natural world. Throughout the course we will examine anatomical, behavioral, and genetic similarities and differences among the living primates, and by illustrating the scientific method, learn the basic mechanism of the evolutionary processes and trace a pathway of human evolution in relation to environmental adaptation as reconstructed from the fossil record. (CSU, UC)

### **ANTH 102 (3.0 Units)**

#### **Cultural Anthropology**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course explores how anthropologists study and compare human culture. Cultural anthropologists seek to understand the broad arc of human experience focusing on a set of central issues: how people around the world make their living (subsistence patterns); how they organize themselves socially, politically and economically; how they communicate; how they relate to each other through family and kinship ties; what they believe about the world (belief systems); how they express themselves creatively (expressive culture); how they make distinctions among themselves such as through applying gender, racial and ethnic identity labels; how they have shaped and been shaped by social inequalities such as colonialism; and how they navigate culture change and processes of globalization that affect us all. Ethnographic case studies highlight these similarities and differences, and introduce students to how anthropologists do their work, employ professional anthropological research ethics and apply their perspectives and skills to understand humans around the globe. (CSU, UC)

### **ANTH 106 (3.0 Units)**

#### **Indians of North America**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

An introductory course studying native cultures of Canada, the United States, and Mexico utilizing archaeological and ethno-historical materials. The pre-historic migration of humans into the Americas and their adaptations to a diverse geography and environment. (Same as AIS 106) (CSU, UC)

### **ANTH 108 (3.0 Units)**

#### **Indians of the Southwest**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

A course designed to study the diverse geography and ecology of the Southwest and its prehistoric Hohokam, Anasazi, and Mogollon cultures; the influence of trade and crafts from Mexico; cultural diversity of customs and traditions, languages, social organizations, healing practices and supernatural beliefs of Native Americans of Arizona and New Mexico. (Same as AIS 108) (CSU, UC)

### **ANTH 120 (3.0 Units)**

#### **Introduction to Archaeology**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Recommended Preparation: ANTH 102 or GEOG 102.

This is a general introductory course to the methods, goals, and data, theories, and models of anthropological archaeology that contributes to our knowledge of the human past. The course includes a discussion of the methods of scientific inquiry, the history and importance of interdisciplinary studies in archaeological research; dating techniques, methods of survey, types of excavation techniques, analysis and interpretation; cultural resource management; professional ethics; and selected topics of cultural sequences of prehistoric societies. (C-ID ANTH 150) (CSU, UC)

## ARABIC

### **ARAB 100 (5.0 Units)**

#### **Elementary Arabic**

**Term Hours: 90 Lec, 0 Lab**

#### **Letter Grade or Pass/No Pass**

This is a beginning level language course in Modern Standard Arabic. This course will be proficiency based and will develop rudimentary ability in the four basic language skills; speaking, listening, reading, and writing. Emphasis will be placed on understanding basic grammatical concepts, vocabulary building, and sociolinguistics. (CSU, UC)

## ART

### **ART 100 (3.0 Units)**

#### **History of Art I**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

A survey of the Visual Arts from the Prehistoric period to the Renaissance, with emphasis on painting, sculpture and architecture. (C-ID ARTH 110) (CSU, UC)

### **ART 102 (3.0 Units)**

#### **History of Art II**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

A continuation of ART 100, extending from the Renaissance to Contemporary times. May be taken before or concurrently with ART 100. (CSU, UC)

### **ART 104 (3.0 Units)**

#### **History of Modern Art**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

A broad analytical survey of modern art with a focus on painting, sculpture and architecture. The course will emphasize the examination and comparison of art styles of the twentieth century. (CSU, UC)

**ART 106 (3.0 Units)****Women Artists****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ART 100 or ART 102

A survey of the great women artists of history from the ancient times through the twentieth century. Some of the artists to be discussed include: Elizabetta Sirani, Artemesia Gentileschi, Judith Leyster, Elizabeth Vigee-Lebrun, Mary Cassatt, Berthe Morisot, Camille Claudel, Kathe Kollwitz, Frida Kahlo, Georgia O'Keeffe, Helen Frankenthaler. The course will also address the special issues and problems concerning the study of women artists, past and present. (CSU, UC)

**ART 110 (3.0 Units)****Design****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Fundamentals of design and composition; theory of color. Includes organization and utilization of basic elements through design problems. Additional materials fee applies. (C-ID ARTS 100) (CSU, UC)

**ART 112 (3.0 Units)****Design****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Introduction to the concepts, applications, and historical references related to three-dimensional design and spatial composition, including the study of the elements and organizing principles of design as they apply to three-dimensional space and form. Development of a visual vocabulary for creative expression through lecture presentations and use of appropriate materials for non-representational three-dimensional studio projects. Additional materials fee applies. (C-ID ARTS 101) (CSU, UC)

**ART 120 (3.0 Units)****Drawing I****Term Hours: 36 Lec, 72 Lab****Letter Grade Only**

A basic course in drawing from observation as an essential means of expression. The focus is on contour line drawing, mass and line gesture, and value structure in creating the illusion of form. Both dry and wet media are used. Additional materials fee applies. (CSU,UC)

**ART 122 (3.0 Units)****Drawing II****Term Hours: 36 Lec, 72 Lab****Letter Grade Only**

Prerequisite: ART 120 with a grade of "C" or better.

Exploration of artistic concepts, styles, and creative expression related to intermediate-level drawing, focusing on complex subject matter and concepts using a variety of drawing mediums, techniques, and methodologies. Students in this course will build on fundamental drawing skills to develop personalized approaches to content and materials in exercises covering multiple historical and contemporary approaches to drawing. Additional materials fee applies. (C-ID ARTS 205) (CSU, UC)

**ART 124 (3.0 Units)****Painting I****Term Hours: 36 Lec, 72 Lab****Letter Grade Only**

Recommended Preparation: ART 110 and ART 120

Basic techniques of painting will be addressed including an introduction to color theory and basic elements of composition as applied to this medium. Subject matter includes still life and landscape, plus some imaginative subjects created through idea generation. Additional materials fee applies. (C-ID ARTS 210) (CSU, UC)

**ART 126 (3.0 Units)****Painting II****Term Hours: 36 Lec, 72 Lab****Letter Grade Only**

Prerequisite: ART 124 with a grade of "C" or better.

A continuation of Art 124. Includes further development of the understanding of contemporary art issues and topics. Additional materials fee applies. (CSU, UC)

**ART 128 (3.0 Units)****Watercolor Painting****Term Hours: 36 Lec, 72 Lab****Letter Grade Only**

The study of watercolor painting with emphasis upon color, composition and pictorial expression. Exploration of various techniques employing the medium of watercolor. Additional materials fee applies. (CSU, UC)

**ART 160 (3.0 Units)****Graphic Design****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

This is an introductory class in graphic design, with an emphasis on communicating ideas visually through the use of traditional graphic design means (thumbnail sketches, comprehensive layouts, typography, and presentations skills). (CSU)

**ART 170 (3.0 Units)****Photography - Beginning****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: ART 110

This course is an introduction to history, art, craft, and scope of black and white photography. Emphasis will be on the choice, types, uses of various cameras and lenses (with special emphasis on the 35mm format), camera work and handling, composition, and black and white darkroom procedures. Adjustable (manual) 35 mm cameras or equivalent will be used. Additional materials fee applies. (CSU)

**ART 220 (3.0 Units)****Drawing III****Term Hours: 36 Lec, 72 Lab****Letter Grade Only**

Prerequisite: ART 120 and ART 122 with a grade of "C" or better.

An exploration of personalized approaches to content and materials to address complex subject matter and concepts using a variety of drawing mediums, techniques, and methodologies at an advanced intermediate drawing level. Additional materials fee applies. (CSU, UC)

**ART 222 (3.0 Units)****Drawing IV****Term Hours: 36 Lec, 72 Lab****Letter Grade Only**

Prerequisite: ART 120, ART 122 and ART 220 with a grade of "C" or better. A continued exploration of personalized approaches to content and materials to address complex subject matter and concepts using a variety of drawing mediums, techniques, and methodologies at an advanced drawing level. Students in this course will develop a portfolio for transfer or professional endeavors. Additional materials fee applies. (CSU, UC)

**ART 224 (3.0 Units)****Painting III****Term Hours: 36 Lec, 72 Lab****Letter Grade Only**

Prerequisite: ART 124 and ART 126 with a grade of "C" or better. A continuation of ART 126. Advanced studio problems geared toward the development of individual style in painting. Additional materials fee applies. (CSU, UC)

**ART 226 (3.0 Units)****Painting IV****Term Hours: 36 Lec, 72 Lab****Letter Grade Only**

Prerequisite: ART 124, ART 126 and ART 224 with a grade of "C" or better. Recommended Preparation: ART 110 and ART 120. A continuation of ART 224. Advanced studio problems in painting. Students will develop paintings with a unified theme to prepare portfolio for transfer or professional endeavors. Additional materials fee applies. (CSU, UC)

**ART 260 (3.0 Units)****Advertising/Graphic Design****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: ART 100 and ART 102. Emphasis on advanced techniques and individualized studies relative to the preparation of a portfolio for use in admittance to a university or professional school or in seeking employment. (CSU)

**ART 262 (3.0 Units)****Gallery Display I****Term Hours: 18 Lec, 72 Lab****Letter Grade Only**

Theories, techniques and practices of art gallery exhibition including experience in care and preservation of art and seeing an exhibition from beginning to end; methods of locating shows, booking shows, communicating with artists, unpacking and returning exhibitions. (CSU)

**ART 263 (3.0 Units)****Gallery Display II****Term Hours: 18 Lec, 72 Lab****Letter Grade Only**

Prerequisite: ART 262 with a grade of "C" or better. A continuation of ART 262, Gallery Display I, a course in basic gallery exhibition techniques, with emphasis on hanging and arrangement of artworks, art exhibit promotion. (CSU)

**ART 264 (3.0 Units)****Gallery Display III****Term Hours: 18 Lec, 72 Lab****Letter Grade Only**

Prerequisite: ART 263 with a grade of "C" or better. A continuation of ART 263, Gallery Display II, with a focus on art gallery exhibition design, installation, and promotion. (CSU)

**ART 270 (3.0 Units)****Photography - Intermediate****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Prerequisite: ART 170 with a grade of "C" or better. Recommended Preparation: ART 110. This course emphasizes the continued instruction and practice required for understanding and improving B/W film exposure and development procedures, and improving the student's B/W printing skills. It covers various techniques for enhancing B/W negative and print quality. B/W composition and visual communication skills are stressed, as are the understanding and use of light and lighting control, both in the studio and on location. Additional materials fee applies. (CSU, UC)

**ASTRONOMY****ASTR 100 (3.0 Units)****Principles of Astronomy****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

An introduction to the principles of astronomy including physical evolution, tools of the astronomer, the sky, the solar system, the stars, the galaxies, and the universe. (CSU, UC)

**ATHLETICS****ATHL 120 (3.0 Units)****Intercollegiate Cross Country & PE****Term Hours: 0 Lec, 175 Lab****Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules. This class is designed for the preparation and training involved with intercollegiate cross country competition. Maximum credit twelve units. (Formerly ATHL 156, Formerly PE 156) (CSU) (UC credit limited. See a counselor.)

**ATHL 121 (3.0 Units)****Out-of-Season Intercollegiate Cross Country & PE****Term Hours: 0 Lec, 175 Lab****Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules. This class is designed for off-season conditioning/skill development for intercollegiate cross country. Maximum credit twelve units. (CSU)



**ATHL 122 (3.0 Units)**  
**Intercollegiate Volleyball & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for preparation and training involved with intercollegiate volleyball competition. Maximum credit twelve units. (Formerly ATHL 155, Formerly PE 155) (CSU) (UC credit limited. See a counselor.)

**ATHL 123 (3.0 Units)**  
**Out-of-Season Intercollegiate Volleyball & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for off-season conditioning/skill development for intercollegiate volleyball. Maximum credit twelve units. (CSU)

**ATHL 124 (3.0 Units)**  
**Intercollegiate Men's Soccer & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for preparation and training involved with intercollegiate soccer competition. Maximum credit twelve units. (Formerly ATHL 152, Formerly PE 152) (CSU) (UC credit limited. See a counselor.)

**ATHL 125 (3.0 Units)**  
**Out-of-Season Intercollegiate Men's Soccer & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisites: Eligibility will be determined by CCCAA rules.  
This class is designed for off-season conditioning/skill development for intercollegiate soccer. Maximum credit twelve units. (CSU)

**ATHL 126 (3.0 Units)**  
**Intercollegiate Women's Soccer & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for preparation and training involved with intercollegiate soccer competition. Maximum credit twelve units. (CSU)

**ATHL 127 (3.0 Units)**  
**Out-of-Season Intercollegiate Women's Soccer & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for off-season conditioning/skill development for intercollegiate soccer. Maximum credit twelve units. (CSU)

**ATHL 128 (3.0 Units)**  
**Intercollegiate Men's Basketball & PE 1**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for preparation and training involved with intercollegiate basketball competition. Maximum credit twelve units. (Formerly ATHL 157) (CSU)(UC credit limited. See a counselor.)

**ATHL 129 (3.0 Units)**  
**Intercollegiate Men's Basketball & PE 2**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for preparation and training involved with intercollegiate basketball competition. Maximum credit twelve units. (CSU)

**ATHL 130 (3.0 Units)**  
**Intercollegiate Women's Basketball & PE 1**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for preparation and training involved with intercollegiate basketball competition. Maximum credit twelve units. (Formerly ATHL 158) (CSU) (UC credit limited. See a counselor.)

**ATHL 131 (3.0 Units)**  
**Intercollegiate Women's Basketball & PE 2**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for preparation and training involved with intercollegiate basketball competition. Maximum credit twelve units. (CSU)

**ATHL 132 (3.0 Units)**  
**Out-of-Season Intercollegiate Baseball & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for off-season conditioning/skill development for intercollegiate baseball. Maximum credit twelve units. (CSU)

**ATHL 133 (3.0 Units)**  
**Intercollegiate Baseball & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for the preparation and training involved with intercollegiate baseball competition. Maximum credit twelve units. (Formerly ATHL 150) (CSU, UC credit limited. See a counselor.)

**ATHL 134 (3.0 Units)**  
**Out-of-Season Intercollegiate Softball & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for off-season conditioning/skill development for intercollegiate softball. Maximum credit twelve units. (CSU)

**ATHL 135 (3.0 Units)**  
**Intercollegiate Softball & PE**

**Term Hours: 0 Lec, 175 Lab**

**Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for the preparation and training involved with intercollegiate softball competition. Maximum credit twelve units. (Formerly PE 153, Formerly ATHL 153) (CSU) (UC credit limited. See a counselor.)

**ATHL 136 (3.0 Units)****Out-of-Season Intercollegiate Men's Tennis & PE****Term Hours: 0 Lec, 175 Lab****Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for off-season conditioning/skill development for intercollegiate tennis. Maximum credit twelve units. (CSU)

**ATHL 137 (3.0 Units)****Intercollegiate Men's Tennis & PE****Term Hours: 0 Lec, 175 Lab****Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for preparation and training involved with intercollegiate tennis competition. Maximum credit twelve units. (Formerly PE 154, formerly ATHL 154) (CSU) (UC credit limited. See a counselor.)

**ATHL 138 (3.0 Units)****Out-of-Season Intercollegiate Women's Tennis & PE****Term Hours: 0 Lec, 175 Lab****Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for off-season conditioning/skill development of intercollegiate tennis. Maximum credit twelve units. (CSU)

**ATHL 139 (3.0 Units)****Intercollegiate Women's Tennis & PE****Term Hours: 0 Lec, 175 Lab****Letter Grade Only**

Prerequisite: Eligibility will be determined by CCCAA rules.  
This class is designed for preparation and training involved with intercollegiate tennis. Maximum credit twelve units. (CSU)

## AUTOMOTIVE TECHNOLOGY

**AUT 070 (3.0 Units)****Automotive Techniques and Applications****Term Hours: 18 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: AUT 125 and AUT 130  
This course is designed for students that already completed classes in brakes, suspension, wheel alignment, and basic automotive electronics or students who are currently employed in the automotive field. This course consists of reviews of hands-on using worksheets related to diagnose brake repair, steering/suspension repair and four wheel alignment. In addition, the student will be using the latest diagnostic equipment and service techniques of the automotive field. (Nontransferable, AA/AS degree only)

**AUT 075 (3.0 Units)****Basic Shop Skills****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

This is a comprehensive course in tool usage, nomenclature, and terminology of tools and equipment for the beginning student in the technologies. The course is for the student who has not developed a background in industrial technology, as well as for the bilingual student who wants to improve his/her technical vocabulary. (Nontransferable, AA/AS degree only)

**AUT 085 (3.0 Units)****Automotive Maintenance and Repair****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

This course is designed for students with little or no previous automotive maintenance training. This course consists of automotive safety, demonstrations of emergency situations, such as changing a flat tire, replacing burned-out lamps, and performing general vehicle maintenance and repairs. In addition, the student will learn the correct and safe way to use basic hand tools. (Nontransferable, AA/AS degree only)

**AUT 110 (4.0 Units)****Engine Technology****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

For the student with little or no internal combustion engine background. Design, construction, and mechanical function of internal combustion engines including lubricating, cooling, fuel, and electrical systems, and an understanding of the basic sciences relevant to such topics as internal combustion and energy conversion. (CSU)

**AUT 120 (4.0 Units)****Automotive Machine Shop****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: AUT 110  
Review and advanced study of the internal combustion engine and service procedures in the use of automotive machine shop tools and machines for rebuilding the engine. (CSU)

**AUT 122 (4.0 Units)****High Performance Engine Blueprinting I****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: AUT 110  
The student learns advanced set-up and operation procedures of machine shop equipment for engine blueprinting. The student will learn the procedures used to complete the machining of the engine block and component parts. The differences between standard and high performance applications will be highlighted. (Nontransferable, AA/AS degree only)



**AUT 125 (4.0 Units)****Automotive Brakes****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

This course covers the principles and instruction in disassembly, inspection, installation, and adjustments of the modern brake system. Laboratory activities stress brake system diagnosis, repair, machining, and overhaul procedures and proper use of tools and equipment utilized in the industry. Upon successful completion of this course, students are prepared to take the Automotive Service Excellence (ASE) certification examination in brakes. (CSU)

**AUT 130 (3.0 Units)****Automotive Electronics I****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

This introductory course covers the study of automotive electrical systems including basic diagnosis and service procedures on the various systems. Student will analyze, test, and repair electrical problems using electronic equipment. Topics also include the construction, operation, and function of automotive electrical components. (CSU)

**AUT 140 (5.0 Units)****Diesel Engine Maintenance and Repair****Term Hours: 54 Lec, 108 Lab****Letter Grade Only**

Prerequisite: AUT 110 with a grade of "C" or better.

This course provides the theory and skills for repairing diesel engines and related accessories. The proper procedures for disassembling, measuring, and rebuilding are covered. The complete engine is reviewed with emphasis on the status of engine components and to return it to service after proper reassembly, adjustments and testing. (Nontransferable, AA/AS degree only)

**AUT 150 (4.0 Units)****Automotive Electronics II****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: AUT 130

Advanced troubleshooting courses for Automotive Service Technicians. This course is designed for technicians or students, certified or not, who want to service the automotive electronic circuitry. The course provides a solid core of electronics based on microprocessor technology. Students will diagnose the various systems that include: engine computer control, transmission computer control, suspension, antilock brake systems, and various automotive instrumentation. Upon successful completion of this course, students are prepared to take the Automotive Service Excellence (ASE) certification examination in electronics. (CSU)

**AUT 155 (4.0 Units)****Suspension and Wheel Alignment****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

This course covers the principles and construction of passenger vehicle and light truck steering, chassis, and suspension system. Emphasis is placed on the skill required in the diagnosis repair and adjustment of wheel alignment including two and four wheel alignment angles. Complete suspension and overhaul will be done in laboratory activities, as well as alignment using either two or four wheel sensors. Upon successful completion of this course, students are prepared to take the Automotive Service Excellence (ASE) certification examination in steering wheel suspension. (CSU)

**AUT 160 (3.0 Units)****Engine Performance Tune-up****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

This course provides operating theory and hands-on experience in the operation, diagnosis, and repair of automotive fuel systems with carburetors, basic throttle body and part fuel injection systems. Students learn to use the four gas analyzers. (CSU)

**AUT 165 (5.0 Units)****Diesel Preventive Maintenance and Inspection****Term Hours: 54 Lec, 108 Lab****Letter Grade Only**

Prerequisite: AUT 110 with a grade of "C" or better.

The Diesel Preventive Maintenance and Inspection course trains students in: theory, design, operation, troubleshooting and maintenance of heavy duty truck and farm equipment. Upon successful completion of this course, the students are prepared to take the Automotive Service Excellence (ASE) Certification Exam in Preventive Maintenance T8. (Nontransferable, AA/AS degree only)

**AUT 170 (3.0 Units)****Engine Diagnosis and Repair****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

This course provides advanced operation and hands-on experience of electronic injection systems and their sub-assemblies. Students will learn operation and repairs of sensors and actuators or injection systems. This class emphasizes diagnostic procedure and techniques using basic and sophisticated test equipment. (CSU)

**AUT 180 (4.0 Units)****Manual Transmissions and Power Trains****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

This course discusses modern manual transmissions, driveline and differential theory of method of repair, service equipment operation, and techniques of problem diagnosis procedures for import and domestic vehicles. Upon successful completion of this course, students are prepared to take the Automotive Service Excellence (ASE) certification examination in manual transmissions. (CSU)

**AUT 210 (3.0 Units)****Automotive Air Conditioning****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

The course is designed to impart knowledge and information needed by the student to enter and make progress in employment on productive basis in the automotive air conditioning service industry. The use of charging station and systems will be part of A/C course. Upon successful completion of this course, students are prepared to take the Automotive Service Excellence (ASE) certification examination in air conditioning. (CSU)

**AUT 220 (4.0 Units)****Mechanical Automatic Transmissions****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Design, construction, mechanical, and hydraulic function and repairs of the automatic transmission. (CSU)

**AUT 230 (3.0 Units)**  
**Emissions Control and Computer Systems**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

This is an advanced engine computer and drivability course. It emphasizes diagnostic procedure and techniques using all types of equipment and procedures. This class brings together all knowledge from AUT 160 and AUT 170, and allows students to diagnose all systems of the automobile. Upon successful completion of this course students are prepared to take the Automotive Service Excellence (ASE) certification examination in electronics, engine performance, and advanced engine performance. (CSU)

**AUT 231 (4.0 Units)**  
**Auto Emission Control System**

**Term Hours: 36 Lec, 108 Lab**  
**Letter Grade Only**

The Clean Air Car Course is designed to prepare students or technicians for vehicle emission diagnosis and emission control system repair. Successful completion of this course allows the students or technicians to take the state smog examination. Students enrolling in this course are expected to have a firm background in automotive engine theory and repair. This is not a beginner course; this course is divided into four sections or modules. These modules consist of reviews in: rules and regulations of the smog system, repair and maintenance of emission control devices, engine tune-up and fuel systems, electrical/electronic devices and testing, and repairing computerized engine controls. (Nontransferable, AA/AS degree only)

**AUT 235 (3.0 Units)**  
**Automotive Electrical/Electronic Instruments**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

Recommended Preparation: AUT 130

The automotive professional uses different types of electrical/electronic instruments and equipment on a daily basis to troubleshoot and maintain various electronic circuits. This course is designed for technicians or students with little previous automotive electronic training. The testers or instruments can range from a logical test light all the way to a lab scope and anything in between. The student will learn how to use and interpret the most popular electronic equipment to diagnose and repair today's vehicle circuitry. In addition, this course covers the proper procedures for using the correct accessories to repair automotive winding computer system. Upon completion of this course, the student will have the capability to interpret all electronic signals and be prepared for the use of any electrical/electronic equipment available in the automotive field. (Nontransferable, AA/AS degree only)

**AUT 240 (3.0 Units)**  
**Diesel Engine Tune-up**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

Prerequisite: AUT 110 with a grade of "C" or better.

This course covers the principles of tune-up and the procedures for servicing the diesel engine. Practical emphasis is placed on proper disassembling, diagnosis calibrating, and testing different types of pumps and injectors. Proper servicing procedures will be followed in servicing, testing, and analyzing the fuel system and electrical circuits. (CSU)

**AUT 250 (4.0 Units)**  
**Electronic Automatic Transmissions**

**Term Hours: 36 Lec, 108 Lab**  
**Letter Grade Only**

Prerequisite: AUT 220 with a grade of "C" or better.

Advanced study using four major domestic and foreign automatic transmissions, with emphasis on practical rebuilding of automatic transmissions, including locking torque converters and 4-speed overdrive and front wheel drive transaxles. Applied shop practices for advanced students who wish to refine technical skills prior to obtaining employment in the industry. (CSU)

**AUT 285 (4.0 Units)**  
**Alternative Fuels for Diesel Engines**

**Term Hours: 36 Lec, 108 Lab**  
**Letter Grade Only**

Prerequisite: AUT 110 with a grade of "C" or better.

This course provides an introduction to various alternative fuel technologies being used in heavy duty diesel engines and farm equipment. This course covers basic operation with ethanol, biodiesel, and compressed natural gas (CNG), as well as liquefied natural gas (LPG) combined with fuel cell technologies. In addition, this course prepares the student to take Exam Certification in alternative fuels (ASE FI). (Nontransferable, AA/AS degree only)

## BIOLOGY

**BIOL 090 (3.0 Units)**  
**Anatomy and Physiology for Health Occupations**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Introductory study of the structure and function of the human organism. Class is structured for health occupation students. It is not acceptable for pre-medical, pre-dental, pre-chiropractic, pre-physical therapy, or registered nursing students, and it is not open to students who have completed BIOL 200, BIOL 202, BIOL 204, or BIOL 206 with a grade of "C" or better. (Nontransferable, AA/AS degree only)

**BIOL 092 (4.0 Units)**  
**Microbiology for Advanced Placement of VN to RN Nursing Students**

**Term Hours: 36 Lec, 108 Lab**  
**Letter Grade Only**

Prerequisite: CHEM 100 and BIOL 100 or current California LVN license. For students currently accepted for advanced placement by the IVC Nursing Department. Provides student with fundamental concepts of the structure and physiology of non-disease and disease producing microorganisms with lesser emphasis on non-disease producers than BIOL 220. Basic techniques for culturing, staining, and identifying bacteria. (Nontransferable, nondegree applicable)



**BIOL 100 (4.0 Units)**  
**Principles of Biological Science**

**Term Hours: 54 Lec, 54 Lab**

**Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.

A comprehensive one semester general biology course for non-majors. Includes life from the molecular to the organismic level of both plants and animals and their interactions within the environment. Special emphasis is put on human biology within appropriate areas of study. Appropriate for general education as well as nursing, pre-professional, and higher level biology courses. Includes laboratory component. (CSU) (UC credit limited. See a counselor.)

**BIOL 120 (4.0 Units)**

**General Zoology I**

**Term Hours: 36 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: MATH 091 or equivalent with a grade of "C" or better.

Recommended Preparation: Any laboratory science college level course, with a grade of "C" or better.

Introduction to basic principles of animal biology with reference to structure, functions, classification, heredity, and the environment of animals in general with special emphasis on the invertebrates. BIOL 122 may be taken before BIOL 120. (CSU, UC)

**BIOL 122 (4.0 Units)**

**General Zoology II**

**Term Hours: 36 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: MATH 091 or equivalent with a grade of "C" or better.

Recommended Preparation: Any laboratory science college level course, including, but not limited to BIOL 120 with a grade of "C" or better.

Introduction to comparative anatomy and physiology, development of vertebrate forms and their interrelationships. (CSU, UC)

**BIOL 140 (3.0 Units)**

**General Botany**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

This introductory course covers the general principles of botany. The emphasis is on anatomy, morphology, life cycles, embryology, physiology, identification of plants, ecological principles, and a plant kingdom survey. Field trip(s)/activities are included with the course. (CSU, UC)

**BIOL 150 (3.0 Units)**

**Human Genetics**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.

A one semester course examining genetics from a human perspective. Discussion of patterns of inheritance, human genetic diseases and disorders, and the application of genetic technologies in other organisms for human use. (CSU, UC)

**BIOL 180 (4.0 Units)**

**General Biology: Molecules, Cells and Genetics**

**Term Hours: 54 Lec, 54 Lab**

**Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.

This course is one of two entry-level courses designed for life science majors, health care, and science educators intending to transfer to four-year institutions. However, the course is open to all students. This course will introduce students to molecules of cells, cell structures and functions, cell division, cellular respiration, photosynthesis, molecular biology, and genetics. (CSU, UC)

**BIOL 182 (4.0 Units)**

**General Biology: Principles of Organismal Biology**

**Term Hours: 54 Lec, 54 Lab**

**Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.

This is one of two entry-level courses designed for life science, biology, health care, and science education majors intending to transfer to four-year institutions. However, this course is open to all students. This course provides students an introduction to biology and the scientific method. Additionally, properties of life leading to genetic and biological diversity are studied. The course surveys evolutionary relationships, systematics, ecology, biological diversity, population regulation, and physiology of living organisms (Protista, Fungi, Plants, and Animals). Emphasis is on structure and function at the organismal level. (C-ID BIOL 140) (CSU, UC)

**BIOL 200 (4.0 Units)**

**Human Anatomy and Physiology I**

**Term Hours: 36 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: MATH 091 and CHEM 100 and BIOL 100 or BIOL 122 or BIOL 180 or BIOL 182 with a grade of "C" or better; or MATH 091 with a grade of "C" or better and current California LVN/RN license.

Human anatomy and physiology. A two semester study of the structure and function of the human organism, from the molecular to the gross level. This course may require the use of human cadavers for observation and/or dissection. Preparatory for RN program and paramedical programs. (CSU) (UC credit limited. See a counselor.)

**BIOL 202 (4.0 Units)**

**Human Anatomy and Physiology II**

**Term Hours: 36 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: BIOL 200 with a grade of "C" or better; or MATH 091 with a grade of "C" or better and current California LVN or RN license.

Part two of a two semester study of the structure and function of the human organism, from the molecular to the gross level. This course may require the use of human cadavers for observation and/or dissection. Preparatory for RN program and paramedical programs. (CSU) (UC credit limited. See a counselor.)

**BIOL 204 (4.0 Units)****Human Anatomy****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Prerequisite: MATH 091 and BIOL 100 or BIOL 122 or BIOL 180 or BIOL 182, with grades of "C" or better; or MATH 091 with a grade of "C" or better and current California LVN/RN license.

Lecture and laboratory course designed to study the fundamental principles of the human body structure at the cellular, tissue, organ and systems level of organization, including the cat and organ dissection, study of the human skeleton, structural-functional relationships, and appreciation of related human diseases and aging. This course may require the use of human cadavers for observation and/or dissection. (C-ID BIOL 110B) (CSU) (UC credit limited. See a counselor.)

**BIOL 206 (4.0 Units)****Human Physiology****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Prerequisite: MATH 091 and CHEM 100 and BIOL 204 with grades of "C" or better; or MATH 091 with a grade of "C" or better and current California LVN or RN license.

Lecture and laboratory course designed to introduce the function of the human body from cellular through organ system levels of organization. Emphasis will be on integration of body systems and interrelationships for maintaining homeostasis. The practical applications of the basic concepts are presented. This course may require the use of human cadavers for observation and/or dissection. (C-ID BIOL 120B) (CSU) (UC credit limited. See a counselor.)

**BIOL 220 (5.0 Units)****General Microbiology****Term Hours: 54 Lec, 108 Lab****Letter Grade Only**

Prerequisite: MATH 091 and CHEM 100 and BIOL 100 or BIOL 120 or BIOL 180 or BIOL 182 with grades of "C" or better; or MATH 091 with a grade of "C" or better and current California LVN/RN license.

