2013-2014
A CALIFORNIA COMMUNITY COLLEGE

ACCREDITED BY
The Western Association of Schools and Colleges
Accrediting Commission for Community & Junior Colleges
10 Commercial Blvd, Ste 204
Novato, CA 94949
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Fax (415) 506.0238

APPROVED BY
The Board of Governors of the California Community Colleges
The California Department of Education
The University of California
The California State Universities

APPROVED FOR
The training of U.S. veterans and other eligible persons

COLLEGE OF THE CANYONS
Valencia Campus
26455 Rockwell Canyon Road
Santa Clarita, CA 91355
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www.canyons.edu

COLLEGE OF THE CANYONS
Canyon Country Campus
17200 Sierra Highway
Santa Clarita, CA 91351
(661) 362-3800
www.canyoncountrycampus.com

Accuracy Statement
The Santa Clarita Community College District and College of the Canyons have made every reasonable effort to determine that everything stated in this catalog is accurate. Courses and programs offered, together with other matters contained herein, are subject to changes without notice by the administration of the College for reasons related to student enrollment, level of financial support, or for any other reason at the discretion of the College. The College further reserves the right to add, to amend, or repeal any of the rules, regulations, policies and procedures, consistent with applicable laws.
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Program/Course Description

“The Overseer” - from 2013 COC Student Calendar. Photographer: Robby Broderick
ADMINISTRATION OF JUSTICE

Associate in Science Degree and Certificate of Achievement: Administration of Justice

The Administration of Justice program focuses on the study of law enforcement in the United States with the primary emphasis on California law, procedures, and evidence. The student gains an insight into the history of law enforcement, the evolution of law, both constitutional and statutory, investigative techniques, report writing, evidence, and criminal procedure.

Upon successful completion of the Administration of Justice degree program, the student will have a general, but very practical knowledge of modern law enforcement in the United States and an in-depth knowledge of California criminal laws and techniques.

Target occupations typical to this major include Police Officer, Deputy Sheriff, Highway Patrol Officer, Correctional Officer, FBI Agent, DEA Agent, Secret Service Agent, Customs Officer, Border Patrol Officer, Evidence Technician, Security Officer, Loss Prevention Officer, and Private Investigator.

NOTE:
Most law enforcement agencies have extensive testing procedures prior to hiring including written, oral, and psychological tests and require the applicant to complete additional rigorous academy training prior to being hired. Most federal agencies require a bachelor’s degree prior to appointment. Security officers employed in the state of California must take additional courses and pass state approved examinations in order to meet state mandates.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge for academic training in a police academy.

Program Requirements:
Units required: 24

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ADMJUS-101</td>
<td>Introduction to Law Enforcement</td>
<td>3.0</td>
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<tr>
<td>ADMJUS-110</td>
<td>Principles and Procedures of the Justice</td>
<td>3.0</td>
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<tr>
<td>ADMJUS-125</td>
<td>Criminal Law</td>
<td>3.0</td>
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<tr>
<td>ADMJUS-126</td>
<td>Substantive Criminal Law</td>
<td>3.0</td>
</tr>
<tr>
<td>ADMJUS-130</td>
<td>Report Writing for Law Enforcement</td>
<td>3.0</td>
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<tr>
<td>ADMJUS-135</td>
<td>Criminal Evidence</td>
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Plus six units from the following:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ADMJUS-150</td>
<td>Police Field Operations</td>
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</tr>
<tr>
<td>ADMJUS-155</td>
<td>Criminal Investigation</td>
<td>3.0</td>
</tr>
<tr>
<td>ADMJUS-160</td>
<td>Traffic: Enforcement and Investigation</td>
<td>3.0</td>
</tr>
<tr>
<td>ADMJUS-175</td>
<td>Organized Crime and Vice</td>
<td>3.0</td>
</tr>
<tr>
<td>ADMJUS-180</td>
<td>Dangerous Drugs and Narcotics</td>
<td>3.0</td>
</tr>
<tr>
<td>ADMJUS-185</td>
<td>Police-Community Relations</td>
<td>3.0</td>
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</tbody>
</table>

ADMJUS 101 INTRODUCTION TO LAW ENFORCEMENT
Units: 3.00
UC:CSU 54.00 hours lecture

Introduces the history, philosophy and practical aspects of the U.S. Criminal Justice System, including related subsystems, concepts, terms and theories of law enforcement, the judiciary and correctional systems. UC credit limitation: ADMJUS-101 and 110 combined maximum credit one course.

ADMJUS 110 PRINCIPLES AND PROCEDURES OF THE JUSTICE SYSTEM
Units: 3.00
UC:CSU 54.00 hours lecture

Presents an in-depth study of the history, role and responsibility of each primary segment within the Administration of Justice system: Law Enforcement, Judicial and Corrections. Each subsystem is examined from the initial entry to final disposition and the relationship each segment maintains with its system members. UC credit limitation; ADMJUS-101 and 110 combined, maximum credit one course.
ADMJUS 125 CRIMINAL LAW
Units: 3.00
UC:CSU 54.00 hours lecture
Presents the historical development, philosophy of law and U.S. Constitutional provisions, including definitions, classification of crimes, concepts of legal research, case law and concepts of law as a social force. Discusses various elements of crimes and relates common law to current California law.

ADMJUS 126 SUBSTANTIVE CRIMINAL LAW
Units: 3.00
CSU 54.00 hours lecture
Presents the substantive laws most often encountered by municipal, county, or state police officers. The course includes an in-depth examination of the most commonly encountered misdemeanor and felony violations of the California law.

ADMJUS 130 REPORT WRITING FOR LAW ENFORCEMENT
Units: 3.00
CSU 54.00 hours lecture
Prepares students to complete police reports consistent with their departments policies, incorporating proper grammar, sentence and paragraph construction, and necessary elements of the incident(s) reported therein.

ADMJUS 135 CRIMINAL EVIDENCE
Units: 3.00
CSU 54.00 hours lecture
Introduces the fundamentals of evidence in a law enforcement context including relevant constitutional issues, Supreme Court decisions, and the California and Federal Rules of Evidence.

ADMJUS 150 POLICE FIELD OPERATIONS
Units: 3.00
CSU 54.00 hours lecture
Explores the theories, philosophies, and concepts related to the role expectations of the line enforcement officer, including patrol, traffic, and public service responsibilities and their relationship to the administration of justice.

ADMJUS 155 CRIMINAL INVESTIGATION
Units: 3.00
CSU 54.00 hours lecture
Introduces the basic principles of investigation utilized in the justice system, including how to deal with the public, knowledge of crime scenes; interviews, evidence, surveillance, follow-up, technical resources and case preparation.

ADMJUS 160 TRAFFIC: ENFORCEMENT AND INVESTIGATION
Units: 3.00
CSU 54.00 hours lecture
Examines traffic collision investigation, including basic reporting requirements, classification and determination of the cause of collisions, and traffic control and enforcement.

ADMJUS 175 ORGANIZED CRIME AND VICE
Units: 3.00
CSU 54.00 hours lecture
Introduces the history of gangs and organized criminal enterprises including the social, political and legal influences of organized crime and its impact on crime in the United States.

ADMJUS 180 DANGEROUS DRUGS AND NARCOTICS
Units: 3.00
CSU 54.00 hours lecture
Presents law enforcement’s role in the prevention of narcotics and dangerous drugs sales and use, including the study of laws pertaining to controlled substances, detailed identification of drugs, symptoms of use, sales and packaging and investigative techniques.

ADMJUS 185 POLICE-COMMUNITY RELATIONS
Units: 3.00
UC:CSU 54.00 hours lecture
Presents a study of the roles of the Administration of Justice agencies and their interaction with the community, including role expectations of the various agencies and the public at large. Emphasizes professionalism and the development of positive relationships between members of the system and the public.

ANIMATION
(See Media Entertainment Arts)
ANTHROPOLOGY

Anthropology is a scientific discipline that studies human beings from a biological and cultural (bio-cultural) perspective using data, methodology and research results from biological science and social science and behavioral science disciplines under the paradigm of evolution. Physical (biological) anthropology studies humans and their animal relatives, both living and extinct, primarily as species originating in the natural world. Cultural (social-cultural) anthropology compliments physical anthropology through the observation and recording of the broad range of human diversity using ethnographic data collected from participant observer field studies and ethnographical accounts. Archaeology, the study of human life ways in the past, adopts a strategy similar to cultural anthropology but relies mainly on evidence from the material culture of a people as well as on the use of specialized field, laboratory and preservation methods rather than upon ethnographic information provided by informants. Students who complete introductory courses in anthropology are equipped to understand those complex interactions between human biology, culture, technology and language that have enabled our species to evolve and adapt to the natural world, a foundation important for their future success as upper-division and graduate level university students. An associate degree in Anthropology is not offered.

ANTHRO 101 PHYSICAL ANTHROPOLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Studies humans and lower primates from the biological perspective. Deals with human population genetics in the conceptual framework of evolutionary processes, comparisons, and analyses, including primate behavior, primate evolution, human fossils, as well as race formation and classification.

ANTHRO 101H PHYSICAL ANTHROPOLOGY-HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Studies humans and the lower primates primarily from the biological perspective. Deals with human population genetics in the conceptual framework of evolutionary processes, comparisons, and analyses, including primate behavior, primate evolution, human fossils, as well as race formation and classification. Additional reading, writing, and research techniques are required.

ANTHRO 103 CULTURAL ANTHROPOLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Presents the nature of humankind, culture and society, including concepts and theories used for their analysis and understanding. Topics including social organization, marriage and family systems, politics and economics, language, religion, the arts, culture change and applied anthropology are examined.

ANTHRO 103H CULTURAL ANTHROPOLOGY - HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Studies the nature of humankind, culture, and society, including the concepts and theories used for their analysis and understanding. Prehistory, cultural growth, social organization, family systems, politics and economics, war, religion, values, culture shock, and applied anthropology are examined. Additional reading, writing and research techniques are required.
ANTHRO 105 INTRODUCTION TO ARCHEOLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Examines archeology and human prehistory from an interdisciplinary perspective, including methods for recovery, dating, interpretation, conservation of items of material culture, and the reconstruction of past social systems and human behavior. Field trips may be required.

ANTHRO 210 INDIANS OF CALIFORNIA
Units: 3.00
UC:CSU 54.00 hours lecture
Examines Native American cultures of California from prehistoric times to the present, including geographic origins, settlement areas, technology, subsistence patterns, social organization, religion, folklore, material culture and current social problems.

ANTHRO 220 MAGIC, WITCHCRAFT AND RELIGION
Units: 3.00
UC:CSU 54.00 hours lecture
Contrasts the cross-cultural phenomena of religion, witchcraft and magical behavior in society from an anthropological perspective, including the role of religion in healing and curing, social control, politics, economics, family, and cultural change.

ARCHITECTURAL DRAFTING

Associate in Science Degree: Architectural Drafting and Technology
The Architectural Drafting program is designed to prepare students for careers in industry as drafters or related occupations, and/or transfer to a four or five-year architectural program. Drafting technicians are in short supply, affording many employment opportunities for qualified individuals. The program provides students with entry-level skills and knowledge in the fields of computer and architectural drafting. Competencies include knowledge in AutoCAD generated drawings, current practices in architectural drafting and construction technology, 2-D and 3-D drawings, drafting techniques such as clarity, line weight expression and accuracy.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core knowledge and skills required for employment in architectural computer-aided drafting

Program Requirements:
Units Required: 38-39

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tr>
<td>ARCHT-100</td>
<td>Careers in Architecture, Interior Design and Related Fields</td>
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<tr>
<td>ARCHT-110</td>
<td>Architectural Drafting I</td>
<td>3.0</td>
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<tr>
<td>ARCHT-120</td>
<td>Design I - Elements of Architectural Design</td>
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<td>ARCHT-140</td>
<td>Materials and Methods of Construction</td>
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<td>ARCHT-160</td>
<td>AutoCAD for Architecture and Interior Design</td>
<td>3.0</td>
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<tr>
<td>ARCHT-180</td>
<td>Codes and Zoning Regulations</td>
<td>3.0</td>
</tr>
<tr>
<td>ARCHT-190</td>
<td>Design II - Space Planning</td>
<td>3.0</td>
</tr>
<tr>
<td>ARCHT-240</td>
<td>Architectural Design Portfolio</td>
<td>3.0</td>
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<tr>
<td>ARCHT-200A</td>
<td>Sustainable Development and Environmental Design</td>
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<tr>
<td>ARCHT-200B</td>
<td>Design III - Environmental Design Lab</td>
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<td>ARCHT-220</td>
<td>Architectural Drafting II</td>
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<tr>
<td>ARCHT-270</td>
<td>CAD 3-D Modeling/Animation</td>
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OR

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<tr>
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<tbody>
<tr>
<td>ARCHT-280</td>
<td>Design IV - Advanced Design</td>
<td>3.0</td>
</tr>
<tr>
<td>ID-103</td>
<td>Perspective and Interior Illustration</td>
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<tr>
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<tbody>
<tr>
<td>ID-104</td>
<td>Rapid Visualization and Illustration</td>
<td>3.0</td>
</tr>
<tr>
<td>ID-114</td>
<td>Architecture and Interiors History Antiquity - Classical Revival</td>
<td>3.0</td>
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</tbody>
</table>
Certificate of Achievement: Architectural Drafting

The architectural drafting program is designed to prepare students for careers in industry as drafters or related occupations, and/or transfer to a four or five-year architectural program. Drafting technicians are in short supply, affording many employment opportunities for qualified individuals. The program provides students with entry-level skills and knowledge in the fields of computer and architectural drafting. Competencies include knowledge in AutoCAD generated drawings, current practices in architectural drafting and construction technology, 2-D and 3-D drawings, drafting techniques such as clarity, line weight expression and accuracy to name a few.

Upon completion of the program, students will be prepared for entry level drafting positions. An associate degree and certificate can be earned in architectural drafting.

Program Requirements:
Units Required: 32

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<td>ARCHT-240</td>
<td>Architectural Design Portfolio</td>
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<tr>
<td>ARCHT-260</td>
<td>Advanced CAD for Architecture and Interior Design</td>
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<tr>
<td>ARCHT-270</td>
<td>CAD 3-D Modeling/Animation</td>
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<tr>
<td>ID-114</td>
<td>Architecture and Interiors History: Antiquity - Classical Revival</td>
</tr>
</tbody>
</table>

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core knowledge and skills required for employment in architectural drafting.

Certificate of Specialization: Architectural Computer Aided Drafting

Students will complete a series of Architectural Drafting Computer Aided Drafting (CAD) courses to become proficient in a high-skilled specialization that is in high demand.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core knowledge and skills required for employment in architectural computer aided drafting.

Program Requirements:
Units Required: 16

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</table>

ARCHT 096L ARCHITECTURAL DRAFTING AND CAD LAB

Units: 1.00
54.00 hours lab

A lab for the currently enrolled architecture or interior design student who wishes to increase skills through the use of the design lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in printed schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in architecture or the interior design program. Offered pass/no-pass only. Units do not apply to the associate degree.

ARCHT 100 CAREERS IN ARCHITECTURE, INTERIOR DESIGN AND RELATED FIELDS

Units: 1.00
CSU 18.00 hours lecture

Surveys careers in architecture, interior design and related fields, including degree requirements, transfer institutions, income, and employment opportunities. Field trips may be required. (Same as ID-100)
ARCHT 110 ARCHITECTURAL DRAFTING I
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Presents current practices in architectural drafting and construction technology focusing on a small single family residence. Drafting techniques will emphasize clarity, line weight expression and accuracy. Same as ID-110.

ARCHT 120 DESIGN I - ELEMENTS OF ARCHITECTURAL DESIGN
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces the fundamentals of 2-D and 3-D design and the design process and problems of structural and spatial definitions.

ARCHT 140 MATERIALS AND METHODS OF CONSTRUCTION
Units: 3.00
CSU 54.00 hours lecture
Introduces principles, materials, methods, and processes of construction. Combines both theory and practical application. Field trips may be required.

ARCHT 160 AUTOCAD FOR ARCHITECTURE AND INTERIOR DESIGN
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: ARCHT-110 or ID-110
Presents drawing and editing commands and procedures to complete basic 2-D drawings for an architectural set of construction documents.

ARCHT 180 CODES AND ZONING REGULATIONS
Units: 3.00
CSU 54.00 hours lecture
Provides an in-depth review of California Building Codes, ADA or California Title 24 (Disabled Access Regulations based on the Americans with Disability Act), as related to commercial, residential and institutional projects. Students will apply building and zoning codes for the design and drafting in architecture and interior design.

ARCHT 190 DESIGN II – DESIGN PROCESS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: ID-110 or ARCHT-110 Recommended Preparation: ARCHT-120 and ID-101B and ID-103
Presents solutions to designing interior and/or exterior spaces, including human factors for all populations, and develops 2-D and 3-D presentations. Same as ID-190.

ARCHT 200A SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL DESIGN
Units: 3.00
CSU 54.00 hours lecture
Introduces sustainable development and environmental design concepts related to culture, economics, politics, climate, energy systems, architecture and city planning. Students who have earned credit for ARCHT 200 cannot receive credit for this course.

ARCHT 200B DESIGN III - ENVIRONMENTAL DESIGN LAB
Units: 1.00
CSU 54.00 hours lab
Prerequisite: ARCHT-120 Co-requisite: ARCHT-200A Recommended Preparation: ARCHT-140, ARCHT-110 or ID-110, and ID-103
Introduces Green Building Design and Sustainable Design related to climate, energy use, comfort, and materials. Includes architectural methods of ventilating, cooling, heating, and lighting for envelope-load dominated buildings.

ARCHT 220 ARCHITECTURAL DRAFTING II
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: ARCHT-160
Presents architectural drawings using 2-D advanced commands, including appropriate codes for a two story wood frame structure.
ARCHT 240 ARCHITECTURAL DESIGN PORTFOLIO
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Creation of individual student portfolios emphasizing student accomplishments, instructional objectives, and portfolio content desired for interviews in industry, or those required by accredited schools of architecture.

ARCHT 260 ADVANCED CAD FOR ARCHITECTURE AND INTERIOR DESIGN
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: ARCHT-160
Presents advanced computer-aided drafting (CAD) features to create three-dimensional conceptual drawings.

ARCHT 270 CAD 3-D MODELING/ANIMATION
Units: 4.00
CSU 36.00 hours lecture, 108.00 hours lab
Prerequisite: ARCHT-160
Intermediate to advanced architectural CAD in 3-D illustration, rendering and animation. Virtual 'walk-through' and 'fly-through' of interior/exterior 3-D models with photo-realistic materials and lighting will be produced.

ARCHT 280 DESIGN IV - ADVANCED DESIGN
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: ARCHT-140, ARCHT-200A, ARCHT-200B, ARCHT-220 and ID-114 Recommended Preparation: ID-115
Application of methods and theory used in architectural design projects. Includes graphic technique, design process, site analysis, presentation drawings, construction principles, physical and cultural determinants of design and urban form. Portfolio will be produced.

ART

Associate in Arts Degree: Art
The Art Department program at College of the Canyons provides students with introductory courses in the fine arts. The current program offers both studio and lecture sections and the majority are transferable to University of California, and California State University, as well as to most private art colleges in the nation. The College of the Canyons catalog virtually mirrors California State University’s lower division requirements for a BA at the freshman and sophomore levels. The art program provides a wide range of skills. Studio courses at the beginning and intermediate levels include: beginning drawing, life drawing, 2-D design, 3-D design, sculpture, two levels of printmaking, painting, watercolor painting, landscape painting and illustration. Art appreciation and art history courses survey the development of art from the Paleolithic period to the present. In addition to developing critical and creative skills, art students have many opportunities to get involved in contemporary art culture. As part of the regular program, students will do many of the following activities: visit local art exhibitions, artists' studios, private collections and art libraries; gain experience at review writing. The art gallery provides a program of up to five exhibitions a year. While our exhibition schedule represents diversity in culture and style, it also parallels the curriculum of the fine and applied arts departments. The gallery serves as an instructional tool for all visual arts courses, the college at large- indicating relationships with other academic departments and the community.

Student Learning Outcome:
Students will be able to analyze and interpret works of cultural importance.

Program Requirements:
Units Required: 24

Choose six units from the following:

<table>
<thead>
<tr>
<th>Units</th>
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<tr>
<td>ART-110</td>
<td>Art History: Ancient to Medieval</td>
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<tr>
<td>ART-111</td>
<td>Art History: Renaissance to Modern</td>
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<tr>
<td>ART-115</td>
<td>Art History: U.S and European Modernism</td>
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Plus twelve units from the following:

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<tr>
<td>ART-124A</td>
<td>Drawing I</td>
</tr>
<tr>
<td>ART-124B</td>
<td>Drawing II</td>
</tr>
<tr>
<td>ART-140</td>
<td>Beginning Design: Two-Dimensional Media</td>
</tr>
<tr>
<td>ART-141</td>
<td>Beginning Design: Three-Dimensional Media</td>
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</tbody>
</table>
### ART 110 ART HISTORY: ANCIENT TO MEDIEVAL

**Units:** 3.00  
**UC:CSU** 54.00 hours lecture  
Analyzes major works of art emphasizing major monuments of art in painting, sculpture, and architectures of the Western World from prehistoric times until the Renaissance. Field trips may be required.

### ART 111 ART HISTORY: RENAISSANCE TO MODERN

**Units:** 3.00  
**UC:CSU** 54.00 hours lecture  
Analyzes major works of art, emphasizing leading creative movements of the Western World from the Italian Renaissance through the mid-nineteenth century. Field trip may be required.

### ART 114 ART HISTORY: FIELD TRIPS

**Units:** 1.50  
**CSU** 27.00 hours lecture  
This is an eight-week course of museum, gallery and studio visits which may include the Museum of Contemporary Art, Los Angeles County Museum of Art, Norton Simon Museum, J. Paul Getty Museum, Bergamot Station, UCLA’s Armand Hammer Museum, Huntington Library and Gardens, and the Pacific Design Center. The course will include interactive discussions and projects with students, faculty, gallery professionals and artists. Different lectures and exhibits each semester.

### ART 115 ART HISTORY: U.S. AND EUROPEAN MODERNISM

**Units:** 3.00  
**UC:CSU** 54.00 hours lecture  
Surveys the history of architecture, sculpture and painting from the mid-nineteenth century to the present time in Western Europe and North America, emphasizing art of the twentieth century. Museum field trips may be required.

### ART 120 WATERCOLOR PAINTING

**Units:** 3.00  
**UC:CSU** 27.00 hours lecture, 81.00 hours lab  
The beginning course in drawing experiences emphasizing (1) basic drawing techniques in a variety of media; and (2) compositional and design fundamentals.

### ART 124A DRAWING I

**Units:** 3.00  
**UC:CSU** 27.00 hours lecture, 81.00 hours lab  
Recommended Preparation: ART-124A  
Continues the study of drawing focusing on skeletal and muscular structure from a live model, and emphasizing the development of drawing skills to suggest proportion, form, and gesture.

### ART 140 BEGINNING DESIGN: TWO-DIMENSIONAL MEDIA

**Units:** 3.00  
**UC:CSU** 27.00 hours lecture, 81.00 hours lab  
Introduces the study of the elements and principles of 2-D design with special emphasis on structure, color, and composition; materials may include pencil, gouache, and ink.

### ART 141 BEGINNING DESIGN: THREE-DIMENSIONAL MEDIA

**Units:** 3.00  
**UC:CSU** 27.00 hours lecture, 81.00 hours lab  
Introduces the basic principles of three-dimensional design with applications in a variety of sculptural media including clay, plaster, wood and paper. Topics include basic design principles, interpretive analysis of form and content and theories of spatial organization. Field trip may be required.

### ART 205 LANDMARKS OF ART AND VISUAL CULTURE

**Units:** 3.00  
**UC:CSU** 54.00 hours lecture  
Introduces great works of art and visual culture, both past and present, as a means of stimulating visual, emotional, and intellectual awareness of the artistic heritage of world art. Field trips may be required.
ART 222 ILLUSTRATION I
Units: 3.00
CSU 27.00 hours lecture, 81.00 hours lab
Prerequisite: ART-124A or ART-140
Introduces materials and techniques used by commercial illustrators. Projects emphasize concept development, style, imagery, and illustrative communication for use in and in combination with advertising, editorial print media, and various publications. Projects are designed to meet professional standards. Field trips may be required.

ART 224A DRAWING III - LIFE DRAWING
Units: 3.00
UC:CSU 27.00 hours lecture, 81.00 hours lab
Prerequisite: ART-124A or ART-140
Introduces advanced drawing techniques studying skeletal and muscular structure from the live model, emphasizing the development of drawing skills to suggest proportion, form and gesture.

ART 227 PAINTING I
Units: 3.00
UC:CSU 27.00 hours lecture, 81.00 hours lab
Prerequisite: ART-124A or ART-140
Introduces beginning painting techniques, pictorial design, and composition. Includes exploration of various media such as oil and acrylic. Field trip may be required.

ART 228 PAINTING II
Units: 3.00
UC:CSU 27.00 hours lecture, 81.00 hours lab
Prerequisite: ART-227 or presentation of portfolio
Introduces advanced painting techniques, including pictorial design, creative interpretation, and using various media. Field trips may be required.

ART 229 LANDSCAPE PAINTING
Units: 3.00
UC:CSU 27.00 hours lecture, 81.00 hours lab
Recommended Preparation: ART-124A
Introduces landscape painting techniques, including color mixing, color theory, brushwork, composition, and technical applications. Field trips may be required.

ART 235 SCULPTURE
Units: 3.00
UC:CSU 27.00 hours lecture, 81.00 hours lab
Prerequisite: ART-141
Introduces the study of plastic form through the processes of modeling, casting, carving, and construction. Emphasis on the development of ideas and personal expression. Materials may include clay, plaster, hydrocal, stone carving, wood carving, and mixed media. Field trip may be required.

ART 236 SCULPTURE II
Units: 3.00
UC:CSU 27.00 hours lecture, 81.00 hours lab
Prerequisite: ART-235
This course is a continuation of Art-235 expanding the student's knowledge of contemporary techniques and materials. Additive, subtractive, manipulation and substitution techniques are further explored.

ART 237 FUNDAMENTALS OF PRINTMAKING
Units: 3.00
UC:CSU 27.00 hours lecture, 81.00 hours lab
Recommended Preparation: ART-124A
Introduces materials and techniques of monotype, etching, silk screen and relief print including wood and linoleum.

ART 238 PRINTMAKING - INTAGLIO
Units: 3.00
UC:CSU 27.00 hours lecture, 81.00 hours lab
Prerequisite: ART-237
Introduces intaglio printmaking techniques and image development, including etching, photo etching, engraving, dry-point and aquatint.

ART 295 PROFESSIONAL SKILLS FOR ARTISTS
Units: 3.00
CSU 27.00 hours lecture, 81.00 hours lab
Emphasizes business and practical skills for a career in the arts, including photographing, documenting, matting, framing, crating, shipping, installation, lighting, resume writing, publicity, visual presentation, preparation of invoices and taxes, contracts, copyright law and portfolio presentation.
Astronomy is the study of the principles and development of the solar system and the galaxies. Astronomy classes include general survey introductory courses for physical science majors or students looking for interesting alternatives to fulfill general education requirements. The following is a sample of career options available for astronomy majors, of which most require a baccalaureate degree, and some require a graduate degree: teacher, astrophysicist and astronomer. An associate degree is not available in astronomy.

**ASTRON 100 GENERAL ASTRONOMY**
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys content and dynamics of the solar system; the earth and its motions; time and the calendar; moon, eclipses, and tides; physics of the sun, planets, comets and meteorites, including their dynamical aspects and motions. Principles, logic, and development of stellar astronomy, as well as physics of the stars, stellar type populations, stellar evolution; stellar organizations, galaxies, and cosmology are also included. UC credit limitation: No credit for ASTRON-100 if taken after 101 or 102.

**ASTRON 101 THE STELLAR SYSTEM**
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys stellar astronomy, including the earth’s place in the universe; the atom and light; the birth, death, and life of stars; the Milky Way galaxy; normal and active galaxies; cosmology.

**ASTRON 102 THE SOLAR SYSTEM**
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the solar system, including the earth and its motions and seasons; the moon, eclipses, and tides; the content and dynamics of the solar system; planets and their satellites, asteroids, comets, and meteorites; and the evolution of the solar system.

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**AUTOMOTIVE TECHNOLOGY**

**Associate in Science Degree and Certificate of Achievement: Automotive Technology**
The Automotive Technology program is a comprehensive two-year program designed to prepare students with the industry defined entry-level skills needed for an automotive technician position in a variety of settings including dealerships, independent automotive repair facilities or city/county agencies. Students may opt to complete an associate in science degree or a certificate of achievement in Automotive Technology. The program provides in-depth training with extensive hands-on experiences. In the classroom, students learn the theoretical aspects of automotive diagnosis, repair and service. In the automotive laboratory setting students will experience applying the theory learned in the classroom. Upon completion of the course work required for the certificate or major, students will have achieved competencies in the areas of brakes, suspension, electrical components and wiring, transmissions, engine diagnosis and drivability. While many automobile dealerships require technicians to acquire manufacturer specialty training, the basic skills and knowledge needed to enter specialty training will be obtained in the Automotive Technician program at College of the Canyons.

**Student Learning Outcome:**
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in the automotive industry.

**Program Requirements:**
Units Required: 42

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>AUTO-094</td>
<td>Automotive Heating and Air Conditioning</td>
<td>3.0</td>
</tr>
<tr>
<td>AUTO-101</td>
<td>Automotive Engine Fundamentals</td>
<td>4.0</td>
</tr>
<tr>
<td>AUTO-102</td>
<td>Engine Performance I</td>
<td>4.0</td>
</tr>
<tr>
<td>AUTO-103</td>
<td>Automotive Electrical Systems</td>
<td>5.0</td>
</tr>
<tr>
<td>AUTO-104</td>
<td>Steering, Suspension and Alignment</td>
<td>3.0</td>
</tr>
<tr>
<td>AUTO-105</td>
<td>Automatic Transmissions</td>
<td>5.0</td>
</tr>
<tr>
<td>AUTO-106</td>
<td>Manual Transmissions, Transaxles and Drivetrains</td>
<td>5.0</td>
</tr>
<tr>
<td>AUTO-107</td>
<td>Advanced Electrical Systems</td>
<td>4.0</td>
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<tr>
<td>AUTO-108</td>
<td>Engine Performance II</td>
<td>4.0</td>
</tr>
<tr>
<td>AUTO-109</td>
<td>Automotive Brake Systems</td>
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*Plus a minimum one unit from the following:*

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<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>CWE-188AUTO</td>
<td>Cooperative Work Experience Education</td>
<td>1.0–4.0</td>
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</tbody>
</table>
AUTO 090 AUTOMOTIVE MAINTENANCE AND OPERATION
Units: 3.00
36.00 hours lecture, 54.00 hours lab
Introduces automotive maintenance and repair concepts for the student with little or no background in the automotive field. Topics include: basic theory of operation, maintenance and minor repair of engine and other auto components.

AUTO 094 AUTOMOTIVE HEATING AND AIR CONDITIONING
Units: 3.00
27.00 hours lecture, 81.00 hours lab
Recommended Preparation: AUTO-101
Provides theory and practical application of the function and repair of heating and air conditioning systems as applied to domestic and imported automobiles.

AUTO 101 AUTOMOTIVE ENGINE FUNDAMENTALS
Units: 4.00
CSU 54.00 hours lecture, 67.50 hours lab
Theory and practice in automotive engine repair, including operating principles and descriptions of all components in an engine. Emphasizes diagnosis and measurement of internal engine components, as well as complete disassembly and assembly of engines.

AUTO 102 ENGINE PERFORMANCE I
Units: 4.00
CSU 45.00 hours lecture, 81.00 hours lab
Prerequisite: AUTO-101
Provides a foundation of the design and operation of domestic and import ignition, fuel, and emission control systems. Emphasis is placed on the problems of accurate diagnosis and the proper repair procedures for these engine systems.

AUTO 103 AUTOMOTIVE ELECTRICAL SYSTEMS
Units: 5.00
CSU 72.00 hours lecture, 54.00 hours lab
Recommended preparation: AUTO-101
Presents the theory and practical application of basic electricity and automotive electrical systems such as battery, starting, charging, and electronic ignition.

AUTO 104 STEERING, SUSPENSION AND ALIGNMENT
Units: 3.00
CSU 36.00 hours lecture, 72.00 hours lab
Provides theory, diagnosis and repair procedures of modern suspension and steering systems on import and domestic vehicles.

AUTO 105 AUTOMATIC TRANSMISSIONS
Units: 5.00
CSU 72.00 hours lecture, 54.00 hours lab
Recommended Preparation: AUTO-101
Introduces the theory and principles of automatic transmissions and transaxles, including procedures for diagnosing problems, adjusting, and overhauling the automatic transmission and transaxle.

AUTO 106 MANUAL TRANSMISSIONS, TRANSAXLES AND DRIVETRAINS
Units: 5.00
CSU 72.00 hours lecture, 54.00 hours lab
Recommended Preparation: AUTO-101
Presents the principles, theory, operation, and diagnosis of problems and service procedures of clutches, manual transmissions, drivelines, transfer cases, and transaxle assemblies.

AUTO 107 ADVANCED ELECTRICAL SYSTEMS
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: AUTO-103
Presents the advanced theory and practice of the automotive body electrical system, including all classes of electrical components and power accessories.

AUTO 108 ENGINE PERFORMANCE II
Units: 4.00
CSU 45.00 hours lecture, 81.00 hours lab
Prerequisite: AUTO-102
Provides more in-depth study of the design and operation of fuel management systems including domestic and import feedback carburetor and fuel injection systems, electronic ignition systems used and introduces computer controlled systems. Emphasizes the correct diagnosis of and proper repair procedures for those systems.

AUTO 109 AUTOMOTIVE BRAKE SYSTEMS
Units: 4.00
CSU 45.00 hours lecture, 81.00 hours lab
Provides the theoretical and practical application of the operation, diagnosis and repair of automotive brake systems.
 Associate in Science Degree: Biological Sciences

Biological Sciences covers all aspects of the scientific study of life and emphasizes both the unity and diversity of living things. The structure, function, and behavior of organisms are studied at the molecular, cellular, organismal and environmental levels. The biology program serves three areas: a broad background of studies for the biology major preparing for transfer to a four-year institution; support courses in human anatomy, human physiology, and general microbiology, which may be used to satisfy prerequisites for nursing programs and other allied-health fields; and courses in natural sciences to fulfill general education requirements.

Student Learning Outcome:
Students will be able to interpret, analyze, and evaluate Biological knowledge using the scientific method.

Program Requirements:
Units Required: 32

Eight units from the following:

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tr>
<td>BIOSCI-106</td>
<td>Organismal &amp; Environmental Biology</td>
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<tr>
<td>BIOSCI-107</td>
<td>Molecular and Cellular Biology</td>
<td>4.0</td>
</tr>
<tr>
<td>OR BIOSCI-107H</td>
<td>Molecular and Cellular Biology Honors</td>
<td>4.0</td>
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Eight units from the following:

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<tr>
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<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>BIOSCI-201</td>
<td>Introduction to Human Anatomy</td>
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</tr>
<tr>
<td>BIOSCI-202</td>
<td>Introduction to Human Physiology</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-204</td>
<td>Human Anatomy and Physiology I</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-205</td>
<td>Human Anatomy and Physiology II</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-215</td>
<td>General Zoology</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-216</td>
<td>General Botany</td>
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</tr>
<tr>
<td>BIOSCI-221</td>
<td>Introduction to Microbiology</td>
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<tr>
<td>BIOSCI-230</td>
<td>Introduction to Biotechnology</td>
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<tr>
<td>BIOSCI-240</td>
<td>Molecular Genetics</td>
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Sixteen units from the following:

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<td>General Chemistry I</td>
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<td>CHEM-202</td>
<td>General Chemistry II</td>
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<td>CHEM-255</td>
<td>Organic Chemistry I</td>
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<td>CHEM-256</td>
<td>Organic Chemistry II</td>
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<tr>
<td>MATH-211</td>
<td>Calculus I</td>
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<tr>
<td>MATH-212</td>
<td>Calculus II</td>
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<tr>
<td>PHYSIC-110</td>
<td>General Physics I</td>
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<td>PHYSIC-111</td>
<td>General Physics II</td>
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<tr>
<td>PHYSIC-220</td>
<td>Physics for Scientists and Engineers: Mechanics of Solids and Fluids</td>
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<tr>
<td>PHYSIC-221</td>
<td>Physics for Scientists and Engineers: Electricity and Magnetism</td>
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Recommended electives:

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<th>Course</th>
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<tr>
<td>BIOSCI-130</td>
<td>Environmental Biology</td>
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<tr>
<td>BIOSCI-132</td>
<td>Concepts in Evolution</td>
<td>3.0</td>
</tr>
<tr>
<td>BIOSCI-140</td>
<td>Principles of Human Genetics</td>
<td>3.0</td>
</tr>
<tr>
<td>BIOSCI-180</td>
<td>Biology of Cancer</td>
<td>3.0</td>
</tr>
</tbody>
</table>

BIOSCI 090 BIOLOGY FOR TECHNOLOGY

Units: 3.00
18.00 hours lecture, 108.00 hours lab
Introduces the basic concepts of applied biology as they relate to the fields of biotechnology and emerging technology, including the principles and methodologies of biotechnology, instrumentation, data analysis, record keeping, safety, lab techniques, and teamwork.