Provides students with fundamental concepts of the structure and physiology of nondisease and disease producing microorganisms with particular attention to bacteria. Basic techniques for culturing, staining, counting and identifying microorganisms. Designed to meet the requirement to enter one of the medical fields as well as general education. (CSU, UC)

## BUILDING CONSTRUCTION

**BLDC 101 (30. Units)****Safety Standards (Cal/OSHA) 30-Hour Card****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Safety Standards is a course designed to afford the student the opportunity to earn the General and Construction Industry OSHA 30-Hour Card. The course will provide the student with essential instruction and learning allowing the student to develop and master knowledge and skills associated with safety and health recognition and prevention at a worksite. Topics include: OSHA and Cal OSHA standards, hazard analysis and identification, acceptable safety practices, proper selection and use of personal protective equipment, job hazard analysis and mitigation measures, hazard communication standards, and inspections, citations, and penalties. OSHA card processing fee will apply. (Nontransferable, AA/AS degree only)

**BLDC 110 (3.0 Units)****Construction Blueprints, Specifications, Measurements, and Codes****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

This is an introduction to construction blueprint reading and specifications. Study of the methods of graphic representation of building materials, symbols, measurements, and interpretation of building codes. (Nontransferable, AA/AS degree only)

**BLDC 115 (3.0 Units)****Energy Fundamentals****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: BLDC 110.

This course in an introductory study in home performance concepts, California Energy Codes. Instruction will be based on blower door and duct tester standards, infrared camera monitoring, shell sealing standards, duct system analysis, repair and sealing standards. Cost and benefit analysis of sealing repairing and retrofitting for energy losses. Included will be the discussion on the leading organizations that influence sustainable buildings such as energy star and LEED, their design, and efficiency. Learning opportunities will be enhanced through a combination of lecture and laboratory activities. (Nontransferable, AA/AS degree only)

**BLDC 130 (4.0 Units)****Carpentry Layout and Framing****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: BLDC 110 and BLDC 140

This course provides instruction in building layout and structural framing systems typical to residential construction and will include: materials, fasteners, measuring, use of tools, construction safety, and hands-on applications. (Nontransferable, AA/AS degree only)

**BLDC 135 (3.0 Units)****Residential Plumbing Applications****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: BLDC 110.

This course is an introductory study of the layout and fabrication of a residential plumbing system. Discussion will include water and waste water plumbing systems for residential applications. In addition there will be a component on residential plumbing design, with emphasis on repair and maintenance of fixture faucets and drains and water leaks. Installations will be guided by the local and national plumbing codes. Learning opportunities will be enhanced through a combination of lecture and laboratory activities. (Nontransferable, AA/AS degree only)

**BLDC 140 (3.0 Units)****Building Construction Methods and Materials****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: Average to above average mathematics and communications skills.

This course will introduce students to construction methods and materials, the characteristics of materials, and construction processes. Methods, equipment, personnel, regulatory organizations, and safety considerations which are common factors in the construction industry will be discussed. (Nontransferable, AA/AS degree only)

**BLDC 145 (3.0 Units)****Concrete Formwork, Layout, and Setting****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: BLDC 140

This course will introduce students to techniques, practices, and procedure in concrete formwork, layout, and settings, which will lead to employment in the cement mason occupations within the Building Construction Trades Industry. (Nontransferable, AA/AS degree only)

**BLDC 150 (4.0 Units)****Carpentry Methods, Materials, and Tools****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: BLDC 110, BLDC 130, and BLDC 140.

Carpentry construction methods require the use of construction methods, materials, and tools to achieve a completed structure. Use and operation of hand and power tools used for a variety of construction materials will be studied and applied during this course. Application of materials and execution of construction methods will be guided by building codes and in compliance with safety regulations. (Nontransferable, AA/AS degree only)

**BLDC 155 (3.0 Units)****Solar Thermal and Water Efficiency****Term Hours: 18 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: BLDC 110

This course is an introductory study in solar thermal concepts, water conservation, water efficiency retrofits, California Energy Codes. Instruction will be based on solar thermal collector installation and operation and water saving devices and equipment. Included will be the discussion on energy saving opportunities with the use of various types of collectors such as storage or tank-type and tankless systems. Cost and benefit analysis will be studied of various water heating systems along with energy conservation and conversion. Learning opportunities will be enhanced through a combination of lecture and laboratory activities. (Nontransferable, AA/AS degree only)

**BLDC 165 (4.0 Units)****Concrete Materials, Methods, and Tools****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: BLDC 145

This course will continue to prepare the student in the occupational field of cement mason by including learning activities in cement manufacturing, portland cement types, aggregates, admixtures, reinforcement, material handling, placing, compacting, finishing, hand tooling, and mechanical tools. (Nontransferable, AA/AS degree only)

**BLDC 170 (3.0 Units)****Essentials of Efficient Green Construction****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: BLDC 110

This course is an introductory study in sustainable building resources and applications, LEED certification requirements, home performance concepts, California Energy Codes, green building, and their relationships to the environment and residential construction. Instruction will

be based on types of materials, inspections, construction applications, material retrofitting, career opportunities, and analysis of retrofitting costs. Included will be the discussion on the standard setting organizations that influence sustainable building, their design and efficiency. Learning opportunities will be enhanced through a combination of lecture, laboratory activities. (Nontransferable, AA/AS degree only)

**BLDC 175 (3.0 Units)****Home Performance Retrofits****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: BLDC 110

This course is an introductory study in home performance concepts, California Energy Codes, green building in residential construction. Instruction will be based on types of energy efficient materials, inspections, construction applications and material retrofitting. Cost and benefit analysis of retrofitting costs. Included will be the discussion on the leading organizations that influence sustainable buildings such as energy star and LEED, their design, and efficiency. Learning opportunities will be enhanced through a combination of lecture and laboratory activities. (Nontransferable, AA/AS degree only)

**BLDC 180 (3.0 Units)****Building Planning and Cost Estimation****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: BLDC 140, BLDC 160, and Construction Trades experience.

This course will present the subjects of planning and cost estimating to develop the knowledge of material determination, production quantities, and costs associated with construction. Included will be the understanding of the relationship between planning, estimating, and cost accounting in construction. (Nontransferable, AA/AS degree only)

**BLDC 185 (4.0 Units)****Concrete Footings, Flatwork, and Detail Work****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: BLDC 165

This course is the study of concrete construction to include the skills and understanding necessary for the entry-level cement mason to locate, layout, and complete the formwork for footings. Included will be elements of flatwork concrete construction and decorative non-traditional detail work. (Nontransferable, AA/AS degree only)

**BLDC 190 (3.0 Units)****Carpentry Trim and Detail Work****Term Hours: 18 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: BLDC 150

Trim and detail work in carpentry construction require a different set of technical and skills competencies. This course is a survey of the technical knowledge, skill sets, and attention to details needed for building and residential construction finish work. Included in this course will be interior finish, doors, windows, drywall, trim, specialty tools, and construction safety. (Nontransferable, AA/AS degree only)

## BUSINESS ADMINISTRATION

### **BUS 059 (3.0 Units)**

#### **Practical English for the Workplace**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Multi-level, multi-content (such as employability skills, workplace survival skills, and workplace social skills) for students wanting to have careers in vocational areas, such as Automotive Technologies, Office Technologies, and Early Childhood Education. The course emphasizes practical vocabulary and grammar of English within the context of the workplace. (Formerly ENGL 060) (Nontransferable, AA/AS degree only)

### **BUS 061 (3.0 Units)**

#### **Business English**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade or Pass/No Pass**

Recommended Preparation: Concurrent enrollment in BUS 063 and/or ENGL 009

This course will provide comprehensive instruction in the correct use of English grammar with an emphasis on business number style skills; and provide an opportunity to apply correct usage and style and effective techniques for writing in today's work world. (Nontransferable. AA/AS degree only)

### **BUS 063 (3.0 Units)**

#### **Essentials in Workplace Communication**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade or Pass/No Pass**

This course emphasizes the basic elements and skills necessary for effective workplace communications. Topics covered include: Business vocabulary and pronunciation as well as spelling and punctuation. Special attention will be devoted to improving written, oral and presentation competencies. (Formerly BUS 060) (Nontransferable. AA/AS degree only)

### **BUS 100 (3.0 Units)**

#### **Practical Accounting**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade or Pass/No Pass**

This basic course will teach students to journalize and post transactions common to a service type business and teach them the end of the fiscal period functions on the accrual basis. (Formerly BUS 010) (Nontransferable, AA/AS degree only)

### **BUS 105 (3.0 Units)**

#### **Business Office Math**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course provides practice with a wide range of mathematical procedures used in various business applications. Students use a combination of estimation, ten-key calculators, and computers. Topics include a review of basic math skills, banking, invoices, markup and markdown, discounts, interest, promissory notes, and credit. (Nontransferable, AA/AS degree only)

### **BUS 122 (2.0 Units)**

#### **Business Plan Development**

**Term Hours: 36 Lec, 0 Lab**

#### **Letter Grade Only**

This course will introduce the development of effective business plans through the assessment of a business concept, collection and organization of market research data, and the preparation of financial projections for businesses. (Nontransferable, AA/AS degree only)

### **BUS 124 (3.0 Units)**

#### **Introduction to Business**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

A basic beginning college course that introduces U.S. business and industry. Includes the nature and importance of business, forms of business ownership, organization, management, finance, marketing, government and legal regulations, pricing and taxes. Class activities include participation in team-building concepts. (C-ID BUS 110) (CSU, UC)

### **BUS 126 (3.0 Units)**

#### **Business and the Legal Environment**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

An introduction to the legal environment of business. The following topics are covered: sources of law, judicial systems, administrative law, and governmental regulation, crimes and torts, protection of intellectual property, contracts, commercial paper, agency, labor law, legal forms of business organization, securities regulation, consumer and environmental law, warranties, and product liability, bankruptcy, real property law and international law. Collaborative learning and the team approach are used in doing legal research, reading and understanding court opinions and writing briefs of cases. (C-ID BUS 120) (CSU, UC)

### **BUS 132 (3.0 Units)**

#### **Business Management**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Recommended Preparation: BUS 124

A study of management theories and processes as they apply in the contemporary business world. The course is based on the application of the four functions of management - planning, organizing, leading, and controlling - in the effective achievement of organizational objectives. Management activities are practiced in organizational situations using case studies, simulations, and class projects. (Same as AG 132) (CSU)

### **BUS 134 (3.0 Units)**

#### **Management Concepts of Supervision**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

A study of supervisory management concepts that include definition of supervision and management, description of supervisory management functions and a supervisor's role in managing organizational resources, staffing, methods of performance appraisal, problem solving, and decision-making techniques, motivation, conflict resolution, compensation, leadership, communication, health and safety, training and development, labor relations, discipline, and how to cope with change. (CSU)



**BUS 136 (3.0 Units)**  
**Human Relations in Management**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Study of human relations as they apply to management. Topics covered include model of organizational behavior, social systems, organizational culture, communications management, motivation, performance appraisal, employee attitudes and their effects, leadership and supervision, nature of participation, interpersonal dynamics, management of change, organizational development, ethics, social responsibility, labor relations, equal employment opportunity, stress and counseling. Collaborative learning with team building approaches are employed to enhance interpersonal skills. (CSU)

**BUS 144 (3.0 Units)**  
**Principles of Marketing**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

A course of study designed to introduce students to the organization and operation of marketing activities, including the study of the marketing mix, markets, promotion and strategic planning. (CSU)

**BUS 148 (3.0 Units)**  
**Personal Finance**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

This course is an introduction to planning and managing personal finances. Emphasis is on real world situations such as budgeting, credit and borrowing, money management and tax strategies, risk and insurance analysis, consumer purchasing strategies, investment instruments and alternatives to retirement and estate planning. (CSU)

**BUS 152 (1.0 Unit)**  
**Basic Keyboarding**

**Term Hours: 18 Lec, 18 Lab**

**Letter Grade or Pass/No Pass**

This course is designed to develop speed and accuracy in the use of the computer keyboard. The student will learn to operate by touch the letter, number, and symbol keys using the proper typing technique. (CSU)

**BUS 154 (3.0 Units)**  
**Beginning Keyboarding and Document Formatting**

**Term Hours: 36 Lec, 36 Lab**

**Letter Grade or Pass/No Pass**

This course is designed to teach the student the basic operations of a computer including using alphabet, numeric and symbol keys. The course will also include the basic commands needed to format business documents. (CSU)

**BUS 156 (3.0 Units)**  
**Keyboarding: Speed and Accuracy**

**Term Hours: 36 Lec, 36 Lab**

**Letter Grade or Pass/No Pass**

Recommended Preparation: Ability to keyboard 20 nwpm.

An individualized diagnostic, prescriptive method of developing accuracy and speed. Emphasis is placed on development of keyboarding speed and accuracy ratings between 20-90 nwpm. (CSU)

**BUS 164 (3.0 Units)**  
**Microsoft Word for the Workplace**

**Term Hours: 36 Lec, 36 Lab**

**Letter Grade or Pass/No Pass**

Recommended Preparation: Keyboard skills of 20 nwpm.

This course stresses those competencies required of the office worker in today's business environment. It is designed to teach students production skills for today's office environment using word processing software as well as develop skills for handling business procedures. (CSU)

**BUS 169 (2.0 Units)**  
**Records Management**

**Term Hours: 36 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

Lecture and supervised individual and group procedural activity designed to acquaint students with progressive filing and records management rules, procedures and techniques. Alphabetic, numeric, geographic and subject filing are studied. Microsoft Access is used extensively. (CSU)

**BUS 172 (3.0 Units)**  
**Office Procedures for the Workplace**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

Recommended Preparation: BUS 164

This course stresses all business skills and those competencies required of the office worker in today's business environment. The course provides realistic and meaningful experiences to strengthen student's administrative skills and knowledge of business procedures and technological skills. The role of the administrative assistant will be analyzed as well as the global influences that affect the way business is conducted. (CSU)

**BUS 180 (4.0 Units)**  
**Microsoft Office Suite for the Workplace**

**Term Hours: 54 Lec, 36 Lab**

**Letter Grade or Pass/No Pass**

Recommended Preparation: BUS 164

This course is designed to strengthen skills needed in a business office. Students will broaden word processing skills; develop spreadsheets and databases; create documents using desktop publishing software; and search for, evaluate, and use information from the Internet. Students will also develop business documents, presentations, and web pages using multimedia. After completing the class, the student will have a foundation for integrating a variety of business applications in an office setting. (CSU)

**BUS 210 (4.0 Units)**  
**Principles of Financial Accounting**

**Term Hours: 72 Lec, 18 Lab**

**Letter Grade Only**

Recommended Preparation: MATH 081 or equivalent.

Theory and practice of accounting applicable to recording and reporting of business transactions for proprietorships, partnerships, and corporations as they relate to external use. Includes the study of asset, liability, and equity accounts; revenue and expense recognition; inventory accounting; stockholder equity, earnings, and dividends; long-term bonds and investments; and statements of cash flows. (C-ID ACCT 110) (CSU, UC)

**BUS 220 (4.0 Units)**  
**Principles of Managerial Accounting**

**Term Hours: 72 Lec, 18 Lab**

**Letter Grade Only**

Prerequisite: BUS 210 or equivalent with grade of "C" or better  
Covers how managers use accounting information in decision-making, planning, directing operations, and controlling. Focuses on cost terms and concepts, cost behavior, cost structure, and cost-volume-profit analysis. Examines profit planning, standard costs, operations and capital budgeting, cost control, and accounting for costs in manufacturing organizations. (C-ID ACCT 120) (CSU, UC)

**BUS 230 (3.0 Units)**  
**Introduction to Governmental Accounting**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: BUS 210 with a grade of "C" or better.  
Theory and practice of accounting for governmental entities. Focus on recording and reporting transactions. Topics include accounting for governmental, proprietary-type, and fiduciary funds; budgetary accounting; and governmental financial statements. (CSU)

**BUS 260 (3.0 Units)**  
**Business Communications**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: ENGL 110 with a grade of "C" or better.  
This course will teach the principles of effective communication applied to business letters, memos, e-mail, resumes, and analytical reports. It includes the organization, writing, and presentation of business documents and incorporates the basic principles of speaking effectively for business. (C-ID BUS 115) (CSU)

## CHEMISTRY

**CHEM 100 (4.0 Units)**  
**Introduction to Chemistry**

**Term Hours: 54 Lec, 54 Lab**

**Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.  
Elementary principles of general inorganic chemistry, a preparatory course for CHEM 200. Previous science background is recommended but not required. This course is designed for non-science majors and students who need only a one-semester general chemistry course, and also for students entering a paramedical and allied health fields, and industrial applications such as power plants. This course will satisfy the prerequisite for CHEM 200. (CSU) (UC credit limited. See a counselor.)

**CHEM 160 (5.0 Units)**  
**Introduction to General, Organic and Biological Chemistry**

**Term Hours: 72 Lec, 54 Lab**

**Letter Grade Only**

Prerequisites: CHEM 100 or equivalent and MATH 091 or equivalent with grades of "C" or better.  
This is a one-semester lecture and lab chemistry course covering topics from general, organic, and biological chemistry, with emphasis on organic and biochemistry, necessary to understand human biochemistry and pharmacology. It is designed for students majoring in Nursing and Allied Health Sciences. (CSU, UC)

**CHEM 200 (5.0 Units)**  
**General Inorganic Chemistry I**

**Term Hours: 54 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: CHEM 100 with a grade of "C" or better.  
Basic principles and calculations of chemistry with emphasis on stoichiometry and dimension analysis applied to various problem types. Fundamental principles and theory of atomic and molecular structure as related to bonding and molecular geometry. Study of kinetic molecular theory, the first law of thermodynamics, periodic relationships of the elements, physical states of matter, solution chemistry, and oxidation-reduction. The laboratory is closely related to lecture topics and includes methods of classical experimentation as well as certain instrumental analysis. (C-ID CHEM 110) (CSU, UC)

**CHEM 202 (5.0 Units)**  
**General Inorganic Chemistry II**

**Term Hours: 54 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: CHEM 200 with a grade of "C" or better.  
This course includes a detailed study of chemical reaction rates, the equilibrium condition as it applies to acids and bases as well as solubility, thermodynamics and the properties of spontaneous reactions, electrochemistry, chemistry of the transition elements, and nuclear processes. A survey of topics in organic chemistry and biochemistry is also included. This is the second course of the chemistry series. (C-ID CHEM 120S) (CSU, UC)

**CHEM 204 (5.0 Units)**  
**Organic Chemistry I**

**Term Hours: 54 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: CHEM 202 with a grade of "C" or better.  
This course is a study of various reaction mechanisms and properties of hydrocarbons, alkyl halides, alcohols, thiols, and ethers. Stereochemical properties of compounds are investigated and related to structure and observed reactions. Instrumental methods of analysis such as IR, UV-VIS, NMR, and mass spectrometry are discussed. This course is intended for students majoring in chemistry, biology, and pre-medical sciences. (CSU, UC)

**CHEM 206 (5.0 Units)**  
**Organic Chemistry II**

**Term Hours: 54 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: CHEM 204 with a grade of "C" or better.  
This course is a study of various reactions and properties aldehydes, ketones, carboxylic acids, aromatic compounds, amines, conjugated dienes, lipids, carbohydrates, and organic polymers. A survey of various biochemical topics such as metabolism, protein structure, and DNA is also included. This course is a continuation of CHEM 204 and is intended for students majoring in chemistry, biology, and pre-medical sciences. (CSU, UC)

## CHILD DEVELOPMENT

### **CDEV 100 (3.0 Units)**

#### **Principles and Practices of Teaching Young Children**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

An examination of the underlying theoretical principles of developmentally appropriate practices applied to programs, environments, emphasizing the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, creative and intellectual development for all children. This course includes a review of the historical roots of early childhood programs and the evolution of the professional practices promoting advocacy, ethics and professional identity. (C-ID ECE 120) (CSU)

### **CDEV 101 (3.0 Units)**

#### **Health, Safety and Nutrition**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Introduction the laws, regulations, standards, policies and procedures and early childhood curriculum related to child health, safety and nutrition. The key components that ensure physical health, mental health and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. Focus on integrating the concepts into every day planning and program development for all children. (C-ID ECE 220) (CSU)

### **CDEV 102 (1.0 Unit)**

#### **First Aid and CPR for Teachers of Young Children**

**Term Hours: 18 Lec, 0 Lab**

#### **Letter Grade Only**

First Aid, CPR Module B: American Red Cross or American Heart Association certification in infant, child and adult CPR and First Aid. (CSU)

### **CDEV 103 (3.0 Units)**

#### **Child, Family and Community**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

An examination of the developing child in a societal context focusing on the interrelationship of family, school community and emphasizes historical and socio-cultural factors. The processes of socialization and identity development will be highlighted, showing the importance of respectful, reciprocal relationships that support and empower families. (C-ID CDEV 110) (CSU)

### **CDEV 104 (3.0 Units)**

#### **Child Growth and Development**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. There will be an emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages. (Same as PSY 104) (C-ID CDEV 100) (CSU) (UC credit limited. See a counselor.)

### **CDEV 105 (3.0 Units)**

#### **Introduction to Curriculum**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine teacher's role in supporting development and fostering the joy of learning for all young children using observation and assessment strategies emphasizing the essential role of play. An overview of content areas will include but not be limited to: Language and literacy, social and emotional learning, sensory learning, art and creativity, math and science. (C-ID ECE 130) (CSU)

### **CDEV 106 (3.0 Units)**

#### **Observation and Assessment**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Prerequisite: CDEV 104 with a grade of "C" or better.

This course focuses on the appropriate use of assessment and observation strategies to document development, growth, play and learning in order to join with families and professionals in promoting children's success and maintaining quality programs. Recording strategies, rating systems, portfolios, and multiple assessment methods are explored. (C-ID ECE 200) (CSU)

### **CDEV 107 (3.0 Units)**

#### **Teaching in a Diverse Society**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Examination of the development of social identities in diverse societies including theoretical and practical implications of oppression and privilege as they apply to young children, families, programs, classrooms and teaching. Various classroom strategies will be explored emphasizing culturally and linguistically appropriate anti-bias approaches supporting all children in becoming competent members of a diverse society. Course includes self-examination and reflection on issues related to social identity, stereotypes and bias, social and educational access, media and schooling. (C-ID ECE 230) (CSU)

### **CDEV 120 (2.0 Units)**

#### **Language and Literature for Young Children**

**Term Hours: 36 Lec, 0 Lab**

#### **Letter Grade Only**

Development of language and communication skills in the first five years of life. Creating a language arts curriculum for toddlers and preschoolers with an emphasis on oral communication using storytelling, puppets, and dramatic play. Analysis of stories and literature for their value to the young child. (CSU)

### **CDEV 121 (2.0 Units)**

#### **Art for Young Children**

**Term Hours: 36 Lec, 0 Lab**

#### **Letter Grade Only**

Develop aesthetic and perceptual awareness in the toddler and preschool child through exploration of various process-oriented art media, activities, and experiences. Emphasis is placed on the development of age appropriate art curriculum activities, basic teaching skills, guidance techniques, equipment and materials. (CSU)

**CDEV 122 (2.0 Units)**  
**Science and Math for Young Children**

**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

Developing a science curriculum aimed at introducing the young child to physical science, simple chemistry and biological science concepts. Developing a math curriculum introducing number and math concepts. Emphasis is placed on developing an age appropriate science and math curriculum and planning a science environment that is meaningful and exciting for the young child. (CSU)

**CDEV 123 (2.0 Units)**  
**Music and Movement for Young Children**

**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

Music, rhythm and body movement experiences for young children. Development of teacher skills with simple music instruments and familiarity with resource materials for program planning and exploration of motor skills and movement concepts. (CSU)

**CDEV 124 (2.0 Units)**  
**Creative Cooking for Children**

**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

Cooking experiences for the preschool classroom. Development of effective, developmentally appropriate cooking activities. (CSU)

**CDEV 125 (3.0 Units)**  
**Multilingual and Multicultural Curriculum for Young Children**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

General introduction to life styles, values, and socioeconomic conditions of children from multilingual and multicultural families with special emphasis on ways in which these factors affect the teaching and learning process. Students are introduced to strategies, materials and resources designed to help them enhance the multilingual and multicultural experience of the children. (CSU)

**CDEV 140 (2.0 Units)**  
**Child Abuse**

**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

A study of abused, battered, and neglected children. Identification and prevention of abused children and of abusers. Mandated reporting responsibilities. (CSU)

**CDEV 141 (2.0 Units)**  
**Children with Challenging Behaviors**

**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

Effective strategies for working with children who have challenging behaviors in the early childhood classroom environment. Emphasis on teacher's role in working with parents and supporting children through emotional difficulties. (CSU)

**CDEV 142 (1.0 Unit)**  
**What is Developmentally Appropriate?**

**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade Only**

This course provides a basic understanding of "developmentally appropriate", and is designed to offer the most current thinking about which practices are most effective in promoting young children's learning and development. The course content is designed to meet educational requirements of Title 22 and Title V Professional Growth Permit requirements. (CSU)

**CDEV 200 (3.0 Units)**  
**Practicum - Field Experience**

**Term Hours: 36 Lec, 159.84 Lab**  
**Letter Grade Only**

Prerequisites: CDEV 100; CDEV 103, CDEV/PSY 104; CDEV 105; CDEV 106; CDEV 107; and 4.0/5.0 units from the following: CDEV 120, CDEV 121, CDEV 122, CDEV 123, CDEV 124, OR CDEV 125; and approval from the Child Development Department.

A demonstration of developmentally appropriate early childhood teaching competencies under guided supervision. Students will utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Child centered, play-oriented approaches to teaching, learning, and assessment; and knowledge of curriculum content areas will be emphasized as student teachers design, implement and evaluate experiences that promote positive development and learning for all young children. The Child Development Program's Comprehensive Portfolio will be assembled and presented in this course. This course requires lecture and supervised lab. (C-ID ECE 210) (CSU)

**CDEV 210 (3.0 Units)**  
**Administration and Supervision**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: CDEV 200 and its prerequisites.

This course incorporates basic management principles for preschools including curriculum development and implementation, personnel management, facility maintenance, budgeting, parent involvement, community relations, program evaluation and professional ethics. (CSU)

**CDEV 211 (3.0 Units)**  
**Advanced Management Functions**

**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

Prerequisite: CDEV 210 with a grade of "C" or better.

This course is designed for those who plan to be directors in any child care center, both public and private, in the State of California. Principles and practices of program planning, budgeting and personnel administration for agencies servicing children and families. (CSU)

**CDEV 212 (3.0 Units)**  
**Adult Supervision in Child Development Programs**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

A study of the methods and principles of adult supervision in an early childhood setting from a development perspective. Topics covered include competence in personnel management, effective interpersonal communication, how adults learn, team building. (CSU)



**CDEV 220 (3.0 Units)**  
**Infant Toddler Development**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course will cover the fundamental principles of prenatal and infant development from conception to age two as determined by heredity, society and human interaction. Prenatal development and the birth process are emphasized. Observations will be done on a neonate, infant and toddler. (CSU)

**CDEV 221 (3.0 Units)**  
**Infant Toddler Curriculum**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course will prepare students to develop and implement an infant and/or toddler curriculum including the design of a developmentally appropriate learning environment. It will examine the methods currently in practice and study teacher competencies necessary for working with infants/toddlers. Students must put in 5 Hrs. Lab TBA for the semester. (CSU)

**CDEV 230 (3.0 Units)**  
**School Age Child Development**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

A study of the developmental characteristics of the School Age child from ages five to twelve, covering physical, cognitive, social and personality development. Developmental theories will be discussed, and the influences on the basic process will be explored. This course provides preparation for employment in child development programs, and public and private School Age programs. (CSU)

**CDEV 231 (3.0 Units)**  
**School Age Curriculum**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course instructs students in designing a school-age program that meets the needs of children based on current theory and research. Emphasis will be on creating developmentally appropriate environments, curriculum planning, behavior management, health, safety and nutrition. (This course provides preparation for employment in child development programs, and public and private School Age programs.) (CSU)

**CDEV 240 (3.0 Units)**  
**Introduction to Children with Special Needs**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: CDEV 104 with a grade of "C" or better.  
Introduces the variations in development of children with special needs ages birth through eight and the resulting impact on families. Includes an overview of historical and societal influences, laws relating to children with special needs, and the identification and referral process. (CSU)

**CDEV 241 (3.0 Units)**  
**Curriculum and Strategies for Children with Special Needs**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: CDEV 240 with a grade of "C" or better.  
This course covers curriculum and intervention strategies for working with children with special needs in partnership with their families. Focuses on the use of observation and assessment in meeting the individualized needs of children in inclusive and natural environments. Includes the role of teacher as a professional working with families, collaboration with interdisciplinary teams, and cultural competence. (CSU)

## COMMUNICATION STUDIES

**COMM 100 (3.0 Units)**  
**Oral Communication**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: ENGL 009 or ENGL 099 or higher  
Training in the fundamental processes involved in oral communication with emphasis on organizing material, outlining, constructing, and delivering various forms of speeches. (Formerly SPCH 100) (C-ID COMM 110) (CSU, UC)

**COMM 110 (3.0 Units)**  
**Advanced Oral Communication**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: COMM 100 (Formerly SPCH 100) with a grade of "C" or better.  
Advanced training in the preparation and delivery of public speeches with an emphasis on audience analysis and adaptation, and a consideration of the role of public discourse in a democratic society. (Formerly SPCH 110) (CSU, UC)

**COMM 125 (3.0 Units)**  
**Interpersonal Communication**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course gives students an opportunity to learn, apply, and improve the practical principles of interpersonal communication. Emphasis is placed on personal, situational and cultural influences on interaction, with attention given to human perception, interpersonal dynamics, listening, conflict management, verbal and nonverbal symbol systems. (Formerly SPCH 120) (C-ID COMM 130) (CSU, UC)

**COMM 130 (3.0 Units)**  
**Small Group Communication**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: COMM 100 (Formerly SPCH 100)  
This course is designed to assist students in the development of critical thinking and decision-making skills in the small group communication context. An emphasis is placed on the basic elements of critical thinking, such as evidence, reasoning, and language. In addition to examining these basic elements, students become familiar with leadership strategies, discussion techniques and conflict management skills used in groups. (Formerly SPCH 130) (C-ID COMM 140) (CSU, UC)

**COMM 150 (3.0 Units)**  
**Intercultural Communication**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: ENGL 009 or ENGL 099 and COMM 100 (Formerly SPCH 100)

This Intercultural Communication course focuses on the study of communication between people of different cultures. The discipline discusses the relationship between culture and communication. An emphasis on social, verbal and nonverbal language codes, communication breakdowns and conflict resolution will be examined. This course is critical to study of all fields that require contact with others and/or awareness of cultural distinctions especially those pursuing a career in speech communications, international business, business, education, social sciences, nursing, mass communications and teaching. (Formerly SPCH 150) (C-ID COMM 150) (CSU, UC)

**COMM 180 (3.0 Units)**  
**Argumentation and Debate**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: COMM 100 (Formerly SPCH 100)  
An introduction to debate, with emphasis on the creation and refutation of arguments concerning current social, political, and legal issues. (Formerly SPCH 180) (C-ID COMM 120) (CSU, UC)

## COMPUTER INFORMATION SYSTEMS

**CIS 050 (1.0 Unit)**  
**Online Learning - An Orientation**

**Term Hours: 9 Lec, 27 Lab**  
**Pass/No Pass**

This course presents the basics of taking a course through the Internet. It is designed to acquaint students with the skills required for success in an online course. Students will learn to navigate in an online environment, to communicate electronically with the instructor and other students, to submit course assignments and take tests, and to perform other related skills. Hardware and software needs are addressed as well as characteristics of successful online learners. Students must have access to a computer that is connected to the Internet and must have an e-mail account. (Nontransferable, AA/AS Degree only)

**CIS 100 (1.0 Unit)**  
**Computer Literacy**

**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

A course designed for students with little or no experience with computers. The course includes a review of computer terminology, system components, and software applications typically used on a microcomputer system. In a hands-on environment, the student will learn basic operating system and user interface commands, basic features in a word processing program, and basic concepts for use of Internet resources. (CSU)