BIOSCI 095 CLEANROOM TECHNOLOGY

Units: 1.00
9.00 hours lecture, 27.00 hours lab
Introduces basic techniques and theory of clean room science, including general building design, water systems, HVAC, utilities, instrumentation, process control systems and external environmental effects.

BIOSCI 096 CELL CULTURE TECHNIQUES

Units: 2.00
18.00 hours lecture, 54.00 hours lab
Introduces cell culture techniques emphasizing aseptic practices in the preparation of media and maintenance of insect, mammalian, and bacterial cell cultures. Discusses small and large scale cell culture processes and compares basic research laboratory and industrial biotechnology.

BIOSCI 098 QUALITY CONTROL AND VALIDATION

Units: 1.00
18.00 hours lecture
Examines the important aspects of QA (Quality Assurance), QC (Quality Control), and methods of validation from the development to the production of biopharmaceuticals.
### BIOSCI 100 GENERAL BIOLOGY
**Units:** 4.00  
UC:CSU 54.00 hours lecture, 54.00 hours lab  
Explores the nature of science, including cell structure and processes, energetics in living systems, heredity, development, evolution, diversity, and environmental relationships. UC credit limitation: No credit for BIOSCI-100 if taken after BIOSCI-106, 107, 107H, 201, 202, 204, 205, 215, 216, 221, or 250.

### BIOSCI 100H GENERAL BIOLOGY – HONORS
**Units:** 4.00  
CSU 54.00 hours lecture, 54.00 hours lab  
Explores the nature of science, including cell structure and processes, energetics in living systems, heredity, development, evolution, diversity, and environmental relationships. Critical analysis combined with written and oral presentation of primary scientific literature will differentiate BIOSCI 100H from BIOSCI 100. UC credit limitations: No credit for BIOSCI-100H if taken after BIOSCI-106, 107, 107H, 201, 202, 204, 205, 215, 216, 221, or 250.

### BIOSCI 106 ORGANISMAL & ENVIRONMENTAL BIOLOGY
**Units:** 4.00  
UC:CSU 54.00 hours lecture, 54.00 hours lab  
Introduction to organismal and environmental biology, cell theory, patterns of reproduction, embryological and organ development in major plant and animal groups, behavior, Mendelian genetics, population genetics, diversity of plants and animals, classification, and principles of ecology and evolution.

### BIOSCI 107 MOLECULAR AND CELLULAR BIOLOGY
**Units:** 4.00  
UC:CSU 54.00 hours lecture, 54.00 hours lab  
**Prerequisite:** MATH-070  
Introduces the principles of cellular form and function including: bioenergetics and metabolism, molecular structure and evolution, gene regulation, cellular anatomy and physiology, and the principles of biotechnology.

### BIOSCI 107H MOLECULAR AND CELLULAR BIOLOGY HONORS
**Units:** 4.00  
UC:CSU 54.00 hours lecture, 54.00 hours lab  
**Prerequisite:** MATH-070  
**Recommended Preparation:** ENGL-101 or ENGL-101H  
Introduces the principles of cellular form and function including: bioenergetics and metabolism, molecular structure and evolution, gene regulation, cellular anatomy and physiology, and the principles of biotechnology. Critical analysis combined with written and oral presentation of primary scientific literature will differentiate BIOSCI 107H from BIOSCI 107.

### BIOSCI 130 ENVIRONMENTAL BIOLOGY
**Units:** 3.00  
UC:CSU 54.00 hours lecture  
Introduces basic ecological principles, current environmental issues such as pollution (air, water, and soil), global warming, deforestation, the impact of human population growth on the earth's environment, and possible solutions to these problems. Not designed for biological science majors.

### BIOSCI 132 CONCEPTS IN EVOLUTION
**Units:** 3.00  
UC:CSU 54.00 hours lecture  
Explores the emergent concepts of evolution by natural selections, elementary population genetics, concepts of fitness and adaptation, genetic and developmental basis for evolutionary change, speciation, micro and macro evolution, human evolution, evolutionary science, creationism and society.

### BIOSCI 140 PRINCIPLES OF HUMAN GENETICS
**Units:** 3.00  
UC:CSU 54.00 hours lecture  
Introduces the principles of human genetics and function of DNA; genes, chromosomes and patterns of inheritance are explored. Not designed for biological science majors.

### BIOSCI 180 BIOLOGY OF CANCER
**Units:** 3.00  
UC:CSU 54.00 hours lecture  
Introduces the basic principles underlying the development and treatment of cancer, including risk factors, tumor formation, cancer genes, and cancer vaccines.

### BIOSCI 190 INTRODUCTION TO BIOINFORMATICS
**Units:** 2.00  
CSU 36.00 hours lecture  
**Recommended preparation:** BIOSCI-100, CHEM-110 or CHEM-151 or CHEM-151H  
Introduces the structural and functional analysis of nucleic acids and proteins using computer based modeling programs and online databases including: NCBI, SWISS-PROT, BLAST, PDB, PIR, KEGG, OMIM, PubMed, ExPASY, and Genbank.
BIOSCI 201 INTRODUCTION TO HUMAN ANATOMY
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: BIOSCI-107 or BIOSCI-107H
Covers the major structural characteristics of the human body, including cells, tissues, organs, and the following organ systems: skeletal, muscular, nervous, circulatory, respiratory, digestive, urinary, reproductive and endocrine. UC credit limitations: BIOSCI-201, 202 and 204, 205, 250 combined; maximum credit 8 units.

BIOSCI 202 INTRODUCTION TO HUMAN PHYSIOLOGY
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: BIOSCI-107 or BIOSCI-107H
Develops a general understanding of the functioning of the human body, including cells and membranes, nerve and muscle function, cardiovascular, respiratory, renal, and gastrointestinal physiology, metabolism, endocrinology and reproduction. Students gain experience in the use of standard and computerized physiological equipment. UC credit limitations: BIOSCI-201, 202 and 204, 205, 250 combined; maximum credit 8 units.

BIOSCI 204 HUMAN ANATOMY AND PHYSIOLOGY I
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: BIOSCI-107 or BIOSCI-107H
Introduces the structure and function of the human body. UC credit limitation: BIOSCI-201, 202 and 204, 205, 250 combined; maximum credit 8 units.

BIOSCI 205 HUMAN ANATOMY AND PHYSIOLOGY II
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: BIOSCI-204
Continues the study of the structure and function of the human body. UC credit limitation: BIOSCI-201, 202 and 204, 205, 250 combined; maximum credit 8 units.

BIOSCI 208 HUMAN PROSECTION
Units: 1.00
CSU 54.00 hours lab
Prerequisite: BIOSCI-201 or BIOSCI-204 and 205 or BIOSCI-250.
Provides experience in the dissection of a human cadaver including identification of major visceral organs and structures, and fine dissection of specific regions or organs.

BIOSCI 215 GENERAL ZOOLOGY
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: MATH-070
Recommended Preparation: BIOSCI-107 or BIOSCI-107H
Surveys the animal kingdom with emphasis on integrating mechanisms at the cellular, organismal, and population levels. Includes cell organization, morphology, and comparative development (anatomy/physiology) with principles of population biology, population genetics, evolution and ecology.

BIOSCI 216 GENERAL BOTANY
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: MATH-070
Recommended Preparation: BIOSCI-107 or BIOSCI-107H
Introduces morphology, anatomy, physiology, and taxonomy of the plant kingdom with an emphasis on seed-bearing plants. Includes principles of plant genetics, population biology, and plant ecology and economics.

BIOSCI 219 MARINE BIOLOGY
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
A study of the description, distribution and natural history of marine organisms. Laboratories will include both in class and field studies - which may extend outside the assigned laboratory times.

BIOSCI 221 INTRODUCTION TO MICROBIOLOGY
Units: 5.00
UC:CSU 54.00 hours lecture, 108.00 hours lab
Prerequisite: BIOSCI-107 or BIOSCI-107H
Introduces the biology of micro-organisms (bacteria, viruses, protozoa, parasitic worms, algae, fungi), their significance, and their role in human affairs.

BIOSCI 230 INTRODUCTION TO BIOTECHNOLOGY
Units: 4.00
UC:CSU 36.00 hours lecture, 108.00 hours lab
Prerequisite: BIOSCI-107 or BIOSCI-107H
Introduces the basic concepts and techniques of modern molecular biology, including the uses and applications of DNA manipulation techniques.

BIOSCI 240 MOLECULAR GENETICS
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: BIOSCI-107 or BIOSCI-107H
Introduces the principles of both prokaryotic and eukaryotic genetics, while emphasizing the structure, function and regulation of genes along with patterns of inheritance.
BIOTECHNOLOGY

Certificate of Achievement: Biotechnology

Biotechnology represents one of the fastest emerging fields of science today. Locally there is a rapidly emerging job market for individuals with all levels of training in biotechnology. The certificate program provides students with a core curriculum that includes both a strong foundation in theory, as well as extensive hands-on training in biotechnology. Students interested in cell-molecular related fields should seek work-based training in biotechnology. Continuing education in the form of internships is available, and will help to solidify a career choice. Entry-level positions (with either an A.S. or Certificate training) are numerous and salary ranges are based on qualifications. Additional training makes candidates more competitive, and students should recognize that biotechnology involves life-long education. Many of the courses in the certificate program articulate with four-year schools. Students are encouraged to consult with a counselor for more detailed transfer information.

Student Learning Outcome:

Students will be able to assess and distinguish the theory and experiment-based skills in biotechnology necessary for research, entry-level positions, and/or transfer.

Program Requirements:
Units Required: 21

<table>
<thead>
<tr>
<th>Course</th>
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<td>BIOSCI-096</td>
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<td>BIOSCI-098</td>
<td>Quality Control and Validation</td>
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<tr>
<td>BIOSCI-107</td>
<td>Molecular and Cellular Biology</td>
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<tr>
<td>BIOSCI-107H</td>
<td>Molecular and Cellular Biology – Honors</td>
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<td>BIOSCI-190</td>
<td>Introduction to Bioinformatics</td>
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<td>BIOSCI-230</td>
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<td>BIOSCI-095</td>
<td>Cleanroom Technology</td>
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</table>

BUSINESS

The Business department offers a comprehensive program for transfer and non-transfer students. The first two years of coursework in preparation for a four-year degree in Accounting and/or Business Administration may be completed, or students may earn associate degrees and/or certificates while exploring areas of personal interest or job enrichment. The department offers a variety of courses in Accounting, Bookkeeping, Business Administration, International Business, Business Mathematics, Management, Finance, Investing, Marketing, Salesmanship, Retail Management, Electronic Commerce, Advertising, Ethics, Law, Conflict Resolution and Managing Diversity in the Workplace. Associate Degrees and Certificates are designed to allow students to specialize in a particular area, and are especially useful for persons seeking a first job, or looking to advance in a current career.

Associate in Science Degree and Certificate of Achievement: Accounting (Transfer)

Student Learning Outcome:

Students will be able to analyze financial, economic, and management issues and formulate strategies for the growth and development of a business entity.

Program Requirements:
Units Required: 22-23

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-201</td>
<td>Principles of Accounting I</td>
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<tr>
<td>BUS-202</td>
<td>Principles of Accounting II</td>
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<td>BUS-211</td>
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<tr>
<td>ECON-201</td>
<td>Macroeconomics</td>
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<tr>
<td>ECON-201H</td>
<td>Macroeconomics - Honors</td>
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<tr>
<td>ECON-202</td>
<td>Microeconomics</td>
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<tr>
<td>ECON-202H</td>
<td>Microeconomics Honors</td>
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<tr>
<td>ECON-291</td>
<td>Statistical Methods in Business and Economics</td>
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<tr>
<td>MATH-140</td>
<td>Introductory Statistics</td>
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<tr>
<td>MATH-140H</td>
<td>Introductory Statistics - Honors</td>
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</tr>
<tr>
<td>CIT-145</td>
<td>Quickbooks Pro</td>
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</tr>
</tbody>
</table>

Recommended electives:
Associate in Science Degree and Certificate of Achievement: Accounting Technician

Student Learning Outcome:
Students will be able to analyze key issues relating to accounting principles and implement accounting procedures to organize financial data based upon generally accepted accounting principles.

Program Requirements:
Units Required: 22

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<td>BUS-100</td>
<td>Introduction to Business</td>
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<tr>
<td>BUS-101</td>
<td>Bookkeeping and Accounting</td>
<td>5.0</td>
</tr>
<tr>
<td>BUS-144</td>
<td>Business Mathematics</td>
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<tr>
<td>BUS-211</td>
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<tr>
<td>CIT-115</td>
<td>Business English</td>
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</tr>
<tr>
<td>CIT-145</td>
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</tbody>
</table>

Associate in Science Degree and Certificate of Achievement: Human Resources Management

Student Learning Outcome:
Students will be able to:
- Evaluate the sources of employee conflict in a diverse workforce
- Create a framework within which to resolve potential conflicts between business practice and professional or personal ethics.

Program Requirements:
Units Required: 21

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-100</td>
<td>Introduction to Business</td>
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<tr>
<td>BUS-110</td>
<td>Principles of Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-126</td>
<td>Managing Diversity in the Workplace</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-132</td>
<td>Negotiation and Conflict Resolution</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-160</td>
<td>Business Ethics</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-211</td>
<td>Business Law</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-116</td>
<td>Business Communications</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Associate in Science Degree and Certificate of Achievement: Marketing

Student Learning Outcome:
Students will be able to analyze key issues relating to marketing principles, design marketing strategies, and integrate those strategies in business operations.

Program Requirements:
Units Required: 21

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-100</td>
<td>Introduction to Business</td>
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</tr>
<tr>
<td>BUS-110</td>
<td>Principles of Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-140</td>
<td>Principles of Marketing</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Associate in Science Degree and Certificate of Achievement: Entrepreneurship and Small Business Management

Student Learning Outcome:
Students will be able to demonstrate the management skills unique to the successful operation of a small business enterprise, including financial, marketing, and management strategies.

Program Requirements:
Units Required: 23

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-100</td>
<td>Introduction to Business</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-110 Principles of Management</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-101 Bookkeeping and Accounting</td>
<td>5.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-117 Business Entrepreneurship</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-120 Principles of Customer Service</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-140 Principles of Marketing</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-121 Supervisory Skills for Business</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-132 Negotiation and Conflict Resolution</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-126 Managing Diversity in the Workplace</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-160 Business Ethics</td>
<td>3.0</td>
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<tr>
<td>CIT-145</td>
<td>Quickbooks Pro</td>
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</tr>
</tbody>
</table>

Certificate of Specialization: Customer Service

Student Learning Outcome:
Demonstrate the skills necessary to provide customer service in a business environment, including communication, team building, decision making, problem solving, conflict resolution, time management, stress management, attitude management, and ethics.

Program Requirements:
Units Required: 5-6

Take a minimum of 2.5 units from the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-080</td>
<td>Customer Service</td>
<td>0.5</td>
</tr>
<tr>
<td>BUS-081</td>
<td>Communication in the Workplace</td>
<td>0.5</td>
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<tr>
<td>BUS-082</td>
<td>Attitude in the Workplace</td>
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</tr>
<tr>
<td>BUS-083</td>
<td>Conflict Resolution</td>
<td>0.5</td>
</tr>
<tr>
<td>BUS-084</td>
<td>Values and Ethics</td>
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</tbody>
</table>
BUS-120 Principles of Customer Service  

Plus a minimum of 2.5 units from the following courses:

- BUS-085 Team Building  
- BUS-086 Decision Making and Problem Solving  
- BUS-087 Managing Organizational Change  
- BUS-088 Stress Management  
- BUS-089 Time Management  

OR

BUS-121 Supervisory Skills for Business Leadership

Certificate of Specialization: Finance

Student Learning Outcome:
Students will be able to analyze key issues relating to personal finance, analyze the advantages and disadvantages of various alternatives to address these issues, determine the appropriate response, and devise specific plans to implement the response in an integrated manner.

Program Requirements:
Units Required: 14

- BUS-100 Introduction to Business  
- BUS-144 Business Mathematics  
- BUS-154 Personal Finance  
- BUS-156 Introduction to Investments

Certificate of Specialization: E-Commerce – Business

In recent years, various changes in the business environment have occurred, including the emergence of new information technologies. Consequently, many businesses need to realign with the new Internet economy in order to compete effectively in our changing world. In addition, there are opportunities for e-business start-ups with sound business foundations and competitive strategies. This certificate of completion in E-Commerce/Business attempts to provide students with the skill-building techniques and knowledge that will empower them to achieve career goals in the current e-commerce environment.

Student Learning Outcome:
Students will be able to analyze e-commerce principles and design an e-business plan to promote a competitive advantage in the current e-commerce environment.

Program Requirements:
Units Required: 15

- BUS-190 Principles of Electronic Commerce
- BUS-192 E-Business Strategy
- CIT-170 Website Development I
- BUS-100 Introduction to Business

OR

- BUS-110 Principles of Management

OR

- BUS-211 Business Law
- BUS-140 Principles of Marketing

OR

- BUS-141 Principles of Advertising

Certificate of Specialization: International Trade – Finance

The continuing trend toward globalization requires that students in business have a fundamental grasp of the social and economic factors leading to commercial internationalization and the management practices required to operate successfully in an international environment. This certificate of specialization provides students with a solid foundation in the concepts of trade and commerce with an emphasis on the financial aspects of globalization. It is ideal for those currently working in an international business environment and wish to increase their fundamental knowledge regarding concepts and practices in addition to those who desire a solid introduction to international business. Students should also consider the International Trade – Marketing certificate of completion in addition to this certificate for an even more comprehensive course of study.

Student Learning Outcome:
Students will be able to analyze and develop a commercial multinational or globalization financial strategy to ensure the financial stability of an ongoing business.

Program Requirements:
Units Required: 15

- BUS-103 Introduction to International Business
- BUS-157 Entrepreneurial Finance
- BUS-159 International Finance
- BUS-214 International Business Law

Plus three units from the following:

- BUS-143 International Marketing
- BUS-185 Principles of Importing and Exporting
- BUS-190 Principles of Electronic Commerce
- POLISC-270 International Relations
Certificate of Specialization: International Trade – Marketing
The continuing trend toward globalization requires that students in business have a fundamental grasp of the social and economic factors leading to commercial internationalization and the management practices required to operate successfully in an international environment. This certificate of specialization provides students with a solid foundation in the concepts of trade and commerce with an emphasis on the marketing aspects of globalization. It is ideal for those currently working in an international business environment and wish to increase their fundamental knowledge regarding concepts and practices in addition to those who desire a solid introduction to international business. Students should also consider the International Trade – Finance certificate of completion in addition to this certificate for an even more comprehensive course of study.

Student Learning Outcome:
Students will be able to analyze and develop a business transnational or globalization marketing strategy for goods and services.

Program Requirements:
Units Required: 15

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-103</td>
<td>Introduction to International Business</td>
<td>3.0</td>
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<tr>
<td>BUS-140</td>
<td>Principles of Marketing</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-143</td>
<td>International Marketing</td>
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</tr>
<tr>
<td>BUS-214</td>
<td>International Business Law</td>
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</table>

Plus three units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-159</td>
<td>International Finance</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-185</td>
<td>Principles of Importing and Exporting</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-190</td>
<td>Principles of Electronic Commerce</td>
<td>3.0</td>
</tr>
<tr>
<td>POLISC-270</td>
<td>International Relations</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Specialization: Restaurant Entrepreneur
This program responds to the large number of students that are currently requesting a limited number of courses specifically targeted to preparing them to open up their own restaurant.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core entrepreneur skills and knowledge required for employment in the restaurant industry.

Program Requirements:
Units Required: 15

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-117</td>
<td>Business Entrepreneurship</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-211</td>
<td>Business Law</td>
<td>3.0</td>
</tr>
<tr>
<td>HRMGT-220</td>
<td>Restaurant Operations</td>
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</tbody>
</table>

Certificate of Achievement: Retail Management
Retail Management is an expanding career path supported by many industry sectors. Strong retail managers are essential to business success in electronics, clothing, food, entertainment, home furnishings, children's supplies, publishing, cosmetics, educational materials, gift, athletic equipment, pet supplies, and just about every other imaginable consumer product and service. The retail industry is at the heart of many local economies. Effective management is the key to long-term economic security throughout the state. This program, designed in collaboration with industry leaders, is intended to provide the student with many of the competencies required for success at the management level within the vast retail industry. This program encompasses the business essentials such as accounting and marketing, and also emphasizes management and communication skills required for career success.

Student Learning Outcome:
Students will be able to demonstrate the skills necessary to successfully manage a retail business enterprise, including human resources, marketing, and bookkeeping.

Program Requirements:
Units Required: 34

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BUS-101</td>
<td>Bookkeeping and Accounting</td>
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<td>BUS-110</td>
<td>Principles of Management</td>
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<tr>
<td>BUS-111</td>
<td>Human Relations in the Workplace</td>
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</tr>
<tr>
<td>BUS-112</td>
<td>Human Resource Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-113</td>
<td>Retail Management</td>
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<tr>
<td>BUS-140</td>
<td>Principles of Marketing</td>
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</tr>
<tr>
<td>BUS-144</td>
<td>Business Mathematics</td>
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<tr>
<td>CIT-116</td>
<td>Business Communications</td>
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<tr>
<td>CIT-140</td>
<td>Survey of Microsoft Office Programs</td>
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OR

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OR

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<th>Course Title</th>
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<tbody>
<tr>
<td>COMS-105H</td>
<td>Fundamentals of Public Speaking - Honors</td>
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OR

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS-223</td>
<td>Small Group Communication</td>
<td>3.0</td>
</tr>
</tbody>
</table>
BUS 080 CUSTOMER SERVICE
Units: 0.50
9.00 hours lecture
Introduces key skills and attitudes necessary to provide outstanding customers service to meet the needs of customers. Focuses on understanding and exceeding customer expectations and how to deal with unrealistic expectations. The long-term value of customers and reasons why customers leave will be addressed. Offered pass/no-pass only.

BUS 081 COMMUNICATION IN THE WORKPLACE
Units: 0.50
9.00 hours lecture
Examines key elements in communication within business organizations, including verbal and nonverbal communication, listening skills, and workplace skills. Offered pass/no-pass only.

BUS 082 ATTITUDE IN THE WORKPLACE
Units: 0.50
9.00 hours lecture
Introduces key skills related to attitude, how attitude is communicated, and how attitude can be adjusted to communicate effectively in the workplace. Offered pass/no-pass only.

BUS 083 CONFLICT RESOLUTION
Units: 0.50
9.00 hours lecture
Examines the meaning and causes of conflict, including strategies for resolving interpersonal conflict and dealing with difficult customers. Offered pass/no-pass only.

BUS 084 VALUES AND ETHICS
Units: 0.50
9.00 hours lecture
Examines how values and ethics influence actions and behaviors in the workplace, emphasizing how values influence actions, evaluating one's ethical behavior, and helping people do the right thing. Offered pass/no-pass only.

BUS 085 TEAM BUILDING
Units: 0.50
9.00 hours lecture
Provides the student with an understanding of how business teams work together, problems teams encounter, and how to solve those problems in the workplace. Offered pass/no-pass only.

BUS 086 DECISION MAKING AND PROBLEM SOLVING
Units: 0.50
9.00 hours lecture
Introduces decision making and problem solving techniques used in business. Offered pass/no-pass only.

BUS 087 MANAGING ORGANIZATIONAL CHANGE
Units: 0.50
9.00 hours lecture
Examines change and the influence change has on an organization and the individuals in that organization, including understanding organizational change, stages of change, and how to manage organizational change. Offered pass/no-pass only.

BUS 088 STRESS MANAGEMENT
Units: 0.50
9.00 hours lecture
Examines the recognition and causes of stress in the workplace, including the benefits of stress management. Offered pass/no-pass only.

BUS 089 TIME MANAGEMENT
Units: 0.50
9.00 hours lecture
Introduces time management principles and specific tools that assist in making maximum use of time in business situations, emphasizing prioritization, identifying time wasters, and goal setting. Offered pass/no-pass only.

BUS 100 INTRODUCTION TO BUSINESS
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the field of business administration, primarily found in the United States, including topics of economic systems, strategic management, marketing, entrepreneurship, accounting, finance, operations, management information systems, human resources, ethics, social responsibility, sustainability, and globalization.
BUS 101 BOOKKEEPING AND ACCOUNTING
Units: 5.00
CSU 90.00 hours lecture
Introduces the theory and application of double entry bookkeeping for non-transfer business majors. Examines the accounting cycle for both service and merchandising sole-proprietorship firms, including the use of ledgers, worksheets, and special purpose journals.

BUS 103 INTRODUCTION TO INTERNATIONAL BUSINESS
Units: 3.00
CSU 54.00 hours lecture
A combination of global business theory as affected by cultural, political, legal, and international economic factors with instruction on government regulation, foreign market analysis, exporting, and importing. Internet applications are utilized to familiarize the student with available international business and government resources. Case studies are emphasized to demonstrate the practical applications of course subject matter.

BUS 110 PRINCIPLES OF MANAGEMENT
Units: 3.00
CSU 54.00 hours lecture
Examines the fundamental functions of modern management in a changing world with an emphasis on planning, leading, and organizing, including leadership in management, motivation, communication, cultural diversity, team decision-making, management by objectives, organizational environment, sustainability, planning and strategic management, control process, organizational structure, and managing organizational change.

BUS 111 HUMAN RELATIONS IN THE WORKPLACE
Units: 3.00
CSU 54.00 hours lecture
Introduces basic concepts of individual, group, and organizational human behavior as they affect human relations, performance, and productivity within the workplace, including strategies and techniques that influence interpersonal, administrative, and organizational communications and interactions among people.

BUS 112 HUMAN RESOURCE MANAGEMENT
Units: 3.00
CSU 54.00 hours lecture
Introduces the management of human resources and an understanding of the impact and accountability to the organization in terms of human resource activities. Topics include global human resource strategies, social and organizational realities, legal implications affecting people at work, union/non-union practices, comparable work, employee compensation and benefits, and employee rights.

BUS 113 RETAIL MANAGEMENT
Units: 3.00
CSU 54.00 hours lecture
Introduces principles and practices used in the management of retail stores. Topics include site selection, layout, organization, staffing, positioning, customer service, the critical buying function, and promotional techniques.

BUS 117 BUSINESS ENTREPRENEURSHIP
Units: 3.00
CSU 54.00 hours lecture
Comprehensive analysis of establishing, marketing, financing, promoting, insuring, developing and staffing a small business.

BUS 120 PRINCIPLES OF CUSTOMER SERVICE
Units: 3.00
CSU 54.00 hours lecture
Introduces principles and strategies used in providing excellent customer service. Emphasizes the key components of excellent customer service such as overcoming barriers to customer service, encouraging customer loyalty, resolving customer issues, communicating the importance of employee attitudes on customer relations, and developing internal values and ethics impacting corporate culture.

BUS 121 SUPERVISORY SKILLS FOR BUSINESS LEADERSHIP
Units: 3.00
CSU 54.00 hours lecture
Introduces principles and practices used in supervisory and leadership roles in business. Topics include creative problem-solving, effective individual and group decision making, the impact of leadership on the corporate culture, how to influence change in the corporate culture, and the role of delegation and priority-setting in effective time management.
BUS 126 MANAGING DIVERSITY IN THE WORKPLACE
Units: 3.00
CSU 54.00 hours lecture
Examines the effects of increasing diversity in the workplace, including the benefits and challenges to management and staff presented by diversity of gender, race, ethnicity, national origin, sexual orientation, and other differences. Organizational and interpersonal strategies for working effectively are examined along with developing skills for the creation of productive and diverse business environments.

BUS 132 NEGOTIATION AND CONFLICT RESOLUTION
Units: 3.00
CSU 54.00 hours lecture
Introduces organizational conflict and strategies for effective resolution with concentration on internal and external sources of conflict. Emphasizes non-litigation resolution, including arbitration, mediation, and mini-trial.

BUS 140 PRINCIPLES OF MARKETING
Units: 3.00
CSU 54.00 hours lecture
Focuses on the fundamental concepts of modern marketing in a changing world. Substantive areas include: creating customer value, buying behaviors, market research, market strategy, target market analysis, global marketing, electronic marketing, and sales techniques, with particular emphasis on the marketing mix, including product, pricing, promotion, and distribution decisions.

BUS 141 PRINCIPLES OF ADVERTISING
Units: 3.00
CSU 54.00 hours lecture
Focuses on fundamental concepts of modern advertising in the current business environment while using specialized techniques to create and promote an advertising campaign. Topics include the role of advertising, its relation to the marketing mix, psychological and socio-cultural influences on consumer buying behavior, advertising research and strategy, target market analysis, the global marketing environment, electronic advertising, media selection, ethics, creative advertising message design, and integrated marketing. Emphasizes planning an advertising campaign and communicating ideas using advertising techniques.

BUS 142 PRINCIPLES OF SELLING
Units: 3.00
CSU 54.00 hours lecture
Focuses on developing concepts of selling in the current business environment, including electronic selling, communication styles, sales servicing, ethics, and sales-force management. Emphasizes developing effective selling strategies and confidence building when making sales decisions.

BUS 143 INTERNATIONAL MARKETING
Units: 3.00
CSU 54.00 hours lecture
Introduces the marketing of goods and services in an international environment, including the development of a comprehensive commercial marketing program. Covers topics such as market selection, effective distribution, and pricing.

BUS 144 BUSINESS MATHEMATICS
Units: 5.00
CSU 90.00 hours lecture
Recommended Preparation: Satisfactory completion of MATH-025 or higher or appropriate math placement as determined by the COC assessment process.
Presents mathematics used in typical accounting, financial, and merchandising transactions, including real-world business problems in the areas of cash and trade discounts, markup and markdown, compound interest, annuities, loan amortizations, inventory control, depreciation, investments, and financial statement analysis.

BUS 145 PERSONAL FINANCE
Units: 3.00
CSU 54.00 hours lecture
Introduces the concepts, tools, and applications of personal financial planning, including developing and prioritizing goals, managing money and credit, identifying investment alternatives, as well as examining retirement planning, housing decisions, tax planning, risk management/insurance, estate planning, and the institutional sources and regulation of financial services and products.

BUS 146 INTRODUCTION TO INVESTMENTS
Units: 3.00
CSU 54.00 hours lecture
Introduces the principles of investing and money management as primarily related to the stock market, including the various types of financial assets an investor must choose from, as well as related institutional settings and valuations.

BUS 147 ENTREPRENEURIAL FINANCE
Units: 3.00
CSU 54.00 hours lecture
Introduces the fundamentals of finance that apply to current or prospective entrepreneurs, including time value of money, cost of capital, working capital management, risk and return, financial performance, and the interpretation of financial statements.
BUS 159 INTERNATIONAL FINANCE  
Units: 3.00  
CSU 54.00 hours lecture  
Recommended Preparation: BUS-157  
Examines the international aspects of commercial finance. Topics include international corporate finance, foreign exchange, foreign direct investment, and multinational tax implications.

BUS 160 BUSINESS ETHICS  
Units: 3.00  
CSU 54.00 hours lecture  
Presents different schools of ethical thought applicable in the business environment including ethical issues and methodologies used for appropriate conduct. Current cases and fact scenarios are presented along with historical examples to demonstrate their effect on contemporary ethical dilemmas.

BUS 172 INTRODUCTION TO RISK MANAGEMENT AND INSURANCE  
Units: 3.00  
CSU 54.00 hours lecture  
Introduces the fundamental principles and terminology of risk management and insurance through the study of such topics as the insurance market, regulation, insurance contracts, various lines of insurance, risk assessment, financial planning, annuities, employee benefits, and other related topics.

BUS 174 PRINCIPLES OF PROPERTY AND LIABILITY INSURANCE  
Units: 3.00  
CSU 54.00 hours lecture  
Introduces the fundamentals of property and liability insurance including types of insurers, institutions that provide insurance, how the industry is regulated, measurement of financial performance, insurance operations, insurance contracts, loss exposure and risk management.

BUS 175 PRINCIPLES OF LIFE, HEALTH, AND DISABILITY INSURANCE  
Units: 3.00  
CSU 54.00 hours lecture  
Recommended Preparation: BUS-172  
Provides a comprehensive analysis of life, health, and disability insurance lines including the history of the industries and markets, economic and financial impact on society, provider evaluation, policy assessment, and regulation.

BUS 176 PERSONAL INSURANCE  
Units: 3.00  
CSU 54.00 hours lecture  
Introduces the policies, procedures, and practices of personal insurance including automobile, homeowners', residential, fire, earthquake, marine, life, liability, and health.

BUS 178 COMMERCIAL INSURANCE  
Units: 3.00  
CSU 54.00 hours lecture  
Introduces commercial property insurance, including business income, commercial crime, equipment breakdown, inland and ocean marine, commercial general liability, as well as other insurance types and coverage.

BUS 179 INSURANCE CODE AND ETHICS  
Units: 1.00  
CSU 18.00 hours lecture  
Introduces ethical business practices and obligations of the insurance industry professional.

BUS 185 PRINCIPLES OF IMPORTING AND EXPORTING  
Units: 3.00  
CSU 54.00 hours lecture  
Introduces the basic aspects of importing and exporting providing students with a working knowledge of terms and techniques essential to operating an import/export business.

BUS 190 PRINCIPLES OF ELECTRONIC COMMERCE  
Units: 3.00  
CSU 54.00 hours lecture  
Introduces the theoretical and practical issues related to conducting business via the internet. Topics include: evolving e-business models, Web-based technologies, value chains, electronic marketing, payment systems, security, ethics, legal, international, and cross-cultural issues. Familiarity with navigating the internet is assumed.

BUS 192 E-BUSINESS STRATEGY  
Units: 3.00  
CSU 54.00 hours lecture  
Examines the fundamental concepts of strategic planning for conducting business via the internet, including case analysis of business strategies in the internet economy, and key elements needed to develop a strategic e-business plan for competitive advantage. Familiarity with the internet is assumed.
BUS 201 PRINCIPLES OF ACCOUNTING I
Units: 5.00
UC:CSU 90.00 hours lecture
Presents the fundamental principles, theory, and application of accounting through the use of journals, ledgers, and worksheets. Covers the entire accounting cycle for both sole-proprietorships and partnerships, including the preparation and analysis of financial statements. Designed for transfer majors in business disciplines.

BUS 202 PRINCIPLES OF ACCOUNTING II
Units: 5.00
UC:CSU 90.00 hours lecture
Prerequisite: BUS-201.
A continuation of the basic accounting theories and practices covered in BUS 201, expanding the use of financial and managerial accounting concepts used to make business decisions. Designed for transfer majors in business disciplines.

BUS 211 BUSINESS LAW
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the legal environment of business, including the classification of civil actions and business crimes, examination of state and federal court systems, detailed study of contract, tort, employment, and property law.

BUS 214 INTERNATIONAL BUSINESS LAW
Units: 3.00
CSU 54.00 hours lecture
Introduces the legal environment of international commerce including a study of the forms of international business, multinational enterprises, trade in goods and services, and dispute settlement.

CHEMISTRY
Chemistry is the study of matter and its changes. Chemistry focuses on understanding matter and energy on a molecular level. The chemistry courses are designed to meet general education and major transfer requirements. Examples of career options include research scientist, teacher, pharmacist, and medical doctor. Some of these career options require a baccalaureate degree and others require a graduate degree. An associate degree is not available in chemistry.

CHEM 090 CHEMISTRY FOR TECHNOLOGY
Units: 3.00
36.00 hours lecture, 54.00 hours lab
Introduces applied chemistry principles including the scientific method, measurement, classification of matter, nomenclature, chemical reactions, chemical calculations, bonding, solutions, and acid-base chemistry using a forensic science approach.

CHEM 110 INTRODUCTORY CHEMISTRY
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: MATH-060
Introduces general, organic, and biochemistry to non-science majors, including scientific method, measurement, matter and energy, atomic theory, names and formulas, moles, reactions, stoichiometry, bonding, gas laws, solids and liquids, solutions, acids and bases, oxidation-reduction, nuclear chemistry, as well as names, structures, properties, and reactions of organic and biochemical compounds. Can not receive credit for both Chem 110 and Chem 151. Chem 110 can not be taken for credit after Chem 201.

CHEM 151 PREPARATORY GENERAL CHEMISTRY
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: MATH-060
A preparatory course for Chemistry 201. Provides basic foundation in problem solving, atomic theory, stoichiometry, nomenclature, states of matter, and solution chemistry. UC credit limitation: CHEM-110 and 151 combined, maximum credit, one course.
CHEM 151H PREPARATORY GENERAL CHEMISTRY - HONORS
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: MATH-060
A preparatory course for Chemistry 201. Provides basic foundation in problem solving, atomic theory, stoichiometry, nomenclature, states of matter, and solution chemistry. Honors work challenges students to be more analytical and creative through expanded assignments such as critical analyses of primary scientific literature, real-world applications, and enrichment opportunities which differentiate this course from Chem 151. UC credit limitation: CHEM-110 and 151H combined, maximum credit, one course.