**CIS 101 (3.0 Units)**  
**Introduction to Information Systems**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

An introductory course designed to teach the basic understanding of computer information systems, survey computer hardware and software, and give the student hands-on experience on common business applications. (C-ID BUS 140 or ITIS 120) (CSU, UC)

**CIS 102 (1.0 Unit)**  
**Computer Applications Laboratory**

**Term Hours: 0 Lec, 54 Lab**  
**Pass/No Pass**

Recommended Preparation: Concurrent enrollment in a course requiring computer support.  
A hands-on lab class which supports those courses requiring computer completed assignments. The student may be involved using word processing, programming, integrated software programs or decision support applications. (CSU)

**CIS 108 (3.0 Units)**  
**Computer Accounting-Quickbooks**

**Term Hours: 36 Lec, 36 Lab**  
**Letter Grade or Pass/No Pass**

Prerequisite: BUS 210 or BUS 100 (Formerly BUS 010) with a grade of "C" or better

Recommended Preparation: CIS 101

A practical course in which students will have an opportunity to utilize computerized financial software that is currently being used in the business field. A "case study" will be completed by the students which will help them to gain computer skills. (CSU)

**CIS 115 (1.0 Unit)**  
**Microsoft Outlook**

**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

This course is an introduction to the features of Microsoft Outlook. Students learn how to manage email messages, schedule appointments, organize and manage the calendar, contact lists, tasks, and customize Outlook. This course is designed for students intending to use Microsoft Outlook for academic, professional and/or personal purposes. (CSU)

**CIS 120 (1.0 Unit)**  
**Microsoft Word I**

**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

Hands-on practice with the Microsoft Word word processing software using a windows environment. The course is designed for beginners and will focus on document creation including multipage documents; basic editing and text enhancement; line and page formatting; cut, copy, and paste, spell check and thesaurus. (CSU)

**CIS 121 (1.0 Unit)**  
**Microsoft Word II**

**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade or Pass/No Pass**

Recommended Preparation: CIS 120 or CIS 101

Hands on practice with the Microsoft Word word processing software using a windows environment. The course is a continuation of CIS 120, Microsoft Word, and will focus on editing and formatting features including multiple windows and documents, managing files, tables, columns, merge, labels, sort, and graphics. (CSU)

**CIS 124 (1.0 Unit)****Excel I****Term Hours: 18 Lec, 0 Lab****Letter Grade or Pass/No Pass**

A beginning course in the creation and use of spreadsheet applications including templates, spreadsheets, and beginning graphic presentation. (CSU)

**CIS 125 (1.0 Unit)****Excel II****Term Hours: 18 Lec, 0 Lab****Letter Grade or Pass/No Pass**

This course is a continuation of CIS 124, Microsoft Excel. The course develops expertise in worksheet applications, teaches the use of graphic presentations and develops database use. (CSU)

**CIS 128 (1.0 Unit)****Microsoft Access****Term Hours: 18 Lec, 0 Lab****Letter Grade or Pass/No Pass**

A course designed to present the basic database concepts. The student will become acquainted with a windows based business database application and its implementation. (CSU)

**CIS 130 (1.0 Unit)****Power Point I****Term Hours: 18 Lec, 0 Lab****Letter Grade or Pass/No Pass**

This course provides students with the basic knowledge of how to create, modify, and present PowerPoint slide shows. Students add and modify both text and graphics; insert and modify information, graphics, and multimedia. This course is designed for students and professionals acquiring or updating basic skills in creating and editing professional presentations. (CSU)

**CIS 131 (1.0 Unit)****Power Point II****Term Hours: 18 Lec, 0 Lab****Letter Grade or Pass/No Pass**

Recommended Preparation: CIS 130

A continuation of CIS 130 that includes adding, modifying and creating templates; adding, importing, and formatting data for tables and charts; customizing presentations; adding interactivity features; and incorporating PowerPoint with other applications. This course is intended for all students and professionals who wish to acquire skills in digital presentations. (CSU)

**CIS 137 (3.0 Units)****Web Development Tools****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: CIS 101

Planning, designing and building professional quality Web pages taking into account customers' needs. Includes text formation and selection; use of tables, layers, sounds, images, and video to be placed in the Web sites; use of templates; use of Cascading Style Sheets (CSS); use of color and color combinations; development and use of rollovers, behaviors and automating repetitive tasks; creating forms for visitor surveys, guestbooks, online shopping, and other types of data collection. Also includes basic of Scripts and Scripting languages such as JavaScript and skills for managing Web sites. Covers core objectives for industry certification. (CSU)

**CIS 149 (3.0 Units)****Computer Graphics - Photoshop****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: CIS 101

The course includes an introduction to the basic working environment of Photoshop; basic photo corrections; retouching and repairing; working with selections; layer basics; masks and channels; correcting and enhancing digital photographs; advanced layer techniques; advanced compositing; and web publishing techniques. The student will create an integrated project that simulates a real-world graphic design job, drawing on the skills learned. (CSU)

**CIS 150 (3.0 Units)****Computer Graphics - Illustrator****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: CIS 101

This course provides an introduction to the process of creating vector graphics images using Adobe Illustrator, the industry standard vector graphics editor for graphics professionals. Adobe Illustrator is used for creating graphic design, typography, logos, and sharp-edged artistic illustration on the computer. (CSU)

**CIS 155 (3.0 Units)****Flash****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

CIS 155 provides a comprehensive yet concise introduction to Flash. The course begins with a discussion of fundamental concepts, which provides a context for learning and sets the stage for specific Flash skill development. A series of step-by-step tutorials follows, covering the range of basic to intermediate skills, including creating animations, using special effects, drawing objects, incorporating sound and video, and using ActionScript. Ultimately, advanced skills will be explored along with coverage of the updated features of Flash - such as enhancements to the workspace, positioning and working with objects in 3D spaces, producing interactive movies and navigation systems, importing Photoshop and Illustrator files, the Flash planning and workflow processes, and the Help feature - make this course an indispensable experience for anyone who wants to take full advantage of the program. (CSU)

**CIS 160 (4.0 Units)****CISCO IT Essentials: Hardware and Software****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: Demonstrate an ability to search on the Internet, identify computer components, understand, in principle, plug-and-play, and recognize issues relating to ethical computer usage.

This course is the first course in the CISCO Networking Academy and covers the fundamentals of computer hardware and software as well as advanced concepts. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Students will also be able to connect to the Internet and share resources in a network environment. (Non-transferable, AA/AS degree only)

**CIS 162 (4.0 Units)****Cisco CCNA Discovery 1: Introduction to Networks****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

This course introduces the architecture, structure, functions, components and models of the Internet and computer networks. The principles of IP addressing and fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. (Nontransferable, AA/AS degree only)

**CIS 163 (4.0 Units)****Cisco CCNA Discovery 2: Routing and Switching Essentials****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Prerequisite: CIS 162 with grades of "C" or better.

Recommended Preparation: CIS 160

This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. (Nontransferable, AA/AS degree only)

**CIS 164 (4.0 Units)****Cisco CCNA Discovery 3: Scaling Networks****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Prerequisite: CIS 163 with a grade of "C" or better.

This course describes the architecture, components, and operations of routers and switches in a large and complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network. (Nontransferable, AA/AS degree only)

**CIS 165 (4.0 Units)****Cisco CCNA Discovery 4: Connecting Networks****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Prerequisite: CIS 164 with a grade of "C" or better.

This course describes the architecture, components, and operations of routers and switches in a large and complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network. (Nontransferable, AA/AS degree only)

**CIS 180 (3.0 Units)****Advanced Computer Graphics****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: CIS 149 or CIS 150 with a grade of "C" or better.

This course provides advanced techniques and knowledge in computer graphics using Adobe Photoshop and Adobe Illustrator, the industry standard software for computer graphic design. Emphasis is placed on the computer as a design tool to assemble type and manipulate images for the printed page and Web publication. The course covers advanced layers techniques; advanced compositing; and advanced web publishing techniques. (CSU)

**CIS 202 (3.0 Units)****Programming in Visual Basic****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: CIS 101

This course introduces event driven computer programming using the Visual Basic Programming language. Topics include building an interface with objects, modular design, programming structures, working with files, and other related topics. (CSU, UC)

**CIS 210 (3.0 Units)****Programming in C++****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: CIS 101 and CIS 202

A course in programming using C++. Syntax of the language will be emphasized. Operating systems, comparative programming languages, data structures, graphics, numerical analysis, programming methodology, and scientific and business applications will also be covered. (CSU, UC)

**CIS 212 (3.0 Units)****Web Development Programming****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: CS 101

This course introduces students to the latest Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) languages used to create and style web pages. Topics include remote development using a web server, page construction using HTML, page layout using CSS, selectors and the box model, creating accessible tables, getting user input using HTML forms and other related topics. This course also includes adding interactivity to Web pages using JavaScript. (CSU)



**CIS 214 (3.0 Units)****PHP and MySQL****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: CIS 101 and CIS 212

This course introduces students to the PHP programming language, the MySQL relational database system commonly used to create dynamic websites. Topics include PHP syntax, using phpMyAdmin, creating tables and queries using SQL, web application security, frameworks, and other related topics. It also includes basics of using content management systems for managing website content. (CSU)

## COMPUTER SCIENCE

**CS 170 (3.0 Units)****Introduction to Unix/Linux****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: Familiarity with computers and at least one operating system: Windows, Mac OS, or Unix/Linux.

A hands-on introduction to Unix operating systems including Linux, Solaris, Android, and Mac and iPhone OS X. Topics include terminology, E-mail, utilities, file structure, and concepts of shell script programming, advanced utilities, file management, and alternative editors. Includes usage of sed (stream editor), awk (a UNIX scripting language), and graphical user interfaces. (CSU, UC)

**CS 220 (4.0 Units)****Introduction to Object-Oriented Programming Using Java****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: MATH 091 or equivalent, and CIS 202 or equivalent.

This course provides an introduction to object-oriented programming using the Java programming language. Topics included (but not limited to) in this course are fundamentals of structured computer programming, primitive data types, expressions, control statements, methods, arrays, searching, sorting, and debugging. Emphasis is on learning through hands-on programming exercise. (CSU, UC)

**CS 221 (3.0 Units)****Introduction to Object Oriented Programming in Java****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Introduction to programming and software engineering for computer science majors and computer professionals. A systematic approach to the design, implementation, and management of robust Java computer programs. Course emphasizes Object Oriented programming design, programming documentation, testing and debugging techniques. (C-ID COMP 122) (CSU)

**CS 230 (4.0 Units)****Intermediate Object-Oriented Programming Using Java****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Prerequisites: CS 220 or equivalent with a grade of "C" or better.

This course provides an intermediate treatment of object-oriented programming using the Java programming language. Topics included (but not limited to) in this course are abstract classes, inheritance, polymorphism, interfaces, graphical user interfaces (GUI), graphics, event-driven programming, exception handling, file input, file output, and applets. Emphasis is on learning through hands-on programming exercises. (CSU, UC)

**CS 231 (3.0 Units)****Introduction to Data Structures****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Prerequisite: CS 221 or CS 230 with a grade of "C" or better.

Design and implementation of larger projects using object-oriented software engineering principles with emphasis on definition and use of data structures including: arrays, stacks, queues, linked lists, trees, hash tables, dictionaries, sets and graphs using JAVA. Standard methods are used for sorting, searching and analyzing the relative efficiency of algorithms (Big-O notation). (C-ID COMP 132) (CSU)

**CS 280 (4.0 Units)****Assembly Language and Machine Organization****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Prerequisites: CS 220 or equivalent, and MATH 091 or equivalent, with grades of "C" or better.

A course covering general concepts of internal organization of a computer, machine and assembly language. Topics include number system and data representation, primitive instructions and operations, program execution, addressing techniques, arrays, subroutines, macros, recursion, virtual memory, cache memory interrupt handling, and memory management. (C-ID COMP 142) (CSU, UC)

**CS 281 (3.0 Units)****Assembly Language and Machine Organization****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Prerequisites: CS 220 or CS 221 and MATH 091 or equivalent, with grades of "C" or better.

Basics of machine architecture, machine language, assembly language and operating systems. Representations of data types and structures along with instruction representation and execution, addressing modes, subroutine calls and return mechanisms, fixed point systems, and basic organization of the von Neumann machine are included. (Formerly CS 280) (CSU)

## CORRECTIONAL SCIENCE

### CSI 100 (3.0 Units)

#### Introduction to Correctional Systems

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: Completion of ENGL 009 and READ 019 (Formerly ENGL 019).

A study and survey of the history, philosophy and trends of adult and juvenile corrections processes. The relationship between corrections and other components of the judicial system will be examined. (C-ID AJ 200) (CSU)

### CSI 104 (3.0 Units)

#### Concepts of Probation and Parole

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: Completion of ENGL 009 and READ 019 (Formerly ENGL 019).

A survey of the historical development of probation and parole from early court procedures through modern practices with an emphasis on the operation of probation and parole agencies in California including such topics as probation and parole laws and procedures. (CSU)

### CSI 150 (15.0 Units)

#### Corrections Officer Core Course

**Term Hours: 90 Lec, 540 Lab**

**Letter Grade Only**

Prerequisite: Students must meet California State and Federal guidelines for the ability to carry and/or possess a firearm. This includes: no Felony Convictions, no Domestic Violence convictions of any kind, pass a Department of Justice (DOJ) background check and a drug screening test. This course is designed to provide the entry-level student with the training necessary to become a correctional officer. This course exceeds the minimum mandated number of hours of training, as set forth by the California State Board of Corrections, and is designed for the current role of corrections in today's society. This course emphasizes the following: Facility operations, criminal law, ethics, inmate supervision and welfare, defensive tactics and techniques, and physical training. This course is intended for students interested in entering into employment as correctional officers at County Jails and privately operated Prisons. (Non-transferable, nondegree applicable)

### CSI 206 (3.0 Units)

#### Correctional Interviewing and Counseling

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: Completion of ENGL 009 and READ 019 (Formerly ENGL 019).

An overview of the techniques available to practitioners in Corrections in counseling and interviewing. The student will learn the use of appropriate techniques and theories in confidence building which may be used by the correctional employee in client interviews and counseling. A basic course for students planning to enter or already employed within the Correctional Science Field. (CSU)

### CSI 208 (3.0 Units)

#### Control and Supervision of Inmates

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: Completion of ENGL 009 and READ 019 (Formerly ENGL 019).

An overview of supervision of inmates in the local, state and federal correctional institutions. The issues of control in a continuum from institutional daily living through crisis situations will be introduced and discussed. The course will emphasize the role played by the offender and the correctional worker. Introduces inmate subculture, violence and effects of crowding on inmates and staff, addresses coping techniques for correctional officers in a hostile prison environment while discussing causes and effects of abusive tactics. (CSU)

## COUNSELING

### COUN 100 (3.0 Units)

#### Personal and Career Development

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

This comprehensive course explores the issues and tasks related to personal and career development over the lifespan. Applying psychological, sociological, and physiological principles, students will utilize the career planning process to begin to prepare effectively for work in the 21st century global economy. Topics include assessment of interests, personality characteristics, transferable skills, and work values, career exploration, and decision-making strategies. Job search preparation includes development of a resume, cover letter, and interviewing skills. Prepares new and re-entry students to explore, identify, and integrate career and life planning goals. Emphasis is placed on the importance of actively managing one's career to achieve success in all life roles. A \$6.00 lab fee will be charged. (CSU)

### COUN 120 (3.0 Units)

#### College Success Skills

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

This course is designed to assist students in learning how to reach their collegiate and life planning goals. Topics include college orientation, study skills, cultural diversity awareness, self-evaluation of personal characteristics related to educational success, and transitioning to college life. The central theme of the course is a holistic approach to the individuality of students in higher education, which include race, ethnicity, gender, sexual orientation and age. Strategies covered will include skills such as creative goal setting, note-taking, listening, time-management, learning styles, critical thinking, test taking, library and financial resources and educational program planning. Course is recommended for new and continuing students. (CSU, UC)

## DISABLED STUDENT PROGRAMS AND SERVICES

### **DSPS 018 (0.5 Unit)**

#### **Educational Assessment and Evaluation**

**Term Hours: 0 Lec, 18 Lab**

**Pass/No Pass**

Recommended Preparation: Must be enrolled in at least one academic or vocational class.

This course is designed specifically to assist the learning disabled student who has the potential to succeed in a community college by assessing, interpreting, and diagnosing his/her learning strengths and weaknesses for the purpose of identifying learning disabilities. Guidelines mandated by the California Community College system will be utilized to determine eligibility for learning disabilities services and accommodations. Upon completion of this course, students will be better prepared to assert their needs and practice coping strategies pertinent to their unique situation. (Nontransferable, nondegree applicable)

### **DSPS 050 (1.0 Unit)**

#### **Adapted Keyboarding**

**Term Hours: 0 Lec, 18 Lab**

**Pass/No Pass**

Prerequisite: A student must be eligible for services and instruction from the Disabled Student Programs and Services through appropriate verification of a primary disability by certificated personnel and be able to benefit from the programs and services offered by the High Tech Center. This course is designed to teach keyboarding basics to disabled students who must use adaptive learning technologies for successful access to computer hardware and software used for other mainstream basic skills support courses. (Nontransferable, nondegree applicable)

### **DSPS 052 (0.5 Unit)**

#### **Computer Access Evaluation**

**Term Hours: 0 Lec, 18 Lab**

**Pass/No Pass**

Prerequisite: A student must be eligible for services and instruction from the Disabled Student Programs and Services through appropriate verification of a primary disability by certificated personnel and be able to benefit from the programs and services offered by the High Tech Center.

This course is designed to help students with a disability or multiple disabilities, to understand their computer usage capabilities and to determine, through an instructor evaluation, the appropriate hardware and software. (Nontransferable, nondegree applicable)

### **DSPS 054 (1.0 Unit)**

#### **Computer Access I**

**Term Hours: 0 Lec, 36 Lab**

**Pass/No Pass**

Prerequisite: A student must be eligible for services and instruction from the Disabled Student Programs and Services through appropriate verification of a primary disability by certificated personnel and be able to benefit from the programs and services offered by the High Tech Center. Designed for students with visual, physical, language impairment, learning disabilities or deafness. This course provides training in the use of computer access technologies which enhance a disabled student's ability to access and use PC's which are used for other basic skills support courses. (Nontransferable, nondegree applicable)

### **DSPS 056 (2.0 Units)**

#### **Computer Access II**

**Term Hours: 18 Lec, 36 Lab**

**Pass/No Pass**

Prerequisite: A student must be eligible for services and instruction from the Disabled Student Programs and Services through appropriate verification of a primary disability by certificated personnel and be able to benefit from the programs and services offered by the High Tech Center.

This course is designed for disabled students who have successfully completed Computer Access I (DSPS 054). Students will enhance their computer access skills through the completion of assignments and/or projects. This will allow them to use PC's in other basic skills support courses. (Nontransferable, nondegree applicable)

### **DSPS 058 (3.0 Units)**

#### **Computer Access Projects**

**Term Hours: 0 Lec, 72 Lab**

**Pass/No Pass**

Prerequisite: A student must be eligible for services and instruction from the Disabled Student Programs and Services through appropriate verification of a primary disability by certificated personnel and be able to benefit from the programs and services offered by the High Tech Center. Instructor permission is required.

The course is designed for students with a disability who require access to specialized adaptive technologies in order to complete assignments for other classes in which they are concurrently enrolled. (Nontransferable, nondegree applicable)

## ECONOMICS

### **ECON 101 (3.0 Units)**

#### **Introduction to Micro Economics**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: MATH 091 with a grade of "C" or better.

An introduction to economic concepts and the principles of economic analysis. Emphasis on economic institutions, issues of public policy, and microanalysis in the direction of production and the allocation of resources through the price-system. (C-ID ECON 201) (CSU, UC)

### **ECON 102 (3.0 Units)**

#### **Introduction to Macro Economics**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: MATH 091 with a grade of "C" or better.

An introduction to economic concepts and the principles of economic analysis. Emphasis on economic institutions, issues of public policy, and macroanalysis in gross domestic product, money and banking, international business, and economic stabilization. (C-ID ECON 202) (CSU, UC)

## EDUCATION

### **EDUC 200 (3.0 Units)**

#### **Introduction to Elementary Classroom Teaching**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Recommended Preparation: ENGL 110 with a grade of "C" or better. This course introduces students to the concepts and issues related to teaching diverse learners in today's contemporary schools, Kindergarten through Grade 12 (K-12). Topics include teaching as a profession and career, historical and philosophical foundations of the American education system, contemporary educational issues, California's content standards and frameworks, and teacher performance standards. In addition to class time, the course requires a minimum of 30 hours of structured fieldwork in public school elementary classrooms that represent California's diverse student population, and includes cooperation with at least one carefully selected and campus-approved certificated classroom teacher. (C-ID EDUC 200) (CSU)

### **EDUC 202 (1.0 Unit)**

#### **Tutor Training**

**Term Hours: 18 Lec, 0 Lab**

#### **Pass/No Pass**

Recommended Preparation: Successful completion of 12 college units with a "2.5" grade point average or better.

This course is designed to prepare college-level persons to tutor adult/college students. Introduction to adult learners, tutoring methods, use of appropriate written and mediated instructional materials, and supervised practice tutoring are included in this course. (CSU)

## ELECTRICAL TRADES

### **ELTT 101 (4.0 Units)**

#### **Electrical Trades I**

**Term Hours: 72 Lec, 0 Lab**

#### **Letter Grade Only**

Basic mathematical functions and computations as they pertain to electricity and electronics. Introduction to basic principles of electricity, AC/DC circuits, electromagnetism, symbols, schematic diagrams, and fundamental safety skills as they pertain to on-the-job-skills. (Nontransferable, AA/AS degree only)

### **ELTT 102 (4.0 Units)**

#### **Electrical Trades II**

**Term Hours: 72 Lec, 0 Lab**

#### **Letter Grade Only**

Prerequisite: ELTT 101 with a grade of "C" or better.

Designed to give the apprentice an overview of transmission and distribution systems (T&D), and the various components used in the utility industry. Additional topics will include high voltage AC power, study of electrical diagrams, safety in the workplace, and a section on rope, rigging, and hand signals. (Nontransferable, AA/AS degree only)

### **ELTT 103 (4.0 Units)**

#### **Electrical Trades III**

**Term Hours: 72 Lec, 0 Lab**

#### **Letter Grade Only**

Prerequisite: ELTT 102 with a grade of "C" or better.

An introduction to framing, setting, guying poles, installation of conductors and grounds, and the laying out and constructing of an underground line system. (Nontransferable, AA/AS degree only)

### **ELTT 104 (4.0 Units)**

#### **Electrical Trades IV**

**Term Hours: 72 Lec, 0 Lab**

#### **Letter Grade Only**

Prerequisite: ELTT 103 with a grade of "C" or better.

Instruction in maintenance line distribution and underground line maintenance. (Nontransferable, AA/AS degree only)

## ELECTRICAL WIRING

### **EWIR 110 (4.0 Units)**

#### **Electrical Principles**

**Term Hours: 36 Lec, 108 Lab**

#### **Letter Grade Only**

This course meets NSF, IID and NABCEP guidelines; this course provides the electrical student with instruction in basic principles of electrical safety. Instruction will include an introduction to power plants and grid functions, electrical theory and test equipment, the use of NEC boxes, fittings and conductors, and the interpretation of related electrical blueprints and commercial/industrial/residential symbols, diagrams, and schematics used for wiring. Electrical principles of residential wiring will be the focus of instruction. (Nontransferable, AA/AS degree only)

### **EWIR 115 (4.0 Units)**

#### **Electrical Wiring and Protection**

**Term Hours: 36 Lec, 108 Lab**

#### **Letter Grade Only**

Recommended Preparation: EWIR 110

This course covers wiring installation and connection for conductor termination and splices; use of cable pulling instruments and NEMA and NEC standards for cable tray; installation of electrical service and electrical protection components and equipment; use of material take-off methods and troubleshooting techniques; identification of ratings for current breakers and fuses; regulations for sizing use and installation of relay switches, conductors and overrides; and application. (Nontransferable, AA/AS degree only)

### **EWIR 125 (4.0 Units)**

#### **Electrical Feeder Service and Circuits**

**Term Hours: 36 Lec, 108 Lab**

#### **Letter Grade Only**

Recommended Preparation: EWIR 115

This course includes instruction in feeder service and branch load calculations for circuits and electrical appliances; introduction to and identification of electrical constructors; devices used for overprotection of loads, currents, circuits and fuses; fill requirements for boxes/raceways; principles of wiring devices, switches and receptacles and their locations; requirements for distribution equipment; settings for voltage, switch gear, circuits, and components; distribution system transformers and their characteristics; types of components; NEC requirements; methods for locating and troubleshooting problems. (Nontransferable, AA/AS degree only)



**EWIR 135 (4.0 Units)****Electrical Equipment and Special Conditions****Term Hours: 36 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: EWIR 125

This course provides the electrical worker with instruction in basic lighting and NEC requirements for lighting fixtures for indoor and outdoor use; an introduction to motor basics, calculations, transformers, instruments for testing, wiring, protection, maintenance, and troubleshooting for various types of motors and motor controls; introduction to heating, ventilation, and air-conditioning (HVAC) systems, system maintenance equipment, and safety requirements for varied locations; principles of combustion, hazardous materials and their reactions in varied locations; and the use of safety equipment. (Nontransferable, AA/AS degree only)

**EWIR 151 (4.0 Units)****Solar Electrical Systems****Term Hours: 72 Lec, 0 Lab****Letter Grade Only**

Prerequisite: RNEW 150 (Formerly EWIR 150) with a grade of "C" or better.

Recommended Preparation: EWIR 110

This course focuses on the National Electrical Code (NEC), including grid and stand-alone calculations, grounding considerations and wiring sizing. Evaluate system performance under various operating conditions. Residential system design elements, including inter-row shading, controller, battery and inverter selection, data monitoring solution, including system design exercises. (CSU)

## ELECTRONICS

**ELTR 120 (4.0 Units)****Electronic Devices****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: MATH 081

This course covers a study on basic electronics laws and components in dc circuits. It emphasizes voltage, current, and resistance relationships. An introduction to magnetism is also included. (CSU)

**ELTR 140 (4.0 Units)****Electronic Circuits and Semiconductors****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: ELTR 120

A continuation of ELTR 120. Topics will include: semiconductor devices, amplifiers, and solid state components. (CSU)

**ELTR 220 (3.0 Units)****Digital Instrumentation Measurements****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: ELTR 140

Advanced concepts in electronics. Topics will include: additional devices included in circuits, instrumentation, various system designs, and successive "generations." (CSU)

**ELTR 240 (3.0 Units)****Digital Logic Circuits****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: ELTR 220

A continuation of ELTR 220. The advanced study of applied digital electronic systems such as those found in computing, audiovisual, and other electromechanical equipment. (CSU)

## EMERGENCY MEDICAL TECHNICIAN

**EMT 105. (7.5 Units)****Emergency Medical Technician I****Term Hours: 117 Lec, 54 Lab****Letter Grade Only**

A course designed for individuals who will come in contact with victims of illness or injury primarily in an emergency, pre-hospital environment. This course would be of value to all emergency service personnel, including ambulance personnel, law enforcement, fire services, hospital emergency department, and other rescue personnel. Topics will include roles and responsibilities, evaluation and treatment of illness and injury. Procedures for dealing with life threatening emergencies are presented. The student will be able to gain a functional understanding of assessment-based approaches to patient care as well as the interventions added to the EMT I scope of practice. Hazardous Material training and semi-automatic defibrillation training are included.

This course is approved by the Imperial County Emergency Medical Services Agency and is within the training guidelines of California Code of Regulations and the California Fire Service Training and Education Systems (CFSTES). Successful completion will result in eligibility for certification as an EMT I and EMT D. Successful completion will also result in a Training Institute (CSTI) through the Office of Emergency Services (OES). This is one of six courses required for an associate degree in Fire Technology and one of six courses toward eligibility for a Fire Fighter I certificate. (Same as FIRE 105) (CSU)

**EMT 107. (2.0 Units)****Emergency Medical Technician 1 - Refresher****Term Hours: 36 Lec, 0 Lab****Letter Grade Only**

Prerequisites: Current EMT I certification or have possessed an EMT I certification within the past 4 years, and as mandated by the Imperial County EMS Agency, California Title 22, and/or CoAEMSP National Education Standards.

This course is designed to fulfill the California EMT I refresher course requirements and will review basic life support topics and procedures to include cardiopulmonary resuscitation training. Topics specific to Imperial County will be presented, as well as changes in policies and procedures with updated and new materials. Successful completion of this course will satisfy continuing education requirements for the EMT I and will enable the EMT I to be eligible for recertification in the State of California. This course is approved by the Imperial County Emergency Medical Services Agency and is within the training guidelines of the California Code of Regulations and the California Fire Service Training and Education Systems (CFSTES). (Same as FIRE 107) (CSU)

## EMERGENCY MEDICAL TECHNICIAN- PARAMEDIC

### **EMTP 200 (9.0 Units)**

#### **EMT - Paramedic Didactic 1**

**Term Hours: 144 Lec, 54 Lab**

#### **Letter Grade Only**

Recommended Preparation: AHP 100

Prerequisites: High school graduate or successful completion of GED. Possess a current American Heart Association basic cardiac life support card at the healthcare provider level. Current certification as an EMT I or NREMT-Basic registration or be currently registered as an EMT Advanced with the National Registry of Emergency Medical Technicians. One year of field or hospital experience as an EMT I. Successful completion of the paramedic program application process. Acceptance into program by the Paramedic Program Director and Paramedic Program Medical Director.

This course is the first phase of training to prepare individuals to render pre-hospital advanced life support within an organized EMS system based on course content that is equivalent to the U.S. Department of Transportation's National Education Standards for Paramedics 2009. This course will cover: EMS Preparatory, including EMS systems, roles and responsibilities of the paramedic, the well-being of the paramedic, illness and injury prevention, medical/legal issues, ethics, general principles of pathophysiology, pharmacology, venous access and medication administration, therapeutic communications and life span development Airway Management and Ventilation. Patient Assessment, including history taking, techniques of physical examination, clinical decision making, communications and documentation. Trauma, including trauma systems, mechanism of injury, hemorrhage and shock, soft tissue trauma, burns, head/facial trauma, spinal trauma, thoracic trauma, abdominal trauma, and musculoskeletal trauma. This course teaches paramedic treatments and skills associated with the above core content. This course is an intense one, requiring the student's total dedication for successful completion. The student must realize that more than usual study and TBA requirements must be met throughout the program. This program is accredited by the CAAHEP. (CSU)

### **EMTP 210 (9.0 Units)**

#### **EMT - Paramedic Didactic 2**

**Term Hours: 144 Lec, 54 Lab**

#### **Letter Grade Only**

Prerequisites: Successful completion of EMTP 200. Successful completion of all other requirements for entrance into and/or continuation in the IVC paramedic program and approval of the IVC Paramedic Program Director and IVC Paramedic Program Medical Director.

Recommended Preparation: NURS 214

This course is the second phase of training to prepare individuals to render pre-hospital advanced life support within an organized EMS system based on course content that is equivalent to the U.S. Department of Transportation's National Education Standards for Paramedics 2009. This course is designed to allow progression of the paramedic student in advanced didactic and skills training. This course will cover all aspects of medical emergencies, including: pulmonology, cardiology, neurology, endocrinology, allergy & anaphylaxis, gastroenterology, urology & nephrology, toxicology & substance abuse, hematology, environmental emergencies, infectious disease, assault, the challenged patient, and acute interventions for chronic-care patients. Included in this course

will be the Pediatric Education for Pre-hospital Professionals (PEPP) course, as well as paramedic treatments and skills associated with the above core content. This course is an intense one, requiring the student's total dedication for successful completion. The student must realize that more than usual study and TBA requirements must be met throughout the program. This program is accredited by the CAAHEP. (CSU)

### **EMTP 215 (5.0 Units)**

#### **EMT - Paramedic Didactic 3**

**Term Hours: 72 Lec, 54 Lab**

#### **Letter Grade Only**

Prerequisites: Successful completion of EMTP 200 and EMTP 210; and successful completion of all other requirements for entrance into and/or continuation in the IVC paramedic program; and approval of the IVC Paramedic Program Director and IVC Paramedic Program Medical Director.

This course is the third phase of training to prepare individuals to render pre-hospital advanced life support within an organized EMS system based on course content that is equivalent to the 2009 U.S. Department of Transportation's National Education Standards for Paramedics. This course is designed to allow progression of the paramedic student in advanced didactic and skills training. This course will cover assessment-based management, all aspects of operations, including: ambulance operations, medical incident command (SEMS-ICS), rescue awareness & operations, desert rescue, hazardous materials, crime scene awareness, rural EMS, bioterrorism and weapons of mass destruction. Included in this course will be the American Heart Association Advanced Cardiac Life Support (ACLS) Course, as well as paramedic treatments and skills associated with the above core content. This course is an intense one, requiring the student's total dedication for successful completion. The student must realize that more than usual study and TBA requirements must be met throughout the program. This program is accredited by the CAAHEP. (CSU)

### **EMTP 225 (3.5 Units)**

#### **EMT - Paramedic Clinical I**

**Term Hours: 0 Lec, 189 Lab**

#### **Letter Grade Only**

Prerequisites: 1. Successful completion of EMTP 200, EMTP 210, EMTP 215; and, 2. Successful completion of all other requirements for entrance into and/or continuation in the IVC paramedic program; and, 3. Approval of the IVC Paramedic Program Director and IVC Paramedic Program Medical Director.

This course provides the clinical training to prepare the paramedic student intern to render pre-hospital advanced life support within an organized EMS system based on course content equivalent to the U.S. Department of Transportation's National EMS Education Standards (2009). The student will put together all didactic and skills training to address medical and traumatic emergencies in multiple hospital departments: critical care, emergency, obstetrics, nursery, pediatrics, and surgery. The student will observe overall administration of advanced life support care in a hospital and will assume responsibilities for advanced assessments, treatment, medication administration, use of equipment, and communication skills under the supervision of a registered nurse, physician assistant, or physician approved by the Local EMS Authority. The course is intense, requires more than usual study hours, TBA requirements, and the student's total dedication for successful completion. This program is accredited by the CAAHEP. (CSU)

**EMTP 235 (6.5 Units)****EMT - Paramedic Field I****Term Hours: 0 Lec, 351 Lab****Letter Grade Only**

Prerequisites: 1. Successful completion of EMTP 200, EMTP 210, EMTP 215, EMTP 225 (or EMTP 220/EMTP 230); and, 2. Successful completion of all other requirements for entrance into and/or continuation in the IVC paramedic program; and, 3. Approval of the IVC Paramedic Program Director and IVC Paramedic Program Medical Director; and, 4. Student Intern may enter/reenter EMTP 235 up to 1 year after completion of the previous prerequisites with prior mutual agreement between the IVC Program Director, IVC Medical Director and the Student Intern; and completion of any required remedial training.

This course provides the first phase of field internship training to prepare the paramedic student intern to render pre-hospital advanced life support (ALS) within an organized EMS system based on course content equivalent to the U.S. Department of Transportation's National EMS Education Standards for Paramedics (2009). The student will progress through record keeping and increasing patient care responsibilities from observation of a team to working as a team member to functioning as a team leader in actual patient care in the pre-hospital setting. The student experience will cover all aspects of medical and traumatic emergencies, advanced patient assessments, and advanced care on an ALS vehicle under the supervision of a licensed paramedic approved by the Local EMS Authority. In addition, the student must complete 30 advanced life support contacts as defined in the Calif. Code of Regulations, Title 22, Div. 9. This course is an intense one, requires more than usual study hours, TBA requirements, and the student's total dedication for successful completion. This program is accredited by the CAAHEP. (CSU)

**EMTP 245 (5.5 Units)****EMT - Paramedic Field II****Term Hours: 0 Lec, 297 Lab****Letter Grade Only**

Prerequisites: 1. Successful completion of EMTP 200, EMTP 210, EMTP 215, EMTP 225, and EMTP 235; and, 2. Successful completion of all other requirements for entrance into and/or continuation in the IVC paramedic program; and, 3. Approval of the IVC Paramedic Program Director and IVC Paramedic Program Medical Director. 4. Student Intern may enter/re-enter EMTP 245 up to one year after completion of the previous prerequisites with prior mutual agreement between the IVC program director, IVC medical director and the student intern; and completion of any required remedial training. 5. Student intern may petition for exemption from this course providing: a. student intern is currently certified as an EMT-II with a minimum of 1 year experience. b. student intern demonstrates completion of an EMT-II program with training and training hours equivalent to IVC's EMT-II program. c. student intern completes all other paramedic training program requirements. d. student intern has approval of the IVC program director and IVC medical director. e. student intern successfully completes EMT-II proficiency exam.

This course is the last segment of field internship training to prepare the paramedic student intern to render pre-hospital advanced life support (ALS) within an organized EMS system based on course content equivalent to the U.S. Department of Transportation's National EMS Education Standards for Paramedics (2009). The student will perform as an

ALS provider, under a paramedic preceptor, in the pre-hospital setting using all training and skills acquired; advanced assessment skills, communication skills, use of advanced life support equipment, medications and procedures. In addition, the student must complete a minimum of 10 advanced life support contacts as defined in the Calif. Code of Regulations, Title 22, Div. 9. This is an intense course, requiring more than usual study hours, TBA requirements, and student dedication for successful completion. This program is accredited by the CAAHEP. (CSU)

## ENGINEERING

**ENGR 210 (3.0 Units)****Statics****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: PHYS 200 with a grade of "C" or better, and credit or concurrent enrollment in MATH 194.

Force systems, equilibrium, structures, distributed forces, friction, virtual work, moments of inertia, vector algebra. (CSU, UC)

**ENGR 212 (3.0 Units)****Dynamics****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: ENGR 210 with a grade of "C" or better, and credit or concurrent enrollment in MATH 194.

Kinetics of a particle; central force motion; systems of particles; work and energy; impulse and momentum; moments and products of inertia; Euler's equations of motion; vibration and time response; engineering applications. (CSU, UC)

**ENGR 240 (3.0 Units)****Electric Circuit Analysis****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 194 and PHYS 202 with grades of "C" or better.

Circuit analysis by reduction methods, source transformations, mesh and nodal analysis. Operational amplifier model, transient analysis, alternating current circuits, impedance, power, phasor diagrams, and three-phase balanced networks. (CSU, UC)

### **Prerequisites for English and ESL Classes**

The student may meet the prerequisite requirement for English and ESL classes in the following manner, with the following conditions:

1. Earn the appropriate score for the course on the assessment test for that area; OR
2. Earn a grade of "C" or higher for the previous course in the sequence of courses for that area, i.e., ESL, Reading, or Writing.

Students may use the end-of-semester assessment in Reading to earn a score high enough to skip one level or more when advancing in the Reading sequence.

Note: End-of-semester assessment test scores DO NOT allow a student to advance in the ESL, Reading, or Writing sequence of courses when a "D" or an "F" has been earned, in which case the student must repeat the unsuccessful course.

Students disagreeing with their placement standing as indicated by the assessment test score for ESL, Reading, or Writing may challenge their placement status through the Credit by Examination process, taking a comprehensive test over the course that serves as the prerequisite. (See the Credit by Examination section in this Catalog.) Upon passing the comprehensive examination, the student will have earned credit for the course in question, thereby satisfying the prerequisite.

## **ENGLISH**

### **ENGL 008 (4.0 Units)**

#### **Basic English Composition I**

**Term Hours: 72 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

Prerequisite: ESL 005 with a grade of "C" or better or appropriate placement.

Recommended Preparation: Concurrent enrollment in an appropriate reading class.

Preparation for ENGL 009. Provides developmental instruction approaching the college level in paragraph and short essay writing. (Non-transferable, nondegree applicable)

### **ENGL 009 (4.0 Units)**

#### **Basic English Composition II**

**Term Hours: 72 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

Prerequisite: ENGL 008 or ENGL 097 or ENGL 098 with a grade of "C" or better or appropriate placement.

Preparation for ENGL 110. The course seeks to facilitate the student's mastery of the short essay at the college level. The course follows in sequence from ENGL 008 (ENGL 098). (Nontransferable, nondegree applicable)

### **ENGL 010 (4.0 Units)**

#### **English Composition – Accelerated**

**Term Hours: 54 Lec, 36 Lab**

**Letter Grade Only**

Accelerated class that prepares students for transfer-level English composition and associate-degree classes. Emphasizes and develops skills in critical reading and academic writing. Strongly recommended: participation in the writing placement (Accuplacer) process. (Nontransferable, nondegree applicable)

### **ENGL 059 (3.0 Units)**

#### **Grammar and Usage Review**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Review of traditional/structural grammar; review of sentence types and sentence combinations; review of usage rules regarding punctuation, mechanics, capitalization; review of spelling rules; practice with sentence, paragraph, essay and/or journal writing done by the student. (Nontransferable, nondegree applicable)

### **ENGL 102 (3.0 Units)**

#### **Introduction to Literature**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.

Introduction to the study of poetry, fiction and drama, with further practice in writing. (C-ID ENGL 120) (CSU, UC)

### **ENGL 110 (4.0 Units)**

#### **Composition and Reading**

**Term Hours: 72 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: ENGL 009 or ENGL 010 or ENGL 099 with a grade of "C" or better or appropriate placement.

Recommended Preparation: READ 019 (Formerly ENGL 019)

The standard course in freshman English. The course seeks to improve the student's ability to understand serious and complex prose and to improve the student's ability to write an exposition that is thoughtful and clear, including the production of a well-documented research paper. (C-ID ENGL 100) (CSU, UC)

### **ENGL 201 (3.0 Units)**

#### **Advanced Composition**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.

Emphasizes critical thinking in reading and writing beyond that achieved in ENGL 110. Written argumentation will focus on deduction and induction, an understanding of the fallacies of language and thought, the application of valid evidence, and refutation. (C-ID ENGL 105) (CSU, UC)

### **ENGL 220 (3.0 Units)**

#### **Survey of American Literature I**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.

Recommended Preparation: ENGL 102

This course is a survey of American Literature from its beginning through the Civil War, including the Colonial Period (1588-1765), the New Republic (1765-1829), and the American Renaissance (1829-1865). In addition to reading representative works of authors of these periods, students will address historical, social, political, cultural, and religious issues of the time. Reading assignments will include essays, novels, poetry, and short fiction of the time period, as well as criticism of the literature. Students will critically analyze these works in essays, exams, and research papers, as assigned. (C-ID ENGL 130) (CSU, UC)



**ENGL 221 (3.0 Units)**  
**Survey of American Literature II**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.  
This course is a survey of American Literature from late 19th Century to the present, which includes representative works from Literary Realism (1865-1914), the Modern Age (1914-1945), and the Postmodern Period (1946-Present). In addition to reading representative works of authors of these periods, students will address historical, social, political, cultural, and religious issues of the time. Reading assignments will include essays, novels, poetry, and short fiction of the time period, as well as criticism of the literature. Students will critically analyze these works in essays, exams, and research papers, as assigned. (C-ID ENGL 135) (CSU, UC)

**ENGL 222 (3.0 Units)**  
**Survey of World Literature**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.  
Recommended Preparation: ENGL 102  
A study of selected works, in translation and in English, of literature from around the world, including Europe, the Middle East, Africa, Asia and other areas, from antiquity to the mid or late seventeenth century. (C-ID ENGL 140) (CSU, UC)

**ENGL 223 (3.0 Units)**  
**Survey of World Literature**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.  
Recommended Preparation: ENGL 102  
A study of selected works, in translation and in English, of literature from around the world, including Europe, the Middle East, Africa, Asia and other areas, from the mid or late seventeenth century to the present. (C-ID ENGL 145) (CSU, UC)

**ENGL 224 (3.0 Units)**  
**Survey of British Literature I**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.  
Recommended Preparation: ENGL 102.  
Study of works of major writers from the British Isles up to the end of the 18th century. (C-ID ENGL 160) (CSU, UC)

**ENGL 225 (3.0 Units)**  
**Survey of British Literature II**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.  
Recommended Preparation: ENGL 102  
Study of works of major writers from the British Isles from the late 18th century to contemporary British and post-colonial texts. May be taken before ENGL 224. (C-ID ENGL 165) (CSU, UC)

**ENGL 226 (3.0 Units)**  
**Introduction to Mythology**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.  
Comparative themes and figures from various mythologies of the world. Interpretation of myths; the influence on art, culture, and history. (Same as HUM 226) (CSU, UC)

**ENGL 250 (3.0 Units)**  
**Creative Writing**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.  
Recommended Preparation: ENGL 102  
Study and application of the principles of literary construction, plus exercises in writing of imaginative literature, including short story, poetry, screen-writing, and stage play-writing. The student will be expected to attempt all genres of imaginative writing. The student may elect to specialize in one of the genres in order to achieve maximum progress. (C-ID ENGL 200) (CSU, UC)

**ENGL 270 (3.0 Units)**  
**Introduction to Linguistics**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisites: ENGL 110 or ENGL 101 with a grade of "C" or better.  
This course is designed to introduce students to the field of Linguistics. In this course students develop an understanding of the nature of language through the study of core areas in linguistics, including phonetics, phonology, morphology, syntax, semantics, and pragmatics. Students also read, observe, and think critically about psycholinguistics, sociolinguistics, historical linguistics, sign language, animal communication, and artificial intelligence. This course is designed for students who plan to transfer as well as for those with a general interest in linguistics. (CSU, UC)



### **Prerequisites for English and ESL Classes**

The student may meet the prerequisite requirement for English and ESL classes in the following manner, with the following conditions:

1. Earn the appropriate score for the course on the assessment test for that area; OR
2. Earn a grade of "C" or higher for the previous course in the sequence of courses for that area, i.e., ESL, Reading, or Writing.

Students may use the end-of-semester assessment in Reading to earn a score high enough to skip one level or more when advancing in the Reading sequence.

Note: End-of-semester assessment test scores DO NOT allow a student to advance in the ESL, Reading, or Writing sequence of courses when a "D" or an "F" has been earned, in which case the student must repeat the unsuccessful course.

Students disagreeing with their placement standing as indicated by the assessment test score for ESL, Reading, or Writing may challenge their placement status through the Credit by Examination process, taking a comprehensive test over the course that serves as the prerequisite. (See the Credit by Examination section in this Catalog.) Upon passing the comprehensive examination, the student will have earned credit for the course in question, thereby satisfying the prerequisite.

## **ENGLISH AS A SECOND LANGUAGE**

### **ESL 001 (5.0 Units) Grammar and Composition for ESL 1**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Recommended Companion Course: ESL 011

ESL 001 is a grammar class in an English-only environment designed for the beginning or false beginning ESL student. The course will cover grammar and simple sentence writing. (Nontransferable, nondegree applicable)

### **ESL 002 (5.0 Units) Grammar and Composition for ESL 2**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: ESL 001 with a grade of "C" or better or appropriate placement.

Recommended Companion Courses: ESL 012

ESL 002 is a grammar class in an English-only environment designed for the low-intermediate ESL student. The course will cover grammar and simple sentence writing. (Nontransferable, nondegree applicable)

### **ESL 003 (5.0 Units) Grammar and Composition for ESL 3**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: ESL 002 with a grade of "C" or better or appropriate placement.

Recommended Companion Courses: ESL 013

ESL 003 is a grammar class in an English-only environment designed for the intermediate ESL student. The course will emphasize grammar, writing sentences, and short paragraphs. (Nontransferable, nondegree applicable)

### **ESL 004 (5.0 Units) Grammar and Composition for ESL 4**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: ESL 003 with a grade of "C" or better or appropriate placement.

Recommended Companion Course: ESL 014

ESL 004 is a grammar class in an English-only environment designed for the high-intermediate ESL student. The course will emphasize grammar, writing sentences, and paragraphs. (Nontransferable, nondegree applicable)

### **ESL 005 (5.0 Units) Grammar and Composition for ESL 5**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: ESL 004 with a grade of "C" or better or appropriate placement.

Recommended Companion Course: ESL 015

ESL 005 is a grammar class in an English-only environment designed for the advanced ESL student. The course will emphasize grammar and writing sentences and paragraphs in a variety of rhetorical modes. (Nontransferable, nondegree applicable)

### **ESL 010 (1.0 Unit) ESL Language Laboratory**

**Term Hours: 0 Lec, 36 Lab**

**Pass/No Pass**

ESL 010 is a self-paced course which provides individualized, interactive conversational English practice with appropriate software programs in the language laboratory. Students practice listening comprehension, vocabulary, pronunciation, and sentence development through interactive activities appropriate to their proficiency level. This course is a recommended supplement for any level of ESL. (Nontransferable, non-degree applicable)

### **ESL 011 (5.0 Units) Speaking and Listening for ESL 1**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Recommended Companion Courses: ESL 001, ESL 041, ESL 042, ESL 051, ESL 052

ESL 011 is a grammar-based speaking class in an English-only Environment for the beginning or false-beginning ESL student. Listening comprehension and speaking skills will be developed through basic dialogues, modeled tasks, and communicative activities. (Nontransferable, nondegree applicable)

### **ESL 012 (5.0 Units) Speaking and Listening for ESL 2**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: ESL 011 with a grade of "C" or better or appropriate placement. Recommended Companion Courses: ESL 002, ESL 041, ESL 042, ESL 051, ESL 052

ESL 012 is a grammar based speaking class in an English-only Environment for the low intermediate ESL student. Students will further develop listening comprehension and will increase fluency, accuracy, and confidence in oral production. (Nontransferable, nondegree applicable)

**ESL 013 (5.0 Units)**  
**Speaking and Listening for ESL 3**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: ESL 012 with a grade of "C" or better or appropriate placement.  
Recommended Companion Courses: ESL 003

ESL 013 is a grammar-based speaking class in an English-only Environment for the intermediate ESL student. Students will further develop listening comprehension and will increase fluency, accuracy, and confidence in oral production. (Nontransferable, nondegree applicable)

**ESL 014 (5.0 Units)**  
**Speaking and Listening for ESL 4**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: ESL 013 with a grade of "C" or better or appropriate placement.  
Recommended Companion Courses: ESL 004

ESL 014 is a grammar-based speaking class in an English-only Environment for the high-intermediate ESL student. Students will further develop listening comprehension and will demonstrate greater fluency, accuracy, and confidence in oral production. (Nontransferable, nondegree applicable)

**ESL 015 (5.0 Units)**  
**Speaking and Listening for ESL 5**

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: ESL 014 with a grade of "C" or better or appropriate placement.  
Recommended Companion Courses: ESL 004, ESL 044, ESL 045, ESL 053, ESL 054, ESL 055

ESL 015 is a grammar-based speaking class in an English-only Environment for the advanced ESL student. Students will further develop listening comprehension and the ability to speak with greater fluency, accuracy, and confidence in oral production. (Nontransferable, nondegree applicable)

**ESL 023 (3.0 Units)**  
**ESL Reading 1**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: Appropriate placement.

This course is designed to assist intermediate level ESL students in developing reading skills and reading efficiency in English. Focus will be placed on understanding text structure and overall comprehension of a variety of texts. Further development of reading skills will also be emphasized. (Nontransferable, nondegree applicable)

**ESL 024 (3.0 Units)**  
**ESL Reading 2**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: ESL 023 with a grade of "C" or better or appropriate placement.

This course is designed to assist high-intermediate ESL students in developing reading skills and reading efficiency in English. Focus will be placed on understanding text structure and overall comprehension of a variety of texts. Further development of reading skills will also be emphasized. (Nontransferable, nondegree applicable)

**ESL 025 (3.0 Units)**  
**ESL Reading 3**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: ESL 024 with a grade of "C" or better or appropriate placement.

This course is designed to assist advanced ESL students in further developing reading skills and reading efficiency in English. Focus will be placed on understanding text structure and overall comprehension of a variety of texts. Further development of reading skills will also be emphasized. (Nontransferable, nondegree applicable)

**ESL 031 (1.0 Unit)**  
**Verb Review 1**

**Term Hours: 18 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ESL 001

This course is designed to review and reinforce proper use of the verbs "to be" and "to have", and the simple present and present progressive verb forms. It is a recommended supplement for students in Beginning and Low Intermediate ESL courses. (Nontransferable, nondegree applicable)

**ESL 032 (1.0 Unit)**  
**Verb Review 2**

**Term Hours: 18 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ESL 002 with a "C" or better or ACCUPLACER score 4003

This course is designed to review and reinforce proper use of the simple present, present progressive, simple past, and past progressive verb tenses. It is a recommended supplement for students in Low Intermediate and Intermediate ESL courses. (Nontransferable, nondegree applicable)

**ESL 037 (1.0 Unit)**  
**Verb Review 7**

**Term Hours: 18 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ESL 004 with a "C" or better or ACCUPLACER score 4005.

This course is designed to review and reinforce proper use of verb tenses in English. It is a recommended supplement for students in Advanced ESL courses, as well as for students in developmental English courses. (Nontransferable, nondegree applicable)

**ESL 038 (1.0 Unit)**  
**Verb Review 8**

**Term Hours: 18 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ESL 004 with a "C" or better or ACCUPLACER score 4005.

This course is designed to review and reinforce proper use of verb tenses in English. It is a recommended supplement for students in Advanced ESL courses, as well as for students in developmental English courses. (Nontransferable, nondegree applicable)

**ESL 041 (1.0 Unit)****Conversation 1****Term Hours: 18 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ESL 001 or ESL 002.

ESL 041 is a short-term intensive course designed for students to participate in a variety of authentic exchanges in academic and workplace environments. Topics include opening, maintaining, and closing a conversation, describing things, places and people. (Nontransferable, non-degree applicable)

**ESL 042 (1.0 Unit)****Conversation 2****Term Hours: 18 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ESL 001 or ESL 002.

ESL 042 is a short-term intensive course designed for students to participate in a variety of authentic exchanges in academic and workplace environments. Topics include asking for permission, help and advice, and opening/closing telephone conversations. (Nontransferable, non-degree applicable)

**ESL 051 (1.0 Unit)****Pronunciation 1****Term Hours: 18 Lec, 0 Lab****Letter Grade Only**

Recommended Companion Courses: ESL 001 and ESL 011

ESL 051 is a short-term intensive pronunciation course designed for students whose main interest is to focus and improve on the articulation of English vowels and consonants, and on the development of basic English patterns of stress and intonation. (Nontransferable, non-degree applicable)

**ESL 052 (1.0 Unit)****Pronunciation 2****Term Hours: 18 Lec, 0 Lab****Letter Grade Only**

Recommended Companion Courses: ESL 002 and ESL 012

ESL 052 is a short-term intensive pronunciation course designed for students whose main interest is to focus on clearer articulation of English vowels and consonants, and on the increased development of basic English patterns of stress, intonation, and rhythm. (Nontransferable, non-degree applicable)

**ESL 061 (1.0 Unit)****Vocabulary 2****Term Hours: 18 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ESL 001

ESL 061 provides beginning level students an additional review, practice, and instruction in basic vocabulary. Topics to be covered include: community life, home, describing people and places, food, colors and clothing. Focus will be on a written and communicative activities designed to increase fluency. (Nontransferable, non-degree applicable)

**ESL 062 (1.0 Unit)****Vocabulary 3****Term Hours: 18 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ESL 002

ESL 062 provides students additional review, practice and instruction in basic vocabulary. Topics to be covered include: shopping, community services, health, and school. Focus will be on written and communicative activities designed to increase fluency for learners at the high beginning level of English. (Nontransferable, nondegree applicable)

**ENVIRONMENTAL SCIENCE****ENVS 110 (3.0 Units)****Environmental Science****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ENGL 009 or ENGL 099 and READ 019 (Formerly ENGL 019) or ENGL 089.

This course is designed to provide students with an overview and understanding of the relationships between human populations and the natural environment. The class will focus on basic concepts of science and ecosystem theory, human impacts on the biosphere, air, water, land, and environmental problems faced by the Imperial Valley that have regional and global consequences, and some of the proposed solutions. Field trips and activities may be included in this course. (Same as AG 110) (CSU, UC)

**FILM STUDIES****FILM 130 (3.0 Units)****Introduction to Film****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

This course will introduce the art, technology, language, and appreciation of film. Students will examine the relationship between cinema and culture. Students also will learn about basic cinematic techniques and structures as well as the roles of producer, director, actor, and cinematographer. (CSU, UC)

**FILM 230 (3.0 Units)****Introduction to Film History and Criticism****Term Hours: 36 Lec, 36 Lab****Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.

The origin and development of movies as an entertainment industry, as a technological medium, and as an art form. Key films from different historical periods will be examined for their technological and artistic contributions to the art of film making. (Formerly ENGL/HUM 230) (CSU, UC)



## FIRE SCIENCE

### **FIRE 100 (3.0 Units)**

#### **Fire Protection Organization**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course provides an introduction to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection; fire loss analysis; organization and function of public and private fire protection services; fire department as a part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire systems; and an introduction to fire strategy and tactics. (CSU)

### **FIRE 101 (3.0 Units)**

#### **Fire Prevention Technology**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationship of fire prevention with fire safety education, detection and suppression systems. This is one of six CORE courses required for an associate degree in Fire Technology. (CSU)

### **FIRE 102 (3.0 Units)**

#### **Fire Protection Equipment and Systems**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course provides information relating to the features of design and operation of fire detection and alarm systems, heat and smoke systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers. This is one of six CORE courses required for an associate degree in Fire Technology. (CSU)

### **FIRE 103 (3.0 Units)**

#### **Building Construction for Fire Protection**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course is the study of the components of building that relates to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at fires. The development and evolution of building and fire codes will be studied in relationship to past fires in residential, commercial, and industrial occupancies. This is one of six CORE courses required for an associate degree in Fire Technology. (CSU)

### **FIRE 104 (3.0 Units)**

#### **Fire Behavior and Combustion**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

This course provides theory and fundamentals of how and why fires start, spread, and are controlled. An in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents, and fire control techniques will be covered. This is one of six CORE courses required for an associate degree in Fire Technology. (CSU)

### **FIRE 105 (7.5 Units)**

#### **Emergency Medical Technician I**

**Term Hours: 117 Lec, 54 Lab**

#### **Letter Grade Only**

A course designed for individuals who will come in contact with victims of illness or injury primarily in an emergency, pre-hospital environment. This course would be of value to all emergency service personnel, including ambulance personnel, law enforcement, fire services, hospital emergency department, and other rescue personnel. Topics will include roles and responsibilities, evaluation and treatment of illness and injury. Procedures for dealing with life threatening emergencies are presented. The student will be able to gain a functional understanding of assessment-based approaches to patient care as well as the interventions added to the EMT I scope of practice. Hazardous Material training and semi-automatic defibrillation training are included. This course is approved by the Imperial County Emergency Medical Services Agency and is within the training guidelines of California Code of Regulations and the California Fire Service Training and Education Systems (CFSTES). Successful completion will result in eligibility for certification as an EMT I and EMT D. Successful completion will also result in a Training Institute (CSTI) through the Office of Emergency Services (OES). This is one of six courses required for an associate degree in Fire Technology and one of six courses toward eligibility for a Fire Fighter I certificate. (Same as EMT 105) (CSU)

### **FIRE 106 (1.0 Unit)**

#### **First Aid/CPR – Public Safety First Responder**

**Term Hours: 18 Lec, 5.4 Lab**

#### **Letter Grade Only**

A course for individuals who must provide first aid and/or CPR prior to the arrival/availability of pre-hospital care personnel with advanced training and certification/licensure. This course is primarily for fire department and law enforcement personnel. It satisfies the minimum requirements for this type of personnel as outlined in the California Code of Regulations, approved by the California Emergency Medical Services Authority. Upon successful completion of this course, the participant will receive a completion certificate from IVC and a CPR course completion card through the American Heart Association. (CSU)

### **FIRE 107 (2.0 Units)**

#### **Emergency Medical Technician I – Refresher**

**Term Hours: 36 Lec, 0 Lab**

#### **Letter Grade Only**

Prerequisites: Current EMT I certification or have possessed an EMT I certification within the past 4 years, and as mandated by the Imperial County EMS Agency, California Title 22, and/or CoAEMSP National Education Standards.

This course is designed to fulfill the California EMT I refresher course requirements and will review basic life support topics and procedures to include cardiopulmonary resuscitation training. Topics specific to Imperial County will be presented, as well as changes in policies and procedures with updated and new materials. Successful completion of this course will satisfy continuing education requirements for the EMT I and will enable the EMT I to be eligible for recertification in the state of California. This course is approved by the Imperial County Emergency Medical Services Agency and is within the training guidelines of the California Code of Regulations and the California Fire Service Training and Education Systems (CFSTES). (Same as EMT 107) (CSU)

**FIRE 108 (3.0 Units)**  
**Fire and Emergency Services Safety/Survival**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. (CSU)

**FIRE 109 (2.0 Units)**  
**Hazardous Materials for First Responders**  
**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: As recommended or mandated by State Fire Training Course Information & Required Materials Manual, California Department of Forestry & Fire Protection, May 2008.

This course is designed for fire department personnel who may respond to releases or potential releases of hazardous materials as part of the initial response to the site for the purpose of protecting nearby persons, property, or environment from the effects of the release. This course will provide the hazmat emergency responder with the processes used in decontamination and the methods to limit the spread of hazardous materials contamination in a safe and competent manner. (CSU)

**FIRE 117 (1.0 Unit)**  
**Auto Extrication**  
**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade Only**

This course provides students with the information and skills necessary to operate within the procedures and systems utilized during an automobile extrication. Subjects covered include: auto extrication sizeup; types of incidents; safety precautions; ICS for auto extrication; types of hand and power tools; removing windows; opening doors; removing roofs; pulling steering wheels; moving foot pedals; raising dashboards; pulling seats; stabilization of vehicles; and simulated rescues of trapped victims. (CSU)

**FIRE 121 (1.0 Unit)**  
**ICS-200 Basic Incident Command**  
**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade Only**

Recommended preparation: ENGL 110 or ENGL 101

This course is designed for all emergency response personnel (fire, police, and EMS). This course consists of the Incident Command System (ICS) modules 2-6 and meets the training needs of wildland fire personnel and other emergency response personnel. Participants are introduced to the principles associated with the ICS and Standardized Emergency Management System (SEMS). Topics provide an introduction to and an overview of the ICS. The topics also introduce the participant to the interagency incident management system being adopted by the fire service and emergency organizations across the country. (CSU)

**FIRE 122 (0.5 Unit)**  
**Confined Space Awareness**  
**Term Hours: 9 Lec, 0 Lab**  
**Letter Grade Only**

Recommended preparation: ENGL 110 or ENGL 101

This course is designed to introduce fire service personnel in the recognition of confined spaces and how to enter them properly, and the proper use of safety procedures within these areas. Students are introduced to the hazards, equipment, and operational positions of safe and

legal confined space entry. This course also includes how following CAL/OSHA regulations are required in regards to confined space areas. (CSU)

**FIRE 140 (9.5 Units)**  
**Fire – First Responders**  
**Term Hours: 153 Lec, 54 Lab**  
**Letter Grade Only**

Prerequisite: Successful completion of the application process and acceptance into the Fire Academy by the Fire Technology Coordinator. Successfully pass the Basic Fire Academy Entrance Exam with a proficiency score of 70% or better and pass the Physical Agility Test.