CHEM 201 GENERAL CHEMISTRY I
Units: 6.00
UC:CSU 90.00 hours lecture, 54.00 hours lab
Prerequisite: MATH-070 and CHEM-151 or CHEM-151H, or MATH-070 and COC Chemistry Placement Exam
Provides a foundation in the basic principles of the molecular nature of matter and its change, including reaction chemistry, atomic and bonding theories of matter, the properties of matter (solids, liquids, gases, solutions) and their relationship to energy. Introduces gravimetric, volumetric, and spectroscopic analysis techniques in the laboratory portion. Required of all majors in chemistry and most other fields of science or technology. UC credit limitation: maximum credit, 5 units.

CHEM 202 GENERAL CHEMISTRY II
Units: 5.00
UC:CSU 54.00 hours lecture, 108.00 hours lab
Prerequisite: CHEM-201
Builds upon the foundation of principles of chemistry presented in Chemistry 201. Topics are chemical kinetics, ionic equilibria (solutions of acids and bases, buffers, solubility of insoluble salts, and solubility product), nuclear chemistry, thermodynamics (entropy & free energy), coordination compounds, advanced qualitative analysis, spectroscopy, and an introduction to organic chemistry.

CHEM 255 ORGANIC CHEMISTRY I
Units: 5.00
UC:CSU 54.00 hours lecture, 108.00 hours lab
Prerequisite: CHEM-202
First semester of a two-semester sequence in organic chemistry for science majors focusing on nomenclature, molecular structure, chemical and physical properties, reaction mechanisms, and synthesis of organic compounds. Laboratory experiments involve using appropriate methods, techniques, and instrumentation for the synthesis, purification, and identification of organic compounds.

CHEM 256 ORGANIC CHEMISTRY II
Units: 5.00
UC:CSU 54.00 hours lecture, 108.00 hours lab
Prerequisite: CHEM-255
Second semester of a two-semester sequence in organic chemistry for science majors, focusing on the syntheses and reaction mechanisms of aromatic, carbonyl, and biological compounds.

CHINESE
(See Modern Languages)
CINEMA

Courses in Cinema provide a broad survey of the history, theory, techniques and development of modern pictures. The history of film as an aesthetic form and its major artists, works and styles are emphasized. An associate degree is not available in cinema.

CINEMA 120 FILM AESTHETICS
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the motion picture both as a medium of mass communication and as a developing art form. Analyzes representative feature films as to genre, technique, aesthetics, and sociological impact.

CINEMA 121 HISTORY OF AMERICAN CINEMA
Units: 3.00
UC:CSU 54.00 hours lecture
Survey and critical analysis of American motion picture masterpieces. A study of the ideas and values of films as reflected and emphasized through artistic techniques.

CINEMA 122 HISTORY OF CINEMA
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys and analyzes motion picture masterpieces from their inception to the present, including how ideas and values are emphasized through artistic techniques.

CINEMA 123 AMERICAN CINEMA: CROSSING CULTURES
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys American motion pictures that have been made by filmmakers representing a variety of American ethnic groups. Students will analyze Hollywood's treatment of ethnic cultures throughout film history.

CINEMA 127 GREAT FILM MAKERS
Units: 3.00
CSU 54.00 hours lecture
Covers one film maker each semester and examines their work in artistic, social and historical terms. The selection of the film makers studied each semester will be denoted in the class schedule each semester.

CINEMA 129 AN INTRODUCTION TO FILM GENRES
Units: 3.00
CSU 54.00 hours lecture
Surveys the development, artistic, social and entertainment ingredients of basic film genres. Emphasizes such genres as the science-fiction film, western, gangster, crime and detective ('film noir'), musical, comedy or horror film. Genres vary each semester.

CINEMA 131 HISTORY OF INTERNATIONAL CINEMA
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys and analyzes international motion picture masterpieces from their inception to the present, including the ideas and values as reflected and emphasized through artistic techniques.
COMMUNICATION STUDIES

Associate in Arts Degree: Communication Studies

An Associate of Arts degree in Communication Studies seeks to provide students with a comprehensive knowledge of the complex and diverse nature of the communication process and a sharpened understanding of contexts within which humans use signs and symbols to create meaning. The degree focuses on the ways language and other symbolic systems are used interpersonally, within small group settings and in mass mediated formats. Courses will allow students to achieve three separate aims depending upon their academic goals. First students will be well prepared to transfer to a four-year institution with a broad range of communication coursework completed. Second, students will be prepared for entry into a variety of careers—all of which require effective communication skills for working with diverse sets of people in an increasingly complex technological workplace. Careers including business, public relations, human resources, law (after law school), advertising arts, teaching, social & human services and entertainment industries are all suited for graduates of a Communication Studies degree. Finally, students who are interested in the field of Communication Studies but do not wish to complete a Baccalaureate degree in the discipline may pursue a terminal two-year course of study. Such study will prepare them to understand diverse communication messages and practice excellent communication skills in a variety of settings.

Student Learning Outcome:
Students will be able to:
- Develop and deliver informative and persuasive presentations using clear written and oral communication skills.
- Analyze theoretical concepts of communication and assess how each concept is utilized within various communication contexts.

Program Requirements:
Units Required: 20 – 22

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS-105</td>
<td>Fundamentals of Public Speaking</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMS-105H</td>
<td>Fundamentals of Public Speaking - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMS-223</td>
<td>Small Group Communication</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Plus two to four units from the following:**

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS-150</td>
<td>Oral Interpretation</td>
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OR

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>COMS-190</td>
<td>Forensics</td>
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Plus three units from the following:

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>COMS-225</td>
<td>Strategies of Argumentation</td>
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</tr>
<tr>
<td>OR</td>
<td></td>
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</tr>
<tr>
<td>COMS-227</td>
<td>Introduction to Rhetorical Criticism</td>
<td>3.0</td>
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Plus three units from the following:

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>COMS-250</td>
<td>Process of Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMS-250H</td>
<td>Process of Communication - Honors</td>
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**Plus nine units from the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>COMS-110</td>
<td>Communication and Leadership</td>
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</tr>
<tr>
<td>COMS-235</td>
<td>Intergenerational Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>COMS-246</td>
<td>Interpersonal Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>COMS-256</td>
<td>Intercultural Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>COMS-260</td>
<td>Communication and Gender</td>
<td>3.0</td>
</tr>
</tbody>
</table>

COMS 105 FUNDAMENTALS OF PUBLIC SPEAKING

Units: 3.00
UC:CSU 54.00 hours lecture

Examines the principles and practices of public speaking, especially speech organization and development, research, audience analysis, presentation skills, listening, and the use of language and ethics for the development of informative and persuasive speeches.

COMS 105H FUNDAMENTALS OF PUBLIC SPEAKING - HONORS

Units: 3.00
UC:CSU 54.00 hours lecture

Examines the principles and practices of public speaking. Emphasis is on speech organization and development, research, audience analysis, presentation skills, listening, and the use of language and ethics for the development of informative and persuasive speeches. Speech analysis and rhetorical criticism skills will differentiate COMS-105H from COMS-105.

COMS 110 COMMUNICATION AND LEADERSHIP

Units: 3.00
CSU 54.00 hours lecture

Introduces students to the fundamental elements of communication in relation to leadership theories, ethics, styles, and perspectives, including the development of a personal philosophy of leadership that includes an understanding of self, others, and community. Prepares students for leadership roles in college and community settings.
COMS 150 ORAL INTERPRETATION
Units: 3.00
UC:CSU 54.00 hours lecture
Teaches theoretical approaches to interpret literature and prepares students to apply these in the performance of that literature.

COMS 190 FORENSICS
Units: 2.00-4.00
CSU 18.00 hours lecture, 54.00-162.00 hours lab
May be taken four times for credit
Preparation for competitive speech team. Studies in argumentation and debate, informative and persuasive speaking, and extemporaneous and impromptu speaking. Involves research and one-on-one training. Requires participation in interscholastic competition or community speakers' bureau.

COMS 223 SMALL GROUP COMMUNICATION
Units: 3.00
UC:CSU 54.00 hours lecture
Explores theories of group decision making and leadership, including critical thinking, problem solving, and strategies for successful group interaction.

COMS 225 STRATEGIES OF ARGUMENTATION
Units: 3.00
UC:CSU 54.00 hours lecture
C-ID COMM 120
Introduces the strategies used for rhetorical argument, including finding issues, using evidence, and detailing fallacies in rhetorical communications.

COMS 227 INTRODUCTION TO RHETORICAL CRITICISM
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGL-101 or ENGL-101H
Introduces critical methodologies of rhetoric and principles of rhetorical theory as a means to analyze and evaluate public discourse, including critical reasoning, advocacy, analysis, writing, and discussion.

COMS 235 INTERGENERATIONAL COMMUNICATION
Units: 3.00
CSU 54.00 hours lecture
Analyses intergenerational interaction and communication patterns throughout the lifespan, including the examination of theories, attitudes, stereotypes, myths, and cultural differences.

COMS 246 INTERPERSONAL COMMUNICATION
Units: 3.00
UC:CSU 54.00 hours lecture
Examines theories and topics within interpersonal communication, such as verbal and nonverbal communication, perception, self-concept, communication climate, relationship satisfaction, conflict, and self-disclosure within different communication contexts.

COMS 250 PROCESS OF COMMUNICATION
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the range of theoretical approaches to the field of communication studies, that provide an overview of communication contexts such as interpersonal, small group, gender, intercultural, mass media, and organizational communication.

COMS 250H PROCESS OF COMMUNICATION – HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the range of theoretical approaches to the field of communication studies, that provide an overview of communication contexts such as interpersonal, small group, gender, intercultural, mass media, and organizational communication. Additional reading, writing, critical thinking and research techniques are required in the honors section.

COMS 256 INTERCULTURAL COMMUNICATION
Units: 3.00
UC:CSU 54.00 hours lecture
Examines intercultural communication, including cultural patterns, verbal and nonverbal communication codes and their practical application in today's diverse society.

COMS 260 COMMUNICATION AND GENDER
Units: 3.00
UC:CSU 54.00 hours lecture
Compares and contrasts the communication styles of males and females in a variety of settings and suggests ways to develop communication competence in gendered societies, including the areas of family, friendship, courtship and marriage, education, media, and business.
COMPUTER INFORMATION TECHNOLOGY

Associate in Science Degree and Certificate of Achievement: Computer Applications
The CIT Computer Applications Degree is designed to provide a solid foundation in the latest, highly marketable business software used in industry today. This program provides the training and exposure that is essential to prospective computer users and office workers at all levels. The sequence of courses included in this program maps to the Microsoft Certified Applications Specialist (MCAS) exam, which provides an outstanding opportunity for students to present to prospective employers a globally recognized certificate representing high-level skills and achievement. At the conclusion of their studies, students will be prepared for entry-level positions such as administrative assistant, computer applications specialist, word processing specialist, database specialist, spreadsheet analyst, bookkeeping assistant, and web content provider. Students who complete this program will be eligible to sit for the MCAS examination.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required to use popular office applications to develop professional documents for organizations and businesses.

Program Requirements:
Units Required: 33

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>CIT-036</td>
<td>Microsoft Outlook - Brief</td>
<td>1.5</td>
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<tr>
<td>CIT-074</td>
<td>Introduction to Photoshop - Brief</td>
<td>1.5</td>
</tr>
<tr>
<td>CIT-105</td>
<td>Microsoft Windows</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-140</td>
<td>Survey of Microsoft Office Programs</td>
<td>3.0</td>
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<tr>
<td>CIT-150</td>
<td>Microsoft Word I</td>
<td>3.0</td>
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<tr>
<td>CIT-151</td>
<td>Microsoft Word II</td>
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<tr>
<td>CIT-155</td>
<td>Microsoft Excel I</td>
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<tr>
<td>CIT-156</td>
<td>Microsoft Excel II</td>
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<tr>
<td>CIT-160</td>
<td>Microsoft Access I</td>
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<tr>
<td>CIT-165</td>
<td>Microsoft PowerPoint</td>
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<tr>
<td>CIT-082</td>
<td>Adobe Acrobat - Brief</td>
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<tr>
<td>CIT-145</td>
<td>Quickbooks Pro</td>
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<tr>
<td>CIT-146</td>
<td>QuickBooks Pro II</td>
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<tr>
<td>CIT-161</td>
<td>Microsoft Access II</td>
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</tr>
<tr>
<td>CIT-166</td>
<td>Desktop Publishing</td>
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<tr>
<td>CIT-173</td>
<td>Web Development: Dreamweaver</td>
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Plus six units from the following:

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<tbody>
<tr>
<td>CIT-035</td>
<td>The Internet - Brief</td>
<td>1.5</td>
</tr>
<tr>
<td>CIT-074</td>
<td>Introduction to Photoshop - Brief</td>
<td>1.5</td>
</tr>
<tr>
<td>CIT-105</td>
<td>Microsoft Windows - Brief</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-111</td>
<td>Advanced Keyboarding and Document Processing</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-145</td>
<td>Quickbooks Pro</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-151</td>
<td>Microsoft Word II</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-156</td>
<td>Microsoft Excel II</td>
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<tr>
<td>CIT-160</td>
<td>Microsoft Access I</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-166</td>
<td>Desktop Publishing</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Specialization: Medical Office Administrative Assistant
The Medical Office Administrative Assistant Certificate program provides students with the fundamental skills to work in entry-level office administrative positions for health-care facilities, doctors’ offices and hospitals. This program involves an experiential learning approach to...
expose students to concepts, skills, and practical application of computer software programs used in the health-care industry in the areas of front office reception, basic medical coding and billing, and transcription of dictated correspondence.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core knowledge and skills needed for employment as a medical office administrative assistant.

Program Requirements:
Units Required: 17

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CIT-116</td>
<td>Business Communications</td>
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<tr>
<td>CIT-130</td>
<td>Medical Office Procedures</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-131</td>
<td>Medical Transcription</td>
<td>2.0</td>
</tr>
<tr>
<td>CIT-132</td>
<td>Medical Office Finances</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-140</td>
<td>Survey of Microsoft Office</td>
<td></td>
</tr>
<tr>
<td>HLHSCI-249</td>
<td>Medical Terminology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Specialization: E-Commerce - Technology
The certificate of specialization in E-Commerce/Technology program provides students with an overview of the fundamental issues and skills involved in developing an online implementation of a business enterprise. The certificate should also appeal to those interested in general Website development due to the business nature of many sites that pervade the Web. The program’s “hands-on” approach assures prospective employers that students who complete the sequence will have obtained practical experience employing Web technologies as business solutions. Courses are appropriate for those who seek entry-level positions in the field and for managers or entrepreneurs who desire a better understanding of the technologies employed in developing commercial Websites.

Student Learning Outcome:
Students will be able to evaluate web technologies for potential business solutions and apply e-commerce principles to design an e-business Website.

Program Requirements:
Units Required: 15

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BUS-190</td>
<td>Principles of Electronic Commerce</td>
<td>3.0</td>
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<tr>
<td>BUS-192</td>
<td>E-Business Strategy</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-170</td>
<td>Website Development I</td>
<td>3.0</td>
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<tr>
<td>CIT-171</td>
<td>Website Development II</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-173</td>
<td>Web Development: Dreamweaver</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Specialization: Website Development
The certificate in Website development affords students the opportunity to acquire basic skills related to the design, planning, and realization of functional Websites. Many employers require their content developers to be proficient in markup languages, style sheets, generation of animated pages, and the latest authoring tools — the primary skills targeted by this certificate. This program is designed for those interested in all aspects of front-end Website development and especially those who are considering future study, career moves, and promotional opportunities related to this growing and continuously evolving area.

Student Learning Outcome:
Students will be able to:
- Analyze a Website’s development life cycle, architecture, and workflow, as well as good Web design standards, usability principles, and coding techniques.
- Plan, design, construct, and remotely administer Websites for a wide variety of functions, integrating accepted usability and design standards, as well as application of efficient architecture, streamline markup code, and stylesheet languages.

Program Requirements:
Units Required: 16.5

<table>
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<tr>
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<td>CIT-074</td>
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<tr>
<td>CIT-170</td>
<td>Website Development I</td>
<td>3.0</td>
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<tr>
<td>CIT-171</td>
<td>Website Development II</td>
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</tr>
<tr>
<td>CIT-173</td>
<td>Web Development: Dreamweaver</td>
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</tr>
<tr>
<td>CIT-174</td>
<td>Web Prototyping and Images</td>
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</tr>
<tr>
<td>CIT-175</td>
<td>Web Development: Flash</td>
<td>3.0</td>
</tr>
</tbody>
</table>

CIT 010 EXPLORING COMPUTERS - BRIEF
Units: 1.50
18.00 hours lecture, 27.00 hours lab
Provides a brief overview of the use of computers, hardware, software, and application of the Internet in modern society.

CIT 011 MICROSOFT WINDOWS - BRIEF
Units: 1.50
18.00 hours lecture, 27.00 hours lab
Provides a hands-on overview of Microsoft Windows fundamentals, including the basics of using a mouse, icons, Windows Explorer, file management, Windows accessories, and Control Panel.

CIT 035 THE INTERNET - BRIEF
Units: 1.50
18.00 hours lecture, 27.00 hours lab
Explores the architecture and historical development of the Internet, including browsers, e-mail, online communications, netiquette, and online resources, including search engines, web applications, blogs, chat rooms, and RSS feeds. Familiarity with a PC and Microsoft Windows is assumed.
CIT 036 MICROSOFT OUTLOOK - BRIEF
Units: 1.50
18.00 hours lecture, 27.00 hours lab
*Recommended Preparation: CIT-035 & CIT-105*
Introduces Microsoft Outlook, including the use of e-mail, scheduling, calendar planning, contact list management, and notes features.

CIT 074 INTRODUCTION TO PHOTOSHOP
Units: 1.50
18.00 hours lecture, 27.00 hours lab
Introduces basic digital image editing using Photoshop, including layers, selections, masks, image retouching, color correction, paint tools, text tools, and special effects, with application to commercial or personal projects. Familiarity with a PC and the Windows operating system is assumed.

CIT 082 ADOBE ACROBAT - BRIEF
Units: 1.50
18.00 hours lecture, 27.00 hours lab
Introduces Adobe Acrobat to create, modify, and authenticate universal PDF (Portable Document Format) documents for cross-platform distribution, including PDF conversion, multimedia content, interactive elements, electronic forms, security features, document review cycle, and publishing for both print and Web.

CIT 090L COMPUTER LAB
Units: 1.00
54.00 hours lab
A lab for the currently enrolled Computer Information Technology student who wishes to increase skills through the use of the CIT lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in printed schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in the Computer Information Technology program. Units do not apply to the associates degree. Offered pass/no-pass only.

CIT 098A MICROSOFT WINDOWS WORKSHOP
Units: 0.50
9.00 hours lecture
Introduces the basic features of the Windows operating system. Offered pass/no-pass only. Units do not apply to the associate degree.

CIT 098B MICROSOFT WORD WORKSHOP
Units: 0.50
9.00 hours lecture
Introduces the basic features of Microsoft Word. Offered pass/no-pass only. Units do not apply to the associate degree.

CIT 098C MICROSOFT EXCEL WORKSHOP
Units: 0.50
9.00 hours lecture
Introduces the basic features of Microsoft Excel. Offered pass/no-pass only. Units do not apply to the associate degree.

CIT 098D MICROSOFT ACCESS WORKSHOP
Units: 0.50
9.00 hours lecture
Introduces the basic features of Microsoft Access. Offered pass/no-pass only. Units do not apply to the associate degree.

CIT 098E MICROSOFT POWERPOINT WORKSHOP
Units: 0.50
9.00 hours lecture
Introduces the basic features of Microsoft PowerPoint. Offered pass/no-pass only. Units do not apply to the associate degree.

CIT 101 INTRODUCTION TO COMPUTERS
Units: 3.00
UC:CSU 36.00 hours lecture, 54.00 hours lab
Introduces computers, including their history, usage, technology, and terminology, as well as their impact on society, ethics, and organizational settings. Provides an introduction to system hardware, networks, telecommunications, operating systems, and popular production software, including spreadsheet, database, word processing, presentation software, internet, and e-mail applications.
CIT 105 MICROSOFT WINDOWS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Presents in-depth study of the Windows graphical user interface, including file management, windows manipulation, desktop customization, multitasking, data search, use of Windows accessories, Object Linking and Embedding (OLE), and troubleshooting.

CIT 110 KEYBOARDING AND DOCUMENT PROCESSING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Develops a mastery of the computer keyboard by touch and proficiency in producing business letters, reports, tables, memos, and other documents using Microsoft Word.

CIT 111 ADVANCED KEYBOARDING AND DOCUMENT PROCESSING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: CIT-110
Continues skill building begun in CIT 110, Keyboarding and Document Processing, emphasizing production of a wide range of documents using Microsoft Word as well as continuing to build speed and accuracy and familiarity with MS Word begun in CIT 110.

CIT 115 BUSINESS ENGLISH
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Provides an extensive review of proper sentence structure within business documents through exercises with contemporary business themes. Students will create simple business communications focusing on correcting the most common errors of language usage pertaining to modern business correspondence. Lays the foundation for clear and correct business writing and formatting for today’s business environment.

CIT 116 BUSINESS COMMUNICATIONS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Training in the development of writing principles and techniques; business vocabulary improvement; practical experience in the composition of correspondence typical of business environments. Additional emphasis on principles of business English.

CIT 120 ADMINISTRATIVE OFFICE PROCEDURES
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Analyse and implement technological and procedural tasks typically encountered by the administrative assistant in the business environment.

CIT 130 MEDICAL OFFICE PROCEDURES
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces administrative medical assistant knowledge and techniques including office environment, medical ethics, and legal responsibilities. Medical office software for completing such tasks as patient registration, records, appointment scheduling, and billing and collection also examined.

CIT 131 MEDICAL TRANSCRIPTION
Units: 2.00
CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: HLHSCI-249
Provides medical office assistant students with entry-level skills in medical transcription using computer applications, medical dictation and transcription software, incorporating business English, medical knowledge, proofreading, and editing skills.

CIT 132 MEDICAL OFFICE FINANCES
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Examines the various financial methods used in medical offices and hospitals for a variety of duties. This course uses the latest medical management software program to perform such tasks as posting patient account entries, printing daily reports, managing office files, and billing routines such as insurance payments and adjustments, hospital coding and billing, report generation, and inpatient and outpatient coding and billing.

CIT 140 SURVEY OF MICROSOFT OFFICE PROGRAMS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Examines operating systems, Microsoft Office, word processing, spreadsheet analysis, database management, presentation software, and the application of information technologies to organizational settings.

CIT 145 QUICKBOOKS PRO
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces the basics of QuickBooks Pro, designed to assist in the operation of a small business as well as a merchandise business. Familiarity with the Windows operating system is assumed.
CIT 146 QUICKBOOKS PRO II
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: CIT-145
Provides a continuation of CIT 145, presenting advanced features such as Pass-Throughs, inventory group items, assemblies, time tracking, advanced sales tax topics, payroll setup and processing, estimates and sales orders, budgeting, forecasting, business planning, and year-end procedures.

CIT 150 MICROSOFT WORD I
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces the latest version of Microsoft Word, including creating, editing, formatting, saving, retrieving, and printing a variety of business documents. Prepares the student to take the Microsoft Office Specialist (MOS) certification core exam in Word.

CIT 151 MICROSOFT WORD II
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: CIT-150
Provides a continuation of CIT-150, presenting a comprehensive overview of advanced features of Microsoft Word including, merging documents, sorting and selecting data using Access database, formatting macros, styles, working with shared documents, creating specialized tables and indexes, and using XML data in different applications. Prepares students for the Microsoft Office User Specialist (MOS) certification expert exam in Word.

CIT 155 MICROSOFT EXCEL I
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces the latest version of Microsoft Excel, including formulas and functions as related to charting, formatting worksheets, creating absolute cell references, working with large worksheets, conducting what-if analysis, and using Excel to create static and dynamic Web pages. Prepares students for the Microsoft Office Specialist (MOS) certification core exam.

CIT 156 MICROSOFT EXCEL II
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: CIT-155
Provides a continuation of CIT-155, presenting a comprehensive overview of advanced features of Microsoft Excel, including templates, SmartArt images, Pivot table reports, Pivot chart reports, formula auditing, data validation, and the use of Macros and Visual Basic for applications. Prepares students to take the MOS exam in Excel.

CIT 160 MICROSOFT ACCESS I
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Provides an in-depth introduction to the latest version of Microsoft Access, including creating, querying, and maintaining a relational database; developing data access pages, reports, forms, combo boxes; and, using OLE fields, hyperlinks, and subforms.

CIT 161 MICROSOFT ACCESS II
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: CIT-160
Provides a continuation of CIT-160, presenting advanced features of Microsoft Access including creating, querying, and maintaining a database; creating reports, forms, and combo boxes; formulating cross tab queries, mailing labels, and mail merge reports; defining relationships, integrating Excel worksheet data into an Access database; using OLE fields, creating an application system using the Switchboard Manager; customizing forms using VBA, working with PivotTable and PivotChart objects, administering a database; establishing customized menu bars; publishing to the Internet using Data Access pages, using XML to share data, and using data from the Internet and other sources. Prepares students for the MCAS Exam.

CIT 165 MICROSOFT POWERPOINT
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Provides an in-depth study of presentation fundamentals, using Microsoft PowerPoint software to create slide presentations incorporating templates, images, screen transitions, sound, and animation. Examines how to create dynamic slides, and develop slide shows based on business topics. Designed as preparation for the Microsoft Office Specialist (MOS) certification Core and Expert exams in PowerPoint.

CIT 166 DESKTOP PUBLISHING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces desktop publishing using Adobe InDesign to create graphically-rich layouts, brochures, posters, fliers, and newsletters. Familiarity with Windows, file management, and a PC is assumed.

CIT 170 WEBSITE DEVELOPMENT I
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces the creation of web sites and remote web site administration using HTML, CSS, and FTP. Proficiency with Windows, the Internet, a browser, and a PC is assumed.
CIT 171 WEBSITE DEVELOPMENT II
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: CIT-170
Continues studies began in Website Development I using XHTML and advanced CSS coding, including implementation of Java applets, audio, and video elements. Concepts related to large-scale development, site promotion, and e-commerce may also be covered. Familiarity with XHTML, CSS, the internet, a browser, and Windows is assumed.

CIT 173 WEB DEVELOPMENT: DREAMWEAVER
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces Adobe Dreamweaver to develop and publish web sites, emphasizing a critical-thinking approach and accepted standards of web page design. Proficiency with Windows, OS, PC, the Internet, and basic HTML and CSS is assumed.

CIT 174 WEB PROTOTYPING AND IMAGES
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: CIT-074, CIT-105, CIT-170
Provides hands-on training and application of theoretical concepts related to creating imagery for Web delivery with digital imaging software, such as Adobe Photoshop or Fireworks. Topics include graphic formats, image optimization, image slicing, resolution, image maps, GIF animation, and Web site prototyping with graphical mockups.

CIT 175 WEB DEVELOPMENT: FLASH
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces Adobe Flash for the purpose of creating interactive web content, animations, and web sites. Proficiency with Windows, OS, PC, basic HTML or a web authoring program is assumed.

CIT 178 DYNAMIC WEB SITE DEVELOPMENT
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisites: CIT-173, CMPSCI-190, CMPSCI-192
Presents advanced topics, including development of database-driven web sites using authoring tools, such as Dreamweaver, and a database application.
Recommended electives:

- CMPSCI-122 Computer Architecture and Assembly Language . . . . . . . . . . . . .3.0
- CMPSCI-182 Data Structure & Program Design . . . . . . . . . . . . . . . . . . . . .3.0
- CWE-188CPNT Cooperative Work Experience Education . . . . . . .1.0 - 4.0
- MATH-140 Introductory Statistics . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .4.0
- OR
- MATH-140H Introductory Statistics - Honors . .4.0

Certificate of Specialization: Network Associate
Design configuration and maintenance of LANs. Develop practical experience in cabling, routing, IP addressing, Cisco supported network technologies, network troubleshooting skills, WAN technologies, VLANs, OSPF, EIGRP.

Student Learning Outcome:
Students will be able to design, implement, maintain, and troubleshoot network infrastructure devices.

Program Requirements:
Units Required: 14

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CMPNET-151</td>
<td>CCNA Prep 1</td>
<td>7.0</td>
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<tr>
<td>CMPNET-152</td>
<td>CCNA Prep 2</td>
<td>7.0</td>
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</tbody>
</table>

**CMPNET 131 VOICE AND DATA CABLING**
Units: 4.00
CSU 36.00 hours lecture, 108.00 hours lab
Focuses on cabling issues related to data and voice connections and provides an understanding of the industry and its worldwide standards, types of media and cabling, physical and logical networks, as well as signal transmission. Develops skills in reading network design documentation, determining and purchasing cabling equipment, pulling and mounting cable, managing cable, selecting wiring closets, terminating cable at patch panels, installing jacks, and testing cable. Stresses documentation, design, and installation issues, as well as laboratory safety, on-the-job safety, and working effectively in group environments. Prepares the student for the BICSI Level 1 Installer Exam.

**CMPNET 132 A+ CERTIFICATION**
Units: 4.00
CSU 36.00 hours lecture, 108.00 hours lab
Provides instruction in computer repair and upgrade and prepares students to take the Computing Technology Industry Association (CompTIA) A+ certification.

**CMPNET 133 DATA CENTER**
Units: 4.00
CSU 36.00 hours lecture, 108.00 hours lab
Covers data center design and implementation with a focus on environmentally friendly "green" technologies.

**CMPNET 151 CCNA PREP 1**
Units: 7.00
CSU 108.00 hours lecture, 54.00 hours lab
The first of two classes in designing, configuring, and maintaining of LANs, including cabling, routing, IP addressing, network technologies and network troubleshooting skills. Prepares students for the Cisco CCNA and CompTIA Network+ certification exams.

**CMPNET 152 CCNA PREP 2**
Units: 7.00
CSU 108.00 hours lecture, 54.00 hours lab
Prerequisite: CMPNET-151
Second of two classes in designing, configuring, and maintaining of LANs and WANs, including WAN technologies PPP and Frame Relay and LAN technologies VLANs, VTP, and STP. Prepares students for the Cisco CCNA and CompTIA Network+ certification exams.

**CMPNET 153 WIRELESS LANS**
Units: 3.50
CSU 54.00 hours lecture, 27.00 hours lab
An introduction to Wireless LANs, focusing on the design, planning, implementation, operation and troubleshooting of Wireless LANs. Covers a comprehensive overview of technologies, security, and design best practices with particular emphasis on hands-on skills in the following areas: Wireless LAN setup and troubleshooting; 802.11 (a, b, and g) technologies, products and solutions; radio technologies; WLAN applications and site surveys; resilient WLAN products, design, installation, configuration and troubleshooting; WLAN security; vendor interoperability strategies; and emerging wireless technologies. Prepares the student for the Cisco WLANFE Certification exam.
CMPNET 166 MCITP PREP 1
Units: 7.00
CSU 108.00 hours lecture, 54.00 hours lab
First of two courses designed to prepare students for pursuing a Microsoft MCITP certification. This course covers the tests for the server administrator.

CMPNET 167 MCITP PREP 2
Units: 7.00
CSU 108.00 hours lecture, 54.00 hours lab
Prerequisite: CMPNET-166
Second of two courses designed to prepare students for pursuing a Microsoft MCITP certification. This course covers the tests for the enterprise administrator.

CMPNET 171 SECURITY+ CERTIFICATION
Units: 3.50
CSU 54.00 hours lecture, 27.00 hours lab
Prerequisite: CMPNET-133
Covers basic concepts in network security including security baselines, securing the network infrastructure, Web security, cryptography, operational security, security policies, and introduces computer forensics. Prepares the student for the Security+ certification exam.

CMPNET 189 MS EXCHANGE SERVER
Units: 3.50
CSU 54.00 hours lecture, 27.00 hours lab
Recommended Preparation: CMPNET-166
Presents designing, implementing, and managing Microsoft Exchange Server, including preparing the student for the two Microsoft certification exams for these topics.

CMPNET 191 LINUX/UNIX 1:
PREPARATION FOR LPIC-1
Units: 3.50
CSU 54.00 hours lecture, 27.00 hours lab
Provides the foundation for the development of Linux/UNIX administration skills. Prepares the student for the LPIC-1 certification.

CMPNET 251 CCNP: PREPARATION FOR BSCI
Units: 3.50
CSU 54.00 hours lecture, 27.00 hours lab
Prerequisite: CMPNET-152, CMPNET-157 or Possession of a valid Cisco CCNA certificate
Part of the Cisco CCNP offered through the College of the Canyons Cisco Academy. Topics include advanced routing, routing protocols, routing tables, scalable routing protocols, access lists, route distribution, multicast, IPv6, and configuration of advanced networks.

CMPNET 253 CCNP: PREPARATION FOR BCMSN
Units: 3.50
CSU 54.00 hours lecture, 27.00 hours lab
Prerequisite: CMPNET-152, CMPNET-157 or Possession of a valid Cisco CCNA certificate
Part of a four-course series preparing the student for Cisco CCNP certification. Some topics include LAN switching, network design LAN media types, VLAN identification and spanning tree protocol.

CMPNET 261 CCVP-1: PREPARATION FOR CVOICE
Units: 3.50
CSU 54.00 hours lecture, 27.00 hours lab
Prerequisite: CMPNET-152
Introduces Voice over IP (VoIP) focusing on interconnecting traditional telephony and IP telephony with particular emphasis on applied skills. Equipment used includes Cisco routers and PIX firewalls, POTS, and PBX’s. Prepares the student for the CVOICE certification exam.

CMPNET 263 CCVP-3: PREPARATION FOR GWGK
Units: 3.50
CSU 54.00 hours lecture, 27.00 hours lab
Prerequisite: CMPNET-262
Continues the pursuit of the Cisco Certified Voice Professional industry certification. Equipment used includes Cisco routers and PIX firewalls, POTS, and PBXs. Prepares the student for the GWGK certification exam.

CMPNET 271 CCSP-1: PREPARATION FOR SND & SNRS
Units: 3.50
CSU 54.00 hours lecture, 27.00 hours lab
Prerequisite: CMPNET-152
Introduces WAN Network Security focusing on the overall security processes with particular emphasis on applied skills. Equipment used includes Cisco routers and PIX firewalls. Prepares the student for the SND and SNRS certification exams.
## COMPUTER SCIENCE

**Associate in Science Degree: Computer Science**

The Computer Science program is designed to address problems in organizing, representing, manipulating, and presenting information in an automatic processing environment. Computerized information systems are being developed and used in almost every field where information must be processed. The goal of the Computer Science program is to provide understanding of the functions of the modern computer and operational skills in programming. The following list is a sample of the many career options available for the computer science major. While a few require an associate degree, most require baccalaureate degrees and some require a graduate degree: programmer, computer hardware specialist, data base specialist, computer operator, systems analyst, programmer analyst, software engineer, and instructor.

**Student Learning Outcome:**

Students will be able to identify, evaluate, analyze, and present fundamental software solutions and their applications.

**Program Requirements:**

<table>
<thead>
<tr>
<th>Units Required: 36</th>
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<tbody>
<tr>
<td>CMPSCI-111</td>
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<tr>
<td>CMPSCI-111L</td>
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<tr>
<td>CMPSCI-122</td>
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<tr>
<td>CMPSCI-182</td>
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<tr>
<td>CMPSCI-182L</td>
</tr>
<tr>
<td>CMPSCI-235</td>
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<tr>
<td>CMPSCI-282</td>
</tr>
</tbody>
</table>

Plus six units from the following:

| CMPSCI-132 | Introduction to Programming | 3.0 |
| CMPSCI-190 | Web Programming: JavaScript | 3.0 |
| CMPSCI-192 | PHP Programming | 3.0 |
| CMPSCI-222 | Computer Organization | 3.0 |
| CMPSCI-236 | C++ Object Oriented Programming | 3.0 |
| PHILOS-230 | Symbolic Logic | 3.0 |

Plus 13 units from the following (for Transfer students)

| MATH-211 | Calculus I | 5.0 |
| MATH-212 | Calculus II | 5.0 |
| MATH-214 | Linear Algebra | 3.0 |

Plus eight additional units from the above CMPSCI courses that have not already been taken (for Non-Transfer students)

| MATH-211 | Calculus I | 5.0 |

**CMPSCI 111 INTRODUCTION TO ALGORITHMS AND PROGRAMMING/JAVA**

Units: 3.00

UC:CSU 54.00 hours lecture

*Co-Requisite: CMPSCI-111L*

Introduces computer programming using Java, including algorithms, data and control structures, problem solving, structured and object oriented programming.

**CMPSCI 111L INTRODUCTION TO ALGORITHMS AND PROGRAMMING LAB**

Units: 1.00

UC:CSU 54.00 hours lab

*Co-Requisite: CMPSCI-111*

Required java programming laboratory to support CMPSCI 111.

**CMPSCI 122 COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE**

Units: 3.00

UC:CSU 54.00 hours lecture

Introduces computer architecture, assembly/machine language programming, system software and computer applications.
CMPSCI 132 INTRODUCTION TO PROGRAMMING
Units: 3.00
UC:CSU 54.00 hours lecture
Introduction to programming using Visual Basic. Designed for students with little or no experience in computer programming. Includes hands-on programming projects, as well as the history of computer science and theories of software development.

CMPSCI 182 DATA STRUCTURES AND PROGRAM DESIGN
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: CMPSCI-111 Co-requisite: CMPSCI-182L

CMPSCI 182L DATA STRUCTURES AND PROGRAM DESIGN LAB
Units: 1.00
UC:CSU 54.00 hours lab
Co-requisite: CMPSCI-182
Implementation and programming of object-oriented data structures using the Java programming language.

CMPSCI 190 WEB PROGRAMMING: JAVASCRIPT
Units: 3.00
CSU 54.00 hours lecture
Introduces Java scripting for Web designers, including creating animated web pages, client-side forms validation, AJAX, processing forms data, and generating dynamically updated web pages. Experience creating web pages with HTML is strongly suggested prior to taking this course.

CMPSCI 192 PHP PROGRAMMING
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: Student must be familiar with HTML and creating Web pages.
Introduces programming and PHP language. Covers PHP language elements including object oriented programming (OOP). In depth coverage of CGI programming and processing FORM elements from a Web page. Additional topics include XML manipulation, database interfaces and programming e-commerce Web pages.

CMPSCI 222 COMPUTER ORGANIZATION
Units: 3.00
CSU 54.00 hours lecture
Introduces advanced computer architecture.

CMPSCI 235 C PROGRAMMING
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces 'C' Programming including data types, operators and expressions, control flow logic, program structure, arrays functions and file I/O.

CMPSCI 236 C++ OBJECT ORIENTED PROGRAMMING
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: CMPSCI-235
Object Oriented Programming (OOP) using the C++ language. Topics covered will be C++ classes/objects, input/output streams, overloading, inheritance, templates and exception handling. This is a second semester course in C++, students entering course should already be familiar with the C programming language.

CMPSCI 282 ADVANCED DATA STRUCTURES
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: CMPSCI-111
Explores the foundations of database design with in-depth coverage of data structures. Using the Java programming language, covers effective storage of data in disk-based files.
CONSTRUCTION MANAGEMENT TECHNOLOGY

Associate in Science and Certificate of Achievement: Construction Management Technology

The Construction Management Technology program is designed to prepare students with the foundation needed to meet the current technological requirements of the construction workplace. The program has two tracks, one for those interested in transfer to a four-year college or university to major in Construction Engineering Technology or Construction Management; the other option is for those students already employed in the construction industry or who plan to enter the industry after completion of a certificate or associate degree. The certificate and associate degree curriculum provides students with the industry identified skill competencies for entry into the field.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in construction management.

Program Requirements:
Units Required: 33

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CONST-101</td>
<td>Introduction to Construction and Construction Engineering</td>
<td>2.0</td>
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<tr>
<td>CONST-102</td>
<td>Construction Management Principles</td>
<td>3.0</td>
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<tr>
<td>CONST-103</td>
<td>Blue Print Reading for Construction</td>
<td>3.0</td>
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<tr>
<td>CONST-104</td>
<td>The Construction Process - Planning and Scheduling</td>
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</tr>
<tr>
<td>CONST-105</td>
<td>Construction Estimating Principles</td>
<td>3.0</td>
</tr>
<tr>
<td>CONST-106</td>
<td>Survey of Construction Contracts and Laws</td>
<td>3.0</td>
</tr>
<tr>
<td>CONST-108</td>
<td>Introduction to Construction Inspection and Codes</td>
<td>2.0</td>
</tr>
<tr>
<td>SURV-101</td>
<td>Introduction to Land Surveying</td>
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Plus ten units from the following: (A minimum of one unit must be completed in CWE-188CNST)

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ARCHT-110</td>
<td>Architectural Drafting I</td>
<td>3.0</td>
</tr>
<tr>
<td>ARCHT-140</td>
<td>Materials and Methods of Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-101</td>
<td>Bookkeeping and Accounting</td>
<td>5.0</td>
</tr>
<tr>
<td>CWE-188CNST</td>
<td>Cooperative Work Experience</td>
<td>5.0</td>
</tr>
<tr>
<td>MFGT-090</td>
<td>Measurements and Computations</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Achievement: Building Inspection

The Building Inspection option is designed to prepare students to meet entry-level requirements for employment in the building inspection profession. The coursework prepares students to take code certification exams typically required for employment. Inspectors are employed by government agencies, private companies, contractors, and lending institutions. Inspectors observe, evaluate, judge and enforce laws and regulations pertaining to building construction. The inspector is required to have a broad base of knowledge in all components of construction including plan reading, specification interpretation, and legal requirements.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required to interpret California construction codes and apply them to building and construction applications.

Program Requirements:
Units Required: 18

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CONST-103</td>
<td>Blue Print Reading for Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>CONST-108</td>
<td>Introduction to Construction Inspection and Codes</td>
<td>2.0</td>
</tr>
<tr>
<td>CONST-109</td>
<td>California Building Code</td>
<td>3.0</td>
</tr>
<tr>
<td>CONST-120</td>
<td>California Mechanical Code</td>
<td>3.0</td>
</tr>
<tr>
<td>CONST-122</td>
<td>Plumbing Systems and the Plumbing Code</td>
<td>3.0</td>
</tr>
<tr>
<td>CONST-124</td>
<td>California Electrical Code</td>
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A minimum of one unit from the following:

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<tr>
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<th>Program Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWE-188CNST</td>
<td>Cooperative Work Experience</td>
<td>1.0-4.0</td>
</tr>
</tbody>
</table>

CONST 101 INTRODUCTION TO CONSTRUCTION AND CONSTRUCTION ENGINEERING

Units: 2.00
CSU 36.00 hours lecture

Introduction to the construction industry, the building design process, the construction project process, and roles and responsibilities of those involved: clients, architects, engineers, contractors, project managers, technicians, sub-contractors, suppliers, regulatory agencies, bankers, lawyers and the public. Includes an overview of careers in construction.
CONST 102 CONSTRUCTION MANAGEMENT PRINCIPLES
Units: 3.00
CSU 54.00 hours lecture
Principles of management as they pertain to the construction industry. Topics include licensing, insurance, construction accounting, bidding, contracts, scheduling, safety, and community relations. Also covers leadership/managerial skills and employer/employee relationships.

CONST 103 BLUE PRINT READING FOR CONSTRUCTION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Provides skills in reading, interpreting, analyzing, and visualizing construction drawings and specifications prepared by architects and engineers, emphasizing reading and extracting information from detailed drawings for both residential and commercial construction.

CONST 104 THE CONSTRUCTION PROCESS - PLANNING AND SCHEDULING
Units: 3.00
CSU 54.00 hours lecture
Introduces the fundamental concepts used in planning, scheduling, and controlling construction projects including software applications. Introduces diagrams, precedence networks, resources, time assignment and computations, the Critical Path Method (CPM), monitoring and updating.

CONST 105 CONSTRUCTION ESTIMATING PRINCIPLES
Units: 3.00
CSU 54.00 hours lecture
Prerequisite: CONST-103
Introduces methods and practices related to construction estimating, including quantities and costs of materials, labor and management as well as miscellaneous items related to construction costs. Course requires print reading knowledge and introduces basic scheduling concepts in relation to estimating. May include computer program applications.

CONST 106 SURVEY OF CONSTRUCTION CONTRACTS AND LAWS
Units: 3.00
CSU 54.00 hours lecture
Introduces the basics of construction contracts, including typical contract terms and conditions, and formation, administration and interpretation of contracts. Introduces laws and regulations applying to construction, including license laws for contractors and design professionals, mechanics liens, stop notices, labor regulations, safety and Cal/OSHA, SWPPP, and environmental issues.

CONST 108 INTRODUCTION TO CONSTRUCTION INSPECTION AND CODES
Units: 2.00
CSU 36.00 hours lecture
Recommended Preparation: ARCHT-140 or CONST-103
Introduces construction inspection, and the function, responsibilities, authority and technical requirements related to construction, including state building code requirements for residential and non-residential construction.

CONST 109 CALIFORNIA BUILDING CODE
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: CONST-108
Focuses on California building code requirements for residential and non-residential construction as they pertain to the building inspection process.

CONST 120 CALIFORNIA MECHANICAL CODE
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: CONST-108
Introduces the Uniform Mechanical Code as it applies to construction and maintenance of buildings regulated by this code.

CONST 122 PLUMBING SYSTEMS AND THE PLUMBING CODE
Units: 3.00
CSU 54.00 hours lecture
Introduces plumbing systems used in buildings and other construction projects, including systems for water, waste, storm water, fuel gas, medical gas and vacuum, sewage disposal, water reuse, and reclaimed water. Surveys the Plumbing Code requirements for each of these systems.

CONST 124 CALIFORNIA ELECTRICAL CODE
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: CONST-108
Introduces the National Electrical Code, including provisions of the Code, interpretation of construction documents, construction procedures, and inspection procedures.
COOPERATIVE WORK EXPERIENCE

WORK EXPERIENCE, COOPERATIVE EDUCATION PROGRAM (CWEE)
The Cooperative Work Experience Education (CWEE) Program has been integrated into academic departments throughout the College. This program allows students to apply knowledge gained in college courses to an actual work setting. In addition, interns who qualify for this program are able to sample career choices and to improve job-readiness skills. This would be in a paid or unpaid work setting that provides elective college credit.

CWE 188OCC COOPERATIVE WORK EXPERIENCE EDUCATION OCCUPATIONAL
Units: 1.00-4.00 - CSU
Provides students with the opportunity to apply knowledge and skills gained from college courses in an actual work setting. The work experience may be paid or unpaid. For more information about earning elective units for ongoing work experience or applying for an internship, visit www.canyons.edu/cwee. Maximum 6 total units.

CWE 189GNRL COOPERATIVE WORK EXPERIENCE EDUCATION GENERAL
Units: 1.00-3.00 - CSU 0.00 hours lecture
Provides students with the opportunity to apply knowledge and skills gained from college courses in an actual work setting. The work experience may be paid or unpaid. For more information about earning elective units for ongoing work experience or applying for an internship, visit www.canyons.edu/cwee. Students are limited to a maximum of 6 total units of CWE 189.

COUNSELING

COUNS 010 CAREER EXPLORATION
Units: 1.00
18.00 hours lecture
Assists students in making career decisions. Emphasis is on selecting a career based on personal interests, abilities, values, and goals through self-assessment and career research.

COUNS 070 DISTANCE LEARNING AND STRATEGIES FOR SUCCESS
Units: 1.00
18.00 hours lecture
Provides students with the skills necessary to be a successful online student. Topics include: word processing, synchronous chat, asynchronous chat, email, the internet, learning styles, test taking strategies and time management. Familiarity with the Windows operating system is necessary. Offered pass/no-pass only.

COUNS 075 BUILDING MATH CONFIDENCE
Units: 0.50
9.00 hours lecture
Builds math confidence and develops successful math study strategies while maintaining a positive attitude toward learning math. Offered pass/no-pass only.

COUNS 100 SUCCESS STRATEGIES FOR THE REENTRY ADULT
Units: 3.00
CSU 54.00 hours lecture
Introduces adult reentry students to the educational, psychological, intellectual, social and health-related factors that impact lifelong learning, well-being, and success. Topics include motivation, self-discovery and self-efficacy, critical and creative thinking, effective study strategies, learning styles, health & wellness issues and lifestyle choices, effective written and oral communication, cross-cultural communication, time and stress management strategies, career exploration and educational and life planning.
COUNS 110 CAREER-LIFE PLANNING
Units: 3.00
CSU 54.00 hours lecture
Introduces self-assessment tools to identify college majors and careers by clarifying interests, skills, values, and personality type. Students also examine the decision-making process, self-management, life roles and goal-setting. Includes a review of labor market trends, career research, interviewing skills, resume and cover letter writing, and job search strategies.

COUNS 111 INTRODUCTION TO COLLEGE AND STRATEGIES FOR SUCCESS
Units: 1.00
CSU 18.00 hours lecture
Provides students with the skills necessary to increase success in college. Topics include: college culture, goal setting, time management, study strategies, college services/resources and educational planning.

COUNS 112 TRANSITION STRATEGIES FOR INTERCOLLEGIATE STUDENT ATHLETES
Units: 2.00
CSU 36.00 hours lecture
Explores current topics and challenges relevant to intercollegiate athletics and the appropriate developmental life skills needed to facilitate college adjustment. Addresses the unique transitional needs of intercollegiate student-athletes including goal setting, time management, career decision making, educational planning, stress management, personal and social responsibility, student/instructor relationships, and NCAA/NAIA transfer rules and requirements.

COUNS 120 UNIVERSITY TRANSFER PLANNING
Units: 1.00
CSU 18.00 hours lecture
Provides students with information and resources to facilitate a smooth transfer to four-year colleges and universities. Topics include UC/CSU applications, major and general education requirements, financial aid/scholarships, personalized student education plans, and analysis of factors involved in the selection of transfer schools.

COUNS 121 LEARNING TO LEARN
Units: 2.00
CSU 36.00 hours lecture
Focuses on seven strategies that develop self-regulatory learning: self-monitoring, motivation, goal-setting, active listening, note-taking, information processing in the brain, and reading for comprehension. Students will combine theory and practice to become successful learners and successful college students.

COUNS 150 STUDENT SUCCESS
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the responsibilities and benefits of higher education, including educational planning, goal setting, and career choices are examined. Life skills and study skills are provided.
CULINARY ARTS

Certificate of Achievement: Culinary Arts
The Culinary Arts program is designed to prepare students for careers in the culinary field. The design of the program is balanced between developing the culinary tactile skills of food preparation and the management qualities necessary for career growth. The program will focus on cooking skills development, problem solving, and challenging students to critically evaluate the strengths and weaknesses of culinary operations and identify entrepreneurial approaches to operations.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in the food industry.

Program Requirements:
Units Required: 32.5

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CULARTS-050</td>
<td>Knife Skills</td>
<td>1.5</td>
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<tr>
<td>CULARTS-055</td>
<td>Culinary Safety and Sanitation</td>
<td>1.0</td>
</tr>
<tr>
<td>CULARTS-120</td>
<td>Introduction to the Culinary Arts</td>
<td>1.0</td>
</tr>
<tr>
<td>CULARTS-121</td>
<td>Culinary Fundamentals I</td>
<td>3.0</td>
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<td>CULARTS-123</td>
<td>Culinary Fundamentals II</td>
<td>4.0</td>
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<tr>
<td>CULARTS-125</td>
<td>Principles of Garde Manger I</td>
<td>3.0</td>
</tr>
<tr>
<td>CULARTS-127</td>
<td>Principles of Baking</td>
<td>3.0</td>
</tr>
<tr>
<td>CULARTS-128</td>
<td>Principles of Baking II</td>
<td>3.0</td>
</tr>
<tr>
<td>CULARTS-129</td>
<td>Cake Decorating Essentials</td>
<td>3.0</td>
</tr>
<tr>
<td>CULARTS-130</td>
<td>Pastry Art</td>
<td>1.0</td>
</tr>
<tr>
<td>CULARTS-131</td>
<td>Chocolates</td>
<td>2.0</td>
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<tr>
<td>CULARTS-083</td>
<td>Wine and Food Affinities</td>
<td>1.5</td>
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<tr>
<td>CULARTS-128</td>
<td>Principles of Baking II</td>
<td>3.0</td>
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<tr>
<td>CULARTS-133</td>
<td>International Cuisine</td>
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<tr>
<td>HRMGT-126</td>
<td>Dining Room Service</td>
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<tr>
<td>CULARTS-083</td>
<td>Wine and Food Affinities</td>
<td>1.5</td>
</tr>
<tr>
<td>CULARTS-128</td>
<td>Principles of Baking II</td>
<td>3.0</td>
</tr>
<tr>
<td>CULARTS-133</td>
<td>International Cuisine</td>
<td>2.5</td>
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<tr>
<td>HRMGT-220</td>
<td>Restaurant Operations</td>
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Plus a minimum of two units from the following:

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<th>Units</th>
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<tbody>
<tr>
<td>CWE-188</td>
<td>CULARTS Cooperative Work Experience Education</td>
<td>1.0 - 4.0</td>
</tr>
</tbody>
</table>

Certificate of Specialization: Baking and Pastry
The Culinary Arts Baking and Pastry Certificate of Specialization is designed for those interested in professional baking. It includes comprehensive study with an emphasis on application of fundamental baking techniques and ingredients. Program completers are prepared for entry level employment as bread bakers, pastry cooks, cake decorators, or confectioners.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in the baking industry.

Program Requirements:
Units Required: 12

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>CULARTS-127</td>
<td>Principles of Baking</td>
<td>3.0</td>
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<tr>
<td>CULARTS-128</td>
<td>Principles of Baking II</td>
<td>3.0</td>
</tr>
<tr>
<td>CULARTS-129</td>
<td>Cake Decorating Essentials</td>
<td>3.0</td>
</tr>
<tr>
<td>CULARTS-130</td>
<td>Pastry Art</td>
<td>1.0</td>
</tr>
<tr>
<td>CULARTS-131</td>
<td>Chocolates</td>
<td>2.0</td>
</tr>
</tbody>
</table>

CULARTS 050 KNIFE SKILLS
Units: 1.50
18.00 hours lecture, 27.00 hours lab

Recommended Preparation: HRMGT-225 or CULARTS-055
Introduces basic knife skills, including theory and proper technique, emphasizing correct sanitation practices and good motor skills.

CULARTS 055 CULINARY SAFETY AND SANITATION
Units: 1.00
18.00 hours lecture
Introduces principles of food safety and sanitation in a food service operation. Topics include sanitation regulations, personal hygiene, contamination sources, microorganisms, proper food handling techniques and storage, comprehensive cleaning and sanitizing, and workplace safety concepts.
CULARTS 083 WINE AND FOOD AFFINITIES  
Units: 1.50  
18.00 hours lecture, 27.00 hours lab  
Prerequisite: HRMGT-225 and students must be 21 years of age to enroll.  
Food and wine pairing in professional food service operations. Pregnant women and persons with allergies to sulfites are advised not to take this class. Wine will be tasted.

CULARTS 120 INTRODUCTION TO THE CULINARY ARTS  
Units: 1.00  
CSU 18.00 hours lecture  
Introduces the fundamentals of the culinary arts, history, terminology, culinary mathematics, and explores culinary careers.

CULARTS 121 CULINARY FUNDAMENTALS I  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
Co-Requisite: CULARTS-050 and CULARTS-055  
Recommended Preparation: CULARTS-120  
Introduces classical cooking and current theories that provide students with an understanding of food chemistry and cooking techniques. Study of equipment, ingredients and basic professional cooking techniques.

CULARTS 123 CULINARY FUNDAMENTALS II  
Units: 4.00  
CSU 36.00 hours lecture, 108.00 hours lab  
Prerequisite: CULARTS-050, CULARTS-055 and CULARTS-121  
Continues development of skills learned in Culinary Arts 121. Introduces high level culinary techniques and modern cooking styles, emphasizing sauce making, meat, poultry, fish and shellfish cooking techniques. Plate presentation theory and practice explored.

CULARTS 125 PRINCIPLES OF GARDE MANGER I  
Units: 3.00  
CSU 27.00 hours lecture, 81.00 hours lab  
Prerequisite: CULARTS-050, CULARTS-055 and CULARTS-121  
Introduces theory and practical skills needed to produce quality salads, sandwiches, appetizers and cold sauces for a restaurant pantry station. Identification and production of cheese and fruit displays.

CULARTS 127 PRINCIPLES OF BAKING  
Units: 3.00  
CSU 27.00 hours lecture, 81.00 hours lab  
Co-requisite: CULARTS-055  
Introduces the principles of baking, including the basic characteristics and function of the major ingredients and the importance of accurately measuring weight.

CULARTS 128 PRINCIPLES OF BAKING II  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
Prerequisite: CULARTS-127  
Introduces the preparation of refined pastries and desserts. The theory and practical skills required to produce quality pastries for the hotel/restaurant/catering industries.

CULARTS 129 CAKE DECORATING ESSENTIALS  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
Prerequisites: CULARTS-127 and CULARTS-055  
Introduces fundamental techniques in chocolate production, including candies, confections, and desserts.

CULARTS 130 PASTRY ART  
Units: 1.00  
CSU 9.00 hours lecture, 27.00 hours lab  
Prerequisite: CULARTS-128 and CULARTS-129  
Introduces culinary techniques to prepare candies, individual plated desserts, and centerpieces. Includes working with pulled sugar and pastillage as well as preparation of frozen desserts.

CULARTS 131 CHOCOLATES  
Units: 2.00  
CSU 9.00 hours lecture, 81.00 hours lab  
Prerequisite: CULARTS-128  
Introduces fundamental techniques in chocolate production, including candies, confections, and desserts.

CULARTS 132 CULINARY FUNDAMENTALS III  
Units: 4.00  
CSU 36.00 hours lecture, 108.00 hours lab  
Prerequisite: CULARTS-123  
Introduces advanced theory in culinary techniques and modern cooking styles, including breakfast and brunch cookery, vegetarian dishes, menu design, and plate presentation.
CULARTS 133 INTERNATIONAL CUISINE
Units: 2.50
CSU 27.00 hours lecture, 54.00 hours lab
Prerequisite: CULARTS-123
Introduces the skills necessary to prepare international foods including traditional methods of preparation and the cultural influences on each dish; promotes an appreciation of international foods and culture.

CULARTS 134 ICUE CAFE PRODUCTION
Units: 4.00
CSU 36.00 hours lecture, 108.00 hours lab
Prerequisite: CULARTS-132
Provides fundamentals of commercial food preparation and restaurant operations. Students rotate through stations of a student-run cafe, developing food preparation skills and hands on experience.

CULARTS 150 FOOD SERVICE COSTS AND CONTROLS
Units: 2.00
CSU 36.00 hours lecture
Recommended Preparation: CULARTS-121 and HRMGT-220
Prepares the student to determine food, beverage, and labor costs and apply appropriate cost controls, including recipe conversions, menu pricing, food and labor cost percentages, and interpretation a profit and loss statement. Also covers fundamentals of purchasing based on analysis of quality, yield, cost of food and merchandise used in food service, control of purchases, receiving, storing, and issuing procedures using current computer applications.

DANCE

The Dance program introduces students to a variety of dance techniques, theories and styles, both contemporary and classic. There are numerous opportunities for students of all skill levels and interest to develop talent in performance and choreography by participating in informal concerts or enrolling in the COC Dance Company. Many dance courses meet general education requirements in the arts, humanities and/or physical education categories. An associate degree is not available in dance. Note: UC limits transfer credits for Dance activity and KPEA courses to a combined total of four units maximum.

Dance activity courses are 107, 108, 121, 122, 131,132, 135, 136, 141, 142, 180, and 181. Although COC allows some dance classes to be repeated, starting in 2008, only four enrollments of the same activity may be taken. For example, students may only take a total of four enrollments of jazz.

DANCE 100 DANCE APPRECIATION
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the influences which have historically and culturally shaped dance throughout the world. Non-performance course. Does not satisfy the Physical Education activity requirement for the associate degree.

DANCE 101 INTRODUCTION TO WORLD DANCE
Units: 1.00
UC:CSU 54.00 hours lab
Introduces movement as it relates to dances from selected cultures including Africa, Asia, The Middle East, Latin America and other countries.

DANCE 107 DANCE CONDITIONING
Units: 1.00
UC:CSU 54.00 hours lab
Focuses on dance conditioning including practice of dance exercises for muscle development, conditioning, strength and flexibility.

DANCE 108 PILATES
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Introduction to exercises designed for non-dancers and dancers to improve on the biomechanical and neuro muscular aspects of the body.
DANCE 111 FUNDAMENTALS OF DANCE MOVEMENT
Units: 1.00
UC:CSU 54.00 hours lab
May be taken four times for credit
Introduces ballet, modern and jazz dance techniques, focusing upon basic skill development in all three styles of dance, as well as the development of strength, flexibility, coordination and rhythm for all movement techniques.

DANCE 121 MODERN DANCE I
Units: 1.00
UC:CSU 54.00 hours lab
Introduces the basic movements, patterns and style of modern dance, emphasizing elementary skills and techniques while conferring an appreciation of modern dance and increasing understanding of body structure and movement.

DANCE 122 MODERN DANCE II
Units: 1.00
UC:CSU 54.00 hours lab
Prerequisite: DANCE-121
Continues Modern Dance I focusing on learning intermediate movements, patterns and styles intrinsic to modern dance.

DANCE 130 HIP-HOP DANCE
Units: 1.00
UC:CSU 54.00 hours lab
Introduces the fundamentals of hip-hop and funk styles of dance derived from current street dance vernacular and culture.

DANCE 131 INTRODUCTION TO JAZZ TECHNIQUES
Units: 1.00
UC:CSU 54.00 hours lab
Introduces jazz dance, emphasizing elementary skills and techniques of various dance jazz dance styles.

DANCE 132 INTERMEDIATE JAZZ
Units: 1.00
UC:CSU 54.00 hours lab
Prerequisite: DANCE-131
Presents intermediate jazz skills.

DANCE 133 INTRODUCTION TO AFRICAN DANCE
Units: 1.00
UC:CSU 54.00 hours lab
Focuses on learning traditional dances of West African cultures, including polyrhythm, call and response, integration of movement to the music as well as the social/religious aspects of African culture.

DANCE 134 BALLROOM AND SOCIAL DANCE
Units: 1.00
UC:CSU 54.00 hours lab
Introduces selected social dance styles and their performance techniques, including Salsa, Tango, Rumba, East and West Coast Swing, Waltz, Foxtrot, Merengue, Cha-Cha and other selected dances. Dance styles may vary by semester.

DANCE 135 BEGINNING TAP DANCE
Units: 1.00
UC:CSU 54.00 hours lab
Introduces elementary tap skills, emphasizing basic tap routines and rhythmic structures.

DANCE 136 INTERMEDIATE TAP
Units: 1.00
UC:CSU 54.00 hours lab
Introduces intermediate level tap skills, syncopated rhythmic combinations and evaluation techniques for the sound and rhythmic accuracy of the taps.

DANCE 137 FLAMENCO AND SPANISH DANCE
Units: 1.00
UC:CSU 54.00 hours lab
Introduces students to the fundamental steps, movements, rhythms and music of flamenco and Spanish dance, including various choreographies and techniques of this dance form are presented.
DANCE 141 INTRODUCTION TO BALLET TECHNIQUES  
Units: 1.00  
UC:CSU 54.00 hours lab  
Introduces the basic skills and techniques of ballet exercises at the barre in order to develop flexibility, strength, control and resilience. The course concentrates on simple port de bras, adagio, and allegro combinations.

DANCE 142 INTERMEDIATE BALLET  
Units: 1.00  
UC:CSU 54.00 hours lab  
Prerequisite: DANCE-141  
Continues the ballet skills introduced in Dance 141, with additional emphasis on the rhythm, design, and dynamics of ballet dance.

DANCE 159 COMMERCIAL DANCE  
Units: 2.00  
CSU 108.00 hours lab  
Introduces movement techniques for the dance entertainment industry, including dance for feature films, videos, television, industrial shows, musicals, and other commercial applications.

DANCE 161 COC DANCE COMPANY PRODUCTION  
Units: 3.00  
UC:CSU 18.00 hours lecture, 108.00 hours lab  
Prerequisite: DANCE-111 and Successful Audition.  
Represents the resident dance company of College of the Canyons and provides intermediate and advanced dance students with experience in performing student, faculty and guest artist works in venues on and off campus. Field trips may be required.

DANCE 170 INTRODUCTION TO CHOREOGRAPHY  
Units: 1.50  
UC:CSU 81.00 hours lab  
Prerequisite: DANCE-111  
Introduces the fundamental skills and concepts necessary to choreograph dance for the stage.

DANCE 180 INTRODUCTION TO YOGA  
Units: 1.00  
UC:CSU 54.00 hours lab  
Introduces basic Yoga postures as well as Yoga breathing, relaxation and meditation techniques.

DRAFTING  
Certificate of Specialization: Mechanical Drafting  
The drafting program is designed to prepare students for careers in industry as drafters or related occupations. Engineers require drafting skills, as do architects and designers. The techniques of drafting are used in many types of industries such as automotive, electronics, building construction, aeronautical/aerospace, machine design, advertising, illustrating, and engineering. The program provides students with entry-level skills and knowledge in the fields of computer mechanical drafting. Competencies include knowledge of orthographic projection and isometric sketching, AutoCAD generated drawings, current practices in construction technology, 2-D and 3-D drawings, drafting techniques such a clarity, line weight expression and accuracy to name a few.

Student Learning Outcome:  
Students will be able to demonstrate proficiency in the core skills and knowledge required for a drafting position in the civil, electrical, electronic or mechanical engineering fields.

Program Requirements:  
Units Required: 9  

<table>
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<tr>
<td>ENGR-110 Introduction to AutoCAD</td>
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<td>ENGR-114 Solids Modeling for Mechanical Drafting</td>
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<td>MFGT-121 CNC 1: Operation and Manual Programming</td>
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</tr>
<tr>
<td>MFGT-131 CAD/CAM I</td>
<td>3.0</td>
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</tbody>
</table>
EARLY CHILDHOOD EDUCATION

Associate in Science Degree: Early Childhood Education

The Early Childhood Education (ECE) degree and certificate programs give students the opportunity to prepare for careers in the field of early childhood education and/or transfer to a four-year university. Education and training prepares students for entry into a variety of careers in the field. The field of early childhood education needs trained, creative educators to provide high quality services to children and families in a variety of settings.

The Early Childhood Education program includes core courses in child development and electives from other departments. The purposes include: 1) educating students in the development of the young child; 2) preparing candidates for Child Development permits (awarded by the State Commission of Teacher Preparation and Licensing, Child Development Division); 3) providing a basis for further study (transfer) and preparation of teacher candidates; and 4) preparing students for work with children in a variety of community settings.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as an Early Childhood Educator in a Title 22 or Title 5 licensed center in the field of Early Childhood.

Program Requirements:
Units Required: 24

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE-110</td>
<td>Introduction to Early Childhood Education</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE-115</td>
<td>Curriculum and Classroom Management of Early Childhood Education</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE-116A</td>
<td>Curriculum and Classroom Management Lab A</td>
<td>1.0</td>
</tr>
<tr>
<td>ECE-125</td>
<td>Child, Family and Community</td>
<td>1.0</td>
</tr>
<tr>
<td>ECE-175</td>
<td>Childhood Health and Safety</td>
<td>1.0</td>
</tr>
<tr>
<td>ECE-120</td>
<td>Child Growth and Development</td>
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</tr>
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OR

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PSYCH-172</td>
<td>Developmental Psychology</td>
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OR

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PSYCH-172H</td>
<td>Developmental Psychology - Honors</td>
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Plus ten units from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ECE-116B</td>
<td>Curriculum and Classroom Management Lab B</td>
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<tr>
<td>ECE-116C</td>
<td>Curriculum and Classroom Management Lab C</td>
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<tr>
<td>ECE-130</td>
<td>Infant/Toddler Development and Curriculum</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE-135</td>
<td>School Age Child Care Programs and Curriculum</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE-140</td>
<td>Recreational Leadership in School Age Child Care</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE-144</td>
<td>Music and Motor Development for the Young Child</td>
<td>2.0</td>
</tr>
<tr>
<td>ECE-151</td>
<td>Art and Creativity for Young Children</td>
<td>2.0</td>
</tr>
<tr>
<td>ECE-155</td>
<td>Science and Math for the Young Child</td>
<td>2.0</td>
</tr>
<tr>
<td>ECE-156</td>
<td>Literature and Language Development for the Young Child</td>
<td>2.0</td>
</tr>
<tr>
<td>ECE-160</td>
<td>Understanding and Education of Exceptional Children</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE-165</td>
<td>Teaching Children in a Diverse Community</td>
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</tr>
<tr>
<td>ECE-201</td>
<td>Supervision and Administration of Children's Programs</td>
<td>3.0</td>
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<tr>
<td>ECE-202</td>
<td>Advanced Supervision and Administration of Children's Programs</td>
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</tr>
<tr>
<td>ECE-220</td>
<td>Adult Supervision in ECE: The Mentoring Process</td>
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Certificate of Specialization: Early Childhood Education - CORE

The Child Development program offers courses leading to a Core Certificate which meets State of California requirements to teach in preschool and childcare settings and several child development program certificates which are suggested for teaching positions in a variety of programs. These can reflect the student's interest in specialized areas such as preschool teaching, infant/toddler development and curriculum, school-age childcare and curriculum, special education and supervision, and administration of children's programs. Program certificate coursework assists students in meeting the State of California Child Development permit requirements. The Child Development permit awarded by the State Commission of Teacher Preparation and Licensing is required by teachers in such funded programs as Children's Centers and Head Start programs.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as a teacher in a Title 22 licensed center in the field of Early Childhood.
Program Requirements:
Units Required: 14

ECE-110 Introduction to Early Childhood Education .................. 3.0
ECE-115 Curriculum and Classroom Management of Early Childhood Education .................. 3.0
ECE-116A Curriculum and Classroom Management Lab A .................. 1.0
ECE-125 Child, Family and Community .................. 3.0
ECE-175 Childhood Health and Safety .................. 1.0
ECE-120 Child Growth and Development .................. 3.0

OR

PSYCH-172 Developmental Psychology .................. 3.0

OR

PSYCH-172H Developmental Psychology - Honors .................. 3.0

Certificate of Achievement: Early Childhood Education - Infant/Toddler

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as an Infant/Toddler teacher in a Title 22 licensed center in the field of Early Childhood.

Program Requirements:
Units Required: 23

ECE-110 Introduction to Early Childhood Education .................. 3.0
ECE-115 Curriculum and Classroom Management of Early Childhood Education .................. 3.0
ECE-116A Curriculum and Classroom Management Lab A .................. 1.0
ECE-125 Child, Family and Community .................. 3.0
ECE-175 Childhood Health and Safety .................. 1.0
ECE-120 Child Growth and Development .................. 3.0

OR

PSYCH-172 Developmental Psychology .................. 3.0

OR

PSYCH-172H Developmental Psychology - Honors .................. 3.0

Plus four units from the following:

ECE-144 Music and Motor Development for the Young Child .................. 2.0
ECE-151 Art and Creativity for Young Children .................. 2.0

Certificate of Achievement: Early Childhood Education – Preschool

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as an Early Childhood Master Teacher in a Title 5 program.

Program Requirements:
Units Required: 24

ECE-110 Introduction to Early Childhood Education .................. 3.0
ECE-115 Curriculum and Classroom Management of Early Childhood Education .................. 3.0
ECE-116A Curriculum and Classroom Management Lab A .................. 1.0
ECE-116B Curriculum and Classroom Management Lab B .................. 1.0
ECE-116C Curriculum and Classroom Management Lab C .................. 1.0
ECE-125 Child, Family and Community .................. 3.0
ECE-144 Music and Motor Development for the Young Child .................. 2.0
ECE-151 Art and Creativity for Young Children .................. 2.0
ECE-155 Science and Math for the Young Child .................. 2.0
ECE-156 Literature and Language Development for the Young Child .................. 2.0
ECE-175 Childhood Health and Safety .................. 1.0
ECE-120 Child Growth and Development .................. 3.0

OR

PSYCH-172H Developmental Psychology - Honors .................. 3.0

College of the Canyons
# Certificate of Achievement: Early Childhood Education - School-Age

**Student Learning Outcome:**
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as a School-Age teacher in a Title 22 licensed center in the field of Early Childhood.

**Program Requirements:**
Units Required: 25

<table>
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<th>Course Title</th>
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<tbody>
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<tr>
<td>ECE-115</td>
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<tr>
<td>ECE-116A</td>
<td>Curriculum and Classroom Management Lab A</td>
<td>1.0</td>
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<tr>
<td>ECE-116B</td>
<td>Curriculum and Classroom Management Lab B</td>
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<td>ECE-116C</td>
<td>Curriculum and Classroom Management Lab C</td>
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<td>ECE-125</td>
<td>Child, Family and Community</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE-135</td>
<td>School Age Child Care Programs and Curriculum</td>
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<td>ECE-140</td>
<td>Recreational Leadership in School Age Child Care</td>
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<td>ECE-175</td>
<td>Child Health and Safety</td>
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<td>Supervision and Administration of Children's Programs</td>
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<td>PSYCH-172</td>
<td>Developmental Psychology</td>
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</tr>
<tr>
<td>PSYCH-172H</td>
<td>Developmental Psychology - Honors</td>
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</tbody>
</table>

# Certificate of Achievement: Early Childhood Education - Special Education

**Student Learning Outcome:**
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as a Special Education teacher in a Title 22 licensed center in the field of Early Childhood.