Fire-First Responders encompasses the disciplines of EMT, IS100, & IS700. This course is designed for individuals who will come in contact with victims of illness or injury primarily in an emergency, pre-hospital environment. This course is of value to all emergency service personnel, including ambulance personnel, law enforcement personnel, fire services personnel, hospital emergency department personnel, and other rescue personnel. Topics include roles and responsibilities of first responders, as well as evaluation and treatment of illness and injury. Procedures for dealing with life threatening emergencies are presented. The student will be able to gain a functional understanding of assessment-based approaches to patient care as well as the interventions added to the EMT I scope of practice. Hazardous Material training and semi-automatic defibrillation training will be included. IS 100- Introduction to the Incident Command System introduces the Incident Command System (ICS) and provides the foundation for higher level ICS training. This course describes the history, features and principles, and organizational structure of the Incident Command System. It also explains the relationship between ICS and the National Incident Management System (NIMS). IS 700- This course introduces and overviews the National Incident Management System (NIMS). NIMS provides a consistent nationwide template to enable all government, private-sector, and nongovernmental organizations to work together during domestic incidents. (Nontransferable, AA/AS Degree only)

**FIRE 142 (10.0 Units)**  
**Firefighter Academy 1**  
**Term Hours: 126 Lec, 162 Lab**  
**Letter Grade Only**

Prerequisites: FIRE 140 with a grade of "C" or better.

This course is designed to teach individuals to respond to and assist victims experiencing a minor or major fire, a need for rescue, or in a disaster or hazardous situation. FIRE 142 provides the basic skills and knowledge to be a productive member of a fire department team and complies with OSFM, NFPA standards for Firefighter 1 certification. Additional materials fee applies. (Nontransferable, AA/AS Degree only)

**FIRE 144 (3.0 Units)**  
**Firefighter Academy 2**  
**Term Hours: 45 Lec, 40.5 Lab**  
**Letter Grade Only**

Prerequisite: FIRE 142 with a grade of "C" or better.

This course introduces students to the hazards presented by vehicle extrication incident management and procedures; extrication tools and equipment; fire incident communications and reporting; fire extinguishing and control; and fire prevention and preparedness. Meets Office of the State Fire Marshal (OSFM) standards. (Nontransferable, AA/AS Degree only)

**FIRE 220 (2.5 Units)**  
**Fire Apparatus Driver/Operator 1A**  
**Term Hours: 45 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: CA Class "B" firefighter restricted license minimum.  
Recommended Preparation: Fire Fighting I training recommended.  
This course provides the student with information on driver responsibilities, recognized standards, and related laws for fire apparatus. Topics include basic inspections, documentation, maintenance, and troubleshooting fire apparatus, and techniques on driving and positioning fire apparatus. Each student also has the opportunity to increase his or her driving skills during simulated driving conditions. (CSU)

**FIRE 221 (2.5 Units)**  
**Fire Apparatus Driver/Operator 1B**  
**Term Hours: 45 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisites: CA Class "B" firefighting restricted license minimum, and FIRE 220 with a grade of "C" or better.  
Recommended Preparation: Fire Fighting I training recommended.  
This course provides the student with information on pump construction and theory of pump operations. Topics include: methods of performing basic hydraulics and techniques on basic inspections, documentation, maintenance, and troubleshooting fire pumps. Each student also has the opportunity to increase his or her pumping skills during simulated pumping conditions. (CSU)

**FIRE 222 (2.5 Units)**  
**Fire Investigation 1A**  
**Term Hours: 45 Lec, 0 Lab**  
**Letter Grade Only**

An introduction into fire investigation. This intense course will include principles of determining cause, recognizing and preserving evidence, interviewing witnesses and suspects, arrests, and detention procedures, point of origin determination, motives of the fire setter, and report writing. Successful completion will satisfy one of the State Fire Marshall's training requirements for certification as a Fire Investigator I. (CSU)

**FIRE 223 (2.5 Units)**  
**Fire Investigation 1B**  
**Term Hours: 45 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: FIRE 222 with a grade of "C" or better.  
This course provides the participant with information to achieve a deeper understanding of fire investigation. The course builds on Fire Investigation 1A and adds topics of discussion including the juvenile fire setter, in depth report writing, evidence collection and preservation procedures. Successful completion will satisfy one of the State Fire Marshall's training requirements for certification as a Fire Investigator I. (CSU)

**FIRE 231 (1.5 Units)**  
**Incident Command System (ICS) 300**  
**Term Hours: 27 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: FIRE 121 with a grade of "C" or better.  
This course is designed to enable personnel to operate efficiently using ICS in supervisory roles on expanding for Type 3 incidents. (CSU)

**FIRE 240 (1.5 Units)**  
**Training Instructor 1A: Cognitive Lesson Delivery**  
**Term Hours: 27 Lec, 0 Lab**  
**Letter Grade Only**

This is the first of a three-course series.  
Topics include methods and techniques for training in accordance with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching cognitive lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations. Two (2) student instructor teaching demonstrations are required of all. (CSU)

**FIRE 241 (1.5 Units)**  
**Training Instructor 1B: Psychomotor Lesson Delivery**  
**Term Hours: 27 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: FIRE 240 with a grade of "C" or better.  
This is the second of a three-course series. Topics include methods and techniques for training in accordance with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching psychomotor lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations. Two (2) student instructor teaching demonstrations are required of all students. (CSU)

**FIRE 242 (1.5 Units)**  
**Training Instructor 1C: Instructional Development Techniques**  
**Term Hours: 27 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: FIRE 240 and FIRE 241 with a grade of "C" or better.  
This is the third of a three-course series. Topics include methods and techniques for developing lesson plans, ancillary components, and tests in accordance with the latest concepts in career education. The course offers the opportunity to develop, receive feedback, and finalize instructional materials and deliver a teaching demonstration. Two (2) student instructor teaching demonstrations are required of all. (CSU)

## FRENCH

**FREN 100 (5.0 Units)**  
**Elementary French I**  
**Term Hours: 90 Lec, 0 Lab**  
**Letter Grade Only**

A beginning course stressing the basic skills of listening comprehension, speaking, reading and writing to develop control of the sounds and the basic forms and structure of French. Introduction to aspects of French culture and civilization. Students must plan for an hour of individual language laboratory by arrangement. Not open to students who have completed three years of high school French. (CSU, UC)

**FREN 110 (5.0 Units)****Elementary French II****Term Hours: 90 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: FREN 100

Continues the development of all four language skills, emphasizing vocabulary building, increasing fluency and control of correct pronunciation, basic forms and structure. Students must plan for an hour of individual language laboratory by arrangement. (CSU, UC)

**FREN 201 (5.0 Units)****Intermediate French I****Term Hours: 90 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: FREN 100 and FREN 110

French 201 is designed as a third semester in French. It is open to students who complete French 100 and French 110 or their equivalent. It provides instruction in the four language skills of listening comprehension, speaking, reading and writing at the beginning intermediate to intermediate levels. Intensive study of linguistic structures and vocabulary is emphasized to build communication skills in French. In addition, the study of authentic materials from a wide variety of sources including, text, images, audio recordings, video and film acquaints students with the diversity of French and francophone culture and civilization. The instructor will also guide students in their investigation of French and francophone history and literature through readings and lectures to prepare them for a major in French or to provide them with a strong general background in French and francophone studies. (CSU, UC)

**FREN 211 (5.0 Units)****Intermediate French II****Term Hours: 90 Lec, 0 Lab****Letter Grade Only**

French 211 is designed as a fourth semester in French. It is open to students who complete French 100, French 110 and French 201 or their equivalent. It provides instruction in the four language skills of listening comprehension, speaking, reading and writing at the intermediate to advanced-intermediate levels. Intensive study of linguistic structures and vocabulary is emphasized to build communication skills in French. In addition, the study of authentic materials from a wide variety of sources including, text, images, audio recordings, video and film acquaints students with the diversity of French and francophone culture and civilization. The instructor will also guide students in their investigation of French and francophone history and literature through readings and lectures to prepare them for a major in French or to provide them with a strong general background in French and francophone studies. (CSU, UC)

**FREN 230 (3.0 Units)****Intermediate Conversational French I****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: Concurrent enrollment in FREN 201.

Practical conversational skills are developed through listening exercises, directed conversations on assigned readings from newspaper and magazine articles, current topics, simple dialogues and plays. Emphasis on contemporary life in countries where French is spoken. Student must plan for an additional hour of individual language laboratory by arrangement. (CSU)

**GEOGRAPHY****GEOG 100 (3.0 Units)****Physical Geography****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

An introduction to the physical characteristics of the earth. Topics include: climate, landforms, natural vegetation, and the water and mineral resources of the earth. (CSU, UC)

**GEOG 102 (3.0 Units)****Cultural Geography****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

This course is a study of diverse human populations, cultural origins, cultural diffusion, and contemporary special variations. The topics studied include: demographics, languages, religions, urbanization, modification of landscapes, political geography, ethnicity and nationalism, economic systems, and development. (CSU, UC)

**GEOG 108 (3.0 Units)****World Regional Geography****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

World Regional Geography is a survey course which introduces students to the physical and cultural geographic aspects of the world's realms. Geography's interdisciplinary approach is used to analyze regions and illustrate their interdependence. (C-ID GEOG 125) (CSU, UC)

**GEOG 111 (1.0 Units)****Physical Geography Laboratory****Term Hours: 0 Lec, 54 Lab****Letter Grade Only**

Prerequisite: GEOG 100 or Concurrent Enrollment in GEOG 100.

GEOG 111 is the laboratory course in Physical Geography. The course provides laboratory exercises in topics covered in GEOG 100, Physical Geography, which covers the Earth's atmosphere, hydrosphere, biosphere and lithosphere. The laboratory experience includes the observation and interpretation of weather data, statistical analysis of climate data, map analysis and interpretation, analysis of earth materials, along with landform processes, plate tectonics, and biogeography. (CSU)

**GEOG 140 (3.0 Units)****California Geography****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

This course thematically covers various issues faced by the state of California that are relevant to the discipline of geography, including water resources, vegetation patterns, landforms and geomorphology, climate, agriculture, cultural landscapes, ethnic diversity, urbanization and economic patterns. Special attention is paid to human-environment interactions that have resulted in the formation of California's unique human and cultural landscapes. (CSU)



## GEOLOGY

### GEOL 100 (4.0 Units)

#### General Geology

**Term Hours: 54 Lec, 54 Lab**

#### Letter Grade Only

This course is designed as an introduction to Earth's physical processes, structures and composition, and includes coverage of Earth's internal processes, such as those that cause earthquakes, volcanoes and mountain building; surface processes, such as rivers and waves, wind, glaciers and the landforms that result from these processes; the nature and origin of rocks and minerals that form the Earth's crust; and structures related to folding and faulting, will be studied. (C-ID GEOL 101) (CSU, UC)

### GEOL 110 (3.0 Units)

#### Earth and Space Science

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

This introductory earth and space science course covers basic principles from the fields of geology, astronomy, oceanography, and meteorology. Minerals and rocks, natural processes acting at the earth's surface and within the Earth, plate tectonics, geologic time and dating, composition and motions of the Earth, solar system, phases of the moon, origin and life cycles of stars, galaxies, water movements, ocean floor, weather and climate, along with other related topics, will be studied. (C-ID GEOL 120) (CSU) (UC credit limited. See a Counselor.)

### GEOL 130 (3.0 Units)

#### Climate and Weather

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

This course will engage the student in learning the key concepts and scientific principles of Climate Science the Earth's atmosphere by analyzing interactions among and between the Earth's Systems as matter and energy are continuously exchanged. Topics included in the course are atmospheric structure and composition, solar radiation and energy balances, temperature, seasonal changes, moisture in the atmosphere, clouds and fog, precipitation, air pressure, winds, air masses, fronts and cyclonic activity, weather forecasting, climates and climate change. This course also focuses on the Earth and its inhabitants have changed though time, how humans interact with the aforementioned topics, and strategies to counter negative impacts associated with global climate change. (CSU, UC)

## HEALTH EDUCATION

### HE 100 (2.0 Units)

#### Health Education – Military Service

**Term Hours: 0 Lec, 0 Lab**

#### Pass/No Pass

Prerequisite: The satisfactory completion of basic or recruit training and 180 days or more active service in the military of the United States of America.

The student wishing credit for military service must present his/her DD214 or equivalent supporting document to the Veterans Assistant and register for the credit. If the student registers for military credit and does not submit verification of service, he/she will be dropped as a No-Show and will not receive credit. HE 100 does not count for units toward VA, Financial Aid, or full-time student status. These are not contact hours. May receive credit only once. (CSU)

### HE 102 (3.0 Units)

#### Health Education

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

This course studies aspects of physical, intellectual, social, emotional, spiritual and environmental health. Emphasis is placed on the development of attitudes and practices of a preventive lifestyle for healthy living and optimal wellness. Specific instructional areas include chronic diseases, physical activity, nutrition, weight management, birth control methods, human sexuality, alcohol, tobacco, illicit drug abuse, stress, and factors that contribute to wellness and longevity. Experience in personal health assessment and the changing of health behaviors is also stressed. This course satisfies the State of California Health Education requirement for a teaching credential. (CSU, UC)

### HE 104 (3.0 Units)

#### First Aid and CPR

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

This course is designed to provide both the theory and demonstration of First Aid, CPR, and AED techniques. Giving students the confidence to respond to emergencies with the knowledge and the skills necessary in an emergency to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until professional medical help arrives. (C-ID KIN 101) (CSU, UC)

## HISTORY

### HIST 100 (3.0 Units)

#### Early World History

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

Early World History is a broad survey of the diverse societies of Africa, Asia, Europe, the Americas, and Oceania from prehistory through the 1400s. This course seeks to describe the emergence and development of civilizations, societies, trade, religions and cultures, and to recognize the interconnections between different peoples and across time. (C-ID HIST 150) (CSU, UC)

### HIST 101 (3.0 Units)

#### Modern World History

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

Modern World History is a broad survey of the diverse societies of Africa, Asia, Europe, the Americas, and Oceania from the 1400s to the present. This course emphasizes the political, cultural, social, imperial, and trade connections between western and non-western societies of the modern era. (C-ID HIST 160) (CSU, UC)

### HIST 110 (3.0 Units)

#### Early Western Civilization

**Term Hours: 54 Lec, 0 Lab**

#### Letter Grade Only

This course is a survey of the major developments in the Western heritage from the world of the ancient Greeks to 16th century Europe. Emphasis will be placed on the foundations of Western culture, religion, politics, economics, and society. (C-ID HIST 170) (CSU, UC)

**HIST 111 (3.0 Units)**  
**Modern Western Civilization**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course is a study of the major developments in Western civilization from the 17th century to the present. Emphasis will be placed on the political, economic, cultural, social and intellectual changes and developments in Western society which have led to our modern global society. May be taken before HIST 110. (C-ID HIST 180) (CSU, UC)

**HIST 120 (3.0 Units)**  
**United States History: Prehistory to Reconstruction**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course is a survey of American history from the pre-Columbian era to the end of Reconstruction. This course will cover the major political, economic, social, gender, racial, cultural and intellectual transformations of the colonial and early American eras. At the completion of this course students will have a broad understanding of the most important ideas, personalities, movements, and events in the colonial and early American periods. (C-ID HIST 130) (CSU, UC)

**HIST 121 (3.0 Units)**  
**United States History: Reconstruction to the Present**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course is a survey of American history from Reconstruction to the present. This course will cover the major political, economic, social, gender, racial, cultural and intellectual transformations of the modern American eras. Of special note will be an examination of America's rise to global power. At the completion of this course students will have a broad understanding of the most important ideas, personalities, movements, and events in the modern period. (C-ID HIST 140) (CSU, UC)

**HIST 130 (3.0 Units)**  
**Early Latin America**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: READ 019 (Formerly ENGL 019)  
This course compares the different regions of Latin America from prehistory through the Early National Period, including Mexico, Central America, South America and the Caribbean. The course explores pre-Columbian American civilizations, European exploration and conquest, the colonial era, the independence movements, and the creation of nations. Emphasis is given to the economic and social changes, the political and legal struggles, and the cultural and intellectual evolution generated by the encounter of two cultures and the creation of a third distinctive culture. (Same as LAS 130) (CSU, UC)

**HIST 131 (3.0 Units)**  
**Modern Latin America**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: READ 019 (Formerly ENGL 019)  
This course compares the nations and cultures of Latin America from the Early National Period to the present by studying the economic, social, political, and cultural evolution of the different regions, including Mexico, Central America, South America and the Caribbean. The region's changing interactions with and place in the international community and various other world factors are also explored. Emphasis is placed on the influence of various ethnic groups in the development of the different cultures of the region. (Same as LAS 131) (CSU, UC)

**HIST 132 (3.0 Units)**  
**History of Mexico**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: READ 019 (Formerly ENGL 019)  
This course is a one semester survey of Mexican history from prehistory to the present. The course will explore the Native American cultures of Mesoamerica, the period of colonization, the struggle for independence and nationhood in the 19th century, the Mexican Revolution, the era of population, and political and economic crisis during the 20th century, and national rebirth in the 21st century. (Same as LAS 132) (CSU, UC)

**HIST 140 (3.0 Units)**  
**East Asian History**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course is an introductory survey of the major cultures of East Asia, including the political, social and economic developments of China, Korea, and Japan from the ancient period to the present. This course will illustrate not only the regional differences of East Asia, but also the commonalities that are shared, especially with regard to the major Asian philosophies and religions. The course will also look at the impact of Western culture on Asia and problems of political and economic modernization. (CSU, UC)

**HIST 150 (3.0 Units)**  
**Survey of African History**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

An introductory survey of African history from prehistory to the present. Emphasis will be on Africa's place in world history since 1500, with special attention paid to the legacy of colonialism, the interaction of Africans and the outside world, and the challenges faced by Africans since independence. (CSU, UC)

**HIST 160 (3.0 Units)**  
**Middle East From 600**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course examines the history of the Middle East from the rise of Islam in the 600's through the present. It discusses the interplay of various peoples and cultures, and the powerful Islamic empires of the Caliphs, Seljuks, and Ottomans. Special emphasis is given to the impact of European and American political and economic imperialism, the spread of Arab nationalism and Islamic fundamentalism, and the region's current strategic position in global affairs. (CSU, UC)

**HIST 220 (3.0 Units)**  
**Women in American History**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: Eligible for placement in college English (ENGL 110). Any college level course in American History or Political Science.

A general survey of women's changing roles, status and contributions in American history from colonial times to the present. This course will analyze the social, political and economic aspects of women's lives and explore the ways in which race, ethnicity, and class influenced the American female experience. (CSU, UC)

**HIST 222 (3.0 Units)****History of California****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: Eligible for placement in college English (ENGL 110); any college level course in American History or Political Science.

A survey of the historical development of California from its earliest times to the present. The course provides an overview of both the physical characteristics and the diverse peoples of California and how they interacted and influenced the history of this state and its economic, social, cultural, and political institutions. This course may be of special interest to students planning a career in education. (CSU, UC)

**HIST 225 (3.0 Units)****Mexican American History****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101

Survey of Mexican American history from colonization to the present. Examines the Spanish and native Mexican roots of people in the American Southwest, the Mexican War of 1846-48 and its aftermath, the interrelationship of Mexico and United States histories between 1860 and 1910, the effects of the Mexican revolution (1910) on Mexican Americans in the United States, and the Chicano experience of the 20th century. (Same as LAS 225) (CSU, UC)

**HUMANITIES****HUM 100 (3.0 Units)****Introduction to the Humanities****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

An exploratory course designed to introduce students to the major disciplines in the Humanities: art, architecture, literature, music, and performing arts. Examination of humanistic values and how they are reflected in the development of arts and cultures from around the world. (CSU, UC)

**HUM 226 (3.0 Units)****Introduction to Mythology****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.

Comparative themes and figures from various mythologies of the world. Interpretation of myths; the influence on art, culture, and history. (Same as ENGL 226) (CSU, UC)

**HUM 262 (3.0 Units)****Introduction to Chicano/a Studies****Term Hours: 54 Lec, 0 Lab****Letter Grade or Pass/No Pass**

This course offers an introduction to Chicano/a studies as an academic discipline, with a focus on the cultural values, social organization, urbanization patterns of the Chicano/a in the U.S., as well as their struggles in education, politics and legislation. Due to the nature of the subject, students will be exposed to some Spanish phrases, words, and expressions. (Same as SPAN 262) (CSU, UC)

**JOURNALISM****JRN 100 (3.0 Units)****Introduction to Journalism****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101

The course focuses on the newspaper as a vehicle for communication within a community. Students study basic components of journalism, including types of articles, writing style, interview techniques, and ethics. (CSU)

**JRN 101 (3.0 Units)****Multimedia News Writing and Reporting****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: JRN 100 with a grade of "C" or better.

Recommended Preparation: ENGL 110 or ENGL 101 and ART 160

This course will provide students with in-depth instruction in interactive journalism. It builds on the skills of researching, interviewing, and reporting as they apply to multimedia storytelling via the internet and other electronic media. (CSU)

**LATINA/LATINO STUDIES****LAS 130 (3.0 Units)****Early Latin America****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: READ 019 (Formerly ENGL 019)

This course compares the different regions of Latin America from pre-history through the Early National Period, including Mexico, Central America, South America and the Caribbean. The course explores pre-Columbian American civilizations, European exploration and conquest, the colonial era, the independence movements, and the creation of nations. Emphasis is given to the economic and social changes, the political and legal struggles, and the cultural and intellectual evolution generated by the encounter of two cultures and the creation of a third distinctive culture. (Same as HIST 130) (CSU, UC)

**LAS 131 (3.0 Units)****Modern Latin America****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: READ 019 (Formerly ENGL 019)

This course compares the nations and cultures of Latin America from the Early National Period to the present by studying the economic, social, political, and cultural evolution of the different regions, including Mexico, Central America, South America and the Caribbean. The region's changing interactions with and place in the international community and various other world factors are also explored. Emphasis is placed on the influence of various ethnic groups in the development of the different cultures of the region. (Same as HIST 131) (CSU, UC)

**LAS 132 (3.0 Units)****History of Mexico****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: READ 019 (Formerly ENGL 019)

This course is a one semester survey of Mexican history from prehistory to the present. The course will explore the Native American cultures of Mesoamerica, the period of colonization, the struggle for independence and nationhood in the 19th century, the Mexican Revolution, the era of population, and political and economic crisis during the 20th century, and national rebirth in the 21st century. (Same as HIST 132) (CSU, UC)

**LAS 225 (3.0 Units)****Mexican American History****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101

Survey of Mexican American history from colonization to the present. Examines the Spanish and native Mexican roots of people in the American Southwest, the Mexican War of 1846-48 and its aftermath, the interrelationship of Mexico and United States histories between 1860 and 1910, the effects of the Mexican Revolution (1910) on Mexican Americans in the United States, and the Chicano experience of the 20th century. (Same as HIST 225) (CSU, UC)

**LEGAL ASSISTANT****LEGL 115 (3.0 Units)****Legal Procedures****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100. This course provides an overview of various legal specialties offered under the legal assistant program and the job functions performed in them. Topics include an introduction to the litigation process, bankruptcy, family law, contract law, corporate law, estates, trusts and wills, federal court practices and procedures, legal communications, and legal research. Students also learn specialized legal terminology. (CSU)

**LEGL 116 (3.0 Units)****Law Office Management****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100. This course introduces systems and procedures for administration and management of a law office. Course emphasizes file management, personnel issues, law library maintenance, computer systems, ordering supplies, financial analysis and billing, risk management, and legal ethics. (CSU)

**LEGL 117 (3.0 Units)****Criminal Litigation and Procedures****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100. This course will provide students with an understanding of criminal litigation practice and procedure, including the criminal court system, criminal investigation and prosecution, discovery and investigation, pretrial motions, trial preparation and procedures, and post-trial motions and relief. (CSU)

**LEGL 119 (3.0 Units)****Civil Procedures and Discovery****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100.

This course covers theory, concept, and rules of civil procedures. It includes types of evidence, prima facie cases, rules governing witness testimony, federal and state court systems, procedures for the removal of state court actions for transfer to the federal court system, initiation of federal and state court actions, remedies available under law and equity, alternative dispute resolution methods, drafting and filing complaints, answers, counterclaims, pre-trial motions, and in-court trial procedures. It also provides an examination of the rules of civil evidence and the admissibility of evidence, depositions, interrogations, admissions, notices to produce, and related rules of discovery and evidence. (CSU)

**LEGL 120 (3.0 Units)****Corporations****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100. This course reviews the types of business formation and law office procedures for selecting and setting up the correct type of business, including sole proprietorship, partnership, LLC, and corporations. (CSU)

**LEGL 121 (3.0 Units)****Legal Research****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100. This course provides an introduction to legal research and writing, including a comprehensive working knowledge and understanding of legal research materials and tools. The course covers the traditional and basic methods of legal research, sources of applicable statutory law and case law information, including use citations and computerized legal search systems. Students will learn to develop research strategies and to write legal memoranda and briefs. (CSU)



**LEGL 125 (3.0 Units)**  
**Real Estate Law for Legal Assistants**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100. This course provides legal background in property ownership with special reference to the law of California as it applies to community property, conveyances, deeds, trust deeds, mortgages, homesteads and estates, etc. (CSU)

**LEGL 126 (3.0 Units)**  
**Wills, Trusts, Probate, and Estate Administration**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100.

Course covers definition of technical terms used in probate, trusts and estate administration, sources of law relating to wills, trusts, and estate administration, types and forms of property and property ownership, the specific duties of a probate legal assistant, rules and general patterns of succession under the UPC, the effect of prior transactions on interstate succession, process for determining validity of wills and the basic requirements of a valid will. Various types of wills authorized by law, papers and other evidences that are components of a will, preparation and execution of a formal attested will, revocation of wills, disposition of property under will, methods for settling a decedent's estate, informal estate proceedings under the UPC, specific tasks performed by a legal assistant in formal estate administration, procedures for payment of decedent's debts and claims, special proceedings in probate, preparation and filing of tax returns, procedural requirements of formal accountings, role of legal assistant in the distribution of testate estates, nature and administration of trusts, guardianships, and conservatorships, and the professional responsibilities of a probate legal assistant. (CSU)

**LEGL 127 (3.0 Units)**

**Family Law**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ENGL 110 and ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100. This course covers elements of family law, including elements of marriage under the law, relationships that can exist when one party enters into an invalid marriage, ante nuptial agreements, dissolution of marriage, child-support rights, division of community property in community and non-community property states, and the uniform child custody jurisdiction act. (CSU)

**LEGL 128 (3.0 Units)**

**Bankruptcy**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to

be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100. This course examines the types of bankruptcies including bankruptcy laws and procedures with topics on creditors rights, debtors exemptions, and secured transactions. (CSU)

**LEGL 129 (3.0 Units)**

**Torts**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

Recommended Preparation: ENGL 110 or ENGL 101. In addition, students are expected to have a basic familiarity with computer terms, to be able to use applications such as word processing, spreadsheets, and email, and to do online research. These skills can be learned in CIS 100. A study of the fundamental principles of the law of torts, and examination of the techniques of investigation involved in the lawyers handling of tort claims, including the various forms of pleading. (CSU)

**Prerequisites for Mathematics Classes**

*The student may meet the prerequisite requirement for Mathematics classes in the following manner, with the following conditions:*

- 1. Earn the appropriate score for the course on the assessment test for that area; OR*
- 2. Earn a grade of "C" or higher for the previous course, at Imperial Valley College or a comparable course at another college, in the sequence of courses for that area, i.e., Calculus I, Calculus II, Calculus III, etc.*

*Students disagreeing with their placement standing as indicated by the assessment test score for mathematics may challenge their placement status through the Credit-by-Examination process, taking a comprehensive test over the course that serves as the prerequisite. (See the Credit by Examination section in this Catalog.) Upon passing the comprehensive examination, the student will have earned credit for the course in question, thereby satisfying the prerequisite.*

*Please see the appendix in the back of this catalog for a complete mathematics prerequisite chart.*

## MATHEMATICS

**MATH 060 (1.0 Unit)**

**Math Lab**

**Term Hours: 0 Lec, 36 Lab**

**Pass/No Pass Only**

Concurrent enrollment in MATH 071, MATH 081, or MATH 091 required. A laboratory where students work on material that accompanies the remedial mathematics course in which they are enrolled. Involves individualized instruction and use of media and computers. This course is offered on a Credit/No Credit basis. The 36 required hours must be undertaken in the Math Lab. (Non-transferable, nondegree applicable)

**MATH 061 (3.0 Units)****Basic Mathematics****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

An introduction to the concepts needed for further study in Mathematics. Topics covered include operations with whole and rational numbers, decimals, percents, ratio and proportions, and their applications. (Nontransferable, nondegree applicable)

**MATH 071 (3.0 Units)****Pre-algebra****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 061 with a grade of "C" or better or appropriate placement.

An introduction to the mathematical concepts needed for further study in Algebra. Topics covered will include the real number system, variable expressions, solving equations, measurement and conversions, and geometry. (Nontransferable, nondegree applicable)

**MATH 081 (4.0 Units)****Beginning Algebra****Term Hours: 72 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 071 with a grade of "C" or better or appropriate placement.

An introduction to the concepts of Algebra. Topics covered include solving equations, polynomials, factoring, rational expressions, graphs and linear equations, systems of linear equations, and inequalities. (Nontransferable, nondegree applicable)

**MATH 091 (5.0 Units)****Intermediate Algebra****Term Hours: 90 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 081 with a grade of "C" or better or appropriate placement.

A further study of the concepts of algebra. Topics covered include linear and quadratic equations, relations, functions and graphs, systems of equations, logarithms and exponential functions, conic sections, and sequences and series. (Nontransferable, AA/AS degree only)

**MATH 110 (3.0 Units)****Number Systems in Elementary Mathematics****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.

Recommended for students who are working towards a teaching credential in elementary education. Topics discussed are sets and relations, development of the number system from the natural numbers including whole, rational and real numbers, decimals and percents, number theory, ratio and proportion. (CSU) (UC credit limited. See a counselor)

**MATH 112 (3.0 Units)****Geometry in Elementary Mathematics****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.

Recommended for students who are working towards a teaching credential in elementary education. Topics discussed are probability and statistics, geometry, geometric constructions, rotations, translations, measurements and problem solving. (CSU) (UC credit limited. See a counselor)

**MATH 114 (1.0 Unit)****Children's Mathematical Thinking****Term Hours: 18 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: Concurrent Enrollment or Completion of MATH 110 with a grade of "C" or better.

Explore children's mathematical thinking with in-depth analysis of their understanding of operations, place value, algorithms, and multiple representations of problems. Examine interviews of children to assess understanding of mathematics topics, then plan tutoring sessions on basis of interviews. (CSU)

**MATH 119 (4.0 Units)****Elementary Statistics****Term Hours: 72 Lec, 0 Lab****Letter Grade Only**

Prerequisites: MATH 091 with a grade of "C" or better or appropriate placement.

Recommended Preparation: ENGL 110 or ENGL 101 or READ 111 (Formerly ENGL 111)

The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t-tests; and supervised use and practice in the application of technology for statistical analysis including the production of graphics, finding confidence intervals, test statistics, and regression lines, as well as the interpretation of the relevance of the statistical findings. Applications using data from disciplines including business, social sciences, psychology, life science, health science, and education. (C-ID MATH 110) (CSU, UC)

**MATH 122 (3.0 Units)****Finite Mathematics****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.

Finite mathematics is a course designed to introduce interesting, relevant, and realistic applications for a variety of fields including business, economics, and social sciences. This course incorporates the use of technology to allow, increased visualization and a better understanding of concepts. It satisfies the mathematics general education requirement and is transferable. It is an excellent course for those students who will not need any other mathematics classes for their degree. Topics included in this course are systems of linear inequalities, matrices, linear programming, mathematics of finance, sets and Venn diagrams, combinatorics, and an introduction to probability and statistics. (CSU, UC)

**MATH 140 (3.0 Units)****Trigonometry****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.

Right angle trigonometry and applications, unit circle trigonometry, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities, solving triangles using the Laws of Sines and Cosines, and polar coordinates. (CSU)

**MATH 150 (4.0 Units)****College Algebra****Term Hours: 72 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 091 with a grade of "C" or better.

A continuation of the study of algebra. Attention will be paid to polynomial and rational functions, Exponential and Logarithmic functions, and Matrix Algebra. Additional topics include systems of equations, Linear Programming, and Analytic geometry. (CSU) (UC credit limited. See a counselor)

**MATH 170 (4.0 Units)****Introductory Calculus with Applications****Term Hours: 72 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 150 with a grade of "C" or better.

This course presents a study of the techniques of calculus with emphasis placed on the application of these concepts to business and management related problems. Students take this course to prepare for courses for which calculus is recommended and/or required, as well as to study the ideas and concepts of advanced mathematics as applied to a modern computerized society. Topics covered include pre-calculus concepts, applications of derivatives and integrals of functions including polynomials, rational, exponential and logarithmic functions, differential equations, and functions of several variables. (C-ID MATH 140) (CSU) (UC credit limited. See a Counselor.)

**MATH 190 (5.0 Units)****Pre-Calculus****Term Hours: 90 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 140 or equivalent with a grade of "C" or better or appropriate placement.

This is a course intended for students who need a thorough foundation before attempting calculus. Included will be the study of the real number system, exponential, logarithmic, and trigonometric functions, the complex numbers, theory of equations, and systems of equations. (CSU) (UC credit limited. See a counselor.)

**MATH 192 (4.0 Units)****Analytic Geometry and Calculus I****Term Hours: 72 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 190 or equivalent with a grade of "C" or better or appropriate placement.

A first course in differential and integral calculus of a single variable: functions; limits and continuity; techniques and applications of differentiation and integration; Fundamental Theorem of Calculus. Primarily for Science, Technology, Engineering and Math Majors. (C-ID MATH 210) (CSU) (UC credit limited. See a counselor.)

**MATH 194 (4.0 Units)****Analytic Geometry and Calculus II****Term Hours: 72 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 192 with a grade of "C" or better.

A second course in differential and integral calculus of a single variable: integration; techniques of integration; infinite sequences and series; polar and parametric equations; applications of integration. Primarily for Science, Technology, Engineering & Math Majors. (C-ID MATH 220) (CSU, UC)

**MATH 210 (4.0 Units)****Multivariable Calculus****Term Hours: 72 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 194 with a grade of "C" or better.

Vector valued functions, calculus of functions of more than one variable, partial derivatives, multiple integration, Green's Theorem, Stokes' Theorem, divergence theorem. (CSU, UC)

**MATH 220 (3.0 Units)****Elementary Differential Equations****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 194 with a grade of "C" or better.

The course is an introduction to ordinary differential equations including both quantitative and qualitative methods as well as applications from a variety of disciplines. Introduces the theoretical aspects of differential equations, including first, second, and higher order differential equations and their applications, establishing when solution(s) exist, and techniques for obtaining solutions, including, series solutions, and singular points, Laplace transforms and linear systems. (C-ID MATH 240) (CSU, UC)

**MATH 230 (3.0 Units)****Introduction to Linear Algebra with Applications****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 194 with a grade of "C" or better.

A first course in linear algebra intended for students majoring in mathematics, the physical sciences, engineering or business. This course develops the techniques and theory needed to solve and classify systems of linear equations. Solution techniques include row operations, Gaussian elimination, and matrix algebra. Investigates the properties of vectors in two and three dimensions, leading to the notion of an abstract vector space. Vector space and matrix theory are presented including topics such as inner products, norms, orthogonality, eigenvalues, eigenspaces, and linear transformations. Selected applications of linear algebra are included. (CSU, UC)

**MATH 240 (3.0 Units)****Discrete Mathematics****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: MATH 192 with a grade of "C" or better.

This course is an introduction to the theory of discrete mathematics and introduces elementary concepts in logic, set theory, graph theory, number theory and combinatorics. This forms a basis for upper division courses in mathematics and computer science, and is intended for the transfer student planning to major in these disciplines. The topics covered in this course include methods of proof, sets and relations, functions, number theory, induction, recursion, counting principles and probability trees, permutations, combinations, introduction to computer programming, and graph theory. (C-ID MATH 160) (CSU, UC)

**MATH 241 (1.0 Unit)**  
**Mathematics Software – MATLAB**

**Term Hours: 18 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: MATH 192 with a grade of "C" or better.

An introduction to MATLAB. MATLAB will be used to perform tasks in Algebra, Calculus, and Linear Algebra. There will be an emphasis on writing programs using MATLAB to perform these tasks. (CSU)

## MEDICAL ASSISTANT

**MA 070 (4.5 Units)**  
**Administrative Medical Assistant I**

**Term Hours: 81 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: AHP 100 with a grade of "C" or better.

Course of study designed to prepare for entry-level positions in clinics and doctors' offices. Medical-legal aspects, history of medicine, interpersonal communications, confidentiality, reception environment, appointment control, records management, professionalism, and telephone communications are emphasized. (Formerly AHP 070) (Nontransferable, AA/AS degree only)

**MA 072 (4.5 Units)**  
**Administrative Medical Assistant II**

**Term Hours: 81 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: MA 070 (Formerly AHP 070) with a grade of "C" or better. This course is designed to prepare students to operate office management equipment, prepare the patient's medical records, understand medical care expenses, credit arrangements, bookkeeping procedures, collection on overdue accounts, health insurance, billing, banking, and general management. (Formerly AHP 072) (Nontransferable, AA/AS degree only.)

**MA 074 (2.0 Units)**  
**Clinical Externship I**

**Term Hours: 0 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: MA 072 (Formerly AHP 072) with a grade of "C" or better. Course is designed to enable the student to put all didactic information and skills together in the work setting of the "front office" of a clinic or doctor's office. The medical assistant student is placed at a medical office, clinic, or HMO where he/she will gain hands-on experience performing "front office" medical assistant duties. Students are required to be available days to attend the externship. The externship hours are similar to the schedules normally available in industry. (Formerly AHP 074) (Nontransferable, AA/AS degree only)

**MA 080 (3.5 Units)**  
**Specimen Collection & Laboratory Procedures**

**Term Hours: 54 Lec, 27 Lab**

**Letter Grade Only**

Prerequisite: AHP 100 with a grade of "C" or better.

Prerequisite: MA 074 (Formerly AHP 074) with a grade of "C" or better. This course is designed to prepare students to comply with OSHA regulations, lab safety, bio-hazard awareness, usage of the microscope and other laboratory equipment, obtainment of capillary and venous blood samples, bacterial smears and cultures, urine, sputum, and stool specimens. (Formerly AHP 080) (Nontransferable, AA/AS degree only)

**MA 082 (3.5 Units)**  
**Exam Room Procedures**

**Term Hours: 54 Lec, 27 Lab**

**Letter Grade Only**

Prerequisite: MA 080 (Formerly AHP 080) with a grade of "C" or better.

This course is designed to prepare students in preparing patients for various types of exams, procedures of the eyes and ears, positioning and draping, assisting physician, language of charting by use of abbreviations and symbols, instrument identification and usage, aseptic technique, diagnostic tests and procedures, EKG, minor surgical procedures, medical emergencies, CPR health care provider level. (Formerly AHP 082) (Nontransferable, AA/AS degree only)

**MA 084 (3.5 Units)**  
**Pharmacology and Administration of Medication**

**Term Hours: 54 Lec, 27 Lab**

**Letter Grade Only**

Prerequisite: MA 082 (Formerly AHP 082) with a grade of "C" or better.

This course is designed to prepare students to understand medical-legal/ethical aspects, drug classifications, medical math, usage of PDR, abbreviations and symbols, writing prescriptions, charting, pharmacy calls, storing medications, methods of administering medications: orally, sublingual, topically, vaginally, and rectally. Conversion of orders to milligrams for injection, handling of and safety in using the syringe and needle, choosing correct size, identifying correct site for injection, injection technique of intradermal, subcutaneous and intramuscular (deep and Z-track), anaphylactic reaction, considerations of drug action and interactions. (Formerly AHP 084) (Nontransferable, AA/AS degree only)

**MA 086 (2.0 Units)**  
**Clinical Externship II**

**Term Hours: 0 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: MA 084 (Formerly AHP 084) with a grade of "C" or better.

Course is designed to enable the student to put all didactic information and skills together in the work setting of a clinic or doctor's office. The medical assistant student is placed at a medical office or clinic where he/she will gain hands-on experience performing medical assistant duties. The student is required to be available days to attend the externship. The externship hours are similar to the schedules normally available in industry. (Formerly AHP 086) (Nontransferable, AA/AS degree only)

## MUSIC

**MUS 100 (3.0 Units)**  
**Introduction to Music Foundations**

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

An introduction to basic concepts of music. The development of the skills and knowledge needed to read music, to hear music, and to use some instrument (including the voice) with skill. (C-ID MUS 110) (CSU) (UC credit limited. See a counselor.)



**MUS 102 (3.0 Units)**  
**Introduction to Music Literature and Listening**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

An introduction to music literature with emphasis on the listening experience. Students study the expressive materials of music and the major forms of music literature. Emphasis placed on the skills and understanding necessary for lifelong music listening experiences. (C-ID MUS 100) (CSU, UC)

**MUS 110 (1.0 Unit)**  
**Beginning Musicianship I**

**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade Only**

This course is designed to present basic skills and theory of music for persons interested in a background for appreciation of or further studies in music. Skills to be studied and developed are sight-singing, ear-training, and keyboard harmony. (C-ID MUS 125) (CSU, UC)

**MUS 112 (1.0 Unit)**  
**Beginning Musicianship II**

**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade Only**

This course continues the development of basic skills and theory of music through sight-singing, ear-training, analysis, and dictation. (C-ID MUS 135) (CSU, UC)

**MUS 120 (3.0 Units)**  
**Beginning Harmony I**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only or Pass/No Pass**

Sight-singing, dictation and keyboard harmony. Traditional diatonic harmony, four-voice writing, analysis. (C-ID MUS 120) (CSU, UC)

**MUS 122 (3.0 Units)**  
**Beginning Harmony II**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

A continuation of MUS 120. (C-ID MUS 130) (CSU, UC)

**MUS 140 (1.0 Unit)**  
**Beginning Group Piano I**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A course structured to correlate those musical skills, techniques and understanding which are basic to comprehensive keyboard musicianship at the early level of study. (CSU, UC)

**MUS 142 (1.0 Unit)**  
**Beginning Group Piano II**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A continuation of MUS 140. (CSU, UC)

**MUS 150 (1.0 Unit)**  
**Beginning Voice I**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

The student receives guidance in the performance and appreciation of the various types of solo songs while acquiring the facilities for good vocal technique. Principles are applied through group and individual singing. (CSU, UC)

**MUS 152 (1.0 Unit)**  
**Beginning Voice II**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**  
A continuation of MUS 150. (CSU, UC)

**MUS 156 (1.0 Unit)**  
**Beginning College Chorus**

**Term Hours: 36 Lec, 18 Lab**  
**Letter Grade Only**

Prerequisite: Audition Required.

Open to all students who have an interest in learning to sing and who enjoy music. Breath control, tone placement, articulation and enunciation. Rehearsal, performance and study of choral literature. Introduction to music theory as a means of learning to read music rather than learning by rote. Maximum credit two units. (CSU, UC)

**MUS 157 (1.0 Unit)**  
**Intermediate College Chorus**

**Term Hours: 36 Lec, 18 Lab**  
**Letter Grade Only**

Prerequisite: MUS 156 with a grade of "C" or better.

Continuation of MUS 156. This course will further students development in choir performance. Maximum credit two units. (CSU, UC)

**MUS 160 (1.0 Unit)**  
**Beginning Guitar I**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A basic course on how to accompany with the guitar. Stress will be placed on tuning, chording, different types of strums and elementary transposition. (CSU, UC)

**MUS 162 (1.0 Unit)**  
**Beginning Guitar II**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A continuation of MUS 160 with the following additions: 1. Reading music (standard musical notation); 2. A thorough presentation of bar chords including sevenths, ninths, diminished, augmented, and various altered chords; 3. Advanced picking techniques. (CSU, UC)

**MUS 163 (1.0 Unit)**  
**Applied Music I**

**Term Hours: 18 Lec, 9 Lab**  
**Letter Grade Only**

A course designed to provide students with a concentrated sequence of private instruction in music within a particular performing medium. One section meeting per week on campus, in addition to private instruction. As required conditions, the student must: 1. Secure a teacher approved by the College. 2. Take a minimum of one 30 minute lesson per week. 3. Meet one hour of class per week on campus for performance as scheduled and turn in weekly lesson attendance form. (CSU, UC)

**MUS 164 (1.0 Unit)****Applied Music II****Term Hours: 18 Lec, 9 Lab****Letter Grade Only**

Prerequisite: MUS 163 with a grade of "C" or better.

A continuation of private lessons in a chosen performance medium at a 2nd semester college level. One section meeting per week on campus, in addition to private instruction. As required conditions, the student must: 1. Secure a teacher approved by the College. 2. Take a minimum of one 30 minute lesson per week. 3. Meet one hour of class per week on campus for performance as scheduled and turn in weekly lesson attendance form. (CSU, UC)

**MUS 165 (1.0 Unit)****Applied Music III****Term Hours: 18 Lec, 9 Lab****Letter Grade Only**

Prerequisite: MUS 164 with a grade of "C" or better.

A continuation of private lessons in a chosen performance medium at a 3rd semester college level. One section meeting per week on campus, in addition to private instruction. As required conditions, the student must: 1. Secure a teacher approved by the College. 2. Take a minimum of one 30 minute lesson per week. 3. Meet one hour of class per week on campus for performance as scheduled and turn in weekly lesson attendance form. (CSU, UC)

**MUS 166 (1.0 Unit)****Applied Music IV****Term Hours: 18 Lec, 9 Lab****Letter Grade Only**

Prerequisite: MUS 165 with a grade of "C" or better.

A continuation of private lessons in a chosen performance medium at a 4th semester college level. One section meeting per week on campus, in addition to private instruction. As required conditions, the student must: 1. Secure a teacher approved by the College. 2. Take a minimum of one 30 minute lesson per week. 3. Meet one hour of class per week on campus for performance as scheduled and turn in weekly lesson attendance form. (CSU, UC)

**MUS 171 (1.0 Unit)****Chamber Orchestra****Term Hours: 36 Lec, 18 Lab****Letter Grade Only**

Prerequisite: Audition Required.

A study and performance of literature for a small orchestra. Performances in local communities and on campus are required. Fieldtrips to other musical events will be included to help performers develop efficient listening and evaluating practices. Solo and ensemble rehearsals and performances are included. Maximum credit four units. (CSU, UC)

**MUS 172 (1.0 Unit)****College - Community Band****Term Hours: 36 Lec, 18 Lab****Letter Grade Only**

Prerequisite: Audition Required.

A performance organization specializing in a wide range of literature for the wind band. The primary objective will be to provide the continuing music performing experiences needed by community adults, music educators, and advanced high school students. Maximum credit four units. (CSU, UC)

**MUS 175 (1.0 Unit)****Instrumental Ensemble****Term Hours: 36 Lec, 18 Lab****Letter Grade Only**

Prerequisite: Audition Required.

A performance organization specializing in jazz/rock literature for brass, woodwind, stringed and percussion instruments. Designed for musicians who wish to explore, rehearse, and perform jazz/rock literature of all styles and periods. Maximum credit four units. (CSU, UC)

**MUS 177 (1.0 Unit)****Stage Band****Term Hours: 36 Lec, 18 Lab****Letter Grade Only**

Prerequisite: Audition Required.

A performance ensemble specializing in the literature of the stage and jazz band tradition. Students will be provided ensemble experiences necessary for developing and refining improvisation techniques and performance practices appropriate to jazz, rock, blues, and swing music traditions. Maximum credit four units. (CID MUS 180) (CSU, UC)

**MUS 178 (1.0 Unit)****Symphony Orchestra****Term Hours: 36 Lec, 18 Lab****Letter Grade Only**

Prerequisite: Audition Required.

The study and performance of literature for full symphony orchestra in a wide variety of styles. Performances in local communities and on campus are required. Maximum credit four units. (CID MUS 180) (CSU, UC)

**MUS 182 (2.0 Units)****Introduction to Recording Techniques****Term Hours: 36 Lec, 18 Lab****Letter Grade Only**

This course is a study in the art of digital audio recording and how to record in the IVC Digital Recording Studio. The curriculum will cover the signal flow the mixing console as it applies to recording, microphones and techniques of application, signal processing, digital recording operation and the use of digital audio/sequencing software. (CSU)

**MUS 184 (2.0 Units)****Advanced Recording Techniques****Term Hours: 18 Lec, 36 Lab****Letter Grade Only**

Prerequisite: MUS 182 with a grade of "C" or better.

This course is a continuation in the study of digital audio recording and how to make a professional sounding compact disk using the IVC Digital Recording Studio. The curriculum will cover alleviating basic problems in the recording process, console automation, SMPTE and MIDI synchronization, the fundamentals involved in a mix-down and the skills for planning and executing a recording session. (CSU)

**MUS 200 (3.0 Units)****History and Literature of Music I****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

The historical development of music with a study of various types of music from stylistic periods as a medium of cultural development. Intended as a background toward further studies in music for the music major and persons interested in a thorough background for enjoying music. (CSU, UC)

**MUS 202 (3.0 Units)**  
**History and Literature of Music II**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

A continuation of MUS 200. (CSU, UC)

**MUS 210 (1.0 Unit)**  
**Intermediate Musicianship I**

**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade Only**

This course applies and develops rhythmic, melodic, and harmonic skills through sight-singing, ear-training, analysis, and dictation. (C-ID MUS 145) (CSU, UC)

**MUS 212 (1.0 Unit)**  
**Intermediate Musicianship II**

**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade Only**

This course continues to apply and develop rhythmic, melodic, and harmonic skills through sight-singing, ear-training, analysis, and dictation. (C-ID MUS 155) (CSU, UC)

**MUS 220 (3.0 Units)**  
**Intermediate Harmony I**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: MUS 122 with a grade of "C" or better.

A comprehensive study of the theory of music to include skills and creative experiences in traditional harmony. An introduction to 20th century harmonic and melodic systems. (CSU, UC)

**MUS 222 (3.0 Units)**  
**Intermediate Harmony II**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

A continuation of MUS 220. (C-ID MUS 150) (CSU, UC)

**MUS 240 (1.0 Unit)**  
**Intermediate Group Piano I**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A course structured for those students who have attained the performance skill competencies required in Beginning Group Piano. (CSU, UC)

**MUS 242 (1.0 Unit)**  
**Intermediate Group Piano II**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A continuation of MUS 240. (CSU, UC)

**MUS 250 (1.0 Unit)**  
**Intermediate Voice I**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A continuation of MUS 152. (CSU, UC)

**MUS 252 (1.0 Unit)**  
**Intermediate Voice II**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A continuation of MUS 250. (CSU, UC)

**MUS 260 (1.0 Unit)**  
**Intermediate Guitar I**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A continuation of MUS 162 with the following additions: 1. Reading music (standard musical notation); 2. A thorough presentations of bar chords including sevenths, ninths, diminished, augmented, and various altered chords; 3. Advanced picking techniques. (CSU)

**MUS 262 (1.0 Unit)**  
**Intermediate Guitar II**

**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

A continuation of MUS 260 with the following additions: 1. Reading music (standard musical notation); 2. A thorough presentations of bar chords including sevenths, ninths, diminished, augmented, and various altered chords; 3. Advanced picking techniques. (CSU)

## **NURSING: ASSOCIATE DEGREE**

**NURS 080 (1.5 Units)**  
**Introduction to Nursing**

**Term Hours: 18 Lec, 27 Lab**  
**Pass/No Pass**

Prerequisite: Admission to the Associate Degree Nursing Program

This course is designed to provide the pre-nursing student with an introduction to the study of nursing. The student will participate in eight-five hour sessions to explore and become familiar with the expectations and realities of being a nursing student. Utilizing a variety of topics, activities, examinations and general information, it is designed to assist the student to develop strategies to be successful in the nursing program. The philosophy of the nursing program and role of the student in developing accountability, integrity and meeting the standards of academic and clinical conduct are discussed. (Nontransferable, nondegree applicable)

**NURS 081 (1.0 Unit)**  
**Individual Studies 1st Semester: Nursing**

**Term Hours: 0 Lec, 54 Lab**  
**Pass/No Pass**

Prerequisite: Admission to the Nursing Program.

This course is designed to facilitate the learning of first semester nursing knowledge, skills and concepts through individualized, computer enhanced and nursing tutor mediated instruction. (Nontransferable, nondegree applicable)

**NURS 082 (1.0 Unit)**  
**Individual Studies 2nd Semester: Nursing**

**Term Hours: 0 Lec, 54 Lab**  
**Pass/No Pass**

Prerequisite: Admission to the Nursing Program and completion of first semester courses.

This course is designed to facilitate the learning of second semester nursing knowledge, skills and concepts through individualized, computer enhanced and nursing tutor mediated instruction. (Nontransferable, nondegree applicable)

**NURS 083 (1.0 Unit)**  
**Individual Studies 3rd Semester: Nursing**  
**Term Hours: 0 Lec, 54 Lab**  
**Pass/No Pass**

Prerequisite: Admission to the Nursing Program and completion of second semester courses.

This course is designed to facilitate the learning of third semester nursing knowledge, skills and concepts through individualized, computer enhanced and nursing tutor mediated instruction. (Nontransferable, nondegree applicable)

**NURS 084 (1.0 Unit)**  
**Individual Studies 4th Semester: Nursing**  
**Term Hours: 0 Lec, 54 Lab**  
**Pass/No Pass**

Prerequisite: Admission to the Nursing Program and completion of third semester courses.

This course is designed to facilitate the learning of fourth semester nursing knowledge, skills and concepts through individualized, computer enhanced and nursing tutor mediated instruction. (Nontransferable, nondegree applicable)

**NURS 100 (1.0 Unit)**  
**Medication Mathematics**  
**Term Hours: 18 Lec, 0 Lab**  
**Letter Grade Only**

Recommended preparation: MATH 091 or higher.

This course focuses on those components of safe medication calculation and administration. The emphasis is on accuracy of calculation and the critical thinking involved in client safety. This is an intense class on med math calculations that is required of all nursing majors. Clinical application is integrated into the clinical nursing course. (CSU)

**NURS 107 (6.0 Units)**  
**Nursing Fundamentals**  
**Term Hours: 36 Lec, 216 Lab**  
**Letter Grade Only**

Prerequisite: Admission to the Associate Degree Nursing Program.

This course provides an introduction to nursing and roles of the nurse, as well as profession related and patient care concepts. Emphasis is placed on the knowledge and skills needed to provide safe, quality care. The theoretical foundation for basic assessment and nursing skills is presented, and the student is given an opportunity to demonstrate these skills in a clinical laboratory setting. An introduction to the nursing process provides a decision-making framework to assist students in developing effective clinical judgment skills. Utilization of the nursing process and developmental theories (primary Erikson), focus on the nursing role as communicator, provider of care, and patient teacher. Parameters of health are defined. Nursing fundamental concepts are introduced related to physical and psychological assessment needs of the normal and ill individual; pain assessment, interventions and evaluation; basic nutrition; and stress and adaptation concepts. Variations in nursing care for individuals of different socio-economic and cultural backgrounds will be explored. Additional materials fee applies. (CSU)

**NURS 108 (2.0 Units)**  
**Gerontology Nursing**  
**Term Hours: 18 Lec, 54 Lab**  
**Letter Grade Only**

Prerequisite: NURS 107 with a grade of "C" or better.

This course provides an introduction to the care of older adults while focusing on their unique physiological and psychosocial needs. Emphasis is placed on promoting healthy aging and retaining functional ability within a home or residential environment. Common health alterations of the older adult as well as safety and end-of-life care are introduced. Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe client care to older adults in selected settings. (CSU)

**NURS 109 (1.5 Units)**  
**Pharmacology**  
**Term Hours: 27 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: Admission to the Associate Degree Nursing Program

Corequisite: NURS 107

This course provides an introduction to the principles of pharmacology, including: pharmacokinetics, pharmacodynamics, medication interactions and potential adverse medication reactions. Emphasis will be placed on life span issues, gene therapy, medication errors, substance abuse, Immunizations and OTC, herbal and dietary medications. Focus will be on nursing actions and rationale for the concepts and medications covered. (CSU)

**NURS 113 (1.5 Units)**  
**Pharmacology I**  
**Term Hours: 27 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: Demonstration of Math Competency, Demonstration of Reading Competency, ENGL 110, PSY 101, SOC 101 or ANTH 102, BIOL 220, BIOL 204 and BIOL 206 or BIOL 200 and BIOL 202, and NURS 100, all with a grade of "C" or better.

This course focuses on those components of pharmacology related to safe nursing care and the reduction medication errors. The course includes information about the general classifications of drugs and principles of therapy related to the effects, actions, and therapeutic use of each drug. Nursing actions and rationale for nursing actions are explored. This class will cover drug administration throughout the lifespan, including psychosocial, gender, and cultural influences. Clinical application is integrated into the clinical nursing courses. (CSU)

**NURS 123 (1.5 Units)**  
**Pharmacology II**  
**Term Hours: 27 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: NURS 109 with a grade of "C" or better.

The course addresses the principles of medication therapy for acute and complex conditions including the effects, actions, algorithms and recommended use of drugs in the treatment of complex patient problems. Safe administration practices and reduction of medication errors will be covered. The student will learn to manage complex medication administration through various routes including intravenous routes. Nursing actions and rationale for nursing actions are explored. Clinical applications are integrated into the clinical nursing courses. (CSU)



**NURS 127 (4.0 Units)**  
**Medical Surgical Nursing I**  
**Term Hours: 36 Lec, 108 Lab**  
**Letter Grade Only**

Prerequisite: NURS 108 and NURS 109 with a grade of "C" or better.  
This course focuses on the care of adult clients with health alterations that require medical and/or surgical intervention. Emphasis is placed on the care of clients with alterations in selected body functions. Concepts of client centered care, cultural sensitivity, informatics, safe practice, and professionalism are integrated throughout the course. Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe client care to adults in a variety of settings. Additional materials fee applies. (CSU)

**NURS 128 (4.5 Units)**  
**Nursing Care of the Childbearing Family**  
**Term Hours: 45 Lec, 108 Lab**  
**Letter Grade Only**

Prerequisite: NURS 127 with a grade of "C" or better.  
This course provides an integrative, family-centered approach to the care of women of childbearing age and newborns. Emphasis is placed on normal and high-risk pregnancies, normal growth and development, family dynamics, reproductive health changes, and the promotion of healthy behaviors in patients. Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe patient care to women of childbearing age and newborns in selected settings. (CSU)

**NURS 204 (3.0 Units)**  
**Transition to A.S. Degree Nursing**  
**Term Hours: 45 Lec, 27 Lab**  
**Letter Grade Only**

Prerequisite: Completion of advanced placement requirements which include an Active California LVN license and at least 6 months of work experience or permission of the instructor.  
Corequisite: BIOL 220 for ADN applicants or BIOL 092 for students seeking the 30-unit option.  
Recommended Preparation: MATH 091 or higher  
This course facilitates the transition of advanced placement students (Licensed Vocational Nurses) into the associate degree nursing program. It provides an introduction to becoming a provider of care and a member of the discipline in the various roles of the RN. The course provides an introduction to the nursing process and critical thinking as a process to learn and improve nursing practice. Emphasis is placed on the acquisition and utilization of the nursing process as a basis for care. Concepts related to program philosophy, conceptual framework, cultural sensitivity, growth and development, and role expectations are emphasized. Advanced assessment knowledge, skills, and practice in the classroom and laboratory are completed. (CSU)

**NURS 217 (4.0 Units)**  
**Medical Surgical Nursing II**  
**Term Hours: 36 Lec, 108 Lab**  
**Letter Grade Only**

Prerequisite: NURS 128 with a grade of "C" or better.  
This course focuses on the care of adult clients with medical and/or surgical health alterations. Emphasis is placed on the care of clients with alterations in selected body functions. Concepts of health promotion, health education, evidence based practice, and interdisciplinary collaboration will be integrated throughout the course. Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe care to clients and selected groups in a variety of settings. (CSU)

**NURS 218 (4.5 Units)**  
**Nursing Care of the Childrearing Family**  
**Term Hours: 45 Lec, 108 Lab**  
**Letter Grade Only**

Prerequisite: NURS 217 with a grade of "C" or better.  
This course provides an integrative, family-centered approach to the care of children. Emphasis is placed on normal growth and development, family dynamics, common pediatric disorders and the promotion of healthy behaviors in patients. Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe patient care to children in selected settings. (CSU)

**NURS 219 (3.0 Units)**  
**Psychiatric and Mental Health Nursing**  
**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

Prerequisite: NURS 218 with a grade of "C" or better.  
This course focuses on the care of clients across the lifespan experiencing cognitive, mental and behavioral disorders. Emphasis is placed on management of clients facing emotional and psychological stressors as well as promoting and maintaining the mental health of individuals and families. Concepts of crisis intervention, therapeutic communication, anger management, and coping skills are integrated throughout the course. The community as a site for care and support services is addressed. Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe client care to clients in selected mental health settings. Clinical experience may be out of county. (CSU)

**NURS 221 (1.0 Unit)**  
**Nursing Skills Laboratory IV**  
**Term Hours: 0 Lec, 54 Lab**  
**Letter Grade Only**

Prerequisite: NURS 211, NURS 231, NURS 224, NURS 225.  
Corequisite: NURS 230 and NURS 241.  
Tactile skills essential to safe nursing practice will be demonstrated in the nursing skills laboratory. Students will have the opportunity for supervised and individual practice followed by skills check-off by the instructor. Mastery of all previous learned skills will be assessed. Skills theory will be part of the demonstration. Additional materials fee applies. (CSU)



**NURS 224 (2.0 Units)**  
**Psychiatric & Mental Health Nursing**

**Term Hours: 36 Lec, 0 Lab**

**Letter Grade Only**

Prerequisites: NURS 121, NURS 123, NURS 125, all with a grade of "C" or better.

Corequisite: NURS 225.

This course provides the theoretical principles and science-based knowledge for the application of the nursing process to the care of clients with existing and potential pathophysiology and psychopathological adaptational problems relating to mental health and the individual's response to stressors and crises. Utilization of the nursing process via the Roy Adaptation Model focuses the course on the role of a nurse as a communicator, care plan developer, provider of care, and educator for clients experiencing psychiatric or mental health problems. Throughout the course, cultural, social, age related, legal and ethical attitudes toward behaviors which deviate from accepted norms are discussed. The promotion of mental health through primary prevention, intervention in maladaptive disorders, and rehabilitation of chronic disorders is presented in concurrent classroom and clinical settings. (CSU)

**NURS 225 (1.0 Unit)**  
**Psychiatric & Mental Health Nursing Applications**

**Term Hours: 0 Lec, 54 Lab**

**Letter Grade Only**

Prerequisites: NURS 121, NURS 123, NURS 125, all with a grade of "C" or better.

Corequisite: NURS 224.

This course provides the clinical applications of theoretical concepts taught in Psychiatric and Mental Health Nursing. Emphasis is on the nursing process, communication, psychopathology, and the principles of psychiatric/mental health nursing, in a variety of clinical settings. (CSU)

**NURS 227 (8.0 Units)**  
**Medical Surgical Nursing III & Preceptorship**

**Term Hours: 63 Lec, 243 Lab**

**Letter Grade Only**

Prerequisite: NURS 218 and NURS 219 with a grade of "C" or better.