**Program Requirements:**
Units Required: 30

<table>
<thead>
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<th>Units</th>
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</thead>
<tbody>
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<td>ECE-115</td>
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<tr>
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<td>Child, Family and Community</td>
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<td>ECE-120</td>
<td>Child Growth and Development</td>
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<tr>
<td>PSYCH-172</td>
<td>Developmental Psychology</td>
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</tr>
<tr>
<td>PSYCH-172H</td>
<td>Developmental Psychology - Honors</td>
<td>3.0</td>
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</tbody>
</table>

# Certificate of Achievement: Early Childhood Education - Supervision and Administration of Children's Programs

**Student Learning Outcome:**
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as a Supervisor/Administrator in a Title 22 licensed center in the field of Early Childhood.

**Program Requirements:**
Units Required: 30

<table>
<thead>
<tr>
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<th>Units</th>
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<tbody>
<tr>
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<td>Introduction to Early Childhood Education</td>
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<tr>
<td>ECE-115</td>
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<tr>
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<td>Child, Family and Community</td>
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<td>ECE-120</td>
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<td>PSYCH-172</td>
<td>Developmental Psychology</td>
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<tr>
<td>PSYCH-172H</td>
<td>Developmental Psychology - Honors</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Units</td>
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<tr>
<td>ECE-201</td>
<td>Supervision and Administration of Children's Programs</td>
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<tr>
<td>ECE-202</td>
<td>Advanced Supervision and Administration of Children's Programs</td>
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<tr>
<td>ECE-120</td>
<td>Child Growth and Development</td>
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<td>PSYCH-172</td>
<td>Developmental Psychology</td>
<td>3.0</td>
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<tr>
<td>PSYCH-172H</td>
<td>Developmental Psychology - Honors</td>
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<tr>
<td>ECE 110</td>
<td>INTRODUCTION TO EARLY CHILDHOOD EDUCATION</td>
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<tr>
<td>ECE 115</td>
<td>CURRICULUM AND CLASSROOM MANAGEMENT OF EARLY CHILDHOOD EDUCATION</td>
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<tr>
<td>ECE 116A</td>
<td>CURRICULUM AND CLASSROOM MANAGEMENT LAB A</td>
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<td>ECE 120</td>
<td>CHILD GROWTH AND DEVELOPMENT</td>
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<td>ECE 125</td>
<td>CHILD, FAMILY AND COMMUNITY</td>
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<tr>
<td>ECE 130</td>
<td>INFANT/TODDLER DEVELOPMENT AND CURRICULUM</td>
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</table>

**ECE 110 INTRODUCTION TO EARLY CHILDHOOD EDUCATION**

Units: 3.00
CSU 54.00 hours lecture

Introduces the study of early childhood education, including the history and philosophy of early education, issues of development, teacher roles, partnerships with parents, and the current issues and trends in the field of early childhood education. Field observation at sites designated by the instructor will be required. Meets the partial core requirement to teach in a Title 22 or Title 5 program and meets a core requirement for licensing and the Child Development Permit.

**ECE 115 CURRICULUM AND CLASSROOM MANAGEMENT OF EARLY CHILDHOOD EDUCATION**

Units: 3.00
CSU 54.00 hours lecture

Prerequisite: ECE-110

Covers planning and implementation of a developmentally appropriate preschool environment including curriculum and behavior management techniques. A continuation of ECE 110.

**ECE 116A CURRICULUM AND CLASSROOM MANAGEMENT LAB A**

Units: 1.00
CSU 54.00 hours lab

Co-requisite: Concurrent enrollment in or previous completion of ECE-110

Provides hands-on experience observing and implementing developmentally appropriate practice as applied to ECE 110 by assisting master teachers in the classroom environment.

**ECE 116B CURRICULUM AND CLASSROOM MANAGEMENT LAB B**

Units: 1.00
CSU 54.00 hours lab

Prerequisite: CHLDEV-116A or ECE 116A  Co-requisite: Concurrent enrollment in or previous completion of ECE-115

Provides hands-on experience observing and implementing developmentally appropriate practice as applied to ECE 115 by assisting master or mentor teachers in the preschool environment.

**ECE 116C CURRICULUM AND CLASSROOM MANAGEMENT LAB C**

Units: 1.00
CSU 54.00 hours lab

Prerequisite: ECE/CHLDEV-116A and 116B.  Third in a series of hands-on experience observing and implementing developmentally appropriate practice as applied to the theory classes ECE 110 and ECE 115. Student teachers assist in the ECE environment, plan, and implement weekly group activities as well as plan, facilitate and evaluate two full sessions (TBA).

**ECE 120 CHILD GROWTH AND DEVELOPMENT**

Units: 3.00
UC:CSU 54.00 hours lecture

Examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. Meets part of the Title 22 core requirements to work in a licensed early childhood program.

**ECE 125 CHILD, FAMILY AND COMMUNITY**

Units: 3.00
UC:CSU 54.00 hours lecture

Examines the developing child in a societal context focusing on the interrelationship of family, school and community and emphasizing historical and socio-cultural factors. Meets the requirement for licensing and the Child Development Permit.

**ECE 130 INFANT/TODDLER DEVELOPMENT AND CURRICULUM**

Units: 3.00
CSU 54.00 hours lecture

Surveys infant/toddler development and its implications for group child care settings, including principles of infant/toddler philosophy and care giving.
ECE 135 SCHOOL AGE CHILD CARE PROGRAMS AND CURRICULUM
Units: 3.00
CSU 54.00 hours lecture
Examines the need for and design of school age child care programs, emphasizing developmental stages of the child ages 5-13, curriculum development, the relationship of the family, and the special needs of the school age child.

ECE 140 RECREATIONAL LEADERSHIP IN SCHOOL AGE CHILD CARE
Units: 3.00
CSU 54.00 hours lecture
Presents different leadership techniques and styles as they apply to various recreational activities for school age children, emphasizing behavioral management skills, and recreational activities for large groups of children.

ECE 144 MUSIC AND MOTOR DEVELOPMENT FOR THE YOUNG CHILD
Units: 2.00
CSU 36.00 hours lecture
Provides the basic skills, methods and theory in music and motor activities relating to the young child, including developing a portfolio of materials, lesson plans and classroom demonstrations.

ECE 151 ART AND CREATIVITY FOR YOUNG CHILDREN
Units: 2.00
CSU 36.00 hours lecture
Explore arts and creativity in young children, including selection of developmentally appropriate media, motivational techniques and classroom arrangements. A creative art curriculum resource file will be developed.

ECE 155 SCIENCE AND MATH FOR THE YOUNG CHILD
Units: 2.00
CSU 36.00 hours lecture
Provides an experiential and discovery approach to learning in the areas of science and math. Students plan and implement developmentally appropriate math and science experiences for young children and apply theoretical concepts in a variety of ways.

ECE 156 LITERATURE AND LANGUAGE DEVELOPMENT FOR THE YOUNG CHILD
Units: 2.00
CSU 36.00 hours lecture
Emphasizes a basic understanding of how children learn language skills, including developing techniques to promote and establish a language and literature program in the preschool setting through the use of flannel board activities, stories, puppets, drama, finger plays and circle activities.

ECE 160 UNDERSTANDING AND EDUCATION OF EXCEPTIONAL CHILDREN
Units: 3.00
CSU 54.00 hours lecture
Introduces the field of special education, emphasizing the developmental theories as they apply to the understanding and education of exceptional children through age eight. Overview of special needs categories as defined by PL94-142 (IDEA), inclusion, and preparation of Individual Education Plan (IEP).

ECE 165 TEACHING CHILDREN IN A DIVERSE COMMUNITY
Units: 3.00
CSU 54.00 hours lecture
Covers the impact of social, political, economic and cultural issues that shape values, beliefs, and behaviors. Students explore their own experiences to increase their understanding of the impact these issues have on teaching children in a multicultural, multilingual, diverse community.

ECE 175 CHILDHOOD HEALTH AND SAFETY
Units: 1.00
CSU 18.00 hours lecture
Introduces common childhood illnesses, emphasizing safety issues, licensing regulations, and health codes pertaining to children and children's programs. American Red Cross certification for First Aid and Community CPR is included.
ECONOMICS

Economics study attempts to clarify how the use of natural, technical, and financial resources affect the lives of human beings. Economic concerns can range from how individuals and businesses make decisions, the roles of government and the Federal Reserve, to the complex world of international trade. Economic theories are examined and applied to the modern economic world. Topics of specialization include macroeconomics and microeconomics, how businesses make decisions, business statistics, using numbers for analysis, and U.S. economic history, the economic development of the U.S. economic history, the economic development of the U.S. consumer economics, how consumers make economic choices, and comparative economic systems, and the comparison of capitalism and socialism as it is applied in different countries. An associate degree is not available in economics.

ECON 170 ECONOMIC HISTORY OF THE UNITED STATES
Units: 3.00
UC:CSU 54.00 hours lecture
Survey of the economic development of the U.S. emphasizing a topical approach, including the development of business cycles, trade, banks in the new nation; manufacturing, tariffs, slavery, big business, labor, government regulations and deregulation leading to a modern industrial nation. (Same as HIST-170). Fulfills Title 5 U.S. History requirement for the associate degree.

ECON 170H ECONOMIC HISTORY OF THE UNITED STATES - HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGL-101 or ENGL-101H
Survey of the economic development of the U.S. emphasizing a topical approach, including the development of business cycles, trade, banks in the new nation; manufacturing, tariffs, slavery, big business, labor, government regulations and deregulation leading to a modern industrial nation. Additional reading, writing, critical thinking, and research techniques required (Same as HIST 170H). Fulfills Title 5 U.S. History requirement for the associate degree.
ECON 201 MACROECONOMICS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: MATH-060
Examines the basic concepts of economics, emphasizing macro-analysis including the nature of the American economy, national income analysis, money and banking, fiscal and monetary policies.

ECON 201H MACROECONOMICS - HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: MATH-060
Examines economic problems facing the nation such as unemployment, inflation, aggregate demand and supply, Gross Domestic Product (GDP), fiscal policy, monetary policy and supply-side economics, debts-deficits-surpluses, money and banking, and the Federal Reserve System. Additional reading, writing, and research techniques are required.

ECON 202 MICROECONOMICS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ECON-201 or ECON-201H
Examines how individuals, firms, and industries perform in our economy, including supply and demand, perfect competition, monopolies, oligopolies, monopolistic competition, wages, prices and profits.

ECON 202H MICROECONOMICS-HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ECON-201 or ECON-201H
Examines how individuals, firms, and industries perform in our economy, including supply and demand, perfect competition, monopolies, oligopolies, monopolistic competition, wages, prices and profits. Additional reading, writing and research required.

ECON 291 STATISTICAL METHODS IN BUSINESS AND ECONOMICS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: MATH-070
Examines descriptive statistics, elements of probability distributions, sampling, estimation, and confidence intervals, tests of hypothesis, linear regression and correlation, including applications to problems in business and economics. Writing and the use of spreadsheet software are required. UC credit limitation: ECON-291, MATH-140, MATH-140H, PSYCH-104 and SOCI-137 combined, maximum credit one course.
ELECTRONIC SYSTEMS TECHNOLOGY

The Electronic Systems Technology program trains students for careers in the electrical service industries including data network services, telecommunication services, audio/video service and home security systems.

ESYST 101 BASIC ELECTRONICS
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Introduces basic electronics and electronic systems technology. Formerly CMPELC-130.

ESYST 102 CIRCUIT ANALYSIS
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: ESYST-101 or CMPELC-130
Explores the functionality of basic electronic components as used in various types of circuits.

ESYST 103 SOLID STATE SYSTEMS
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: ESYST-102
Presents integration of PC boards, ICs, modules, and sub-assemblies into equipment and complete systems.

ESYST 104 DIGITAL CIRCUITS
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: ESYST-103
Introduces digital electronic systems including the programming and manipulation of logic controllers and registers.

ESYST 111 ELECTROMECHANICAL SYSTEMS
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Co-requisite: ESYST-101 OR CMPELC-130
Presents the theory and application of mechanical devices and their control circuits, including component recognition, electrical schematic diagrams, hydraulics, pneumatics, AC and DC motors, stepping motors, mechanical drive systems, and servomechanisms.

ESYST 112 INDUSTRIAL ROBOTICS
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: ESYST-101 OR CMPELC-130
Presents industrial robotics, including designing, building, operating, and programming.

ESYST 113 INDUSTRIAL CONTROLLERS
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: ESYST-101 OR CMPELC-130
Presents basic control systems for process machines and driven equipment used in industry, including programmable controllers, basic electrical circuits, input devices, output devices, control diagrams, and specific programmable controller applications.

ESYST 114 AUTOMATED SYSTEMS
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: ESYST-111, 112, and 113
Integrates the principles of manufacturing automation, including process and machine control, programmable logic controllers, robotics, part handling and assembly.

ESYST 123 RESIDENTIAL WIRING
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Prerequisites: CONST-103, CONST-124
Co-requisite: ESYST-104
Introduces circuit wiring and methods for residential construction according to the National Electrical Code, including circuit planning for kitchens, bathrooms, general living areas and special purpose circuits.
ENGINEERING

Associate in Science Degree: Engineering

The Engineering program provides curriculum concerned with the fundamentals of mechanics, electrical theory, and materials that can be applied to all disciplines within engineering. The degree concentrates on helping students develop critical thinking skills, a creative imagination, and excellent communication skills to effectively function in the professional environment. Most careers in engineering require a baccalaureate or graduate degree. Career options include: mechanical engineer, civil engineer, computer engineer, aerospace engineer, biomedical engineer, automotive engineer, and manufacturing engineer.

Student Learning Outcome:
Students will be able to interpret, analyze, and evaluate engineering concepts.

Program Requirements:
Units Required: 48

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ENGR-101</td>
<td>Introduction to Science, Engineering and Technology</td>
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<tr>
<td>ENGR-151</td>
<td>Materials of Engineering</td>
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<td>ENGR-152</td>
<td>Statics</td>
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<td>ENGR-153</td>
<td>Electrical Circuits I</td>
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<td>MATH-212</td>
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<td>MATH-215</td>
<td>Differential Equations</td>
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<tr>
<td>PHYSIC-220</td>
<td>Physics for Scientists and Engineers: Mechanics of Solids and Fluids</td>
<td>4.0</td>
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<tr>
<td>PHYSIC-221</td>
<td>Physics for Scientists and Engineers: Electricity and Magnetism</td>
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Recommended electives:

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<tr>
<td>ENGR-110</td>
<td>Introduction to AutoCAD</td>
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<tr>
<td>ENGR-114</td>
<td>Solids Modeling for Mechanical Drafting</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGR-154</td>
<td>Engineering Economy</td>
<td>3.0</td>
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<tr>
<td>ENGR-155</td>
<td>Dynamics</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGR-161</td>
<td>Strength of Materials</td>
<td>3.0</td>
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<tr>
<td>ENGR-161L</td>
<td>Strength of Materials Lab</td>
<td>1.0</td>
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<tr>
<td>PHYSIC-222</td>
<td>Physics for Scientists and Engineers: Wave Motion, Heat, Optics and Modern Physics</td>
<td>4.0</td>
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ENGR 090 EXPLORING GADGETS, ENGINEERING, AND TECHNOLOGY
Units: 3.00
36.00 hours lecture, 54.00 hours lab
Introduces applied physics and engineering concepts, emphasizing technologies and phenomena used in the industrial laboratory setting.

ENGR 096 DISCOVER ENGINEERING
Units: 2.00
18.00 hours lecture, 54.00 hours lab
Explores the various engineering disciplines through the examination of engineering problems and their solutions. Includes essential techniques for success in subsequent engineering courses and become oriented to relevant computer based technologies.

ENGR 101 INTRODUCTION TO SCIENCE, ENGINEERING AND TECHNOLOGY
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: MATH-102
An introduction to engineering and engineering technology. Topics include history, careers, ethics and responsibilities, and engineering calculations and problem solving - examples from mechanics, dynamics and fluids. Various engineering systems are modeled and the design process is examined. Develops written and oral communication skills. Guest speakers from various engineering fields are invited to speak.

ENGR 110 INTRODUCTION TO AUTOCAD
Units: 3.00
UC:CSU 36.00 hours lecture, 54.00 hours lab
Introduces two-dimensional computer-aided drafting using AutoCAD software, including tolerance and dimensioning, symbols, orthographic projection, section and auxiliary views, geometric construction, and composition of working drawings.

ENGR 114 SOLIDS MODELING FOR MECHANICAL DRAFTING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Focuses on design and development of mechanical parts with solids modeling program Solidworks. Emphasizes surface modeling and ‘top-down’ design.
ENGR 151 MATERIALS OF ENGINEERING
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: CHEM-201.
Covers properties of materials as they relate to atomic and crystal structure. Topics include atomic structure and bonding; crystalline structures; phases and phase diagrams; metals; polymers; electrical and magnetic properties; optical properties; and corrosion and process methods.

ENGR 151L MATERIALS OF ENGINEERING LAB
Units: 1.00
UC:CSU 54.00 hours lab
Co-requisite: ENGR-151.
Presents crystalline structures, mechanical properties of metals, the electrical properties of semiconducting materials, and polymers in a laboratory setting. Investigates experiments involving cold-working, heat-treatment, material hardness, ductile-to-brittle fracture behavior, fatigue, equilibrium phase diagrams, steel microstructure, corrosion, and process methods.

ENGR 152 STATICS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: MATH-211 and PHYSIC-220
Applies the principles of mechanics to rigid bodies in two and three-dimensional equilibrium. Focuses on graphical solutions using force vectors and equivalent force systems to solve problems pertaining to friction, centroids, center of gravity, and moments of inertia for areas.

ENGR 153 ELECTRICAL CIRCUITS I
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: MATH-212 and PHYSIC-221
Presents electric circuit analysis in both time and frequency domains, transient and steady state solutions. Topics include linear circuit analysis techniques, Kirchhoff’s laws, Network theorems, mesh and nodal analysis, OP amps and amplifiers, Thevenin/Norton equivalents, natural-forced-complete response of RLC circuits, AC circuits, phasors, three-phase power, frequency response, and resonance.

ENGR 154 ENGINEERING ECONOMY
Units: 3.00
CSU 54.00 hours lecture
Prerequisite: MATH-060
Introduces engineering economy problems with a focus on the selection of alternatives and replacement decisions, including interest compounding, depreciation, tax, capital costs and flows, and economic life.

ENGR 155 DYNAMICS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGR-152 and MATH-212
Introduces the principles of Newtonian Dynamics in one-, two-, and three-dimensional motions, including kinematics of a single particle, system of particles, rigid bodies, conservation laws, work, energy, impulse, impact and free and forced vibrations.

ENGR 161 STRENGTH OF MATERIALS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGR-152
Emphasizes stresses and strains under axial, shearing, and torsional forces; flexural stresses and deflections of simple beams; columns; and combined stresses.

ENGR 161L STRENGTH OF MATERIALS LAB
Units: 1.00
UC:CSU 54.00 hours lab
Co-requisite: ENGR-161
Presents physical and engineering properties of materials resulting from tension, shear stresses, compression, bending, hardness, torsion, impact, and combined loading in a laboratory setting. Also investigates column buckling, moment of inertia, beam deflection, flexure, and design beyond the elastic limit.
Associate in Arts Degree: English
The English associate degree provides students with a wide variety of intellectual skills while introducing them to a major source of cultural enrichment. The major includes both creative writing and literature courses. The creative writing courses provide instruction in multiple genres. The literature courses offer a broad range of types and periods of literature.

Student Learning Outcome:
– Appraise the contributions and relevance of literature.
– Apply multiple perspectives and critical thinking methods to analyze and interpret literature.

Program Requirements:
Units Required: 18

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<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
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<tr>
<td>ENGL-102</td>
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<td>Intermediate Composition, Literature and Critical Thinking</td>
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<td>OR</td>
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<tr>
<td>ENGL-102H</td>
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<td>Intermediate Composition, Literature and Critical Thinking - Honors</td>
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Plus three units from the following:

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<tr>
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<td>ENGL-251</td>
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Plus three units from the following:

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<tr>
<td>ENGL-260</td>
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Plus nine units from the following:

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<td>ENGL-270</td>
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<tr>
<td>ENGL-271</td>
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ENGL 071 BEGINNING READING AND WRITING SKILLS
Units: 3.00
54.00 hours lecture

Co-requisite: ENGL-071L

Improves writing at the sentence level and improves reading comprehension through study of nonfiction pre-college level texts. Also introduces the basics of the composition process. Units do not apply to the associate degree.

ENGL 071L BEGINNING READING AND WRITING SKILLS WORKSHOP
Units: 0.50
27.00 hours lab

Co-requisite: ENGL-071

Provides supplementary instruction and practice in sentence skills, reading comprehension, and the writing process for currently enrolled English 071 students. Offered pass/no-pass only. Units do not apply to the associate degree.

ENGL 081 INTERMEDIATE READING AND WRITING SKILLS
Units: 3.00
54.00 hours lecture

Prerequisite: ENGL-071 or placement as determined by the COC English assessment process.

Improves writing at the paragraph level by focusing on structure, mechanics, and editing. Familiarizes students with source-based compositions. Emphasizes pre-college level reading of fiction and nonfiction with attention to formal responses to reading. Units do not apply to the associate degree.

ENGL 091 INTRODUCTION TO COLLEGE READING AND WRITING
Units: 3.00
54.00 hours lecture

Prerequisite: ENGL-081 or placement as determined by the COC English assessment process.

Prepares students to write well-organized, unified and coherent essays for a college audience and teaches critical reading skills for college-level reading material. No credit if taken after ENGL-094 or ENGL-096.
ENGL 094 INTRODUCTION TO TECHNICAL READING AND WRITING
Units: 3.00
54.00 hours lecture
Prerequisite: ENGL-081 or placement as determined by the COC English assessment process.
Develops the reading and writing skills needed to be successful in the workplace, including the rhetorical principles and compositional practices necessary for writing effective business letters, memos, resumes, instructions, proposals, annotated bibliographies, and reports. No credit if taken after ENGL-091.

ENGL 096 ACCELERATED PREPARATION FOR COLLEGE READING AND WRITING
Units: 4.00
72.00 hours lecture
Prerequisite: ENGL-071 or placement as determined by the COC English assessment process.
Provides an accelerated approach to prepare students for transfer-level English composition by focusing on writing strategies for well-organized, unified, and coherent college essays and critical reading skills for interpreting college-level reading material.

ENGL 101 ENGLISH COMPOSITION
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGL-091, ENGL-094, ENGL-096, ESL-100 or placement as determined by the COC English assessment process.
Builds expository writing and critical reading skills through the composition of well-organized, full-length essays containing properly documented evidence and the analysis and evaluation of college-level readings.

ENGL 101H HONORS ENGLISH COMPOSITION
Units: 4.00
UC:CSU 72.00 hours lecture
Prerequisite: ENGL-091, ENGL-094, ENGL-096, ESL-100 or placement as determined by the COC English assessment process.
Principles and methods of expository writing, with reading and analysis of expository prose and creative literature. The honors component requires expanded and more complex reading and writing assignments.

ENGL 102 INTERMEDIATE COMPOSITION, LITERATURE AND CRITICAL THINKING
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGL-101 or ENGL-101H
Builds on the critical thinking, reading, and writing practice begun in English 101, including critical analysis, interpretation, and evaluation of literary works, along with writing of argumentative essays about literary works.

ENGL 102H INTERMEDIATE COMPOSITION, LITERATURE AND CRITICAL THINKING - HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGL-101 or ENGL-101H
Builds on the critical thinking, reading, and writing practice begun in English 101, including critical analysis, interpretation, and evaluation of literary works, along with writing of argumentative essays about literary works. Honors work challenges students to be more analytical and creative through expanded assignments such as more in depth engagement with and application of literary theory.

ENGL 103 CRITICAL READING, WRITING AND THINKING
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGL-101 or ENGL-101H
Examines the principles of critical thinking as applied to writing and reading arguments on complex issues. Focuses on close textual analysis, argumentative writing, and logical reasoning.

ENGL 105 INTRODUCTION TO CREATIVE WRITING
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGL-101 or ENGL-101H
Focuses on writing and analysis of poetry, short stories, and plays. Students learn to develop ideas with an awareness of style and the manipulation of formal elements.

ENGL 106 CREATIVE WRITING - NONFICTION
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGL-101 or ENGL-101H
Students study and write nonfiction prose, emphasizing description and narration through the composition of memoirs and personal essays. Writing practice stresses the writer's awareness of his or her own style and the manipulation of stylistic elements.
ENGL 108 CREATIVE WRITING - POETRY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
*Prerequisite: ENGL-101 or ENGL-101H*  
Presents elements of poetry and advanced practice in the writing of poems, emphasizing the writer’s awareness of his or her own style and the manipulation of formal and stylistic elements. Includes analysis of selected published writings.

ENGL 109 CREATIVE WRITING - SHORT STORIES  
Units: 3.00  
UC:CSU 54.00 hours lecture  
*Prerequisite: ENGL-101 or ENGL-101H*  
Presents the elements of short fiction and advanced practice in writing short stories, emphasizing the writer’s awareness of his or her own style and the manipulation of formal and stylistic elements.

ENGL 111 INTRODUCTION TO LINGUISTICS  
Units: 3.00  
UC:CSU 54.00 hours lecture  
*Prerequisite: ENGL-101 or ENGL-101H*  
Introduces the theory and methods of linguistics, with an emphasis on the structure, function, and history of language. Includes a study of language acquisition, language change, and the sociology and psychology of language.

ENGL 122 LITERARY MAGAZINE PRODUCTION  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Introduces literary magazine production, culminating in the publication of a creative arts magazine. Includes reading, evaluating, and editing literary manuscripts and artistic submissions for publication in a variety of formats.

ENGL 135 LITERATURE AND FILM  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Explores the complex interplay between literature and film by studying the conventions and characteristics, terms and concepts, and critical theories in both fields.

ENGL 204 TECHNICAL REPORT WRITING  
Units: 3.00  
UC:CSU 54.00 hours lecture  
*Prerequisite: ENGL-101 or ENGL-101H*  
Focuses on the writing of reports and accompanying documents required in professional or vocational environments, including proposals, summaries, memoranda and research skills.

ENGL 225 CHILDREN’S LITERATURE  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Introduces literature written for children, with emphasis on analysis and evaluation, including cultural, psychological and literary contexts.

ENGL 250 BRITISH LITERATURE I  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Surveys British literature from Anglo-Saxon period to the end of the Neoclassic era.

ENGL 251 BRITISH LITERATURE II  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Surveys British literature from 1800 to the present.

ENGL 260 AMERICAN LITERATURE I  
Units: 3.00  
UC:CSU 54.00 hours lecture  
A survey of the major movements and genres of American literature from its beginnings through the Civil War.

ENGL 261 AMERICAN LITERATURE II  
Units: 3.00  
UC:CSU 54.00 hours lecture  
A survey of American literature from 1860 to the present.

ENGL 262 AMERICAN MULTICULTURAL LITERATURE  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Surveys of various genres of multicultural literature of the United States, addressing issues of voice, agency and the construction of American identity across racial, ethnic, regional, and gender boundaries in the cultural context of a diverse country.

ENGL 263 INTRODUCTION TO POETRY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Introduces the elements of poetry in selected poems in English representing a diversity of voices, emphasizing the discovery of meaning by reading analytically. Major poetic forms are examined, along with aspects of imagery, symbolism, figurative language, rhythms and sounds.
ENGL 264 STUDY OF FICTION
Units: 3.00
UC:CSU 54.00 hours lecture
Study of selected prose fiction from different times and places in Western civilization. Emphasis on short fiction of the nineteenth and twentieth centuries plus one novel. Through close reading and discussion, students learn to analyze and interpret prose narratives.

ENGL 270 INTRODUCTION TO AFRICAN-AMERICAN LITERATURE
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys of African American literature from the 1700s to the present, including poetry, fiction, autobiography, essays, drama and oral literature.

ENGL 271 MYTHOLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Presents a multicultural look at basic themes and archetypes in mythology, including creation, the female and male divine, heroic quest, the trickster and sacred places.

ENGL 272 THE BIBLE AS LITERATURE
Units: 3.00
UC:CSU 54.00 hours lecture
Reading and discussion of selected books of the Old and New Testaments: saga, myth, epic, story, historical writing, poetry, wisdom literature, prophecy, parables, letters and proverbs.

ENGL 273 WORLD LITERATURE I
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys world literature in translation from ancient times to the Middle Ages, including literature from the Middle East, Greece, Rome, China, Japan, India and Africa.

ENGL 274 WORLD LITERATURE II
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys world literature in translation from the Renaissance to modern times, including the literature of Europe, Russia, China, Japan, Africa and Latin America.

ENGL 275 SHAKESPEARE
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the principles of Shakespearean poetry and drama, including detailed reading of selected poems, comedies, tragedies and histories.

ENGL 280 WOMEN’S LITERATURE
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys literature written by women from diverse cultural backgrounds throughout various literary periods.

ENGL 281 INTRODUCTION TO SCIENCE FICTION
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces fantasy and science fiction as literature, emphasizing the history and traditions of the genre, the use of mythology, and the political, philosophical and social commentary in works studied.
ENGLISH AS A SECOND LANGUAGE

The ESL program offers beginning, intermediate, and advanced level courses providing essential language skills aimed at preparing non-native speakers of English for college-level work. An associate degree is not available in English as a second language.

ESL 060 COLLEGE WRITING AND GRAMMAR I
Units: 3.00
54.00 hours lecture
Prerequisite: NC.ESL-4A or appropriate placement as determined by the COC ESL or Noncredit placement process.
Develops reading, writing and grammar skills designed to move non-native speakers of English toward college-level work. Offered pass/no-pass only. Units do not apply to the associate degree.

ESL 061 COLLEGE LISTENING AND SPEAKING I
Units: 3.00
54.00 hours lecture
Provides practice in speaking in informal college situations. Focuses on listening, speaking and pronunciation through extensive practice in common college situations. Offered pass/no-pass only. Units do not apply to the associate degree.

ESL 070 COLLEGE WRITING AND GRAMMAR II
Units: 3.00
54.00 hours lecture
Prerequisite: ESL-060 or NC.ESL-4B or COC Credit or Noncredit placement test
Continued development of reading, writing and grammar skills necessary for college-level work. Offered pass/no-pass only. Units do not apply to the associate degree.

ESL 071 COLLEGE LISTENING AND SPEAKING II
Units: 3.00
54.00 hours lecture
Provides extensive practice in oral communication in both formal and informal college situations. Develops listening strategies. Offered pass/no-pass only. Units do not apply to the associate degree.

ESL 080 COLLEGE WRITING AND GRAMMAR III
Units: 3.00
54.00 hours lecture
Prerequisite: ESL-070 or appropriate placement as determined by the COC placement process.
Focuses on non-personal paragraph and short essay writing, including the writing process and more advanced grammar. Units do not apply to the associate degree.

ESL 081 COLLEGE LISTENING AND SPEAKING III
Units: 3.00
54.00 hours lecture
Provides intensive practice in academic listening, note-taking and speaking skills. Focuses on fluency. Offered pass/no-pass only. Units do not apply to the associate degree.

ESL 083 COLLEGE READING AND DISCUSSION III
Units: 3.00
54.00 hours lecture
Prerequisite: ESL-070 or appropriate placement by the COC ESL placement process.
Develops reading skills, vocabulary building skills, and discussion techniques through analysis of fiction and non-fiction materials.

ESL 091 ACCENT REDUCTION
Units: 3.00
54.00 hours lecture
Focuses on accent reduction for non-native speakers of English. Course covers discrete sounds and phonemes as well as stress and intonation, aural discrimination, and sound patterns reproduction. Offered pass/no-pass only. Units do not apply to the associate degree.

ESL 100 COLLEGE READING AND WRITING IV
Units: 4.00
UC:CSU 72.00 hours lecture
Prerequisite: ESL-080 and 083 or appropriate placement as determined by the COC ESL placement process.
Reading, composition, and grammar for advanced non-native speakers, designed to prepare students for transfer-level English composition courses, including complex sentence patterns and researched multi-paragraph essays.
ENVIRONMENTAL SCIENCES

The Environmental Sciences focus on understanding the relationships between nature and humanity.

The courses offered provide the necessary background knowledge and training for students to successfully transfer into prominent four-year colleges and universities in the fields of Environmental Studies and Sciences. Environmental scientists are needed to develop sustainable solutions to global problems currently facing our society.

An associate degree is not currently available in Environmental Sciences.

ENVRMT 101 INTRODUCTION TO ENVIRONMENTAL STUDIES
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the use of the Earth's natural resources by human civilizations; the roles that economics, ethics, law, history, politics, culture and gender inequity have played in resource use and distribution; as well as career opportunities in environmental studies.

ENVRMT 103 INTRODUCTION TO ENVIRONMENTAL SCIENCE
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Provides students with an understanding of the natural processes operating in the world. Explores environmental processes associated with society and emphasizes the scientific method, elements of statistics and sampling, and the completion of research-based experimental studies along with required field trips.

ENVRMT 104 ENERGY RESOURCES AND CONSERVATION
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces a quantitative survey of current energy resources, alternate methods of energy generation, and various energy conservation methods using scientific inquiry, including practical applications relevant to today's economy and technology. Field trips required.

FIRE TECHNOLOGY

Associate in Science Degree: Fire Technology - In-Service
This degree is for the fire service professional who wishes to advance within the fire service. Upon completing the degree program, fire service professionals will further their knowledge in the following areas: Incident Command System 200 and 300, fire investigation, fire command, fire management and fire prevention officer training. Promotional opportunities include Fire Apparatus operator, Fire Captain, Battalion Chief, Division Chief, Assistant Fire Chief and Fire Chief.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for fire service professionals in incident command system, fire investigation, fire command, fire management, and fire prevention.

Program Requirements:
Units Required: 27

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRETC-102</td>
<td>Fire Prevention Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-103</td>
<td>Fire Protection Equipment and Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-104</td>
<td>Building Construction for Fire Protection</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-105</td>
<td>Fire Behavior and Combustion</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Plus 15 units from the following:</td>
<td></td>
</tr>
<tr>
<td>FIRETC-106</td>
<td>Fire Company Organization and Procedures</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-107</td>
<td>Fire Apparatus and Equipment</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-108</td>
<td>Fire Hydraulics</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-123</td>
<td>Fire Investigation</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-125</td>
<td>Firefighting Tactics and Strategy</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-201</td>
<td>Incident Command System 200</td>
<td>1.0</td>
</tr>
<tr>
<td>FIRETC-202</td>
<td>I-300 Intermediate (ICS) Incident Command System</td>
<td>0.25 – 4.0</td>
</tr>
</tbody>
</table>

Associate in Science Degree: Fire Technology - Pre-Service
The Fire Technology - Pre-Service degree/certificate program prepares students for careers in the fire service, either public or private. After completion of the program, students will have a basic understanding in fire protection, prevention and behavior, fire company organization and procedures, fire hydraulics, wildland fire behavior and fire investigation among other areas. HLHSCI 151 (EMT) may be waived if the student has successfully completed EMT training; however, two additional elective courses must be taken in lieu of HLHSCI 151.
Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge of fire organization, fire prevention, fire equipment and systems, building construction for fire protection, fire behavior and combustion and emergency medical technician.

Program Requirements:
Units Required: 32

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Units</th>
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</thead>
<tbody>
<tr>
<td>FIRETC-101</td>
<td>Fire Protection Organization</td>
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</tr>
<tr>
<td>FIRETC-102</td>
<td>Fire Prevention Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-103</td>
<td>Fire Protection Equipment and Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-104</td>
<td>Building Construction for Fire Protection</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-105</td>
<td>Fire Behavior and Combustion</td>
<td>3.0</td>
</tr>
<tr>
<td>HLHSCI-151</td>
<td>Emergency Medical Technician I</td>
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</table>

Plus nine units from the following:

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<thead>
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<tr>
<td>FIRETC-106</td>
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</tr>
<tr>
<td>FIRETC-107</td>
<td>Fire Apparatus and Equipment</td>
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</tr>
<tr>
<td>FIRETC-108</td>
<td>Fire Hydraulics</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-109</td>
<td>Principles of Fire and Emergency Services &amp; Survival</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-110</td>
<td>Wildland Fire Behavior</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-120</td>
<td>Hazardous Materials</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-123</td>
<td>Fire Investigation</td>
<td>3.0</td>
</tr>
<tr>
<td>FIRETC-125</td>
<td>Firefighting Tactics and Strategy</td>
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</tr>
<tr>
<td>HLHSCI-045</td>
<td>Emergency Medical Services Career Preparation</td>
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Certificate of Achievement:
Fire Technology - Pre-Service

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge of fire organization, fire prevention, fire equipment and systems, building construction for fire protection, fire behavior and combustion and emergency medical technician.