Corequisite: NURS 229

This course focuses on advanced concepts of nursing care as they relate to patients across the lifespan with complex, multisystem alterations in health. Emphasis is placed on implementing time management and organizational skills while managing the care of patients with multiple needs and collaborating with the interdisciplinary team. Complex clinical skills, as well as priority setting, clinical judgment, and tenets of legal and ethical practice, are integrated throughout the course. Clinical experiences and advanced clinical preceptorships provide the student an opportunity to apply theoretical concepts and implement safe care to patients and selected groups in a variety of settings. (CSU)

**NURS 240 (2.0 Units)**  
**Intravenous Therapy Techniques**

**Term Hours: 36 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: Permission of instructor and/or License as Vocational Nurse  
A course of instruction in the practice and regulation of blood withdrawal, venipuncture, and intravenous therapy. Course content covers the anatomy and physiology of the vascular system; IV solutions, electrolytes, nutrients, vitamins, and blood/blood products; devices or equipment required to start and monitor; the role and regulations for RN, LVN, or other healthcare providers; and preparation of the client and family. At completion of the course, each participant will demonstrate successful venipuncture. (Same as VN 240) (CSU)

**NURS 241 (8.5 Units)**  
**Nursing Process and Application IV**

**Term Hours: 81 Lec, 216 Lab**

**Letter Grade Only**

Prerequisite: NURS 211, NURS 231, NURS 224, NURS 225, with a grade of "C" or better.

Corequisite: NURS 221, NURS 230.

This course is designed to integrate previous science and nursing course theory into an in-depth study of clients with increasingly complex health problems. Complex, multisystem, acute and emergency nursing theory is presented. This course provides theoretical perspective, science-based knowledge and principles needed by students to guide their application of the nursing process and choice of nursing interventions for individuals. Professional, legal and ethical issues are explored. Through utilization of developmental theories (primarily Erickson) and the Roy Adaptation Model nursing care for individual experiencing adaptation problems across the lifespan in the physiologic mode, psychologic mode and selected adaptation problems for person with acute, complex medical and/or surgical conditions related to neurologic system adaption, adaptations problems of special senses, cardiac, respiratory, and endocrine systems. Multisystem stressors are presented. Community nursing, and home health nursing are discussed. The nurse as leader of the nursing team and case management in nursing is explored. (CSU)

## **NURSING: VOCATIONAL**

**VN 110 (5.0 Units)**  
**Introduction to Patient Care I**

**Term Hours: 36 Lec, 162 Lab**

**Letter Grade Only**

Prerequisites: Admission to the vocational nursing program. AHP 100, BIOL 090, PSY 101, ENGL 101, current CPR certification (American Heart Health Care Provider Course only).

Corequisite(s): PSY 204, VN 114, VN 116

Theory and skills basic to the provision of safe nursing care are introduced in the classroom, skills laboratory, and clinical. Components of the nursing process are studied. Parameters of health are defined and the physical and psychological needs of the normal individual are explored. Additional materials fee applies. (CSU)

**VN 112 (5.0 Units)**  
**Introduction to Patient Care II**

**Term Hours: 36 Lec, 162 Lab**  
**Letter Grade Only**

Prerequisite: VN 110 with a grade of "C" or better.

Corequisite: VN 114, VN 116, PSY 204

Communication skills are presented in this course. Basic psychological and physiological concepts related to stress that cause disruptions in the individual's ability to adapt to his/her environment are presented in the classroom. Concurrently, in clinical sessions, the student relates learned skills and theory to the care of clients with well-defined commonly occurring illnesses in the hospital setting. (CSU)

**VN 114 (1.5 Units)**  
**Pharmacology I**

**Term Hours: 27 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: Admission to the Nursing Program or permission of the instructor.

Corequisite(s): VN 110, VN 112, VN 116, PSY 204

Recommended Preparation: MATH 091

An introductory course in Pharmacology designed to assist the student to acquire basic skills in drug dosage calculations and the administration of medications. A skills laboratory requirement is included. Clinical application will be integrated into VN 112. (CSU)

**VN 116 (2.5 Units)**  
**Patient Care Management and Critical Thinking**

**Term Hours: 45 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: Admission to the nursing program or permission of the instructor. To be taken concurrently with VN 110 and 112.

An overview of the leadership and management process as it relates to management of patient care is presented. Clinical application is integrated into VN 130 and VN 132 and all subsequent nursing courses. (CSU)

**VN 120 (5.5 Units)**  
**The Maternity Cycle**

**Term Hours: 45 Lec, 162 Lab**  
**Letter Grade Only**

Prerequisite: VN 112 or permission of instructor.

The nursing process is used to assess the needs of and devise a plan of care for the pregnant woman through the maternity cycle. Consideration is given to the physiological, psychosocial, cultural, and economic factors which have impact on the mother, infant, and the family as a whole. Concurrent classroom and clinical experience are provided. (CSU)

**VN 122 (5.5 Units)**  
**Common Health Problems I**

**Term Hours: 45 Lec, 162 Lab**  
**Letter Grade Only**

Prerequisite: VN 112 or permission of the instructor.

The first of three eight-week courses designed to provide a progressive and sequential study of common, well-defined health problems of the respiratory, reproductive, and special senses systems are presented. Transition from wellness to illness is emphasized. Concepts acquired to previous courses are applied with increasing complexity to caring for individuals of all ages. Physiological, psychological, emotional, cultural, and social concepts are integrated into the planning and implementation of nursing care. Concurrent classroom and clinical experiences are provided. (CSU)

**VN 124 (2.0 Units)**  
**Pharmacology II**

**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: VN 112, VN 114 or permission of instructor.

This course focuses on those components of pharmacology related to safe nursing care. It includes information about the general classification of drugs and principles of therapy related to the effects, actions, and therapeutic use of each drug. The nursing actions and rationale for nursing actions are covered. Clinical application is integrated into the clinical nursing courses. (CSU)

**VN 130 (5.5 Units)**  
**Common Health Problems II**

**Term Hours: 45 Lec, 162 Lab**  
**Letter Grade Only**

Prerequisite: VN 120, VN 122, and VN 124, or permission of the instructor.

The second of three nine-week courses designed to provide a progressive and sequential study of common, well-defined health problems is presented. Emphasis is placed on the immune, endocrine, hematological, cardiovascular, and musculoskeletal systems. Concepts acquired in previous courses are applied with increasing complexity in caring for individuals of all ages. Physiological, psychological, emotional, cultural, and social aspects are integrated into the planning and implementation of nursing care. Concurrent clinical experiences are provided whenever possible. In conjunction, appropriate nursing skills are learned in the classroom. (CSU)

**VN 132 (5.5 Units)**  
**Common Health Problems III**

**Term Hours: 45 Lec, 162 Lab**  
**Letter Grade Only**

Prerequisite: VN 130 or permission of the instructor.

The final nine-week course designed to provide a progressive and sequential study of common, well-defined health problems is presented in VN 132. The concepts from previous courses are applied with increasing complexity to the caring of individuals throughout the lifespan. The pathophysiology, treatment, and nursing management of common disorders involving the neurological, integumentary, gastrointestinal, and renal systems are studied in a progressive sequence across the lifespan. Principles of growth and development are reinforced. The nursing process is utilized by the student to identify the problems and nursing interventions needed for selected patients in the clinical setting. (CSU)

**VN 240 (2.0 Units)**  
**Intravenous Therapy Techniques**

**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: Permission of instructor and/or License as Vocational Nurse  
A course of instruction in the practice and regulation of blood withdrawal, venipuncture, and intravenous therapy. Course content covers the anatomy and physiology of the vascular system; IV solutions, electrolytes, nutrients, vitamins, and blood/blood products; devices or equipment required to start and monitor; the role and regulations for RN, LVN, or other healthcare providers; and preparation of the client and family. At completion of the course, each participant will demonstrate successful venipuncture. (Same as NURS 240) (CSU)

## PHARMACY TECHNICIAN

### **PHT 108 (2.0 Units)**

#### **Introduction to Pharmacy Technology**

**Term Hours: 36 Lec, 0 Lab**

#### **Letter Grade Only**

Recommended Preparation: AHP 100, BIOL 090, MATH 081, and CIS 101  
This course is designed to provide an introduction and overview of the Pharmacy Technician role and various related career opportunities. Course includes an overview of pharmaceutical dosage forms, drug development processes, and drug classifications. Ethical and Legal aspects of pharmacy practice are explored. (Formerly AHP 108) (CSU)

### **PHT 120 (3.0 Units)**

#### **Pharmacy Technician Body Systems I**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Prerequisite: AHP 100 with a grade of "C" or better.  
Recommended Preparation: BIOL 090, MATH 081, and BUS 164  
This course explores the anatomy, pathophysiology, and related pharmacology treatments for diseases and conditions of the respiratory, cardiovascular, renal, integumentary, reproductive, and immune systems. The classification and indication for generic and trade name medications for these systems will be explored. Accurate use of medical vocabulary and descriptive terms is expected. (Formerly AHP 120) (CSU)

### **PHT 125 (3.0 Units)**

#### **Pharmacy Technician Body Systems II**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Prerequisite: AHP 100 with a grade of "C" or better.  
This course explores the anatomy, pathophysiology and related pharmacology treatments for diseases and conditions of the endocrine, gastrointestinal, hematological, nervous, musculoskeletal, as well as the eyes, ears, nose and throat. The classification and indication for generic and trade name medications for these systems will be explored. Accurate use of medical vocabulary and descriptive terms is expected. (Formerly AHP 125) (CSU)

### **PHT 130 (3.0 Units)**

#### **Calculation and Pharmacology for Pharmacy Technicians**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Recommended Preparation: MATH 081  
This course is designed to prepare students for pharmacology calculations related to dosage, measurements of strength, and safe preparation of medication. There is a focus on unit-cancellations for solving pharmacy situation problems. Principles of pharmacology are utilized with an emphasis on the classification, indication, interaction, and common side effects of major drug classes. (Formerly AHP 130) (CSU)

### **PHT 140 (4.5 Units)**

#### **Pharmacy Technician Operations**

**Term Hours: 63 Lec, 54 Lab**

#### **Letter Grade Only**

Prerequisite: AHP 100 with a grade of "C" or better.  
Recommended Preparation: PHT 120 (Formerly AHP 120) and PHT 125 (Formerly AHP 125)  
This course is designed to prepare the student for the technical and operational aspects of drug distribution in the ambulatory, inpatient, ex-

tended care, and ambulatory care settings. The course includes a review of Federal regulations, State regulations, codes of ethics, and standards pertaining to the practice of pharmacy. Practice site regulations, policies and procedures regarding prescriptions and medication orders will be explored. Various techniques, equipment and supplies for drug administration will be discussed and demonstrated. Mandatory maintenance and screening of equipment and packaging requirements will be reviewed. Application of aseptic techniques and use of the laminar flow hood in the preparation of sterile products is demonstrated. Pharmaceutical industry procedures for obtaining pharmaceuticals including purchasing policies, procedures and practices will be discussed and the role of the pharmacy technician in the administration and management of pharmacy practice will be explored. (Formerly AHP 140) (CSU)

## PHILOSOPHY

### **PHIL 100 (3.0 Units)**

#### **Introduction to Philosophy I**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Man's interpretation of the nature and meaning of reality. Emphasis placed upon the existence of God, free will, and mind-body problems. (CSU, UC)

### **PHIL 102 (3.0 Units)**

#### **Introduction to Philosophy II**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

The place of philosophy in intelligent living and the methods and significance of philosophical inquiry. Emphasis is placed upon problems of value and human nature. PHIL 102 may be taken before PHIL 100. (CSU, UC)

### **PHIL 104 (3.0 Units)**

#### **Ethics**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

An introduction to significant and typical value theories and systems, and of the concrete problems such theories seek to explain. Emphasis placed upon teaching students to critically analyze their own value systems. (Same as RELS 104) (CSU, UC)

### **PHIL 106 (3.0 Units)**

#### **Logic**

**Term Hours: 54 Lec, 0 Lab**

#### **Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better.  
An introduction to deductive and inductive logic. Attention focused upon the relationship between logic and language fallacies, and the use of logic in everyday life. (CSU, UC)



## PHYSICAL EDUCATION

**PE 100 (2.0 Units)**  
**Lifetime Exercise Science**  
**Term Hours: 18 Lec, 36 Lab**  
**Letter Grade Only**

This course is designed to emphasize a comprehensive understanding of the entire scope of the fitness for life process. The student will be equipped to assess their present fitness status; with the ability to write a personalized fitness program; and engage in that fitness program. The course will focus on five areas: cardiovascular endurance, weight control, strength, flexibility, and relaxation. (CSU) (UC credit limited. See a Counselor.)

**PE 102 (1.0 Unit)**  
**Physical Fitness**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

This course is designed to emphasize physical conditioning and development. Equips the student with a repertoire of exercises and conditioning activities which can be used to maintain physical fitness throughout college and adult life. (CSU) (UC credit limited. See a counselor)

**PE 103 (1.0 Unit)**  
**Physical Fitness, Women**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

This course is designed to emphasize physical conditioning and development. Equips the student with a repertoire of exercises and conditioning activities which can be used to maintain physical fitness throughout college and adult life. (CSU) (UC credit limited. See a counselor)

**PE 104 (1.0 Unit)**  
**Weight Training**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

A course designed to present the basic fundamentals of weight training such as the weight apparatus, proper lifting techniques and basic knowledge of specific muscle groups. Equips the students with a variety of exercises and conditioning activities which can be used to maintain physical fitness throughout college and adult life. (CSU) (UC credit limited. See a counselor)

**PE 105 (1.0 Unit)**  
**Public Safety Fitness**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade or Pass/No Pass**

The purpose of this course is to assist students with their physical fitness conditioning specific to Public Safety agencies. Students will engage in a variety of exercises and conditioning activities designed to help them pass the required physical fitness standards used by Public Safety agencies in hiring and/or promoting. Emphasis will be placed on aerobic, anaerobic, strength, and flexibility activities which will assist the student in meeting and/or maintaining the physical fitness levels demanded by their chosen careers. (CSU)

**PE 106 (1.0 Unit)**  
**Walking/Jogging Fitness**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

This course provides the knowledge and skills necessary to improve cardiovascular endurance and fitness through walking and/or jogging exercise. Class may be held on land or in the water. Topics will include general fitness principles, and aerobic endurance, muscle endurance and flexibility training exercises. (CSU) (UC credit limited. See a counselor.)

**PE 107 (1.0 Unit)**  
**Aquatic Exercise**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade or Pass/No Pass**

Course will include the development of fundamental elements of fitness in the aquatic environment. Progressive instruction will include more strenuous exercises for cardiorespiratory fitness, muscular endurance and flexibility. Exercises will be performed in shallow and/or deep water. (CSU) (UC credit limited. See a counselor.)

**PE 110 (2.0 Units)**  
**Physical Education Activity - Military Service**  
**Term Hours: 0 Lec, 0 Lab**  
**Pass/No Pass**

Prerequisite: The satisfactory completion of basic or recruit training and 180 days or more active service in the military of the United States of America. The student wishing credit for military service must present his/her DD214 or equivalent supporting document to the Veterans Assistant and register for the credit. If the student registers for the class for military credit and does not submit verification of service, he/she will be dropped as a No-Show and will not receive credit. PE 110 does not count for units toward VA, Financial Aid, or full-time student status. These are not contact hours. May receive credit only once. (CSU)

**PE 111 (1.0 Unit)**  
**Aerobics - Step**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

Step aerobics involves stepping up and down from a 4 to 12 inch bench, while performing various upper body movements to the accompaniment of music. This course is a simple introduction to basic steps, leading to simple patterns of step choreography. Offers cardiovascular conditioning and strength training. (CSU) (UC credit limited. See a counselor.)

**PE 112 (1.0 Unit)**  
**Basketball - Men**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

An introduction to the fundamental skills and strategy of the game. Rules and class competition are included in the course. (CSU) (UC credit limited. See a counselor.)

**PE 113 (1.0 Unit)**  
**Basketball - Women**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

Designed for women students interested in basketball. To offer basic and advanced fundamentals, team play, and strategy. (CSU) (UC credit limited. See a counselor.)

**PE 120 (1.0 Unit)****Softball****Term Hours: 0 Lec, 36 Lab****Letter Grade Only**

This course is designed to emphasize the fundamentals, knowledge of rules, coaching techniques, and basic knowledge of the game of softball. (CSU) (UC credit limited. See a counselor.)

**PE 121 (1.0 Unit)****Beginning to Intermediate Swimming****Term Hours: 0 Lec, 36 Lab****Letter Grade Only**

This course is concerned with teaching the student to successfully execute the proper strokes for swimming. Skills, fundamentals, and safety knowledge are stressed from the beginner to the intermediate swimmer. (CSU) (UC credit limited. See a counselor.)

**PE 122 (2.0 Units)****Lifeguard Training****Term Hours: 27 Lec, 27 Lab****Letter Grade or Pass/No Pass**

Prerequisites: Demonstrated swimming proficiency.

This course provides the most current instruction in the American Red Cross (ARC) lifeguard training techniques, first aid and CPR skills required to prepare for a lifeguard position. Upon successful completion, a student will earn certifications in both ARC Lifeguard Training and CPR for the Professional Rescuer. (CSU) (UC credit limited. See a counselor.)

**PE 123 (2 Units)****Water Safety Instructor Training****Term Hours: 18 Lec, 36 Lab****Letter Grade Only**

Prerequisite: Demonstrated swimming proficiency.

This course provides the most current instruction in the American Red Cross (ARC) Water Safety Instructor (WSI) course. Upon successful completion, students earn ARC WSI certification. (CSU) (UC credit limited. See a counselor.)

**PE 126 (1.0 Unit)****Tennis****Term Hours: 0 Lec, 36 Lab****Letter Grade Only**

Tennis offers training in the basic fundamentals of the game including history, rules, and etiquette. Social etiquette of the game is stressed along with the worthy use of leisure time. Tournament competition in singles and doubles is emphasized. (CSU) (UC credit limited. See a counselor.)

**PE 127 (1.0 Unit)****Tennis - Advanced****Term Hours: 0 Lec, 36 Lab****Letter Grade Only**

Review and practice of forehand, backhand, serve and volley, overhead smash, and lob. Emphasis on court strategy and tactics for singles and doubles competition. (CSU) (UC credit limited. See a counselor.)

**PE 128 (1.0 Unit)****Volleyball****Term Hours: 0 Lec, 36 Lab****Letter Grade Only**

This class is designed to provide the student with the appropriate level of knowledge and skills involved with beginning volleyball. As a result of this class the student will improve his or her general physical fitness and volleyball skill performance. Principles, techniques, safe practices and strategies of volleyball will be taught throughout this class. (CSU) (UC credit limited. See a counselor.)

**PE 129 (1.0 Unit)****Volleyball - Advanced****Term Hours: 0 Lec, 36 Lab****Letter Grade Only**

Recommended Preparation: Completion of PE 128 and demonstrate competency in advanced skills.

Continuation of PE 128. More advanced volleyball skills. More emphasis on tournament play and advanced strategy. More emphasis will be placed on spiking and blocking. (CSU) (UC credit limited. See a counselor.)

**PE 130 (1.0 Unit)****Adapted Physical Exercise****Term Hours: 0 Lec, 36 Lab****Letter Grade Only**

Prerequisite: A signed physician's medical release form is required. Level of strength and ability sufficient to avoid injury to the student and others in course activities is required.

Open only to students who are unable to participate in the regular physical education program. The course is specifically designed to meet the individual needs of these students. (CSU) (UC credit limited. See a counselor.)

**PE 131 (1.0 Unit)****Adapted Sports****Term Hours: 0 Lec, 36 Lab****Letter Grade or Pass/No Pass**

Prerequisite: A signed physician's medical release form is required. Level of strength and ability sufficient to avoid injury to the student and others in course activities is required.

Open only to students who are unable to participate in the regular physical education program. The course is specifically designed to meet the individual needs of students with disabilities. (CSU) (UC credit limited. See a counselor.)

**PE 142 (1.0 Unit)****Advanced Swimming****Term Hours: 0 Lec, 36 Lab****Letter Grade or Pass/No Pass**

Prerequisite: Student must be able to jump in deep water and swim 50 yards nonstop, including 25 yards of Front Crawl.

Recommended Preparation: Completion of PE 121. Previous swim training.

Supervised swim workouts designed to improve competitive strokes and turns and to enhance cardiovascular fitness. Pre- and post-tests of cardiovascular fitness levels will be incorporated. (CSU) (UC credit limited. See a counselor.)

**PE 143 (1.0 Unit)**  
**Advanced Basketball - Men**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

Recommended Preparation: Participation on the competitive high school (or equivalent) basketball team.

This course is designed for those students of advanced ability in basketball skills who have an interest in playing competitive basketball at the college level. Instruction will cover the development of fundamental offensive and defensive skills with an emphasis on advanced techniques, strategies, and team preparation. (CSU)

**PE 144 (1.0 Unit)**  
**Advanced Basketball - Women**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

Recommended Preparation: Prior experience in basketball is strongly suggested.

This class is designed for students with previous basketball knowledge. This class is a preparatory for intercollegiate participation. Advanced principles, techniques, safe practices and strategies of basketball will be taught. Sportsmanship and enjoyment of the game will be emphasized. (CSU) (UC credit limited. See a counselor.)

**PE 170 (1.0 Unit)**  
**Beginning Bowling**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

This course emphasizes skill development and acquisition of knowledge about a life-time sport, bowling. The students will be introduced to bowling skills such as: approach, delivery, scoring, and league experience. Class meets off-campus at Brunswick XL Bowling Alley, located at 950 North Imperial Ave., El Centro. Additional materials fees required. (CSU) (UC credit limited. See a counselor.)

**PE 171 (1.0 Unit)**  
**Intermediate Bowling**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

Recommended Preparation: PE 170.

This course emphasizes skill development and acquisition of knowledge about a life-time sport, bowling. The students will continue to develop in bowling skills such as: approach, delivery, scoring, and league experience, in addition to being able to analyze, evaluate and modify technique to improve performance. Class meets off-campus at the Brunswick XL Blowing Alley located at 950 North Imperial Ave., El Centro. Additional materials fees required. (CSU) (UC credit limited. See a counselor.)

**PE 172 (1.0 Unit)**  
**Advanced Bowling**  
**Term Hours: 0 Lec, 36 Lab**  
**Letter Grade Only**

Recommended Preparation: PE 170 and PE 171.

This course is designed for the avid bowling, having thorough knowledge of bowling principles. Competition in tournament play will be initiated encouraging league experience. Class meets off-campus at the Brunswick XL Blowing Alley located at 950 North Imperial Ave., El Centro. Additional materials fees required. (CSU) (UC credit limited. See a counselor.)

**PE 200 (2.0 Units)**  
**Theory of Baseball**  
**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

A history of the game, knowledge of rules, current and possible future trends in the game, coaching techniques, and scouting. Recommended for physical education majors, potential coaches, and recreation majors. (CSU) (UC credit limited. See a counselor.)

**PE 201 (2.0 Units)**  
**Theory of Basketball**  
**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

This course is designed for physical education majors, recreation majors, and potential coaches. Coaching techniques and theories, history rules and current possible future trends in the game will be offered. (CSU) (UC credit limited. See a counselor.)

**PE 202 (2.0 Units)**  
**Theory of Softball**  
**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

This course is recommended for physical education majors, recreation majors, and potential coaches. History of the game, rules, coaching techniques, practice organization, strategies and theories, and possible future trends in softball will be offered. (CSU) (UC credit limited. See a counselor.)

**PE 203 (2.0 Units)**  
**Theory of Volleyball**  
**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

This course is recommended for physical education majors, recreation majors, and potential coaches. History of the game, rules, coaching techniques, offensive and defensive strategies, practice organization, and possible future trends in volleyball will be offered. (CSU) (UC credit limited. See a counselor.)

**PE 209 (3.0 Units)**  
**Introduction to Physical Education**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

History, philosophy and principles of physical education. Study of the aims and objectives of modern physical education with emphasis on the development of basic philosophy and background for professional development. (CSU)

**PE 211 (3.0 Units)**  
**Physical Education in the Elementary School**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course is designed to prepare the elementary school teacher to teach the whole child through physical education. (CSU)

**PE 219 (3.0 Units)**  
**Introduction to Athletic Training**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course introduces the profession of athletic training and covers the care and prevention of common athletic injuries. It includes bandaging and/or taping techniques, rehabilitation of injuries, and the use of therapeutic modalities. (CSU)

**PE 221 (2.0 Units)**  
**Psychology of Coaching**  
**Term Hours: 36 Lec, 0 Lab**  
**Letter Grade Only**

A course covering all the aspects of the psychology of coaching sports. Includes certain guides to show how teaching and learning may be applied to the coaching of sports, and to bring out the relationship of meaningful learning to successful athletic coaching. (CSU)

**PE 222 (3.0 Units)**  
**Sports Officiating**  
**Term Hours: 36 Lec, 54 Lab**  
**Letter Grade Only**

This course is designed to provide for the study and interpretation of rules for various men's and women's sports, and the philosophies, procedures, practices, and mechanics of officiating games including football, basketball, baseball softball, soccer, tennis, track, volleyball and wrestling. (CSU) (UC credit limited. See a counselor.)

## PHYSICAL SCIENCE

**PHSC 110 (3.0 Units)**  
**Physical Science**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: MATH 091

This course is designed to give an understanding of the fundamental principles of physics and chemistry as they relate to the structure and properties of matter and the principles of motion and energy, for the liberal studies student. (CSU) (UC credit limited. See a counselor.)

## PHYSICS

**PHYS 200 (4.0 Units)**  
**General Physics I**  
**Term Hours: 45 Lec, 81 Lab**  
**Letter Grade Only**

Prerequisite: MATH 192 with a grade of "C" or better.

This course is designed to give an understanding of the fundamental principles of physics in the area of mechanics. (C-ID PHYS 205 or PHYS 200S) (CSU, UC)

**PHYS 202 (4.0 Units)**  
**General Physics II**  
**Term Hours: 45 Lec, 81 Lab**  
**Letter Grade Only**

Prerequisites: PHYS 200 or equivalent with a grade of "C" or better and MATH 194 with a grade of "C" or better or concurrent enrollment in MATH 194.

This course is designed to give an understanding of the fundamental principles of physics in the areas of electricity, magnetism, atomic, and nuclear physics. (C-ID PHYS 210 or PHYS 200S) (CSU, UC)

**PHYS 204 (4.0 Units)**  
**General Physics III**  
**Term Hours: 45 Lec, 81 Lab**  
**Letter Grade Only**

Prerequisites: PHYS 200 with a grade of "C" or better and MATH 194 with a grade of "C" or better or concurrent enrollment in MATH 194.

This course is designed to give an understanding of the fundamental principles of physics in the areas of waves, heat, light, relativity, quantum mechanics and atomic physics. (C-ID PHYS 215 or PHYS 200S) (CSU, UC)

## POLITICAL SCIENCE

**POLS 100 (3.0 Units)**  
**Introduction to Political Science**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

An introduction to the theories, principles, and problems of modern political life and the methods of studying and acquiring political knowledge. Illustrative materials drawn primarily from the American experience. (C-ID POLS 150) (CSU, UC)

**POLS 102 (3.0 Units)**  
**American Government and Politics**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

The origin, development and operation of local, state and national political institutions within the United States emphasizing the contemporary operations of the American political system. (C-ID POLS 110) (CSU, UC)

**POLS 104 (3.0 Units)**  
**Comparative Politics**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: POLS 100 or POLS 102

A comparative study of modern political systems. Emphasis upon patterns of political action and problems of decision-making in various cultural contexts. (C-ID POLS 130) (CSU, UC)

**POLS 106 (3.0 Units)**  
**Introduction to International Relations**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

An introductory course stressing the techniques of analysis of the basic factors making for conflict and adjustment in contemporary international relations. Problems of nationalism and imperialism, elements of national power, causes of war, methods of seeking peace, the role of international organizations, and the foreign policies of the major powers will be considered. Emphasis will be upon contemporary developments. (C-ID POLS 140) (CSU, UC)



## PSYCHOLOGY

**PSY 101 (3.0 Units)**  
**Introduction to Psychology**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: Twelfth grade reading level highly recommended.

An introduction to the study of human behavior and cognition. Includes consideration of many of the major topics in psychology including, but not limited to, the biology of behavior, learning, human development, sleep and consciousness, personality, mental disorders and therapy, and social processes. (C-ID PSY 110) (CSU, UC)

**PSY 104 (3.0 Units)**  
**Child Growth and Development**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. There will be an emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages. (Same as CDEV 104) (CSU) (UC credit limited. See a counselor.)

**PSY 120 (3.0 Units)**  
**Introduction to Counseling**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

A study of the theory, process, and practice of interviewing and counseling in community service and other counseling situations. The course is designed to assist the student to gain knowledge and develop skills in order to help a client or interviewee in counseling situations. Theories of counseling and basic helping skills will be presented, demonstrated, and practiced. (Same as ADS 120) (CSU)

**PSY 130 (3.0 Units)**  
**Group Leadership and Group Process**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course will introduce the student to group theory and process, and how groups affect the whole social scene. It will examine membership in, and leadership of, various kinds of groups, emphasizing group process. Consideration will be given to goals and strategies of social change and the necessity for social change in relation to personal and social values. The factors involved in problems of communications, effective emotional responses and personal growth also will be highlighted, emphasizing the group process as a means of changing behavior. (Same as ADS 130) (CSU)

**PSY 142 (3.0 Units)**  
**Psychology of Adjustment**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: Twelfth grade reading level strongly recommended.

This is an applied course that focuses on how psychology is used in daily life. The course surveys different psychological perspectives and theo-

retical foundations and how these are applied across a person's life taking into account the influence of factors such as culture, gender, ethnicity, historical cohort, and socio-economic status from a biopsychosocial perspective. (CSU)

**PSY 144 (3.0 Units)**  
**The Psychology of Interpersonal Relationships**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

An exploration of the dynamics of interpersonal relationships. Starting, developing, understanding, and improving one's relationships with self and others will be the focus of this course. Topics will include love, jealousy, acceptance, listening skills, communication skills, perception of self and others, and self-disclosure. The course involves lecture, discussion, and experiential techniques. (CSU)

**PSY 146 (3.0 Units)**  
**Psychology of Human Sexuality**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

This course is an introductory overview of the field of human sexuality. Human sexuality will be examined from psychological, biological, sociocultural, and historical perspectives. Students will be encouraged to become aware of their own sexual attitudes, values, and behaviors and to evaluate the consistency of their behaviors within their own moral frameworks. Current sex norms and various aspects of interpersonal and individual sexual adjustment will be explored. (C-ID PSY 130) (CSU, UC)

**PSY 200 (3.0 Units)**  
**Biological Psychology**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: PSY 101 with a grade of "C" or better.

An exploration of the biological basis of human behavior. The development, structure and functions of the nervous system is thoroughly examined to provide insight into its complex relationship with human behavior, thought, and feelings. The history of neuroscience and methods of scientific inquiry are reviewed. (C-ID PSY 150) (CSU, UC)

**PSY 202 (3.0 Units)**  
**Learning**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Recommended Preparation: Successful completion of PSY 101 strongly recommended and the twelfth grade reading level highly recommended.

This course will explore the role of learning in the adaptation of humans and other animals to their changing environment. Research methodology, Pavlovian and operant theories, applications and implications, and higher cognitive processes will be examined. (CSU, UC)

**PSY 204 (3.0 Units)**  
**Developmental Psychology: Conception to Death**  
**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

A study of human development from conception to death, including genetics, conception, prenatal development, infancy, toddlerhood, preschool years, middle childhood, adolescence, early adulthood, middle adulthood, later adulthood, and death. Theories and research of physical, cognitive, personality, and social development are examined, as well as attention to developmental problems. (C-ID PSY 180) (CSU) (UC credit limited, see a counselor)

**PSY 206 (3.0 Units)****Social Psychology****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

The study of how personality and behavior are influenced by the social environment. The conceptual and research focus is on the relationship between the individual and society. This course includes such topics as: self-concept and social identity, group behavior and group membership. (Same as SOC 206) (C-ID PSY 170) (CSU, UC)

**PSY 208 (3.0 Units)****Abnormal Psychology****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: Twelfth grade reading level highly recommended, PSY 101, PSY 142 and PSY 200 recommended.