Program Requirements:
Units Required: 23

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRETC-101</td>
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</tr>
<tr>
<td>FIRETC-102</td>
<td>Fire Prevention Technology</td>
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<tr>
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<td>FIRETC-104</td>
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<td>3.0</td>
</tr>
<tr>
<td>FIRETC-105</td>
<td>Fire Behavior and Combustion</td>
<td>3.0</td>
</tr>
<tr>
<td>HLHSCI-151</td>
<td>Emergency Medical Technician I</td>
<td>8.0</td>
</tr>
</tbody>
</table>

Recommended electives:

<table>
<thead>
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<th>Units</th>
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</thead>
<tbody>
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<tr>
<td>FIRETC-125</td>
<td>Firefighting Tactics and Strategy</td>
<td>3.0</td>
</tr>
</tbody>
</table>

FIRETC 101 FIRE PROTECTION ORGANIZATION
Units: 3.0
CSU 54.00 hours lecture
Introduces fire services and fire protection careers, including fire department organization, firefighting tactics, fire prevention, tools and equipment, alarm systems, and water systems.

FIRETC 102 FIRE PREVENTION TECHNOLOGY
Units: 3.0
CSU 54.00 hours lecture
Provides fundamental knowledge relating to the field of fire prevention, including history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use and application of codes and standards, plans review, fire inspections, fire and life safety education, and fire investigation.

FIRETC 103 FIRE PROTECTION EQUIPMENT AND SYSTEMS
Units: 3.0
CSU 54.00 hours lecture
Provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable extinguishers.

FIRETC 104 BUILDING CONSTRUCTION FOR FIRE PROTECTION
Units: 3.0
CSU 54.00 hours lecture
Examines building construction as it relates to fire protection, classification of occupancy and types of construction with emphasis on fire protection features including building equipment, facilities, fire resistant materials and high-rise considerations.
FIRETC 105 FIRE BEHAVIOR AND COMBUSTION
Units: 3.00
CSU 54.00 hours lecture
Explores the theories and fundamentals of how and why fires start, spread and are controlled.

FIRETC 106 FIRE COMPANY ORGANIZATION AND PROCEDURES
Units: 3.00
CSU 54.00 hours lecture
Presents the role of the fire company officer in municipal fire departments. Topics include the relationship of the company officer to the organizational structure, as well as the responsibilities with regards to personnel supervision, evaluation, discipline, training, communication, fire apparatus, equipment maintenance, fire prevention, incident response and command, strategy and tactics, records and reports.

FIRETC 107 FIRE APPARATUS AND EQUIPMENT
Units: 3.00
CSU 54.00 hours lecture
Presents fire apparatus design including mobile and fixed apparatus, a review of construction specifications and performance capabilities, and the effective deployment, utilization and performance of equipment under emergency conditions.

FIRETC 108 FIRE HYDRAULICS
Units: 3.00
CSU 54.00 hours lecture
Presents fire service hydraulics' theory, formulas, and water supply, including hydraulics' laws as applied to the fire service.

FIRETC 109 PRINCIPLES OF FIRE AND EMERGENCY SERVICES SAFETY AND SURVIVAL
Units: 3.00
CSU 54.00 hours lecture
Introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout emergency services.

FIRETC 110 WILDLAND FIRE BEHAVIOR
Units: 3.00
CSU 54.00 hours lecture
Introduces principles related to wildland fire behavior such as weather, fuel and topographic factors.

FIRETC 120 HAZARDOUS MATERIALS
Units: 3.00
CSU 54.00 hours lecture
Provides an in-depth analysis of the principles of hazardous materials and chemical release incidents, including the utilization of personnel, equipment and control mechanisms.

FIRETC 123 FIRE INVESTIGATION
Units: 3.00
CSU 54.00 hours lecture
Examines methods of determining cause and origin of fire (accidental, suspicious, and incendiary), types of fires, related laws, introduction to arson and incendiaries, recognizing and preserving evidence, interviewing witnesses and suspects, arrest and detention procedures, court procedures and giving testimony.

FIRETC 125 FIREFIGHTING TACTICS AND STRATEGY
Units: 3.00
CSU 54.00 hours lecture
Examines the principles of fire control through utilization of personnel, equipment and extinguishing agents on the fire ground.

FIRETC 201 INCIDENT COMMAND SYSTEM 200
Units: 1.00 - CSU 16.94 hours lecture
Develops the necessary foundation for the student to participate as a member of a wildland fire incident, including the principles and features of ICS, an organizational overview, incident facilities, incident resources, and common responsibilities. Intended for fire personnel who understand the Incident Command System. REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.

FIRETC 202 I-300 INTERMEDIATE (ICS) INCIDENT COMMAND SYSTEM
Units: 0.25-4.00 - CSU 72.00 hours lecture
For fire personnel who have intermediate-level requirement for understanding the Incident Command System. A continuation of the ICS training for members of a wildland fire incident team. Designed for fire personnel.

FRENCH
(See Modern Language)
GENERAL STUDIES

GENSTU 050 ORIENTATION AND ASSESSMENT - LEARNING DISABILITIES
Units: 0.25
4.50 hours lecture
Introduces the student to the learning disabilities assessment process and the resource available, including the California Community College eligibility model, achievement and cognitive testing, learning difficulties, support services, study strategies and accommodations. Offered pass/no-pass only. Units do not apply to the associate degree.

GENSTU 081 COGNITIVE BASIC SKILLS - COMPUTER INSTRUCTION TECHNOLOGY
Units: 0.25-2.00
13.50-108.00 hours lab
Strengthens and retrains cognitive skills in areas of critical thinking, reasoning, communication, memory improvement, visual perception and language skills by use of computer assisted instruction and adaptive technology. Designed specifically for students with a verifiable acquired brain injury. Offered pass/no-pass only. Units do not apply to the associate degree.

GENSTU 082 INDIVIDUAL COMPUTER APPLICATIONS
Units: 0.25-2.00
13.50-108.00 hours lab
Designed to be a computer assisted support for students with disabilities enrolled in coursework other than English and math. Students are able to utilize computer programs, assistive technology, and the Internet in order to complete course assignments. Topics are taken from the student's regular course load, or from subject matter appropriate to the student's current or future employment. It is tutorial in nature and focuses on the utilization of computers, assistive technology devices, the Internet, a scanner, and selected software programs. Offered pass/no-pass only. Units do not apply to the associate degree.

GENSTU 090 INDIVIDUAL STUDIES - BLACKBOARD SUPPORT
Units: 0.25-2.00
13.50-108.00 hours lab
Provides Blackboard support for students with disabilities who are taking online or hybrid classes. Through small group tutoring, students develop strategies to be successful online students. Offered pass/no-pass only. Units do not apply to the associate degree.

GENSTU 091 INDIVIDUAL STUDIES - LANGUAGE SKILLS
Units: 0.25-2.00
13.50-108.00 hours lab
Designed for DSPS students as a support in mainstream English and language-related courses other than mathematics. It is tutorial in nature and focuses on the utilization of computers, assistive technology devices, the Internet, a scanner, and selected software programs. Computer applications are taken from topics based on the students coursework to provide additional computer support or enhance basic skills. Offered pass/no-pass only. Units do not apply to the associate degree.

GENSTU 092 INDIVIDUAL STUDIES - MATHEMATICS SKILLS
Units: 0.25-2.00
13.50-108.00 hours lab
Designed for DSPS students who are enrolled in mainstream college math classes and whose disability result in educational limitations in math. The course offers small group tutoring for students. Students must be concurrently enrolled in either MATH-025, Arithmetic, MATH-026 Arithmetic-Computer Assisted, MATH-058 Algebra Preparation I, MATH-059 Algebra Preparation Computer Assisted, MATH-060 Elementary Algebra, MATH-070 Intermediate Algebra, or BUS-144 Business Math. Students will learn strategies to enhance math concepts and computation skills. Offered pass/no-pass only. Units do not apply to the associate degree.

GENSTU 104 TUTORING METHODS
Units: 1.00
CSU 6.00 hours lecture, 36.00 hours lab
Prerequisite: Students must meet minimum qualifications for tutor position in the TLC Lab
Presents tutoring techniques designed to improve the tutees problem-solving, computational, listening, note-taking, and test-taking skills. Practice in individual tutoring under supervision. Offered pass/no-pass only.
GEOGRAPHY

Geography is the broad spatial science that studies the location, distribution, and interaction among all physical and cultural features of Earth. These studies include physical processes that create and modify landforms, affect daily weather and long-term climates, and influence the setting for all biologic phenomena such as plants, animals and humans. These studies also include the distribution and interaction of cultural phenomena such as population, language, religion, economics, politics, diseases, agriculture, migration, resources, urban patterns, ethnic studies, and the many short-term and long-term effects of humans on the environment. The geography program also includes the study and use of graphs, maps, and geospatial digital data retrieval and cartographic technology.

Through lecture, lab, and field study, the geography program provides insight, perspective, and application required to assist citizens in making well-informed decisions involving the inter-relationships between the natural physical environment and the systems and networks of human societies.

Associate in Arts Degree: Geography for Transfer

The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an “associate degree for transfer,” a newly established variation of the associate degrees traditionally offered at a California community college. The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete a minimum of 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor’s degree (unless the major is a designated “high-unit” major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements. At the time of catalog publication, a student may earn an AA-T in Geography. Additional majors are being developed. Please see a counselor or visit www.canyons.edu for more information.

Student Learning Outcome:
Students will be able to locate and analyze the distribution of physical and cultural features in the world, relate them to modifying processes, and assess variables that influence resulting spatial patterns.

Program Requirements:

<table>
<thead>
<tr>
<th>Units Required: 18</th>
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<tbody>
<tr>
<td>GEOG-101 Physical Geography ............ 3.0</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>GEOG-101H Physical Geography - Honors .... 3.0</td>
</tr>
<tr>
<td>GEOG-102 Cultural Geography ............ 3.0</td>
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</table>

Plus six units from the following:

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<tbody>
<tr>
<td>GEOG-101L Physical Geography Lab .......... 1.0</td>
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<tr>
<td>GEOG-103 Introduction to Meteorology .... 3.0</td>
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<tr>
<td>GEOG-104 World Regional Geography ....... 3.0</td>
</tr>
<tr>
<td>GIS-101 Introduction to Geographic Information Systems .......... 3.0</td>
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</tbody>
</table>

Plus six units from the following:

<table>
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<tr>
<th>Units</th>
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<tbody>
<tr>
<td>ANTHRO-103 Cultural Anthropology ............ 3.0</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>ANTHRO-103H Cultural Anthropology – Honors ... 3.0</td>
</tr>
<tr>
<td>GEOL-101 Physical Geology ............ 3.0</td>
</tr>
</tbody>
</table>

GEOG 101 PHYSICAL GEOGRAPHY

Units: 3.00
UC:CSU 54.00 hours lecture
Examines the basic physical elements of Earth and the processes that affect climate, water, soils, vegetation, landforms, how humans and the environment interrelate, the fundamentals of Earth/Sun relationships and cartography.

GEOG 101H PHYSICAL GEOGRAPHY - HONORS

Units: 3.00
UC:CSU 54.00 hours lecture
Recommended Preparation: ENGL-101 or ENGL-101H
Examines the basic physical elements of Earth and the processes that affect climate, water, soils, vegetation, landforms, how humans and the environment interrelate, the fundamentals of Earth/Sun relationships, and cartography. Honors work challenges students to be more analytical and creative through expanded assignments that include additional critical thinking, research, and presentation techniques.
GEOG 101L PHYSICAL GEOGRAPHY LAB
Units: 1.00
UC:CSU 54.00 hours lab
Co-requisite: GEOG-101 or GEOG-101H
Focuses on observations, experiments, and demonstrations designed to familiarize students with techniques utilized by physical geographers. Field trips may be required.

GEOG 102 CULTURAL GEOGRAPHY
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the location, distribution, and inter-relationships among cultural patterns which may include population, language, religion, economics, migration, cities, politics, and human effects on the natural environment. Map studies and field trips may be included.

GEOG 103 INTRODUCTION TO METEOROLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Introduction to the mechanics and processes of the atmosphere, including general and severe weather, weather forecasting, climates, and the complex natural and human influences on global climate change. Explores the relationship of climate and weather to the solid Earth and the world oceans. May include field work and field trips.

GEOG 104 WORLD REGIONAL GEOGRAPHY
Units: 3.00
UC:CSU 54.00 hours lecture
C-ID GEOG-125
Examines the interdependency, connectivity, and diversity of the world’s regions, while exploring the processes of global change and their interactions with the environmental and social identities of regional landscapes, cities, and peoples.

GEOGRAPHIC INFORMATION SYSTEMS

Geographic Information System (GIS) is a computer-based geospatial management system that allows the user to visualize, question, analyze, interpret, and understand complex data in order to reveal relationships, patterns, and trends. The study of GIS leads to increased efficiency, improved communication, and all-around better decision making in an almost endless variety of fields and disciplines.

GIS 101 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS
Units: 3.00
UC:CSU 54.00 hours lecture
C-ID GEOG 155
Introduces the fundamental concepts, methods, and applications of Geographic Information Systems (GIS) and its role in spatial analysis and decision making.
GEOLOGY

Geology is the science that studies the earth. These studies include earth's formation and composition, the processes that create resources such as fuels, minerals, and construction materials, the energy systems that modify landforms on the crust, the historical evolution of life and global climates, and the continuing interaction between humans and the natural environment.

Through lecture, lab, and field study, the geology program provides insight, perspective, and application required to assist citizens in making well informed decisions concerning earth-related issues such as water resources, building and engineering, natural disasters, agriculture and ocean resources, and the long-term effects on our planet from an increasing population. An Associate degree is not available in geology.

GEOL 100 PHYSICAL GEOLOGY LAB
Units: 1.00
UC:CSU 54.00 hours lab
Co-requisite: GEOL-101
Provides the principles and tools of direct and remote observation of Earth's crustal evolution and surface processes through analysis of minerals, rocks, fossils, topographic and geologic maps, cross sections and other geologic tools. Field work may be required.

GEOL 101 PHYSICAL GEOLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Explores the basic features of the exterior and interior of the earth's crust, the materials of which those features are composed, and the geologic processes which produced them. Includes specific consideration of minerals, rocks, volcanic activity, running water erosion, soils, ground water activity, land sliding, glaciations, coastlines, wind activity, deserts, plate tectonics, mountains, faults and earthquakes, metamorphism and geologic time.

GEOL 102 HISTORICAL GEOLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Studies the evolution of the earth's crust and the earth's plant and animal life from the beginnings to the present as revealed in geologic strata and in the fossil record. Emphasizes the evolution of the North American continent, its landforms, contiguous oceans, animals and plants, including some study of the principles of paleontology. Includes megascopic and microscopic laboratory study and evaluation of Earth's materials and the evolution of Earth and its life forms with particular emphasis on fossils and sedimentary rocks; includes study and use of topographic maps, geologic tools, geologic maps, geologic time scales, cross-sections and columns. Fieldwork may be required to collect earth materials and to recognize and study existing or ongoing geologic processes, landforms and structures to interpret and evaluate the history of the Earth.

GEOL 104 NATURAL DISASTERS
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the earth processes, forces, and systems that cause natural disasters, including volcanic eruptions, earthquakes, hurricanes, tsunamis, floods, mass extinction, and landslides.

GEOL 105 GEOLOGY OF CALIFORNIA
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the major geomorphic provinces of California, including their geologic history, topography, geologic structures, rock units, natural resources, and possible environmental risks. Field trips may be required.

GEOL 109 EARTH SCIENCE
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the terminology and basic concepts of the fields of earth science, including astronomy, geology, meteorology, and oceanography. Examines Earth's changing geologic systems and the importance of earth science phenomenon to daily life. UC credit limitation: No credit if taken after a college-level course in astronomy, geology, meteorology or oceanography.

GEOL 218 INTRODUCTION TO OCEANOGRAPHY
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
A study of the history of oceanography, geological, chemical, biological and physical oceanography. Laboratories will include both in-class and required field studies - which may include times outside of assigned laboratory times.

GERMAN

(See Modern Language)
GERONTOLOGY

Certificate of Specialization: Skills for Healthy Aging Resources and Programs (SHARP)
As Baby Boomers age, and as they continue to represent a growing percentage of the U.S. population aged 65 and older, the nation faces an increasing use of social services. The longest of which being medical treatment and hospitalization. However, with proper education and training, older adults can effectively decrease their risks of many common injuries and increase their quality of life. Evidence Based Health Promotion (EBHP) is gaining greater recognition among health care professionals working with older adults as a research based model supporting evidence of how, with proper training and education, older adults can decrease the probability of suffering the negative effects of common health risks and increase their chance of aging healthy. Integrating the documented techniques and procedures of EBHP, the SHARP Certificate will provide an intensive semester length program to train individuals as EBHP group facilitators who can teach older adult populations in home or organizational/agency settings the skills necessary to age healthy.

Student Learning Outcome:
Students will be able to compare and contrast principles, theories, and methods incorporated in Evidence Based Health Promotion (EBHP) programs and demonstrate applied techniques associated with maintaining healthy aging among older adults. Design and implement an EBHP activity plan for older adults.

Program Requirements:
Units Required: 12

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>GERO-101</td>
<td>Introduction to Healthy Aging</td>
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<tr>
<td>GERO-102</td>
<td>Health Promotion: Behavior Change Theories and Practices</td>
<td>3.0</td>
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<tr>
<td>GERO-103</td>
<td>Health Promotion: Program Implementation</td>
<td>3.0</td>
</tr>
<tr>
<td>GERO-104</td>
<td>Health Promotion: Fieldwork Practicum</td>
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Plus a minimum of one unit from the following:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CWE-188GERO</td>
<td>Cooperative Work Experience Education</td>
<td>1.0 - 4.0</td>
</tr>
</tbody>
</table>

GERO 101 INTRODUCTION TO HEALTHY AGING
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the biological, psychological, and social issues associated with the aging process and reviews aspects of healthy aging among older adults.

GERO 102 HEALTH PROMOTION: BEHAVIOR CHANGE THEORIES AND PRACTICES
Units: 3.00
CSU 54.00 hours lecture
Co-requisite: GERO-101
Examines behavior change, processes, and motivational theories, as well as negotiation and motivational interview techniques, group dynamics, and communication skills among older adults.

GERO 103 HEALTH PROMOTION: PROGRAM IMPLEMENTATION
Units: 3.00
CSU 54.00 hours lecture
Co-requisite: GERO-101 and GERO-104
Introduces specific Evidence Based Health Promotion (EBHP) programs for older adults that address issues of chronic disease self-management, physical activity, falls prevention, depression care management, and medication management while discussing program instruction and administration.

GERO 104 HEALTH PROMOTION: FIELDWORK PRACTICUM
Units: 2.00
CSU 36.00 hours lecture
Co-requisite: GERO-103 and Cooperative Work Experience
Capstone course to the Skills for Healthy Aging Resources and Programs (SHARP) Certificate by employing fieldwork methodology and program skills in an Evidence Based Health Promotion (EBHP) setting working with older adults.
GRAPHIC AND MULTIMEDIA DESIGN

Associate in Arts Degree: Graphic & Multimedia Design – Graphic Design
This program offers an associate degree in Graphic and Multimedia Design with an emphasis in graphic design. The primary goal of this degree is to provide students with a foundation of knowledge and technical abilities required of a graphic design position. Elective courses provide preparedness to specific industry requirements. All courses are sequenced to facilitate transferability to an art or design program at a four-year university. Along with the transferability aspect of this program, the associate degree in Graphic and Multimedia Design with an emphasis in graphic design will also provide students with basic skills and competencies.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in a graphic design position.

Program Requirements:
Units Required: 33

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>ART-110</td>
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<tr>
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<tr>
<td>GMD-101</td>
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<td>GMD-105</td>
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<tr>
<td>GMD-120</td>
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<td>3.0</td>
</tr>
<tr>
<td>GMD-242</td>
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</tr>
</tbody>
</table>

Certificate of Achievement: Graphic & Multimedia Design – Graphic Design
The Graphic Design certificate develops students' creative and technical skills by providing hands-on training in current technologies. The two-year program prepares students for employment in graphic design, graphic arts, computer illustration, digital photography and art direction.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in a multimedia position.

Program Requirements:
Units Required: 22

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>GMD-101</td>
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<td>3.0</td>
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<td>GMD-242</td>
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</table>

Plus a minimum of one unit from the following:
CWE-188 GMD Cooperative Work Experience Education 1.0 - 4.0

Associate in Arts Degree: Graphic & Multimedia Design – Multimedia
The primary goal of the Graphic and Multimedia Design degree with emphasis in multimedia is to provide students with a foundation of knowledge and technical abilities required of a multimedia position. Elective courses provide preparedness to specific industry requirements. All courses are sequenced to facilitate transferability to an art or design program at a four-year university. Along with the transferability aspect of this program, the associate degree in Graphic and Multimedia Design with an emphasis in multimedia will also provide students with a set of basic skills and competencies.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in a multimedia position.

Program Requirements:
Units Required: 33

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ART-110</td>
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<td>ART-111</td>
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<tr>
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<tr>
<td>GMD-277</td>
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<tr>
<td>GMD-173</td>
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<tr>
<td>CWE-188</td>
<td>1.0 - 4.0</td>
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</table>

College of the Canyons
Certificate of Achievement: Graphic & Multimedia Design – Multimedia

Multimedia is a rapidly growing industry combining video, sound, animation and graphics with digital technology into an interactive environment. The multimedia certificate develops students’ creative and technical skills by providing hands-on training in current technologies. The two-year program prepares students for employment in Web design, interface design, motion graphics, digital photography, graphic arts, digital video production and game design.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in a multimedia position.

Program Requirements:
Units Required: 22

<table>
<thead>
<tr>
<th>Course Code</th>
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<td>GMD-105</td>
<td>Digital Imaging</td>
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<td>GMD-120</td>
<td>History of Graphic Design</td>
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</tr>
<tr>
<td>GMD-145</td>
<td>Type and Typography</td>
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<td>GMD-173</td>
<td>Motion Design</td>
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<td>GMD-177</td>
<td>Web Page Design I</td>
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<tr>
<td>GMD-277</td>
<td>Web Page Design II</td>
<td>3.0</td>
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Plus a minimum of one unit from the following:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CWE-188</td>
<td>GMD Cooperative Work Experience</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>1.0</td>
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</tbody>
</table>

GMD 041 INTRODUCTION TO INDESIGN
Units: 1.00
13.50 hours lecture, 13.50 hours lab
Introduces page layout for print media using Adobe InDesign. Students learn how to utilize layout features for both text and images. Basic computer knowledge is assumed. Offered pass/no-pass only.

GMD 044 INTRODUCTION TO ILLUSTRATOR
Units: 1.00
13.50 hours lecture, 13.50 hours lab
Introduces computer illustration using Adobe Illustrator, including how to create images, use type and layout features, use filters, and format images for print, Web and multimedia formats. Basic computer knowledge is assumed. Offered pass/no-pass only.

GMD 047 INTRODUCTION TO PHOTOSHOP
Units: 1.00
13.50 hours lecture, 13.50 hours lab
Introduces digital imaging using Adobe Photoshop, including how to composite, work with layers, select pixels and adjust digital images. Basic computer knowledge is assumed. Offered pass/no-pass only.

GMD 094L GRAPHICS LAB
Units: 1.00
54.00 hours lab
A lab for the currently-enrolled graphics student who wishes to increase skills through the use of the graphics lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in printed schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in the graphics program. Offered pass/no-pass only. Units do not apply to the associate degree.

GMD 097L MULTIMEDIA LAB
Units: 1.00
54.00 hours lab
A lab for the currently-enrolled graphics student who wishes to increase skills through the use of the graphics lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in printed schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in the graphics program. Offered pass/no-pass only. Units do not apply to the associate degree.

GMD 101 INTRODUCTION TO DIGITAL MEDIA
Units: 3.00
UC:CSU 36.00 hours lecture, 54.00 hours lab
Introduces the concepts and practices applicable in digital media, including digital imaging, audio, video, graphic design and multimedia. Includes instruction in several software applications.

GMD 105 DIGITAL IMAGING
Units: 3.00
UC:CSU 36.00 hours lecture, 54.00 hours lab
Introduces the fundamental concepts, terminology, techniques, and applications of digital imaging using industry standard software such as Adobe Photoshop. Through application of theory, students explore both the technical aspects of image manipulation, as well as the artistic aspects of creating images. Note: In order to access the multimedia and graphics labs outside of class time, students must register for GMD-094L or GMD-097L.
GMD 120 HISTORY OF GRAPHIC DESIGN  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Surveys the origin and evolution of graphic design, including the development of typography, advertising, poster design, illustration, corporate identities and trademarks.

GMD 142 2-D COMPUTER ILLUSTRATION  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
Introduces methods, materials, and techniques of commercial illustration for magazines, books, editorials, and graphic communications. Emphasizes two-dimensional aspects of computer illustration using Adobe Illustrator and Adobe Photoshop.

GMD 144 GRAPHIC DESIGN I  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
Introduces the design of print graphics, covering various page layout formats and the fundamentals of typographic design. Includes instruction in several software applications.

GMD 145 TYPE AND TYPOGRAPHY  
Units: 3.00  
UC:CSU 36.00 hours lecture, 54.00 hours lab  
Introduces the history, development and use of type and typography in all areas of communication arts. Traditional and contemporary methods for creating type and typography are combined to provide an understanding of the aesthetic qualities of letterforms. Basic computer knowledge is assumed.

GMD 173 MOTION DESIGN  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
The fundamental concepts, terminology, techniques and applications of motion-based design using industry standard software such as Adobe After Effects. Through application of theory, students will explore the basic principles of compositing, animation, typography, audio, video and graphics. Note: In order to access the multimedia computer lab outside of class time, students must register for GMD-097L.

GMD 242 GRAPHIC DESIGN II  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
Introduces advanced visual communication skills in print graphics, using graphic software applications to explore logo, advertising and publication design.

GMD 277 WEB PAGE DESIGN II  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
Recommended preparation: GMD-177  
The advanced concepts, terminology, techniques and applications of Web page design using industry standard software such as Macromedia Dreamweaver. Through application of theory, students will explore the basic principles of dynamically driven Websites using CSS (Cascading Style Sheets) while advancing interactive design, graphics, type, color, and layout skills. Note: In order to use the multimedia computer lab outside of class time, students must register for GMD-097L.
HEALTH SCIENCE

Certificate of Specialization: Emergency Medical Technician I
Prepares students for certification and employment as an Emergency Medical Technician (also known as EMT-Basic). Includes Emergency Department and ambulance clinical observations. Health clearance and background check required prior to start of clinical rotations. Upon successful completion, students are eligible to take the National Registry EMT-B examination. This course meets DOT objectives. May be repeated if used for legally mandated training.

Student Learning Outcome:
Students will be able to demonstrate proficiency in EMT skills and knowledge as required by state and local regulations.

Program Requirements:
Units Required: 8.0

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Hours Lecture</th>
<th>Hours Lab</th>
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<td>HLHSCI-151</td>
<td>Emergency Medical Technician I</td>
<td>8.0</td>
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<td>HLHSCI 046</td>
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<td>Introduction to the Health Professions</td>
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<td>HLHSCI 149</td>
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<td>HLHSCI 150</td>
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<td>HLHSCI 151</td>
<td>Emergency Medical Technician I</td>
<td>8.0</td>
<td>136.00</td>
<td>24.00</td>
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</table>

HLHSCI 100 HEALTH EDUCATION
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the physical, emotional and social dimensions of health, including physical fitness, nutrition, weight management, substance abuse, tobacco and alcohol use, diseases, sexuality, mental health, stress management, consumerism, environmental health, death and dying. UC credit limitation: HLHSCI-243, and HLHSCI-100 combined, maximum credit one course.

HLHSCI 101 INTRODUCTION TO THE HEALTH PROFESSIONS
Units: 3.00
CSU 54.00 hours lecture
Introduces students to a variety of health occupations, including roles and responsibilities, educational preparation requirements, health care career planning, and an overview of the US health system.

HLHSCI 149 NUTRITION FOR FITNESS AND BALANCED LIVING
Units: 2.00
UC:CSU 36.00 hours lecture
Examines the psycho-biological, cultural, social, cognitive, and environmental factors that influence a person’s eating and physical activity behaviors and body image. Provides practical strategies to promote healthy attitudes and behaviors.

HLHSCI 150 NUTRITION
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the study of food and nutrients throughout the lifespan and their impact on quality of life and disease prevention.

HLHSCI 151 EMERGENCY MEDICAL TECHNICIAN I
Units: 8.00
CSU 136.00 hours lecture, 24.00 hours lab
Prerequisite: Must be 18 years or older the first day the class meets and have completed an American Heart Association "BLS for the Healthcare Provider" course or HLHSCI 051 or present AHA BLS Healthcare Provider card to instructor the first day of class. Recommended Preparation: HLHSCI-046
Prepares students for certification and employment as an Emergency Medical Technician, including emergency department clinical experience and ambulance ride-along. Health clearance and background check required prior to start of clinical rotations. Upon successful completion, students are eligible to take the National Registry EMT examination. The course meets the U.S. Department of Transportation (DOT) National EMS Education Standards (DOT HS 811 077A, January 2009). May be repeated if used for legally mandated training.
HLHSCI 153 EMERGENCY MEDICAL TECHNICIAN REFRESHER
Units: 2.00
CSU 36.00 hours lecture
Prerequisite: HLHSCI-151 or current/lapsed EMT Certification
Satisfies Los Angeles County and State of California recertification for emergency medical technicians, including skills testing certification. May be repeated if used for legally mandated training. Course is based on United States Department of Transportation’s EMT-Basic Refresher National Standard Curriculum, DOT HS 808 624, September 1996.

HLHSCI 243 WOMEN AND HEALTH
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys past and current issues surrounding women’s health, including anatomy, sexuality/reproductive health, STI’s, disorders common to women, mental health, domestic violence, menopause and women in the health profession. UC credit limitation: HLHSCI-243 and PHYS-ED-100 combined, maximum credit one course.

HLHSCI 249 MEDICAL TERMINOLOGY
Units: 3.00
CSU 54.00 hours lecture
Comprehensive study of medical terminology with an emphasis on determining meanings by dividing words into their component parts. Basic anatomy and physiology are discussed. Correct spelling, pronunciation and meaning of common medical terms related to individual body systems, clinical procedures, laboratory tests and pathological conditions are covered.

HISTORY

Associate in Arts Degree: History

In a broad sense, history is the study and record of all human experience. It examines people, institutions, ideas and events through the past, develops cultural literacy, critical thinking and other useful skills while helping to plan for the future. By having knowledge of the origins and people of the past we are able to obtain a better understanding of ourselves as individuals and as a society.

History provides a solid fundamental preparation for careers in business, industry, government and education. It also serves as a preparation for law school, foreign service, international work, urban affairs, and library science.

Student Learning Outcome:
Students will be able to analyze and interpret the significance of specific historical events and time periods.

Program Requirements:
Units Required: 18

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<tr>
<td>HIST-101H</td>
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<tr>
<td>HIST-102</td>
<td>History of Western Civilization: The Modern Era</td>
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<td>HIST-111</td>
<td>United States History I</td>
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<td>United States History I - Honors</td>
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<td>HIST-191</td>
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<td>HIST-115</td>
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<tr>
<td>HIST-120</td>
<td>The Role of Women in the History of the United States</td>
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Plus three units from the following:

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
</table>

Plus three units from the following:
HIST 101 HISTORY OF WESTERN CIVILIZATION: THE PRE-INDUSTRIAL WEST
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the history of Western Civilization from earliest times to the 16th Century, including the development of economic, socio-political, and cultural institutions from pre-history to Riverine cultures of the Near East, Greco-Roman world and medieval and early modern Europe.

HIST 101H HISTORY OF WESTERN CIVILIZATION: THE PRE-INDUSTRIAL WEST HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: ENGL-101 or ENGL-101H
Surveys the history of Western Civilization from earliest times to the 16th Century, including the development of economic, socio-political, and cultural institutions from pre-history to Riverine cultures of the Near East, Greco-Roman world and medieval and early modern Europe. Additional reading, writing, critical thinking, and research techniques are required.

HIST 102 HISTORY OF WESTERN CIVILIZATION: THE MODERN ERA
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the history of Western Civilization from the 16th Century to the present period, including the economic, socio-political, and cultural developments in Europe, the Americas, and the emergent nations of the modern era.

HIST 111 UNITED STATES HISTORY I
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys American civilization, from the Pre-Columbian era through Reconstruction, emphasizing the political, cultural, economic, and social history of the United States. Meets Title 5 American Institutions U.S. History requirement for the associate degree.

HIST 111H UNITED STATES HISTORY I - HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Recommended Preparation: ENGL-101 or ENGL-101H
Surveys American civilization, from the Pre-Columbian era through Reconstruction, including the political, cultural, economic, and social history of the United States. Additional reading, writing, and research techniques required. Meets Title V American Institutions U.S. History requirement for the associate degree. UC credit limitation: HIST-111, 111H, 112 and 150 combined, maximum credit, two courses.

HIST 112 UNITED STATES HISTORY II
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the political, economic, and social history of the United States from Reconstruction to the present. Meets Title V American Institutions U.S. History requirement for the associate degree. UC credit limitation: HIST-111, 111H, 112 and 150 combined, maximum credit, two courses.

HIST 112H UNITED STATES HISTORY II - HONORS
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: ENGL-101 or ENGL-101H
Surveys the political, economic, and social history of the United States from Reconstruction to the present. Additional reading, writing, and research techniques required. Meets Title V American Institutions U.S. History requirement for the associate degree. UC credit limitation: HIST-111, 111H, 112, 112H and 150 combined, maximum credit, two courses.

HIST 115 UNITED STATES HISTORY SINCE 1945
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the political, social, and cultural events occurring in the United States since 1945, exploring the connections with racial unrest, foreign and military policy, civil liberties, and governmental responsibility.
HIST 116 THE AFRICAN AMERICAN EXPERIENCE IN THE UNITED STATES, 1619-1877  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Recommended Preparation: Eligibility for ENGL-101 or ENGL-101H  
Surveys the development of the African-American community in the United States from the Colonial Period to 1877. Emphasizes the historical, cultural, social, economic and political experience of the African-American, as well as examines the historical content of the American society as a whole.

HIST 117 THE AFRICAN AMERICAN EXPERIENCE IN THE UNITED STATES, 1877-PRESENT  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Recommended Preparation: Eligibility for ENGL-101 or ENGL-101H  
Surveys the African-American experience in the United States from 1877 to present, including the examination of the cultural, social, economic, and political factors that have shaped African-Americans.

HIST 120 THE ROLE OF WOMEN IN THE HISTORY OF THE UNITED STATES  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Explores the political, economic, and intellectual history of women in the development of the United States from the early Colonial Era to the present day, including their challenges and contributions. Meets Title 5 American Institutions US History requirement for the associate degree.

HIST 120H THE ROLE OF WOMEN IN THE HISTORY OF THE UNITED STATES - HONORS  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Prerequisite: ENGL-101 or ENGL-101H  
Explores the political, economic, and intellectual history of women in the development of the United States from the early Colonial Era to the present day, including their challenges and contributions. Additional reading, writing, and research techniques required. Meets Title 5 American Institutions US History requirement for the associate degree.

HIST 130 SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Surveys the social, ethnic, and cultural history of the United States, from the 15th Century to the present, including changes in society, immigration, ethnicity, race, gender, and culture. Meets Title 5 American Institutions U.S. History requirement for the associate degree.

HIST 161 WORLD HISTORY I  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Examines world civilization from prehistory through the 1500’s, including Greek and Roman philosophies, Confucianism, Hinduism, Buddhism, Christianity, Islam, political institutions, social practices, literature, women’s status, and cross-cultural influences.

HIST 165 HISTORY OF AFRICA  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Examines Classical African Civilization and analyzes its various great societies, including neo-classical Egypt, the Bantu dispersion, the Iron Age, Islamic hegemony, Sudanic Empire, and the Zulu Kingdom, as well as the relationship of the rise and fall between modern day Africa and its historical past.

HIST 170 ECONOMIC HISTORY OF THE UNITED STATES  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Surveys the economic development of the U.S. emphasizing a topical approach, including the development of business cycles, trade, banks in the new nation, manufacturing, tariffs, slavery, big business, labor, government regulation and deregulation leading to a modern industrial nation. Same as ECON 170. Meets Title 5 American Institutions U.S. History requirement for the associate degree.

HIST 170H ECONOMIC HISTORY OF THE UNITED STATES - HONORS  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Prerequisite: ENGL-101 or ENGL-101H  
Surveys the economic development of the U.S. emphasizing a topical approach, including the development of business cycles, trade, banks in the new nation; manufacturing, tariffs, slavery, big business, labor, government regulation and deregulation leading to a modern industrial nation. Additional reading, writing, critical thinking, and research techniques required (Same as ECON 170H). Fulfills Title 5 U.S. History requirement for the associate degree.
HIST 191 HISTORY OF EASTERN CIVILIZATION I
Units: 3.00
UC:CSU 54.00 hours lecture
Survey of Asian civilizations from antiquity to the nineteenth century, including philosophical and social environments and cultural and political trends. Specifically examines China and Japan, as well as neighboring areas like Korea, India, and Southeast Asia.

HIST 192 HISTORY OF EASTERN CIVILIZATION II
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys Asian civilizations from the nineteenth century to the present, emphasizing the regions of China, Japan, Korea, India, and Southeast Asia. Topics include Western imperialism, nationalist movements, Asian affairs during World War II, communist regimes, economic modernization, and cultural trends.

HIST 193 HISTORY OF INDIA
Units: 3.00
UC:CSU 54.00 hours lecture
History of India's diverse populations, social practices, religions, government institutions, nationalist movements, art, and literature from antiquity to the present, including the Indus Civilization, Mughal Empire, tenets and socio-political implications of Hinduism, Buddhism, Islam, British colonialism, communal strife, and modern India.

HIST 210 HISTORY OF CALIFORNIA
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys California from its pre-Columbian past to the present and emphasizes the economic, political, social, and natural history utilizing a cross-cultural emphasis.

HIST 212 HISTORY OF THE MIDDLE EAST
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the Middle East, ancient civilizations in the Fertile Crescent leading up to the rise of Islam, including economic, political, ethnic, religious, and national differences.

HIST 230 HISTORY OF AMERICAN INDIANS
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys American Indian history from the pre-Columbian through the modern era, emphasizing the intersection of American Indian history and United States history. Meets Title V American Institutions U.S. History requirement for the associate degree.

HIST 240 LATIN AMERICAN CIVILIZATION
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys the geography, history, culture, economic, and political development of Latin America from the late pre-Colombian era to the present.

HIST 243 HISTORY OF MEXICO AND THE MEXICAN AND CHICANO PEOPLES
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the history of Mexico and the Mexican/Chicano people from the late Pre-Cortesian era to the present, including Aztec and Maya societies, Mexican Independence Movement, Mexican Revolution, and the North American Free Trade Agreement.
HOTEL AND
RESTAURANT
MANAGEMENT

Associate in Science Degree: Hotel and Restaurant Management
The Associate of Science degree program in Hotel and Restaurant Management provides a broad based fundamental approach to the managerial functions in both the hotel and restaurant industry. The combined designation adds accounting requirements to either the restaurant or the hotel management program offerings.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in hotel and restaurant management.

Program Requirements:
Units Required: 18

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>HRMGT-101</td>
<td>Introduction to the Hospitality Industry</td>
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<tr>
<td>HRMGT-210</td>
<td>Hotel and Restaurant Law</td>
<td>3.0</td>
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<tr>
<td>HRMGT-225</td>
<td>Food Service Sanitation and Safety</td>
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<td>HRMGT-245</td>
<td>Hotel and Restaurant Supervision and Guest Relations</td>
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<td>HRMGT-275</td>
<td>Hospitality Industry Accounting</td>
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<tr>
<td>HRMGT-220</td>
<td>Restaurant Operations</td>
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</tr>
<tr>
<td>HRMGT-235</td>
<td>Hotel and Restaurant Sales and Marketing</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Associate in Science Degree: Restaurant Management
The Associate in Science Degree with a designation prepares students for a career in the restaurant industry.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in restaurant management.

Program Requirements:
Units Required: 18

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<td>HRMGT-245</td>
<td>Hotel and Restaurant Supervision and Guest Relations</td>
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</tr>
</tbody>
</table>

HRMGT 101 INTRODUCTION TO THE HOSPITALITY INDUSTRY
Units: 3.00
CSU 54.00 hours lecture
Introduces the student to careers and trends in the hotel, restaurant, and tourism industries, including social and economic forces that influence various industry components.

HRMGT 102 INTRODUCTION TO THE TOURISM INDUSTRY
Units: 3.00
CSU 54.00 hours lecture
Examines operations, principles and trends in the emerging tourism industry, emphasizing the marketing and the competitive service strategies of major tourist attractions.
HRMGT 126 DINING ROOM SERVICE  
Units: 2.00  
CSU 18.00 hours lecture, 54.00 hours lab  
*Recommended Preparation: HRMGT-225*  
Designing quality food and beverage operations service systems. Evaluates and matches guest service needs to efficient and courteous food presentation techniques. A wide variety of table appointments and settings are evaluated in conjunction with presentation and design principles.

HRMGT 150 INTRODUCTION TO HOTEL/RESORT OPERATIONS  
Units: 3.00  
CSU 54.00 hours lecture  
Introduces students to the operating systems of a lodging operation with an emphasis on the accounting, management and performance standards of a lodging enterprise.

HRMGT 210 HOTEL AND RESTAURANT LAW  
Units: 3.00  
CSU 54.00 hours lecture  
Presents the fundamental legal concepts of the Common Law, Constitutional Law, statutes and administrative law and the compliance required by the hospitality industry.

HRMGT 220 RESTAURANT OPERATIONS  
Units: 3.00  
CSU 54.00 hours lecture  
Examines operations, management, policy, development and related aspects of a retail restaurant establishment.

HRMGT 225 FOOD SERVICE SANITATION AND SAFETY  
Units: 3.00  
CSU 54.00 hours lecture  
Presents the concepts and related practices that assure a safe and sanitary food service facility. Emphasizing the application of the HACCP (Hazard Analysis of Critical Control Point) system of prevention. Areas covered include the following: food handling and processing, foodborne illness and prevention, and accident and fire prevention.

HRMGT 235 HOTEL AND RESTAURANT SALES AND MARKETING  
Units: 3.00  
CSU 54.00 hours lecture  
Examines the fundamentals of marketing plans used by hotels and restaurants, emphasizing advertising, promotions, merchandising and sales.

HRMGT 245 HOTEL AND RESTAURANT SUPERVISION AND GUEST RELATIONS  
Units: 3.00  
CSU 54.00 hours lecture  
Provides a comprehensive analysis of the design and delivery of service industry products with emphasis on effective managerial oversight techniques. The performance and evaluation of operating systems are presented and then compared to the standards of leading industry performers.

HRMGT 275 HOSPITALITY INDUSTRY ACCOUNTING  
Units: 3.00  
CSU 54.00 hours lecture  
Presents accounting for hotel and restaurant operations emphasizing revenue and expenses, payroll, inventory, food and beverage, and the tools necessary to create the financial reports to evaluate operations of hotels and restaurants.
HUMANITIES

Humanities studies the history and development of human thought and culture. By focusing on literature, history, philosophy, art and film, humanities courses seek a broad and interconnected understanding of the human experience.

HUMAN 100 COMPARATIVE STUDIES IN THE HUMANITIES
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces themes and methods of inquiry of the humanities. Compares and contrasts the ideas and cultural expressions of Western Civilization with those of non-western civilizations, focusing on a selected theme chosen each term.

HUMAN 101 FORMS AND IDEAS IN HUMANITIES
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces interdisciplinary analysis and interpretation of meaning in art, music, and literature and in the understanding of philosophical ideas in their own right and as they influence the world civilizations. UC credit limitation: HUMAN-101, 105 and 106 combined, maximum credit 6 units. No credit for 101 if taken after 105 or 106.

HUMAN 150 GREAT BOOKS, GREAT IDEAS
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys humanistic works of literature, philosophy, history, and the arts from Greek Antiquity to the end of the Medieval period as related to contemporary values and ideas.

INTERDISCIPLINARY STUDIES

INTERD 010 CAREERS IN TECHNOLOGY
Units: 1.00
18.00 hours lecture
Provides students with the background needed to evaluate a career path in chemical, biological, and engineering technologies, including an overview of the chemical, biological, and engineering industries, how to access and understand labor market information, and individual career goal setting.

INTERD 090 HEALTH AND SAFETY IN THE LABORATORY
Units: 0.50
9.00 hours lecture
Orients students to laboratory safety, reviews safety information found in the laboratory such as the Material Safety Data Sheet, and instructs students on safe behavior and practices in a laboratory. Offered pass/no-pass only.
INTERIOR DESIGN

The Interior Design program goals are designed to prepare graduates for employment in the current job market and/or fulfill transfer requirements to a four-year institution where courses fulfill the lower division requirements of a specific major or serve as electives. An important element of the program is to offer professional-level curriculum that provides graduates with the ability to perform in a variety of occupations as industry demands change and economic conditions fluctuate. Additionally, the comprehensive curriculum follows CIDA (Council for Interior Design Accreditation) standards to meet the functional and aesthetic needs pertaining to clients and the interior environments. Students who complete this Associate in Science Degree will be eligible to sit for the Certified Interior Designer examination upon graduation that may lead to becoming a Certified Interior Designer. Additionally, the comprehensive curriculum follows FIDER standards to meet the functional and aesthetic needs pertaining to clients and the interior environments.

Associate in Science Degree: Interior Design

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as an interior designer.

Program Requirements:
Units Required: 40

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<tr>
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<th>Course Title</th>
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<tr>
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<td>Introduction to Interior Design</td>
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<td>ID-101B</td>
<td>Introduction to Interior Design Lab</td>
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<td>ID-102</td>
<td>Applied Color for Designers</td>
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<tr>
<td>ID-103</td>
<td>Perspective and Interior Illustration</td>
<td>3.0</td>
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<tr>
<td>ID-104</td>
<td>Rapid Visualization and Illustration</td>
<td>3.0</td>
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<tr>
<td>ID-110</td>
<td>Architectural Drafting I</td>
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</tr>
<tr>
<td>ID-113</td>
<td>Interior Design Materials and Specifications</td>
<td>3.0</td>
</tr>
<tr>
<td>ID-114</td>
<td>Architecture and Interiors History: Antiquity - Classical Revival</td>
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<tr>
<td>ID-115</td>
<td>Architecture and Interiors History: Classical Revival - Post Modern</td>
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</tr>
<tr>
<td>ID-190</td>
<td>Design II - Space Planning</td>
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<tr>
<td>ID-207</td>
<td>Residential Design</td>
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<td>ID-217</td>
<td>Advanced Interior Design Studio I</td>
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<tr>
<td>ID-295</td>
<td>Professional Practices for Interior Design</td>
<td>3.0</td>
</tr>
<tr>
<td>ARCHT-160</td>
<td>AutoCAD for Architecture and Interior Design</td>
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OR

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<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
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<td>Careers in Architecture, Interior Design and Related Fields</td>
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<tr>
<td>ID-103</td>
<td>Perspective and Interior Illustration</td>
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<td>ID-104</td>
<td>Rapid Visualization and Illustration</td>
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</tr>
<tr>
<td>ID-111</td>
<td>Kitchen and Bath Design</td>
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<tr>
<td>ID-219</td>
<td>Interior Design Portfolio</td>
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<td>AutoCAD for Architecture and Interior Design</td>
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<tr>
<td>ARCHT-180</td>
<td>Codes and Zoning Regulations</td>
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<td>ID-091</td>
<td>Art and Accessories in Interior Design</td>
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</tr>
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</tr>
<tr>
<td>ID-219</td>
<td>Interior Design Portfolio</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Achievement: Interior Design

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as an interior designer.

Program Requirements:
Units Required: 34

<table>
<thead>
<tr>
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<tbody>
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<tr>
<td>ID-102</td>
<td>Applied Color for Designers</td>
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<td>Architectural Drafting I</td>
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<tr>
<td>ID-113</td>
<td>Interior Design Materials and Specifications</td>
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<tr>
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<td>Architecture and Interiors History: Antiquity - Classical Revival</td>
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<td>AutoCAD for Architecture and Interior Design</td>
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<tr>
<td>ID-219</td>
<td>Interior Design Portfolio</td>
<td>3.0</td>
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</tbody>
</table>
Certificate of Achievement: Interior Decorating - Merchandising
This certificate prepares students to become interior decorators whose primary industry employment will be in retail furniture sales.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as an assistant to an interior designer or decorator, or a salesperson within the residential home furnishing industry.

Program Requirements:
Units Required: 21

<table>
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<td>ID-104</td>
<td>Rapid Visualization and Illustration</td>
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<td>ID-295</td>
<td>Professional Practices for Interior Design</td>
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Recommended electives:

<table>
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<tbody>
<tr>
<td>ID-110</td>
<td>Architectural Drafting I</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Specialization: Interior Design - Set Decorator for TV and Film
A certificate designed to prepare students for internships and employment opportunities as production assistants in TV, and film. Students may be able to obtain the following positions upon completion of certificate program: prop house worker, prop house consultant, set dresser, assistant set dresser, on-set dresser, lead of set decoration department, swing gang worker, and set decorator for small non-union production. Students will obtain the following skills and knowledge: color application, identification of period history, the application of principles and elements of design, the ability to obtain trade resources, and stagecraft skills.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as a set decorator for TV, film or theatre.

Program Requirements:
Units Required: 16

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<td>ID-101B</td>
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<td>Applied Color for Designers</td>
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<td>ID-105</td>
<td>Introduction to Production Design</td>
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<td>ID-106</td>
<td>Trade Resources for TV, Film, and Theatre</td>
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<td>Architecture and Interiors History: Antiquity - Classical Revival</td>
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<td>ID-115</td>
<td>Architecture and Interiors History: Classical Revival - Post Modern</td>
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</table>

Certificate of Specialization: Interior Design - Home Staging
The Certificate of Specialization in Home Staging provides students with knowledge on how to professionally prepare a home for sale. Home staging requires attention to detail in preparing a sellers home to give it the appearance of a “model home.”

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as a residential home stager.

Program Requirements:
Units Required: 11.5

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<td>ID-093</td>
<td>Home Staging and Applications</td>
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ID 091 ART AND ACCESSORIES IN INTERIOR DESIGN
Units: 1.00
18.00 hours lecture
Covers the use and application of fine collectibles, art, serigraphs, lithographs, posters, framing methods, portable light fixtures, linens, and tableware in interior design. Field trips may be included.
### ID 092 MERCHANDISING FOR INTERIOR DESIGN

**Units:** 1.00  
18.00 hours lecture  

Introduces retailing concepts and strategies used by merchandisers, including sales transactions, customer service, store operations, store policies, advertising and display. Field trips may be included.

### ID 093 HOME STAGING AND APPLICATIONS

**Units:** 1.50  
18.00 hours lecture, 27.00 hours lab  

Introduces home staging for marketability, including home staging applications using free vendor online tools. Field trips may be required. Students who have earned credit for ID 094 & 095 cannot receive credit for this course. Offered pass/no-pass only.

### ID 094 HOME STAGING

**Units:** 1.00  
18.00 hours lecture  

Stage homes for marketability by selecting color, theme, scale, furniture and accessories that appeal to a broad base of consumers. Field trips may be required. Offered pass/no-pass only.

### ID 095 HOME STAGING APPLICATIONS

**Units:** 0.50  
27.00 hours lab  

**Prerequisite:** ID-094  

Introduces home staging applications using free vendor online tools to produce 2-D scaled drawings, furniture layouts, and pencil layouts to demonstrate home staging solutions in plan view and elevation. Offered pass/no-pass only.

### ID 096L INTERIOR DESIGN LAB

**Units:** 1.00  
54.00 hours lab  

A lab for the currently-enrolled Interior Design student who wishes to increase skills through the use of the Interior Design lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in printed schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in the Interior Design program. Offered pass/no-pass only. Units do not apply to the associate degree.

### ID 100 CAREERS IN ARCHITECTURE, INTERIOR DESIGN AND RELATED FIELDS

**Units:** 1.00  
CSU 18.00 hours lecture  

Surveys careers in architecture, interior design and related fields. Introduces degree requirements, transfer institutions, income, and employment opportunities. Field trips may be required. (Same as ARCHT-100)

### ID 101A INTRODUCTION TO INTERIOR DESIGN

**Units:** 3.00  
CSU 54.00 hours lecture  

Introduces the principles and elements of interior design based on function and aesthetics. Field trips may be required. Students who have earned credit for ID-101 cannot earn credit for this course.

### ID 101B INTRODUCTION TO INTERIOR DESIGN LAB

**Units:** 1.00  
CSU 54.00 hours lab  

**Co-requisite:** ID-101A  

Lab component of ID-101A. Students who have earned credit for ID-101 cannot receive credit for this course.

### ID 102 APPLIED COLOR FOR DESIGNERS

**Units:** 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  

Focuses on color concepts through two- and three-dimensional design problems and theory and application of color in design and digital media. Hands-on experience with the elements of color as they change backgrounds and environments by applying pigmented and/or digital color. Concentrates on color systems and psychology, and appropriate color choices for various projects. Field trips may be required.

### ID 103 PERSPECTIVE AND INTERIOR ILLUSTRATION

**Units:** 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  

Introduces the basic black and white interior graphic communication techniques focusing on one and two-point perspective sketch techniques, graphic charts, material representation, plan and elevation graphics; emphasis on composition, shade, shadow, lighting, and texture.
ID 104 RAPID VISUALIZATION AND ILLUSTRATION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: ID-103
Introduces techniques for freehand drawing and illustration necessary for visual communication and presentation. Rapid sketching techniques in addition to perceptual skills and an understanding of line, tone, proportion, composition, and rendering will be included. Illustration techniques include projects in pencil, pen, shading, marker and/or water color.

ID 105 INTRODUCTION TO PRODUCTION DESIGN
Units: 3.00
CSU 54.00 hours lecture
Examines the process of production design in TV, film and theatre, including the design process of the production designer, art director, set decorator, set designer, scenic designer, and prop master. Educational and professional qualifications for entry into the TV, film, and theatre industries are reviewed. Field trip may be required.

ID 106 TRADE RESOURCES FOR TV, FILM, AND THEATRE
Units: 2.00
CSU 18.00 hours lecture, 54.00 hours lab
Examines the process of production design in TV, film and theatre, including the design process of the production designer, art director, set decorator, set designer, scenic designer, and prop master. Educational and professional qualifications for entry into the TV, film, and theatre industries are reviewed. Field trip may be required.

ID 110 ARCHITECTURAL DRAFTING I
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Presents current practices in architectural drafting and construction technology focusing on a small single family residence. Drafting techniques will emphasize clarity, line weight expression and accuracy. Same as ARCHT-110.

ID 111 KITCHEN AND BATH DESIGN
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Analysis and application of the design process to space planning, materials and finish choices, codes application, and selection of specialized equipment unique to the planning of kitchens and baths. Field trips may be required. Students who have earned credit for ID 108 and 109 cannot receive credit for this course.

ID 113 INTERIOR DESIGN MATERIALS AND SPECIFICATIONS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: ID-101A & ID-101B
Introduces the selection, specifications, and computations for interior design materials, products and textiles for residential and commercial design. Field trips may be required.

ID 114 ARCHITECTURE AND INTERIORS HISTORY: ANTIQUITY - CLASSICAL REVIVAL
Units: 3.00
CSU 54.00 hours lecture
Traces the development of styles in the decorative arts, architecture, and interior furnishings in the period from Antiquity to Classical Revival. Emphasis is placed on style development as it relates to social, economic, and political influences. Field trips may be required.

ID 115 ARCHITECTURE AND INTERIORS HISTORY: CLASSICAL REVIVAL - POST MODERN
Units: 3.00
CSU 54.00 hours lecture
Traces the development of styles in the decorative arts, architecture, and interior furnishings in the period from Classical Revival to Post Modern. Emphasis is placed on style development as it relates to social, economic, and political influences.

ID 190 DESIGN II – DESIGN PROCESS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: ID-110 or ARCHT-110 Recommended Preparation: ARCHT-120 and ID-101B and ID-103
Presents solutions to designing interior and/or exterior spaces, including human factors for all populations, and develops 2-D and 3-D presentations. Same as ARCHT-190.

ID 207 RESIDENTIAL DESIGN
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisites: ID-101 and ID-110
Addresses space planning, programming, living space, kitchens, baths, and support spaces explored through creative expression related to theme design and lighting application. Includes critiques and design presentations.
ID 217 ADVANCED INTERIOR DESIGN
STUDIO I
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisites: ID-103 or ID-104, ID-114 or ID-115, ID-113 and ID-207
Examines creative design solutions for residential environments, including new construction and/or remodeling for diverse clients and budgets. Field trips may be required.

ID 219 INTERIOR DESIGN PORTFOLIO
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Presents the process of preparing a professional interior design portfolio including an appropriate selection of work, concept improvement and methods of presentation.

ID 295 PROFESSIONAL PRACTICES FOR INTERIOR DESIGN
Units: 3.00
CSU 54.00 hours lecture
Presents basic principles, procedures, and office systems necessary to professionally organize and carry through a creative interior design project from the original client contract to final billing and collecting. Field trips may be required.

KINESIOLOGY – PHYSICAL EDUCATION

Associate in Science Degree: Sports Medicine
The Sports Medicine program/degree prepares the student for appropriate procedures in the recognition, prevention, care and rehabilitation of athletic related injuries. This program is designed to prepare students to transfer into university degree programs in related fields including but not limited to athletic training, physical therapy, and orthopedics.

Student Learning Outcome:
Demonstrate the necessary skills and knowledge required for prevention, evaluation, diagnosis, immediate care and rehabilitation of athletic injuries.

Program Requirements:
Units Required: 32

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>HLHSCI-100</td>
<td>Health Education</td>
<td>3.0</td>
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<tr>
<td>HLHSCI-150</td>
<td>Nutrition</td>
<td>3.0</td>
</tr>
<tr>
<td>KPET-120</td>
<td>Emergency Procedures</td>
<td>2.0</td>
</tr>
<tr>
<td>KPET-201</td>
<td>Principles of Physical Fitness and Conditioning</td>
<td>3.0</td>
</tr>
<tr>
<td>KPET-210</td>
<td>Prevention and Care of Athletic Injuries</td>
<td>3.0</td>
</tr>
<tr>
<td>KPET-210L</td>
<td>Prevention and Care of Athletic Injuries Lab</td>
<td>1.0</td>
</tr>
<tr>
<td>KPET-212</td>
<td>Sports Medicine Clinical Experience</td>
<td>3.0</td>
</tr>
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Plus four units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPET-213A</td>
<td>Practicum in Sports Medicine – Lower Extremity</td>
<td>2.0</td>
</tr>
<tr>
<td>KPET-213B</td>
<td>Practicum in Sports Medicine – Upper Extremity</td>
<td>2.0</td>
</tr>
<tr>
<td>KPET-213C</td>
<td>Practicum in Sports Medicine – General Medical Conditions</td>
<td>2.0</td>
</tr>
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</table>

Plus eight units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSCI-201</td>
<td>Introduction to Human Anatomy</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-202</td>
<td>Introduction to Human Physiology</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-204</td>
<td>Human Anatomy and Physiology I</td>
<td>4.0</td>
</tr>
</tbody>
</table>

ITALIAN
(See Modern Language)

JOURNALISM
(See Media Entertainment Arts)
Associate in Arts Degree: Physical Education-Kinesiology

The Physical Education-Kinesiology program offers a diverse curriculum which includes theory courses in Physical Education-Kinesiology, health education, and athletic training/sports medicine. A wide variety of movement courses are offered for the development of physical activity skills, knowledge, and fitness necessary for lifetime wellness in the areas of group exercise, aquatics, team sports, and recreation.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core academic skills and knowledge required for transfer to a kinesiology program at a four-year college or university.

College of the Canyons

141
Certificate of Specialization: Personal Training
This certificate will help prepare those who are interested in entering the private training industry. This set of courses will assure that students will have a solid background in Kinesiology, resistance training program design, exercise techniques, and an array of conditioning techniques.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as a personal trainer.

Program Requirements:
Units Required: 10

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPEA-101B</td>
<td>Advanced Weight Training</td>
<td>1.0</td>
</tr>
<tr>
<td>KPET-200</td>
<td>Introduction to Kinesiology</td>
<td>3.0</td>
</tr>
<tr>
<td>KPET-201</td>
<td>Principles of Physical Fitness and Conditioning</td>
<td>3.0</td>
</tr>
<tr>
<td>KPET-205</td>
<td>Personal Trainer Certification Preparation</td>
<td>2.0</td>
</tr>
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</table>

Plus one unit from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPEA-103</td>
<td>Cardio Cross-Training</td>
<td>0.25-1.0</td>
</tr>
</tbody>
</table>

Recommended electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLHSCI-150</td>
<td>Nutrition</td>
<td>3.0</td>
</tr>
<tr>
<td>BIOSCI-201</td>
<td>Introduction to Human Anatomy</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-202</td>
<td>Introduction to Human Physiology</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-204</td>
<td>Human Anatomy and Physiology I</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-205</td>
<td>Human Anatomy and Physiology II</td>
<td>4.0</td>
</tr>
</tbody>
</table>

KPEA 100A BEGINNING PHYSICAL FITNESS LAB
Units: 1.00
UC:CSU 54.00 hours lab
Introduces beginning physical fitness principles and applications to develop and encourage positive habits in a personalized exercise program. Offered pass/no pass only.

KPEA 100B ADVANCED PHYSICAL FITNESS LAB
Units: 1.00
CSU 54.00 hours lab
Presents advanced techniques in a laboratory physical fitness course designed to develop and encourage lifelong positive attitudes and habits in a personalized exercise program.

KPEA 101A BEGINNING WEIGHT TRAINING
Units: 1.00
UC:CSU 54.00 hours lab
Presents beginning level instruction in weight training, emphasizing lifting and training techniques, basic nutrition, and wellness concepts.

KPEA 101B ADVANCED WEIGHT TRAINING
Units: 1.00
UC:CSU 54.00 hours lab
Recommended Preparation: KPEA-101A, KPEI-152, KPEI-153 or equivalent physical preparation.
Advanced methods of physical conditioning and fitness program design, including principles of explosive training like Olympic lifts, plyometrics, balance training, speed development and functional flexibility training.

KPEA 102 RUNNING FOR FITNESS
Units: 1.00
UC:CSU 54.00 hours lab
Presents the principles and theories of aerobic, and cardiovascular training. Strength, flexibility, and jogging/running programs will be emphasized.

KPEA 103 CARDIO CROSS-TRAINING
Units: 0.25-1.00
UC:CSU 13.50-54.00 hours lab
A group exercise class focusing on improvement of cardiovascular and muscular fitness. Various training methods such as step aerobics, kick boxing, plyometrics, muscle sculpting, and core training are included. Proper form, exercise technique, and safety are addressed for all training modes. Basic anatomy and physiology of human conditioning will also be discussed.

KPEA 105 STEP AEROBICS
Units: 1.00
UC:CSU 54.00 hours lab
Provides group cardiovascular conditioning utilizing a step platform.

KPEA 106 BOWLING
Units: 1.00
UC:CSU 54.00 hours lab
Covers fundamental techniques of bowling, scoring, rules, and etiquette. Practice and class competition are provided to enhance skill development and strategy.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>UC:CSU Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPEA 107</td>
<td>STRETCHING FOR FLEXIBILITY AND RELAXATION</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Introduces stretching exercises that enhance flexibility, reduce muscle tension, and promote relaxation; styles may include yoga, Pilates and others.</td>
</tr>
<tr>
<td>KPEA 125</td>
<td>WALKING FOR FITNESS</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Focuses on improving cardio-respiratory endurance through a safe and effective walking exercise program.</td>
</tr>
<tr>
<td>KPEA 150A</td>
<td>BEGINNING BASKETBALL</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Introduces the basic fundamentals of basketball.</td>
</tr>
<tr>
<td>KPEA 150B</td>
<td>INTERMEDIATE BASKETBALL</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Provides the intermediate skills of basketball.</td>
</tr>
<tr>
<td>KPEA 165A</td>
<td>BEGINNING GOLF</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Introduces the fundamentals of golf including stance, grip, swing, putting, rules of golf, and overall gamesmanship.</td>
</tr>
<tr>
<td>KPEA 165B</td>
<td>INTERMEDIATE GOLF</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Develops intermediate level golf skills with further emphasis on fundamentals and the developing of techniques for playing long irons and wood play.</td>
</tr>
<tr>
<td>KPEA 165C</td>
<td>ADVANCED GOLF</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Develops advanced skills including course management, match and stroke play strategies, club selection, and long iron play.</td>
</tr>
<tr>
<td>KPEA 170A</td>
<td>BEGINNING SOCCER</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Introduces the techniques of the sport of soccer for the beginning level player, emphasizing recreation play, strategy and rules.</td>
</tr>
<tr>
<td>KPEA 170B</td>
<td>INTERMEDIATE SOCCER</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Develops intermediate-level soccer skills, emphasizing intermediate/advanced play, strategy and rules.</td>
</tr>
<tr>
<td>KPEA 175A</td>
<td>BEGINNING SOFTBALL</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Introduces the fundamentals of softball, including the rules and mechanics of throwing, hitting, and catching, and overall gamesmanship.</td>
</tr>
<tr>
<td>KPEA 175B</td>
<td>INTERMEDIATE SOFTBALL</td>
<td>2.00</td>
<td>108.00 hours</td>
<td>Designed to enable students to become proficient in the intermediate skills of softball with emphasis on play and strategy. Progressive instruction includes hitting, fielding, throwing and catching, including weight training and conditioning. A lead-up class for intercollegiate softball.</td>
</tr>
<tr>
<td>KPEA 180A</td>
<td>BEGINNING SWIMMING</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Introduces beginning swimming skills, emphasizing water safety.</td>
</tr>
<tr>
<td>KPEA 180B</td>
<td>INTERMEDIATE SWIMMING</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Develops intermediate swim skills, emphasizing the four competitive swim strokes. Speed and endurance will be emphasized in a training environment.</td>
</tr>
<tr>
<td>KPEA 180C</td>
<td>ADVANCED SWIMMING</td>
<td>1.00</td>
<td>54.00 hours</td>
<td>Develops advanced swim skills emphasizing four competitive swim strokes, as well as advanced speed and endurance training.</td>
</tr>
</tbody>
</table>
**KPEA 185A BEGINNING TENNIS**
Units: 1.00
UC:CSU 54.00 hours lab
Introduces rules, methods, techniques and basic fundamentals for the beginning tennis player.

**KPEA 185B INTERMEDIATE TENNIS**
Units: 1.00
UC:CSU 54.00 hours lab
Develops intermediate tennis skills emphasizing play and strategy.

**KPEA 185C ADVANCED TENNIS**
Units: 1.00
UC:CSU 54.00 hours lab
Presents advanced tennis skills with highly competitive game playing, including attacking ground strokes, quick volleys, offensive overheads, serves, service returns and power ground strokes.

**KPEA 195A BEGINNING VOLLEYBALL**
Units: 1.00
UC:CSU 54.00 hours lab
Introduces the fundamentals of volleyball, including rules, serving, setting, passing, attacking, blocking, digging and overall gamesmanship.

**KPEA 195B INTERMEDIATE VOLLEYBALL**
Units: 1.00
UC:CSU 54.00 hours lab
Introduces intermediate volleyball skills and strategies, including jump-serving, the quick attack, 6-2 and 5-1 offensive systems, and rotational defense.

**KPEA 195C ADVANCED VOLLEYBALL**
Units: 1.00
UC:CSU 54.00 hours lab
Recommended Preparation: KPEA-195B
Introduces advanced skills including the quick attack, jump serving, and strategies associated with the game of volleyball at an advanced/competitive level.

**KPEA 195A INTERCOLLEGIATE BASEBALL**
Units: 3.00
UC:CSU 162.00 hours lab
May be taken four times for credit
Intercollegiate competition in the sport of baseball. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

**KPEA 245A INTERCOLLEGIATE BASEBALL TRAINING**
Units: 2.00
UC:CSU 108.00 hours lab
May be taken four times for credit
Provides off-season training in the sport of baseball. Appropriate for members of the intercollegiate baseball team and individuals interested in baseball training at an advanced level.

**KPEA 250A INTERCOLLEGIATE BASKETBALL I**
Units: 1.50
UC:CSU 81.00 hours lab
May be taken four times for credit
Fall intercollegiate competition in the sport of basketball. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.
KPEI 250B INTERCOLLEGIATE BASKETBALL II
Units: 1.50
UC:CSU 81.00 hours lab
May be taken three times for credit
Spring intercollegiate competition in the sport of basketball. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

KPEI 255 INTERCOLLEGIATE CROSS-COUNTRY
Units: 2.00
UC:CSU 108.00 hours lab
May be taken four times for credit
Intercollegiate competition in the sport of cross country. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

KPEI 260A INTERCOLLEGIATE FOOTBALL
Units: 3.00
UC:CSU 162.00 hours lab
May be taken four times for credit
Intercollegiate competition in the sport of football. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

KPEI 260B OFF-SEASON FOOTBALL TRAINING
Units: 2.00
UC:CSU 108.00 hours lab
May be taken four times for credit
Provides off-season training in the sport of football. Appropriate for members of the intercollegiate football team and individuals interested in football training at an advanced level.

KPEI 265 INTERCOLLEGIATE GOLF
Units: 2.00
UC:CSU 108.00 hours lab
May be taken four times for credit
Intercollegiate competition in the sport of golf. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

KPEI 270A INTERCOLLEGIATE SOCCER
Units: 3.00
UC:CSU 162.00 hours lab
May be taken four times for credit
Intercollegiate competition in the sport of soccer. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

KPEI 270B OFF-SEASON SOCCER TRAINING
Units: 2.00
UC:CSU 108.00 hours lab
May be taken four times for credit
Provides off-season training in the sport of soccer. Appropriate for members of the intercollegiate soccer team and individuals interested in soccer training at an advanced competitive level.

KPEI 275A INTERCOLLEGIATE SOFTBALL
Units: 3.00
UC:CSU 162.00 hours lab
May be taken four times for credit
Intercollegiate competition in the sport of softball. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

KPEI 275B OFF-SEASON SOFTBALL TRAINING
Units: 2.00
UC:CSU 108.00 hours lab
May be taken four times for credit
Provides off-season training in the sport of softball. Appropriate for members of the intercollegiate softball team and individuals interested in softball training at an advanced level.

KPEI 280A INTERCOLLEGIATE SWIMMING
Units: 3.00
UC:CSU 162.00 hours lab
May be taken four times for credit
Intercollegiate competition in the sport of swimming. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

KPEI 280B OFF-SEASON SWIMMING TRAINING
Units: 2.00
UC:CSU 108.00 hours lab
May be taken four times for credit
Provides off-season training in the sport of swimming. Appropriate for members of the intercollegiate swim team and individuals interested in swimming training at an advanced level.
KPEI 290A INTERCOLLEGIATE TRACK AND FIELD
Units: 3.00
UC:CSU 162.00 hours lab
May be taken four times for credit
Intercollegiate competition in the sport of track and field. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

KPEI 290B OFF-SEASON TRACK AND FIELD TRAINING
Units: 2.00
UC:CSU 108.00 hours lab
May be taken four times for credit
Provides off-season training in the sport of track and field. Appropriate for members of the intercollegiate track and field team and individuals interested in track and field training at an advanced level.

KPEI 295A INTERCOLLEGIATE VOLLEYBALL
Units: 3.00
UC:CSU 162.00 hours lab
May be taken four times for credit
Intercollegiate competition in the sport of volleyball. Students must meet California Community College eligibility requirements as established by the California Community College Athletic Association.

KPEI 295B OFF-SEASON VOLLEYBALL TRAINING
Units: 2.00
UC:CSU 108.00 hours lab
May be taken four times for credit
Provides off-season training in the sport of volleyball. Appropriate for members of the intercollegiate volleyball team and individuals interested in volleyball training at an advanced level.

KPET 104 THEORY AND ANALYSIS OF FOOTBALL
Units: 3.00
UC:CSU 54.00 hours lecture
Presents advanced football fundamentals, including theory and philosophy of offensive and defensive strategy, principles of the kicking game of football, coaching organization and implementation. Does not meet PE activity requirement. UC credit limitations.

KPET 107 THEORY AND ANALYSIS OF BASKETBALL
Units: 3.00
UC:CSU 54.00 hours lecture
Presents the history, rules, styles, game strategy, and current developments of basketball while preparing teams for games and practices, and anticipated innovations for the future. Does not meet PE activity requirement. UC credit limitations.

KPET 108 THEORY AND ANALYSIS OF SOCCER
Units: 3.00
UC:CSU 54.00 hours lecture
Emphasizes history, rules, styles, game strategy, current developments, preparations of teams for games and weekly practice schedules, and anticipated innovations for the future. Does not meet PE activity requirement. UC credit limitations.

KPET 120 EMERGENCY PROCEDURES
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Introduces procedures to maintain health in emergency first aid situations. Successful course completion qualifies a student for the American Red Cross Community First Aid and Safety, CPR for the Professional Rescuer and Automated External Defibrillation cards. Does not meet the Physical Education requirement for the Associate Degree.

KPET 200 INTRODUCTION TO KINESIOLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the field of kinesiology as a profession and an academic discipline. Focuses on the following sub-disciplines: exercise physiology, sports nutrition, biomechanics, motor control and learning, sports medicine/athletic training, rehabilitative medicine, teaching and coaching, and sports psychology. This course does not satisfy the physical education activity requirement for the associate degree. UC credit limitation: KPET-200 and 201 combined, maximum credit one course.

KPET 201 PRINCIPLES OF PHYSICAL FITNESS AND CONDITIONING
Units: 3.00
UC:CSU 54.00 hours lecture
Fitness and conditioning concepts and their relationship to the human body. Focus is on physiological principles and the conditioning process. This course does not satisfy the physical education activity requirement for the associate degree. UC credit limitation: KPET-200 and 201 combined, maximum credit one course.
KPET 205 PERSONAL TRAINER CERTIFICATION PREPARATION
Units: 2.00
CSU 36.00 hours lecture
Preparation for taking the CPT, Certified Personal Trainer, exam through the National Strength and Conditioning Association, NSCA. Covers methods of client assessment, measurement, and evaluation. Highlights include resistance training program design, nutrition, body composition, and cardio-respiratory fitness. Does not satisfy the physical education requirement for the associate degree.