Covers the major categories of mental disorders listed in the latest version of the "Diagnostic and Statistical Manual of Mental Disorders" (DSM). Draws upon important contributions from various disciplines and theoretical stances. Case studies and research-based explanations are examined. Controversial topics related to mental disorder are explored. (C-ID PSY 120) (CSU, UC)

**PSY 210 (3.0 Units)****Crisis Intervention and Referral Techniques****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Techniques used for brief therapy crisis intervention, intake interviewing and referral will be studied and practiced. Special attention will be given to the process of intervention, admitting, and recording of information as it pertains to alcohol and drug abuse clients. Through an experiential format, participants will learn and practice skills in brief therapy, different levels of client communication and intake interviewing. (Same as ADS 210) (CSU)

**PSY 212 (3.0 Units)****Research Methods in Psychology****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: PSY 101 and PSY 214 with a grade of "C" or better.

This course surveys various psychological research methods with an emphasis on research design, experimental procedures, descriptive methods, instrumentation, and the collection, analysis, interpretation, and reporting of research data. Research design and methodology will be examined through a review of research in a variety of the subdisciplines of psychology. (C-ID PSY 200) (CSU, UC)

**PSY 214 (4.0 Units)****Statistical Methods in Behavioral Sciences****Term Hours: 54 Lec, 36 Lab****Letter Grade Only**

Prerequisite: PSY 101 with a grade of "C" or better and MATH 091 with a grade of "C" or better.

Quantitative methods in behavioral sciences are considered including: measures of central tendency and variability; graphic methods and percentages; linear correlation and regression; application of normal probability curves; and introducing statistical inferential measures including "t" tests, one and two-way analysis of variance, and chi-square. The data analysis will also involve statistical and graphical analysis and interpretation of behavioral science data using computer technology such as SPSS. (CSU, UC)

**PSY 220 (3.0 Units)****Practicum****Term Hours: 18 Lec, 108 Lab****Letter Grade Only**

Recommended Preparation: PSY 101, ADS/PSY 120 or SOC 101

A course designed to provide opportunity for the student in Psychology, Human Relations, or Alcohol and Drug Studies to gain experience under supervised conditions such as those involving mental health, child development, youth corrections, welfare, homes for the neglected, homes for the aged, youth recreation, rehabilitation centers for people with physical limitations, and educational settings. Students will be supervised by qualified instructional staff and professionally trained personnel. (Same as ADS 220) (CSU)

**PSY 221 (3.0 Units)****Practicum****Term Hours: 18 Lec, 108 Lab****Letter Grade Only**

Prerequisite: ADS/PSY 220 with a grade of "C" or better.

A continuation of ADS/PSY 220 with emphasis in gaining further experience in the same institution or agency or a different institution or agency. (Same as ADS 221) (CSU)

**READING****READ 018 (4.0 Units)****Reading I: Basic Development****Term Hours: 72 Lec, 0 Lab****Letter Grade or Pass/No Pass**

Prerequisite: ESL 025 with a grade of "C" or better or appropriate placement.

This course is designed for the student needing additional instruction in comprehension, vocabulary, and study skills. Emphasis will be on fundamental understanding of texts and increasing word knowledge. Participation in instructor-assigned reading lab activities is a required part of the course. (Formerly ENGL 018) (Nontransferable, nondegree applicable)

**READ 019 (4.0 Units)****Reading II: Intermediate Development****Term Hours: 72 Lec, 0 Lab****Letter Grade or Pass/No Pass**

Prerequisite: READ 018 (Formerly ENGL 018) with a grade of "C" or better or appropriate placement.

This course aims to build reading efficiency to college level for graduation from IVC and/or successful completion of transfer level courses. Course work includes practice in whole chapter note-taking, vocabulary building, study reading, informed reading of literature, and reinforcement of critical thinking skills. Participation in instructor-assigned reading lab activities is a required part of the course. (Formerly ENGL 019) (Nontransferable, nondegree applicable)

**READ 111 (3.0 Units)****Reading IV: Analytical and Critical Reading****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Prerequisite: ENGL 110 or ENGL 101 with a grade of "C" or better and READ 019 (Formerly ENGL 019) or ENGL 089 with a grade of "C" or better or appropriate placement.

Designed to help adequate readers become superior readers. Recommended for college transfer students who wish to develop the critical reading and thinking skills necessary for all types of college level reading. (Formerly ENGL 111) (CSU)

**RELIGIOUS STUDIES****RELS 100 (3.0 Units)****Religions of the Modern World****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

An introduction to the various contemporary religions of the world with an emphasis on their historical development. Study of the basic beliefs in religions such as Hinduism, Buddhism, Sikhism, Judaism, Christianity, and Islam. (CSU, UC)

**RELS 104 (3.0 Units)****Ethics****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

An introduction to significant and typical value theories and systems and of the concrete problems such theories seek to explain. Emphasis placed upon teaching students to critically analyze their own value system. (Same as PHIL 104) (CSU, UC)

**RENEWABLE ENERGY****RNEW 105 (3.0 Units)****Introduction to Energy Compliance****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

This course provides practical instruction in current compliance issues pertaining to the generation, distribution and transmission of electricity. Students will review and analyze case studies pertaining to the Energy Power Act of 2005, Federal Energy Regulatory Commission (FERC), North American Energy Reliability Corporation (NERC), Critical Infrastructure Standards (CIPS), bulk elements, NERC standards, developing standards and protocols, compliance monitoring, enforcement process, compliance registration and mitigation. (Nontransferable, AA/AS degree only)

**RNEW 111 (3.0 Units)****Introduction to Power Plant Operations I****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Introduces students to power generation, types of power plants, boilers and boiler operation, fuel combustion, auxiliary equipment, boiler accessories, operation and maintenance procedures, pumps, steam turbines, condensers, cooling towers, environmental control systems and other types of renewable energy generation. Power plant simulation training will be provided. (Nontransferable, AA/AS degree only)

**RNEW 112 (3.0 Units)****Introduction to Power Plant Operations II****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

Prerequisite: RNEW 111 with a grade of "C" or better.

This course will enhance the body of knowledge for the students pursuing a career in power plant operation, with additional technical instruction in, types of power plants, production and transfer of energy, transmission and distribution systems, VAR flows, economic operation of power plants, power systems controls, energy accounting in interconnected operations, communication, telemetering methods, SCADA systems, distribution systems, power system reliability factors, power system protection, EHV operation, and safety procedures within the power plant facility. (Nontransferable, AA/AS degree only)

**RNEW 118 (4.0 Units)****Alternative Energies****Term Hours: 54 Lec, 54 Lab****Letter Grade Only**

Recommended Preparation: ELTR 120 and ELTR 140.

This course provides the student with instruction, which meets NSF Renewable Energy Program and NABCEP guidelines, and as part of the Solar PV & Thermal Technician Certification, qualifies the student to take the NABCEP Solar Entry Level PV and SH Exams, instruction is in basic principles of electrical Alternative Energy Systems. Instruction will include an introduction to energy usage, Ocean and Hydro-power, Solar Energy, Wind Energy, bio-energy, combustion turbines, Hydrogen economy and Fuel Cells, Combined Heat and Power systems, Geothermal, Nuclear, Smart Grid, Energy and data acquisition systems based on LabVIEW software. Energy efficiency and sustainability principles of these systems will be the focus of instruction. (Formerly EWIR 160) (CSU)

**RNEW 135 (3.0 Units)****Introduction to Alternative Fuels****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

This course is an overview of alternative fuels used in stationary and portable power generation, and transportation. Students will learn about various alternative fuels, their effect on exhaust emissions, the environment, the economic impact, and how alternative fuels reduce the importation of foreign oil. This course will include the study of the safety, production, distribution and the future of hydrogen, fuel cells, Compressed & Liquefied Natural Gas (CNG & LNG), propane (LP gas), ethanol, methanol, and bio-diesel. (Nontransferable, AA/AS degree only)

**RNEW 150 (3.0 Units)****Solar Energy Systems PV1****Term Hours: 36 Lec, 54 Lab****Letter Grade Only**

This course provides students with instruction in the principles of photovoltaic (PV) technology that meets NSF and NABCEP guidelines, and qualifies the student to take the NABCEP Solar PV Entry Level Exam. Instruction includes an overview of electric principles, the solar resource, and electric load analysis; (PV) modules, controllers, batteries, and inverters; (PV) systems utility-interactive systems, integrating (PV) into buildings and system applications. Basics of installation, maintenance, troubleshooting, and safety. (Formerly EWIR 150) (Nontransferable, AA/AS degree only)

## SOCIOLOGY

### **RNEW 151 (3.0 Units)** **Solar Electrical Systems PV2** **Term Hours: 36 Lec, 54 Lab** **Letter Grade Only**

This course focuses on Photovoltaic (PV) systems design and meets NSF Renewable Energy Program and NABCEP guidelines, and qualifies the student to take the NABCEP Solar PV Entry Level Test, including grid and stand-alone calculations, grounding considerations and wiring sizing based on the National Electrical Code (NEC). Evaluate systems performance under various operating conditions. residential, commercial and industrial systems design elements, including inter-row shading, controllers, battery and inverters selection, sizing and data monitoring solutions, including system design and installation exercises. (CSU)

### **RNEW 152 (3.0 Units)** **Solar Heating (SH)** **Term Hours: 36 Lec, 54 Lab** **Letter Grade Only**

Recommended Preparation: RNEW 118 or EWIR 160 and RNEW 150 or EWIR 150.

This course is an introductory study in solar thermal concepts that meets NABCEP guidelines, and qualifies the student to take the NABCEP Solar Heating (SH) Entry Level Test. Identifying SH safety practices, standards, codes and certification. Instruction will be based on solar thermal collector for water, space heating, installation and operation, water treatment, saving devices and equipment. Conducting a site analysis, water and space heating systems design, identifying systems components, materials, balance, installation, maintenance and troubleshooting. Learning opportunities will be enhanced through a combination of lecture and laboratory activities. (Nontransferable, AA/AS degree only)

### **RNEW 165 (1.0 Unit)** **NABCEP Entry Level Exam Preparation** **Term Hours: 0 Lec, 81 Lab** **Letter Grade Only**

Prerequisite: EWIR 110, RNEW 150 or EWIR 150, RNEW 151, and RNEW 152 with a grade of "C" or better.

This course prepares students for NABCEP PV and SH Entry Level Exams, including in and out of class activities. Skills development in the areas of exam preparation; exam mental and physical preparation, highlight related solar topics, principles and concepts, exam taking strategy, several exams simulations, exams grading and results driven corrective actions. A review of factors relating to or contributing to exam passing success factors. (Nontransferable, nondegree applicable)

## SOCIAL WORK

### **SW 220 (3.0 Units)** **Introduction to Social Work** **Term Hours: 54 Lec, 0 Lab** **Letter Grade Only**

A survey course that introduces the field of social work as a profession within the context of the institution of social welfare. Development of an understanding of social work principles, goals, values, and methods through readings and class discussion. An unpaid assignment in an agency setting is required. (CSU)

### **SOC 101 (3.0 Units)** **Introduction to Sociology** **Term Hours: 54 Lec, 0 Lab** **Letter Grade Only**

Introduction to the study of society. Overview of major concepts, methods and theoretical perspectives including: culture, social structure, institutions, socialization, gender, race, social class, inequality, deviance, and social control. Topics include macro and micro theories. (C-ID SOCI 110) (CSU, UC)

### **SOC 102 (3.0 Units)** **Contemporary Social Problems** **Term Hours: 54 Lec, 0 Lab** **Letter Grade Only**

This course examines contemporary social problems and the process by which competing groups make claims to define phenomena as social problems. Emphasis includes understanding these problems on the societal level, the group level, and from the standpoint of the individual. (C-ID SOCI 115) (CSU, UC)

### **SOC 110 (3.0 Units)** **Marriage and the Family** **Term Hours: 54 Lec, 0 Lab** **Letter Grade Only**

The sociological perspective on marriage and the family as social institutions. Topics include: the history of love and marriage, myths and hidden realities, kinship systems, mate selection, social class differences in marital roles and child-rearing practices, and how social change effects marriage and the family. (C-ID SOCI 130) (CSU)

### **SOC 150 (3.0 Units)** **Sociology of Minority Groups** **Term Hours: 54 Lec, 0 Lab** **Letter Grade Only**

This course examines the social construction of race including the social, political and historical factors that shape race. Discussion topics include how race is interpreted across large aggregate categories such as ethnicity, gender, class, immigration status and sexuality. Additionally this course will provide how the concept of race is affected by the colonial experience and the forming of contemporary society. (Same as ADS 150) (C-ID SOCI 150) (CSU, UC)

### **SOC 206 (3.0 Units)** **Social Psychology** **Term Hours: 54 Lec, 0 Lab** **Letter Grade Only**

The study of how personality and behavior are influenced by the social environment. The conceptual and research focus is on the relationship between the individual and society. This course includes such topics as: self-concept and social identity, group behavior and group membership. (C-ID PSY 170) (Same as PSY 206) (CSU, UC)



**SOC 224 (3.0 Units)****Criminology****Term Hours: 54 Lec, 0 Lab****Letter Grade Only**

Recommended Preparation: Completion of ENGL 009 and READ 019  
 This course explores the nature of crime, measurement and research of crime, the extent of crime, major theories of crime causation, criminal typologies, criminal justice system response to crime, and societal reaction to crime. (Same as AJ 224) (C-ID SOCI 160) (CSU)

**SPANISH****SPAN 100 (5.0 Units)****Elementary Spanish I****Term Hours: 90 Lec, 0 Lab****Letter Grade or Pass/No Pass**

Prerequisite: The student must be able to speak and read English.  
 Not open to students with native ability in Spanish or those who have studied in a Spanish speaking country. (See SPAN 220). For additional oral practice, concurrent enrollment in SPAN 113 is recommended.  
 The beginning Spanish course is based on a contrastive analysis between Spanish and English and is designed to develop in the English-speaking student rudimentary abilities in the four basic language skills: hearing, speaking, reading, and writing. The main emphasis is on the present tense of both regular and irregular verbs. The student will be familiarized with those features of Hispanic culture through authentic language and cultural products, which reflect the different frame of reference from which the native speaker of Spanish views the world. The class is conducted in Spanish. (C-ID SPAN 100) (CSU, UC)

**SPAN 110 (5.0 Units)****Elementary Spanish II****Term Hours: 90 Lec, 0 Lab****Letter Grade or Pass/No Pass**

A continuation of SPAN 100 with the main emphasis on the imperfect, preterit, and the present perfect forms for both regular and irregular verbs. The course continues teaching language acquisition in a cultural context through the four basic language skills: hearing, speaking, reading, and writing. Not open to students with native fluency in Spanish and to those students who have studied in a Spanish Speaking country. Course is conducted in Spanish. (See SPAN 220) (CSU, UC)

**SPAN 113 (2.5 Units)****Beginning Conversational Spanish and Culture I****Term Hours: 45 Lec, 0 Lab****Letter Grade or Pass/No Pass**

A course designed to give the student a basic ability in everyday Spanish. The course will emphasize vocabulary building, conversational skills, listening and comprehension, and culture. (CSU)

**SPAN 200 (5.0 Units)****Intermediate Spanish I****Term Hours: 90 Lec, 0 Lab****Letter Grade or Pass/No Pass**

Prerequisite: The student must be able to speak and read English.  
 The student can be successful in SPAN 200 only after having achieved all of the minimal performance objectives specified for both SPAN 100 and SPAN 110. Either a recent course in SPAN 110 or a recent 3 year high school Spanish course with good retention should enable the student to succeed in SPAN 200.

A continuation of SPAN 110 covering the uses of all Spanish tenses with special emphasis on the subjunctive and imperative modes. This course requires the use of increasingly complex language structures and vocabulary to develop the functional competence required to communicate beyond survival needs and to discuss and express opinions on abstract topics related to the arts, lifestyle, linguistics, and literature at the intermediate level. (CSU) (UC credit limited. See a counselor.)

**SPAN 210 (5.0 Units)****Intermediate Spanish II****Term Hours: 90 Lec, 0 Lab****Letter Grade or Pass/No Pass**

Prerequisite: The student must be able to speak and read English.  
 The student can be successful in SPAN 210 only after having achieved all of the minimal performance objectives specified for SPAN 100, 110, and 200. A recent course in SPAN 200 or the recent completion of 4 years of high school Spanish course with good retention should enable the student to succeed in SPAN 210.

A continuation of SPAN 200 but with greater emphasis on the reading and writing skills. Content continues to expand in order to use more complex language structures and vocabulary to express personal meaning, opinions, and to apply different strategies and techniques to go beyond casual conversation. The student will work with all tenses and modes of the Spanish language. (CSU) (UC credit limited. See a counselor.)

**SPAN 220 (5.0 Units)****Spanish for Heritage Speakers I****Term Hours: 90 Lec, 0 Lab****Letter Grade or Pass/No Pass**

Prerequisite: Spanish speaking fluency, native or near-native or 3 years of high school Spanish.

The course is designed for heritage speakers of Spanish or other linguistically qualified students. The course provides instruction that builds upon the four basic language skills: listening, speaking, reading, and writing; placing emphasis on acquiring proficiency using formal Spanish at the intermediate level. The course also focuses on language challenges particular to Heritage and Native speakers such as orthography, the inappropriate mix of English and Spanish, and contrasts between standard Spanish and regional variations. Emphasis will be on the indicative tenses: present, preterit, imperfect, and future. These skills will be explored through reading in the contemporary culture of Spain, Latin America, and the Spanish speaking communities in the United States - Mexican, Cuban, Puerto Rican, and Central American. (C-ID SPAN 220) (CSU) (UC credit limited. See a counselor.)

## THEATRE ARTS

### SPAN 221 (5.0 Units)

#### Spanish for Heritage Speakers II

**Term Hours: 90 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

Continuation of SPAN 220. It is designed for Heritage Speakers of Spanish to improve their writing, reading, and grammar skills. It focuses on the mastery of formal, written communication in Spanish at the intermediate-advanced level, while integrating authentic cultural and literary readings from Spanish speaking countries. The course focuses also on language challenges that Spanish speakers still encounter at intermediate-advanced level, such as orthography, the inappropriate mix of English and Spanish in specific contexts, and standard Spanish as contrasted with regional variations. This course is conducted entirely in Spanish. Emphasis on the conditional and the subjunctive forms. (CSU) (UC credit limited. See a counselor.)

### SPAN 222 (3.0 Units)

#### Bilingual Oral Spanish

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

An intensive course in oral Spanish for students who have learned Spanish as a native language. It is intended for students who may read well and have good grammar but need more practice in oral structures. This course will include a brief grammar review and discussion of relevant everyday topics of social concern. Concurrent enrollment in SPAN 221 is recommended, but not required. (CSU, UC)

### SPAN 223 (4.0 Units)

#### Spanish Reading and Writing

**Term Hours: 72 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

Recommended Preparation: SPAN 210 or SPAN 221.

This course is designed to develop reading and writing skills for the student of Spanish. Emphasis will be placed on the process of writing as preparation for upper division work. In addition, the student will review grammar, punctuation, and spelling. Selected readings from Chicano, Spanish American, and Spanish literature will be included. (CSU, UC)

### SPAN 225 (3.0 Units)

#### Introduction to Spanish American Literature

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

Introductory survey of representative movements, authors, and works of Spanish American literature from the Spanish Discovery to the present. Course conducted in Spanish. (CSU, UC)

### SPAN 262 (3.0 Units)

#### Introduction to Chicano/a Studies

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

This course offers an introduction to Chicano/a studies as an academic discipline, with a focus on the cultural values, social organization, urbanization patterns of the Chicano/a in the U.S., as well as their struggles in education, politics and legislation. Due to the nature of the subject, students will be exposed to some Spanish phrases, words, and expressions. (Same as HUM 262) (CSU, UC)

### THEA 100 (3.0 Units)

#### Introduction to Theatre

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

The class focuses on the relationship of theatre to various cultures throughout history and on the contributions of significant individual artists. This course introduces students to elements of the production process including playwrighting, acting, directing, design, and criticism. Students will also survey different periods, styles, and genres of theatre through play reading, discussion, films, and viewing and critiquing live theatre. (C-ID THTR 111) (CSU, UC)

### THEA 120 (3.0 Units)

#### Fundamentals of Acting

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

This course prepares the student to apply basic acting theory to performance and develops the skills of interpretation of drama through acting. Special attention is paid to skills for performance: memorization, stage movement, and interpretation of text. (CSU, UC)

## WATER TREATMENT SYSTEMS TECHNOLOGY

### WT 105 (3.0 Units)

#### Computational Procedures Operator I

**Term Hours: 54 Lec, 0 Lab**

**Letter Grade Only**

This course is designed to give water and wastewater treatment operators a general knowledge of basic mathematics as applied to treatment plant operations. This course includes calculation of treatment plant problems, fractions, decimals, percentages, ratios, proportions, averages, areas, volumes, metric system conversions, and estimation. (Formerly WT 120) (CSU)

### WT 110 (4.0 Units)

#### Water Treatment Plant Operator I

**Term Hours: 72 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: WT 105 (Formerly WT 120) with a grade of "C" or better.

This course will provide information needed to operate a basic freshwater treatment plant as efficiently as possible. Course will consist of water sources and treatment, coagulation and flocculation, sedimentation, filtration, disinfection, corrosion control, taste and odor control, laboratory procedures, and plant operation math. (CSU)

### WT 130 (4.0 Units)

#### Wastewater Treatment Operator I

**Term Hours: 72 Lec, 0 Lab**

**Letter Grade Only**

Prerequisite: WT 105 (Formerly WT 120) with a grade of "C" or better.

This course is designed to train operators in the effective operation and goals of the wastewater treatment process. The course will consist of the fundamentals of water cycle, wastewater treatment daily operations, sources and pretreatment of domestic and industrial wastes, interpretation of laboratory results, and process control. (CSU)

## WELDING

### **WT 140 (4.0 Units)** **Water Distribution Systems**

**Term Hours: 72 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: WT 105 (Formerly WT 120) with a grade of "C" or better.  
This course is designed to provide operators with the necessary skills required for the proper installation, inspection, operation, maintenance, repair, and management of water distribution systems. Among the topics covered are: distribution system mathematics, system hydraulics, system design, water mains and valve installation, fire hydrants, water services and meters, backflow and cross-connection control, pumps and motors, occupational safety, utility management, and federal regulations. (CSU)

### **WT 150 (4.0 Units)** **Wastewater Collection Systems**

**Term Hours: 72 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: WT 105 (Formerly WT 120) with a grade of "C" or better.  
This course covers proper installation, inspection, operation, maintenance, and repair of wastewater collection systems. It provides the knowledge and skills to effectively operate and maintain collection systems. It also provides knowledge as to why collection systems affect treatment facilities and how they have a significant impact on the operation and maintenance costs and effectiveness of these systems. (CSU)

### **WT 205 (3.0 Units)** **Computational Procedures Operator II**

**Term Hours: 54 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: WT 105 (Formerly WT 120) with a grade of "C" or better.  
This course provides instruction in entry-level to advanced-level mathematical calculations used in the operation and evaluation of conventional water/wastewater treatment processes and water distribution systems. Course will cover basic geometry, metric conversions, flows, pressure, and chemical dosage as it relates to the water/wastewater industry. Material will parallel some of the problems found on State Certification examinations. (Formerly WT 220) (CSU)

### **WT 210 (4.0 Units)** **Water Treatment Plant Operator II**

**Term Hours: 72 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: WT 110 and WT 205 (Formerly WT 220) with a grade of "C" or better.

This course is designed to give water plant operators a comprehensive understanding of freshwater treatment plant safety, iron and manganese control, fluoridation, softening, demineralization, handling, disposal of process wastes, instrumentation, maintenance, groundwater plant operations, advanced math, rules and regulations, laboratory procedures, and supervisory practices. (CSU)

### **WT 230 (4.0 Units)** **Wastewater Treatment Operator II**

**Term Hours: 72 Lec, 0 Lab**  
**Letter Grade Only**

Prerequisite: WT 130 with a grade of "C" or better.  
Recommended Preparation: WT 220

This course covers wastewater treatment operations related to maintenance, plant safety, sampling procedures, laboratory procedures, hydraulics systems, process control, activated sludge plants, sludge digestion, solids handling, solving operational problems, record keeping and report writing. (CSU)

### **WELD 100 (5.0 Units)** **Welding Technology**

**Term Hours: 54 Lec, 108 Lab**  
**Letter Grade Only**

This course is designed to be a study of Welding Technology and related Industrial Safety. The student will develop the theory and knowledge base to be able to safely and properly practice welding techniques in the following welding processes; Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), Oxy/Fuel Welding and Cutting (OFW/C), and Plasma Arc Cutting (PAC). To support and enhance the understanding and application of Welding Technology principles, the student will develop an understanding of Industrial Safety Standards, Technical Drawings, Weld/Welding Symbols, Electrical Fundamentals, Fundamental Welding Metallurgy, Fundamentals of Quality Assurance, and Weld Testing/Inspection. The development of welding skills sets and practices for all applicable welding processes will require the proper use of Personal Protective Equipment (PPE) and the application of all Safety Rules. (CSU)

### **WELD 115 (3.0 Units)** **Flux Cored Arc Welding Plate**

**Term Hours: 36 Lec, 72 Lab**  
**Letter Grade Only**

Prerequisite: WELD 100 with a grade of C or better.  
This course is designed to be a study of Flux Cored Arc Welding (FCAW). This course is one of the required courses in the Welding Technology Program. The student will develop the theory and knowledge base to be able to safely and properly practice welding techniques in Flux Cored Arc Welding (FCAW) on Structural Steel (A-36) plate. To support and enhance the understanding and application of FCAW and Welding Technology principles, the student will develop an understanding of Industrial Safety Standards, Technical Drawings, Weld/Welding Symbols, Electrical Fundamentals, Fundamental FCAW Welding Metallurgy, Fundamentals of Quality Assurance, Welding Codes (AWS D1.1), and Weld Testing/Inspection. The development of welding skills sets and practices for FCAW applications on plate will require the proper use of Personal Protective Equipment (PPE) and the diligent application of all Safety Rules. (Formerly WELD 105) (CSU)

### **WELD 125 (3.0 Units)** **Gas Tungsten Arc Welding on Plate**

**Term Hours: 36 Lec, 72 Lab**  
**Letter Grade Only**

Prerequisite: WELD 100 with a grade of C or better.  
This course is designed to be a study of Gas Tungsten Arc Welding (GTAW). This course is one of the required courses in the Welding Technology Program. The student will develop the theory and knowledge base to be able to safely and properly practice welding techniques in Gas Tungsten Arc Welding (SMAW) on Steel (A-36), Stainless Steel, and Aluminum plate. To support and enhance the understanding and application of GTAW and Welding Technology principles, the student will develop an understanding of Industrial Safety Standards, Technical Drawings, Weld/Welding Symbols, Electrical Fundamentals, Fundamental GTAW Welding Metallurgy, Fundamentals of Quality Assurance, Welding Codes, and Weld Testing/Inspection. The development of welding skills sets and practices for GTAW applications on plate will require the proper use of Personal Protective Equipment (PPE) and the application of all Safety Rules. (Formerly WELD 101) (CSU)

**WELD 135 (4.0 Units)**  
**Shielded Metal Arc Welding on Plate**

**Term Hours: 36 Lec, 108 Lab**

**Letter Grade Only**

Prerequisite: WELD 100 with a grade of C or better.

This course is designed to be a study of Shielded Metal Arc Welding (SMAW). This course is one of the required courses in the Welding Technology Program. The student will develop the theory and knowledge base to be able to safely and properly practice welding techniques in Shielded Metal Arc Welding (SMAW) on Structural Steel (A-36) plate. To support and enhance the understanding and application of SMAW and Welding Technology principles, the student will develop an understanding of Industrial Safety Standards, Technical Drawings, Weld/Welding Symbols, Electrical Fundamentals, Fundamental SMAW Welding Metallurgy, Fundamentals of Quality Assurance, Welding Codes (AWS D1.1), and Weld Testing/Inspection. The development of welding skills sets and practices for SMAW applications on plate will require the proper use of Personal Protective Equipment (PPE) and the application of all Safety Rules. (Formerly WELD 102) (CSU)

**WELD 225 (3.0 Units)**  
**Gas Tungsten Arc Welding on Pipe**

**Term Hours: 36 Lec, 72 Lab**

**Letter Grade Only**

Prerequisite: WELD 125 (Formerly WELD 101) with a grade of C or better. This course is designed to be a study of Gas Tungsten Arc Welding (GTAW). This course is one of the required courses in the Welding Technology Program. The student will develop the theory and knowledge base to be able to safely and properly practice welding techniques in Gas Tungsten Arc Welding (GTAW) on Carbon Steel Pipe (Open Root) and on Stainless Steel (Thin Wall Tube). To support and enhance the understanding and application of GTAW and Welding Technology principles, the student will develop an understanding of Industrial Safety Standards, Technical Drawings, Weld/Welding Symbols, Electrical Fundamentals, Fundamental GTAW Welding Metallurgy, Fundamentals of Quality Assurance, Welding Codes (API 1104 and ASME Section IX), and Weld Testing/Inspection. The development of welding skills sets and practices for GTAW applications on Carbon Steel and Stainless Steel pipe will require the proper use of Personal Protective Equipment (PPE) and the diligent application of all Safety Rules. (Formerly WELD 104) (CSU)

**WELD 230 (3.0 Units)**  
**Shielded Metal Arc Welding on Pipe**

**Term Hours: 36 Lec, 72 Lab**

**Letter Grade Only**

Prerequisite: WELD 135 (Formerly WELD 102) with a grade of C or better. This course is designed to be a study of Shielded Metal Arc Welding (SMAW). This course is one of the required courses in the Welding Technology Program. The student will develop the theory and knowledge base to be able to safely and properly practice welding techniques in Shielded Metal Arc Welding (SMAW) on Carbon Steel Pipe (Open Root). To support and enhance the understanding and application of SMAW and Welding Technology principles, the student will develop an understanding of Industrial Safety Standards, Technical Drawings, Weld/Welding Symbols, Electrical Fundamentals, Fundamental SMAW Welding Metallurgy, Fundamentals of Quality Assurance, Welding Codes (API 1104 and ASME Section IX), and Weld Testing/Inspection. The development of welding skills sets and practices for SMAW applications on carbon steel pipe will require the proper use of Personal Protective Equipment (PPE) and the application of all Safety Rules. (Formerly WELD 103) (CSU)

## WORK EXPERIENCE

**WE 201 (1.0 Unit)**  
**Employment Readiness**

**Term Hours: 18 Lec, 0 Lab**

**Letter Grade or Pass/No Pass**

Skills development in the areas of job search, employer contact, resume writing, applications and cover letter, interviewing techniques, appropriate dress, job-holding practices and on-site learning objectives. A review of factors relating to or contributing to job success, including motivation, attitude, human relations, leadership, personal, as well as, group relationships, and behavior. (CSU)

**WE 210 (1.0-3.0 Units)**  
**General Work Experience**

**Term Hours: 0 Lec, 63 Lab**

**Letter Grade or Pass/No Pass**

Corequisite: Must be taken in conjunction with WE 201.

A sequence of on-the-job learning experiences designed to assist the student in acquiring desirable work habits, attitudes and career awareness. Current employment for volunteer/unpaid experience need not be related to the students' educational goal. One unit of credit is earned for each 60 hours of volunteer/unpaid work or 75 hours of paid work, with a maximum of three units per session, students must complete one other course in addition to Work Experience. (CSU)

**WE 220 (1.0-4.0 Units)**  
**Internship**

**Term Hours: 0 Lec, 63 Lab**

**Letter Grade or Pass/No Pass**

Corequisite: Must be taken in conjunction with WE 201.

A course that is supervised employment extending classroom-based occupational learning at an on-the-job learning site relating to the student's educational or occupational (major or career) goals. One unit of credit is earned for each 60 hours of volunteer/unpaid work or 75 hours of paid work, with maximum of 4 units per semester. During a regular semester, students must complete a minimum of 7 units, including Work Experience. During the summer session, students must complete one other course in addition to Work Experience. (CSU)