KPET 209 AMERICAN SPORTS IN FILM
Units: 3.00
CSU 54.00 hours lecture
Examines American sports history, the portrayal of sport, and the contributions made by members representing various gender, ethnic and socio-economic backgrounds as depicted through sports related films.

KPET 210 PREVENTION AND CARE OF ATHLETIC INJURIES
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the field of athletic training, including the role of the athletic trainer in relation to the physician, coach and athlete, emphasizing the prevention, recognition, and treatment of common sports injuries. Does not meet the Physical Education activity requirement for the Associate Degree.

KPET 210L PREVENTION AND CARE OF ATHLETIC INJURIES LAB
Units: 1.00
UC:CSU 54.00 hours lab
Covers the principles and techniques for application of protective taping, padding, wrapping and bracing, emphasizing the prevention of sport and exercise injuries. Does not meet the Physical Education activity requirement for the Associate Degree.

KPET 212 SPORTS MEDICINE CLINICAL EXPERIENCE
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: KPET-120 & KPET-210L
Provides instruction and clinical experience for students interested in sports-related injury care and rehabilitation. Includes injury assessment and diagnosis, therapeutic modality usage and selection, and rehabilitation of sports injuries. Does not meet the physical education activity requirement for the associate degree.

KPET 213A PRACTICUM IN SPORTS MEDICINE – LOWER EXTREMITY
Units: 2.00
CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: KPET-210, KPET-210L & KPET-212. Recommended Preparation: KPET-120
Focuses on practical experience in sports medicine, emphasizing lower extremity athletic injuries. Includes immediate recognition, diagnosis, treatment, rehabilitation and taping technique to enable athletes to return safely to competition. Does not meet the physical education activity requirement for the associate degree.

KPET 213B PRACTICUM IN SPORTS MEDICINE – UPPER EXTREMITY
Units: 2.00
CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: KPET-210, KPET-210L & KPET-212. Recommended Preparation: KPET-120
Focuses on practical experience in sports medicine, emphasizing upper extremity athletic injuries. Includes immediate recognition, diagnosis, treatment, rehabilitation and taping technique to enable athletes to return safely to competition. Does not meet the physical education activity requirement for the associate degree.

KPET 213C PRACTICUM IN SPORTS MEDICINE – GENERAL MEDICAL CONDITIONS
Units: 2.00
CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: KPET-210, KPET-210L & KPET-212. Recommended Preparation: KPET-120
Focuses on a practical experience in sports medicine with a specific focus on traumatic injuries and general medical conditions as they pertain to the athletic population. Includes immediate recognition, diagnosis and treatment of traumatic injuries and general medical conditions to enable athletes to safely compete. Does not meet the physical education activity requirement for the associate degree.

KPET 217 SPORTS MANAGEMENT
Units: 3.00
CSU 54.00 hours lecture
Introduces organization, management, planning, staffing, directing, and controlling a sports program, including such areas as budget, facilities, scheduling, officials, transportation, public relations, parent and booster clubs, purchase and care of athletic equipment, fundraising and marketing.
# LAND SURVEYING

## Associate in Science and Certificate of Achievement Degree: Land Surveying

The focus of the Land Surveying program is to provide the student with a thorough background in land surveying and mapping in addition to an introduction to the collecting, manipulating, formatting and mapping of geospatial data. A student who successfully completes the program will have the technical expertise necessary for an entry level position in the field of Land Surveying or related fields of geographic information systems specialists, architectural services, and engineering services. Land Surveyors typically measure and record property boundaries and the topography of the land covered by construction and engineering projects. Surveys are used to establish legal boundaries to prepare maps and exhibits, and write descriptions of land tracts that satisfy legal requirements. The program also assists students in preparing for the State Land Surveyor–In-Training and Land Surveyor’s Exams.

### Student Learning Outcome:

Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in land surveying.

### Program Requirements:

Units Required: 34

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<tr>
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<td>SURV-102</td>
<td>Advanced Land Surveying</td>
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<td>SURV-103</td>
<td>Advanced Applications in Surveying I</td>
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<td>SURV-104</td>
<td>Advanced Applications in Surveying II</td>
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<td>SURV-105</td>
<td>Boundary Control and Legal Principles I</td>
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<td>SURV-106</td>
<td>Boundary Control and Legal Principles II</td>
<td>3.0</td>
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<tr>
<td>SURV-107</td>
<td>Construction Surveying</td>
<td>4.0</td>
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<tr>
<td>SURV-110</td>
<td>Computer Aided Drafting for Surveyors</td>
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<tr>
<td>MATH-102</td>
<td>Trigonometry</td>
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<tr>
<td>GEOG-151</td>
<td>This course is no longer offered. See</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Department Chair for substitution information.</td>
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</tbody>
</table>

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**SURV 101 INTRODUCTION TO LAND SURVEYING**

Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab

*Recommended Preparation: MATH-070 & MATH-083*

Presents the fundamentals of land surveying, field practice, and calculations. Includes equipment and equipment use, horizontal, vertical, angular measurements; error, traversing, leveling and stadia. Also covers the history of and careers in surveying.

**SURV 102 ADVANCED LAND SURVEYING**

Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab

*Prerequisite: SURV-101 Recommended Preparation: MATH-102*

Presents computation of horizontal and vertical curves, tachometry, earthwork, error, adjustment of level nets and topographic surveys. Includes procedures for U.S. Public Land surveys and State Plane Coordinate System.

**SURV 103 ADVANCED APPLICATIONS IN SURVEYING I**

Units: 3.00
CSU 54.00 hours lecture

*Recommended Preparation: SURV-102*

Focuses on measurement analysis and adjustments, geodesy, various mapping elements, state plane coordinates and the use of GPS for land surveying applications.

**SURV 104 ADVANCED APPLICATIONS IN SURVEYING II**

Units: 3.00
CSU 54.00 hours lecture

*Prerequisite: SURV-102*

Introduction to photogrammetry emphasizing concepts and calculations performed by the land surveyor, including horizontal and vertical curves.
SURV 105 BOUNDARY CONTROL AND LEGAL PRINCIPLES I
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: SURV-102
Introduction to the basic elements of the U.S. Public Land Survey System (PLSS), including background, history, subdivisions of sections and restoration of lost corners. Principles of preparing land descriptions for surveyors and title companies.

SURV 106 BOUNDARY CONTROL AND LEGAL PRINCIPLES II
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: SURV-105
Principles and techniques of boundary control. Interpretation of land descriptions, voluntary and involuntary transfer of property, senior rights, simultaneous conveyances, sequential conveyances, and case law pertaining to boundary disputes.

SURV 107 CONSTRUCTION SURVEYING
Units: 4.00
CSU 54.00 hours lecture, 54.00 hours lab
Prerequisite: SURV-101
Introduction to construction surveys for pipelines, tunnels, culverts, bridges, buildings, highways and municipal surveys.

SURV 110 COMPUTER-AIDED DRAFTING FOR SURVEYORS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: SURV-101
Introduction to computer-aided drafting for land surveying using AutoCAD Civil 3D.

LIBERAL ARTS AND SCIENCES

The Liberal Arts and Sciences major is designed for students planning to transfer to either the California State University or University of California. To earn the Associate in Arts degree with a Liberal Arts and Sciences major, students must complete either the Intersegmental General Education Transfer Curriculum (IGETC) UC or CSU option or the CSU General Education Certification pattern and one of the three areas of emphasis. The areas of emphasis are: Mathematics and Science, Social and Behavioral Sciences or Humanities. The area of emphasis requires a minimum of 18 units with a grade of "C" or better in all courses in the area of emphasis. The courses identified for each area of emphasis fulfill major preparation requirements as demonstrated through ASSIST articulation. A minimum of six units must be within a single discipline and in the case of the Mathematics and Science area of emphasis at least one mathematics course must be completed. Select courses based on ASSIST data for major preparation articulation with selected transfer institutions. Consult a counselor for specific information regarding the intended major at the college the student is choosing.

Courses used to complete a student’s area of emphasis can double count for general education just as they may for any other major.

Although the associate degree recognizes the completion of lower division general education requirements, it does not guarantee admission to a specific campus in the CSU or UC system, nor does it guarantee admission to a specific major. Some majors and schools require a higher GPA than is necessary for the associate degree. Students should meet with a counselor to determine the lower division major preparation needed for their intended transfer school.

- Complete CSU General Education Breadth for Certification, including the American Institutions and Diversity requirements. Consult with the Counseling Office for the appropriate list of applicable courses.
- Earn a “C” or “CR” grade or higher in all CSU Breadth course.
- Complete a minimum of 60 degree applicable CSU transferable semester units.
- Earn a cumulative G.P.A. of 2.0 in all college coursework completed.
- Meet College of the Canyons residency requirements for graduation.

Note: No Physical Education and/or Wellness courses are required.
To meet requirements for the IGETC - CSU associate degree program, students must:

- Complete IGETC - CSU Certification pattern. Consult with the Counseling Office for the appropriate list of applicable courses.
- Meet the American Institutions and Diversity requirements.
- Earn a “C” or “CR” grade or higher in all IGETC courses.
- Complete a minimum of 60 degree applicable CSU transferable semester units.
- Earn a cumulative G.P.A. of 2.0 in all college coursework completed.
- Meet College of the Canyons residency requirements for graduation.

Note: No Physical Education and/or wellness courses are required.

To meet requirements for the IGETC - UC associate degree program, students must:

- Complete IGETC - UC Certification pattern.
- Meet the American Institutions and Diversity requirements.
- Earn a “C” or “CR” grade or higher in all IGETC courses.
- Complete a minimum of 60 degree applicable UC transferable semester units.
- Earn a cumulative G.P.A. of 2.0 in all college coursework completed.
- Meet College of the Canyons residency requirements for graduation.

Note: No Physical Education and/or wellness courses are required.

**Associate in Arts Degree: Liberal Arts and Sciences**

**Student Learning Outcome:**
Students will be able to analyze concepts from the liberal arts and sciences.

**Program Requirements:**

**Mathematics and Science Emphasis:** Minimum 18 units. Select at least six units from one discipline and at least one mathematics course.

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<th>Units</th>
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<td>Organismal &amp; Environmental Biology</td>
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<tr>
<td>BIOSCI-107</td>
<td>Molecular and Cellular Biology</td>
<td>4.0</td>
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<tr>
<td>BIOSCI-107H</td>
<td>Molecular and Cellular Biology - Honors</td>
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</tr>
<tr>
<td>BIOSCI-215</td>
<td>General Zoology</td>
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<td>BIOSCI-216</td>
<td>General Botany</td>
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<tr>
<td>CHEM-151</td>
<td>Preparatory General Chemistry</td>
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<td>GEOG-101</td>
<td>Physical Geography</td>
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<td>CHEM-151H</td>
<td>Preparatory General Chemistry - Honors</td>
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<td>Organic Chemistry I</td>
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<td>PHYSIC-110</td>
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<td>General Physics II</td>
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<td>PHYSIC-220</td>
<td>Physics for Scientists and Engineers: Mechanics of Solids and Fluids</td>
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<td>PHYSIC-221</td>
<td>Physics for Scientists and Engineers: Electricity and Magnetism</td>
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<tr>
<td>PHYSIC-222</td>
<td>Physics for Scientists and Engineers: Wave Motion, Heat, Optics, and Modern Physics</td>
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**OR**

**Social and Behavioral Sciences Emphasis – Minimum 18 units:** Select at least six units from one discipline

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
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<tr>
<td>ANTHRO-103</td>
<td>Cultural Anthropology</td>
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<td>ANTHRO-103H</td>
<td>Cultural Anthropology - Honors</td>
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<tr>
<td>ANTHRO-105</td>
<td>Introduction to Archaeology and Prehistory</td>
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<tr>
<td>ECON-201</td>
<td>Macroeconomics</td>
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<td>Macroeconomics - Honors</td>
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<td>ECON-202</td>
<td>Microeconomics</td>
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<tr>
<td>GEOG-102</td>
<td>Cultural Geography</td>
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<tr>
<td>HIST-101</td>
<td>History of Western Civilization: The Pre-Industrial West</td>
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<tr>
<td>HIST-101H</td>
<td>History of Western Civilization: The Pre-Industrial West - Honors</td>
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<td>HIST-102</td>
<td>History of Western Civilization: The Modern Era</td>
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<td>United States History I</td>
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<tr>
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<td>MEA-100</td>
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<td>POLISC-250</td>
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<td>POLISC-270</td>
<td>International Relations</td>
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<td>PSYCH-101</td>
<td>Introduction to Psychology</td>
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<tr>
<td>PSYCH-102</td>
<td>Physiological Psychology</td>
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<td>PSYCH-103</td>
<td>Introduction to Behavioral Research Methods</td>
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<td>ENGL-102</td>
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<td>History of Western Civilization: The Pre-Industrial West</td>
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<td>PHILOS-110</td>
<td>History of Early Philosophy</td>
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<td>PHILOS-111</td>
<td>History of Philosophy: Renaissance Through the 19th Century</td>
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<td>History of Philosophy - 20th Century Philosophy</td>
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<td>PHILOS-120</td>
<td>Introduction to Ethics</td>
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<td>Spanish for Heritage Speakers II</td>
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<td>SIGN-101</td>
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<td>American Sign Language III</td>
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<td>SIGN-104</td>
<td>American Sign Language IV</td>
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<td>THEATR-110</td>
<td>Understanding Theatre</td>
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<td>THEATR-140</td>
<td>Acting Fundamentals</td>
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<td>THEATR-141</td>
<td>Scene Performance</td>
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Humanities Emphasis – Minimum 18 units: Select at least six units from one discipline.

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<th>Course Title</th>
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<td>ART-110</td>
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<tr>
<td>ART-111</td>
<td>Art History: Renaissance to Modern</td>
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<td>ART-124A</td>
<td>Drawing I</td>
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<tr>
<td>ART-140</td>
<td>Beginning Design: Two-Dimensional Media</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL-102</td>
<td>Intermediate Composition, Literature and Critical Thinking</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Certificate of Achievement: CSU IGETC
The certificate of achievement CSU IGETC allows the student transferring to a four-year college or university the opportunity to receive a certificate. The requirements for this certificate of achievement are completion of CSU IGETC with a grade of “C” or better in each course. Specific requirements can be found at www.assist.org or consult with the Counseling Department.

Certificate of Achievement: UC IGETC
The certificate of achievement UC IGETC allows the student transferring to a four-year college or university the opportunity to receive a certificate. The requirements for this certificate of achievement are completion of UC IGETC with a grade of “C” or better in each course. Specific requirements can be found at www.assist.org or consult with the Counseling Department.

Certificate of Achievement: CSU GE Breadth
The certificate of achievement CSU GE Breadth allows the student transferring to a four-year college or university the opportunity to receive a certificate. The requirements for this certificate of achievement are completion of CSU GE Breadth with a grade of “C” or better in each course. Specific requirements can be found at www.assist.org or consult with the Counseling Department.

LIBERAL STUDIES

Associate in Arts Degree: Liberal Studies-Elementary Teaching Preparation
The Liberal Studies-Elementary Teaching Preparation (Multiple Subject) major is designed for students who are interested in transferring to four-year college or university in Liberal Studies or a teacher preparation program. The requirements of this major includes general education requirements for the associate's degree.
Students planning to transfer should meet with a counselor to identify required courses for their specific transfer institution and develop an educational plan.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core academic skills and knowledge required for transfer into liberal studies or a teacher preparation program at a four-year college or university.

Program Requirements:
Units Required: 53-54

<table>
<thead>
<tr>
<th>Composition</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three – four units from the following:</td>
<td></td>
</tr>
<tr>
<td>ENGL-101 English Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>ENGL-101H Honors English Composition</td>
<td>4.0</td>
</tr>
<tr>
<td>Oral Communication</td>
<td></td>
</tr>
<tr>
<td>Plus three units from the following:</td>
<td></td>
</tr>
<tr>
<td>COMS-105 Fundamentals of Public Speaking</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>COMS-105H Fundamentals of Public Speaking - Honors</td>
<td>3.0</td>
</tr>
</tbody>
</table>

| Critical Thinking | |
| Plus three units from the following: | |
| ENGL-103 Critical Reading, Writing and Thinking | 3.0 |
| PHILOS-106 Critical Reasoning | 3.0 |
| SOCI-108 Thinking Critically About Social Issues | 3.0 |
**Literature**

*Plus three units from the following:*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL-102</td>
<td>Intermediate Composition, Literature and Critical Thinking</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL-102H</td>
<td>Intermediate Composition - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL-250</td>
<td>British Literature I</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL-251</td>
<td>British Literature II</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL-260</td>
<td>American Literature I</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL-261</td>
<td>American Literature II</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL-273</td>
<td>World Literature I</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL-274</td>
<td>World Literature II</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Mathematics**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-130</td>
<td>Math for Elementary School Teachers</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Science**

*Plus 11 units from the following:*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSCI-100</td>
<td>General Biology</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-100H</td>
<td>General Biology – Honors</td>
<td>4.0</td>
</tr>
<tr>
<td>GEOL-109</td>
<td>Earth Science</td>
<td>3.0</td>
</tr>
<tr>
<td>PHYSCI-101</td>
<td>Physical Science</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**History and Social Science**

*Plus 12 units from the following:*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG-102</td>
<td>Cultural Geography</td>
<td>3.0</td>
</tr>
<tr>
<td>HIST-111</td>
<td>United States History I</td>
<td>3.0</td>
</tr>
<tr>
<td>HIST-111H</td>
<td>United States History I Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>HIST-161</td>
<td>World History I</td>
<td>3.0</td>
</tr>
<tr>
<td>POLISC-150</td>
<td>Introduction to American Government and Politics</td>
<td>3.0</td>
</tr>
<tr>
<td>POLISC-150H</td>
<td>Introduction to American Government And Politics - Honors</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Performing and Visual Arts**

*Plus three units from the following:*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART-110</td>
<td>Art History: Ancient to Medieval</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-111</td>
<td>Art History: Renaissance to Modern</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-205</td>
<td>Landmarks of Art and Visual Culture</td>
<td>3.0</td>
</tr>
<tr>
<td>DANCE-100</td>
<td>Dance Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-105</td>
<td>Music Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>THEATR-110</td>
<td>Understanding Theatre</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Human Development**

*Plus three units from the following:*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE-120</td>
<td>Child Growth and Development</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-172</td>
<td>Developmental Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-172H</td>
<td>Developmental Psychology - Honors</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Education**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC-203</td>
<td>Introduction to Teaching in a Diverse Society</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Required Electives**

Select a minimum of six units depending on requirements for your transfer institution of choice:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHRO-220</td>
<td>Magic, Witchcraft, and Religion</td>
<td>3.0</td>
</tr>
<tr>
<td>CIT-140</td>
<td>Survey of Microsoft Office Programs</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL-111</td>
<td>Introduction to Linguistics</td>
<td>3.0</td>
</tr>
<tr>
<td>HIST-120</td>
<td>The Role of Women in the History of the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>HIST-120H</td>
<td>The Role of Women in the History of the United States - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>HIST-210</td>
<td>History of California</td>
<td>3.0</td>
</tr>
<tr>
<td>HIST-230</td>
<td>History of American Indians</td>
<td>3.0</td>
</tr>
<tr>
<td>HLHSCI-100</td>
<td>Health Education</td>
<td>3.0</td>
</tr>
<tr>
<td>PHILOS-101</td>
<td>Introduction to Philosophy</td>
<td>3.0</td>
</tr>
<tr>
<td>PHILOS-101H</td>
<td>Introduction to Philosophy - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>PHILOS-120</td>
<td>Introduction to Ethics</td>
<td>3.0</td>
</tr>
<tr>
<td>PHILOS-220</td>
<td>Introduction to Comparative Religion</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-105</td>
<td>Multiculturalism in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-200</td>
<td>Introduction to Women's Studies</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-200H</td>
<td>Introduction to Women's Studies Honors</td>
<td>3.0</td>
</tr>
</tbody>
</table>
**LIBRARY/MEDIA TECHNOLOGY**

Library/Media Technology courses provide training in phases of library/media work, background knowledge of the types of libraries and media centers and their services, and actual work experience.

**LMTECH 100 COLLEGE RESEARCH SKILLS**

Units: 1.00  
UC:CSU 18.00 hours lecture  
Examines strategies and skills needed to locate, retrieve, evaluate, synthesize and utilize information among the various library and other resources to conduct successful college research.

**MANUFACTURING TECHNOLOGY**

Manufacturing Technology is a career technical education program designed to prepare students for a variety of entry-level positions in a manufacturing environment. These positions may include manual machine operator, computer numerical control operator, CAD/CAM designer, or programmer. Classes are designed for first-time college students, re-entry students, and current industry employees requiring skill enhancement or upgrade training. Learned skills may include the ability to operate conventional and CNC machinery, program CNC machinery, operate various CAD/CAM systems and interpret blueprints.

**Certificate of Specialization:**  
**Manufacturing Technology - CAD/CAM**

This certificate prepares students on CAD/CAM training using MASTERCAM specifically used in the automotive, aerospace, and manufacturing industries. Upon completion of the certificate, students will be able to work in the automotive, aerospace, and manufacturing industries as a CAD/CAM design engineer, machinist, CNC operator, or CNC programmer.

**Student Learning Outcome:**

Students will be able to demonstrate proficiency in the core CAD/CAM skills and knowledge required for a variety of manufacturing industries.

**Program Requirements:**

<table>
<thead>
<tr>
<th>Units Required</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFGT-131 CAD/CAM I</td>
<td>3.0</td>
</tr>
<tr>
<td>MFGT-132 CAD/CAM II</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Certificate of Specialization:**  
**Manufacturing Technology - CATIA**

This certificate prepares students on CATIA software specifically used in the automotive, aerospace, and manufacturing industries. Upon completion of the certificate, students will be able to work in the automotive, aerospace, and manufacturing industries as a designer or drafter.

**Student Learning Outcome:**

Students will be able to demonstrate proficiency in the core CATIA skills and knowledge required for a variety of manufacturing industries.
Certificate of Specialization: Automated Machining
This certificate provides students training in CAD/CAM using MASTERCAM and CNC Programming specifically used in the automotive, aerospace, and manufacturing industries. Upon completion of the certificate, students will be able to work in the automotive, aerospace, and manufacturing industries as a CAD/CAM design engineer, machinist, CNC operator, or CNC programmer.

Student Learning Outcome:
Students will be able to accurately perform a variety of CAD/CAM and CNC application and calculations using appropriate equipment.

Program Requirements:
Units Required: 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFGT-141</td>
<td>CATIA I</td>
<td>3.0</td>
</tr>
<tr>
<td>MFGT-142</td>
<td>CATIA II</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Specialization: Machining/CNC
This certificate prepares students for CNC programming specifically used in the automotive, aerospace, and manufacturing industries. Upon completion of the certificate, students will be able to work in the automotive, aerospace, and manufacturing industries as a CNC machinist, CNC lathe operator, production machinist, or CNC programmer.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core CNC skills and knowledge required for a variety of manufacturing industries.

Program Requirements:
Units Required: 12

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFGT-121</td>
<td>CNC 1: Operation and Manual Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>MFGT-122</td>
<td>CNC 2: Concepts and Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>MFGT-131</td>
<td>CAD/CAM I</td>
<td>3.0</td>
</tr>
<tr>
<td>MFGT-132</td>
<td>CAD/CAM II</td>
<td>3.0</td>
</tr>
</tbody>
</table>

MFGT 090 MEASUREMENTS AND COMPUTATIONS
Units: 3.00
54.00 hours lecture
Focuses on measurements and calculations used in career technical fields. Reviews basic computations and measurement systems.

MFGT 121 CNC 1: OPERATION AND MANUAL PROGRAMMING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Explores the history of NC/CNC, elementary CNC programming conventions, cutting tool types, automatic tool changing, tool offsets and compensation, CNC set up procedures, and CNC mill and lathe practice.

MFGT 122 CNC 2: CONCEPTS AND PROGRAMMING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MFGT-121
Studies advanced skills for programming and set up for mill and lathe parts on computer numerical control machine tools (3-axis & 5 axis).

MFGT 131 CAD/CAM I
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces computer aided design and manufacturing using MASTERCAM as a CAD/CAM environment, emphasizing the writing and running of CNC lathe programs and machining metal parts. Includes a review of machining & CNC programming fundamentals, the MASTERCAM environment and process overview, basic 2D geometry construction and modification, process and toolpath planning, and 2-axis toolpath generation and editing.
MFGT 132 CAD/CAM II
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MFGT-131
Provides intermediate level CAD/CAM training using MASTERCAM. Intended primarily for manufacturing technology students and industrial practitioners who have some experience with MASTERCAM. Includes construction of 3D wire frame models, surface modeling fundamentals and creation, derived and composite surfaces, 3-axis surface modeling, and 4-axis and 5-axis programming.

MFGT 141 CATIA I
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces the basic concepts of CATIA as well as CATIA’s surface design capabilities.

MFGT 142 CATIA II
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MFGT-141
Presents CATIA solid and surface modeling in advanced 3 dimensional design.

MFGT 143 CATIA III
Units: 3.00
CSU 54.00 hours lecture
Prerequisite: MFGT-142
Students to utilize CATIA basic manufacturing Fixed and Multi-Axis CNC milling for various manufacturing environments.

MATHEMATICS

Associate in Science Degree: Mathematics for Transfer
The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an “associate degree for transfer,” a newly established variation of the associate degrees traditionally offered at a California community college. The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete a minimum of 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor’s degree (unless the major is a designated “high-unit” major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements.

Student Learning Outcome:
Students will be able to:
- Prepare for the mathematical reasoning required in upper division work in their major, including the ability to generalize concepts and comprehend increasing levels of abstraction.
- Demonstrate mathematical literacy, problem solving ability, and modeling ability.

Program Requirements:
Units Required: 18-21

Twelve to fifteen units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-211</td>
<td>Calculus I</td>
<td>5.0</td>
</tr>
<tr>
<td>MATH-212</td>
<td>Calculus II</td>
<td>5.0</td>
</tr>
<tr>
<td>MATH-213</td>
<td>Calculus III</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Plus three units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-214</td>
<td>Linear Algebra</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH-215</td>
<td>Differential Equations</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Plus three units from the following that have not already been selected from the courses listed above:

CMPSCI-235  C Programming .................. 3.0  
CMPSCI-236  C++ Object Oriented Programming .. 3.0  
MATH-140  Introductory Statistics .............. 4.0  
   OR  
MATH-140H  Introductory Statistics - Honors ... 4.0  
MATH-214  Linear Algebra ...................... 3.0  
MATH-215  Differential Equations .............. 3.0  
CMPSCI-111  Introduction to Algorithms and  
           Programming/Java .................. 3.0  
   OR  
CMPSCI-111L  Introduction to Algorithms and  
            Programming Lab .................. 1.0  

Associate in Science Degree: Mathematics

The Mathematics program provides curriculum from basic arithmetic to algebra, statistics, linear algebra, calculus, and differential equations. These courses fulfill breadth requirements, associate degree requirements and transfer major requirements for degrees in mathematics, physics, chemistry and engineering. Many B.A./B.S. level careers require extensive background in mathematics. Virtually all two-year career programs in the business or technology fields require a solid foundation in mathematics. Examples of these career options include computer programmer, financial analyst, statistician, systems analyst, urban planner, and teacher.

Student Learning Outcome:
Students will be able to:
- Prepare for the mathematical reasoning required in upper division work in their major, including the ability to generalize concepts and comprehend increasing levels of abstraction.
- Demonstrate mathematical literacy, problem solving ability, and modeling ability.

Program Requirements:
Units Required: 18
MATH-211  Calculus I ......................... 5.0  
MATH-212  Calculus II ........................ 5.0  
MATH-213  Calculus III ....................... 5.0

   Plus three units from the following:
MATH-140  Introductory Statistics .............. 4.0  
   OR  
MATH-140H  Introductory Statistics - Honors ... 4.0  
MATH-214  Linear Algebra ...................... 3.0  
MATH-215  Differential Equations .............. 3.0  
CMPSCI-111  Introduction to Algorithms and  
           Programming/Java .................. 3.0  
PHYSIC-220  Physics for Scientists and Engineers:  
           Mechanics of Solids and Fluids ....... 4.0  

MATH 025 ARITHMETIC - LECTURE
Units: 5.00
90.00 hours lecture
Reviews the fundamentals of addition, subtraction, multiplication, division, fractions, decimals, integers, percentages, area, volume, perimeter, systems of measurement, graphs and word problems. Units do not apply to the associate degree.

MATH 026 ARITHMETIC - COMPUTER-ASSISTED
Units: 5.00
90.00 hours lecture
A computer-assisted alternative to Math 025. Reviews the fundamentals of addition, subtraction, multiplication, division, fractions, decimals, integers, percentages, area, volume, perimeter, systems of measurement, graphs and word problems. Units do not apply to the associate degree.

MATH 058 ALGEBRA PREPARATION - LECTURE
Units: 5.00
90.00 hours lecture
Prerequisite: MATH-025 or MATH-026 or appropriate math placement as determined by the COC Mathematics assessment process.
Introduces the basic elements of algebra for those who need a preparatory course before enrolling in elementary algebra. An alternative to the MATH-059 computer-assisted course. Units do not apply to the associate degree.

MATH 059 ALGEBRA PREPARATION - COMPUTER-ASSISTED
Units: 5.00
90.00 hours lecture
Prerequisite: MATH-025 or MATH-026 or appropriate math placement as determined by the COC Mathematics assessment process.
A computer-assisted introduction to the basic elements of algebra for those who need a preparatory course before enrolling in elementary algebra. An alternative to Math 058 lecture course. Units do not apply to the associate degree.
MATH 060 ELEMENTARY ALGEBRA
Units: 5.00
90.00 hours lecture
Prerequisite: MATH-058 or MATH-059 or appropriate math placement as determined by the COC Mathematics assessment process.
Designed to develop beginning algebra skills, including the fundamental concepts of operating within the real number system, working with first degree equations in one unknown, identifying and evaluating functions, factoring of and multiplication of polynomials, and working with algebraic fractions, linear equations and graphs, systems of linear equalities, exponents and radicals, quadratic equations, and applications. Units do not apply to the associate degree.

MATH 070 INTERMEDIATE ALGEBRA
Units: 5.00
90.00 hours lecture
Prerequisite: MATH-060 or appropriate math placement as determined by the COC assessment process.
Examines higher degree and rational equations and inequalities, functions and graphs, systems of equations, exponential and logarithmic functions, introduction to sequences, and applications.

MATH 075 INTERMEDIATE ALGEBRA FOR STATISTICS
Units: 5.00 – Not transferable
90.00 hours lecture
Prerequisite: MATH-058 or MATH-059 or appropriate placement as determined by the COC assessment process.
Introduces intermediate algebra topics and the basic elements of exploratory data analysis. (Advisory: This class is not intended as preparation for calculus. It is only a prerequisite for those students wanting to take MATH-111, 130, or 140. Those students needing MATH-103 or 104 need to take both MATH-060 and 070.)

MATH 083 GEOMETRY
Units: 5.00
90.00 hours lecture
Prerequisite: MATH-060 or appropriate math placement as determined by the COC Mathematics assessment process.
Presents geometric theory and concepts and their application.

MATH 102 TRIGONOMETRY
Units: 3.00
CSU 72.00 hours lecture
Prerequisite: MATH-070 and MATH-083 or appropriate math placement as determined by the COC Mathematics assessment process.
Examines circular and trigonometric functions, inverse trigonometric functions, identities, trigonometric equations, solutions of triangles, complex numbers, vectors, and applications.

MATH 103 COLLEGE ALGEBRA
Units: 4.00
UC:CSU 90.00 hours lecture
Prerequisite: MATH-070 or appropriate math placement as determined by the COC Mathematics assessment process.
Presents linear and non-linear algebraic relations and functions, conic sections, exponential and logarithmic functions, matrices and determinants, complex numbers and selected topics from theory of equations, sequences and series. UC credit limitation: MATH-103 and MATH-104 combined, maximum credit one course.

MATH 104 PRECALCULUS
Units: 5.00
UC:CSU 90.00 hours lecture
Prerequisite: MATH-102 or appropriate math placement as determined by the COC Mathematics assessment process.
Introduces equations, inequalities, functions, systems of equations, conic sections, roots of polynomial equations and an introduction to limits. UC credit limitation: MATH-103 and MATH-104 combined, maximum credit one course.

MATH 111 FINITE MATH
Units: 4.00
UC:CSU 90.00 hours lecture
Prerequisite: MATH-070 or MATH-075 or appropriate math placement as determined by the COC Mathematics assessment process.
Introduces math concepts related to game theory, linear algebra, finance, logic, probability and statistics.

MATH 130 MATH FOR ELEMENTARY SCHOOL TEACHERS
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: MATH-070 or MATH-075 or appropriate math placement as determined by the COC Mathematics assessment process.
Introduces number theory, problem solving techniques, and the development, structure and history of the real number system. (Designed primarily for students intending to teach at the elementary or junior high school level.)
MATH 140 INTRODUCTORY STATISTICS
Units: 4.00
UC:CSU 90.00 hours lecture
Prerequisite: MATH-070 or MATH-075 or appropriate math placement as determined by the COC Mathematics assessment process.
Examines statistical methods including empirical and theoretical frequency distributions, sampling, estimation, hypothesis testing, correlation, regression, probability, counting techniques and computer-based statistical software. UC credit limitation: ECON-291, MATH-140, MATH-140H, PSYCH-104 and SOCI-137 combined, maximum credit one course.

MATH 140H INTRODUCTORY STATISTICS - HONORS
Units: 4.00
UC:CSU 90.00 hours lecture
Prerequisite: MATH-070 or MATH-075 or appropriate math placement as determined by the COC Mathematics assessment process.
Examines statistical methods including empirical and theoretical frequency distributions, sampling, estimation, hypothesis testing, correlation, regression, probability, counting techniques and computer-based statistical software. Honors work challenges students to be more analytical through expanded assignments involving critical analysis of peer-reviewed journals and primary scientific literature. UC credit limitation: ECON-291, MATH-140, MATH-140H, PSYCH-104 and SOCI-137 combined, maximum credit one course.

MATH 211 CALCULUS I
Units: 5.00
UC:CSU 90.00 hours lecture
Prerequisite: MATH-104 or appropriate math placement as determined by the COC Mathematics assessment process.
Introduces limits, derivatives and integrals, as well as applications including rate of change, maxima-minima, curve sketching, and area problems.

MATH 212 CALCULUS II
Units: 5.00
UC:CSU 90.00 hours lecture
Prerequisite: MATH-211
Covers differentiation and integration of transcendental functions, techniques of integration, improper integrals, infinite series, and applications.

MATH 213 CALCULUS III
Units: 5.00
UC:CSU 90.00 hours lecture
Prerequisite: MATH-212
Presents vectors and vector calculus, functions of several variables, partial derivatives, multiple integrals, line and surface integrals, Green’s Theorem, the Divergence Theorem, Stokes’ Theorem.

MATH 214 LINEAR ALGEBRA
Units: 3.00
UC:CSU 72.00 hours lecture
Prerequisite: MATH-211
Presents linear algebra including real vector spaces, inner product spaces, linear transformations, matrices, determinants and eigenvalues.

MATH 215 DIFFERENTIAL EQUATIONS
Units: 3.00
UC:CSU 72.00 hours lecture
Prerequisite: MATH-213
Presents ordinary differential equations, systems of linear differential equations, the Laplace transform, numerical methods, series solutions and applications.

MATH 240 MATH ANALYSIS FOR BUSINESS AND SOCIAL SCIENCE
Units: 5.00
UC:CSU 90.00 hours lecture
Prerequisite: MATH-103 or MATH-104
Presents main topics of calculus as applied to business and social science, including limits, differentiation, and integration.
MEDIA ENTERTAINMENT ARTS

Media Entertainment Arts seeks to create, improve, expand and strengthen relevant and rigorous academic Programs of Study, in cooperation with local high school, ROP, and community and regional business and industry partners. By developing sequentially modeled curricula and practicum for media, entertainment, and design industrial arts, Media Entertainment Arts will link current industry skills and foundation Career and Technical Education standards to all aspects of study.

Associate in Arts Degree: Animation Production

The Animation Production Program will prepare students for an entry-level position in the animation industry with emphasis in either computer or hand-drawn methods. The associate degrees are also designed to transfer to four-year colleges or universities. At the conclusion of their studies, all students will be prepared for entry-level positions in a number of fields (for example: video game design, television and motion picture production) requiring them to create animation, by either computer or hand-drawn methods, or a combination of the two. Classes include traditional drawn animation, character design, layout, storyboarding, 2-D computer animation, and 3-D computer animation.

Student Learning Outcome:
Students will be able to:
- Create portfolio-ready artwork demonstrating their mastery of the fundamentals of concept art and 2D animation.
- Critique animation projects using industry standards.

Program Requirements:
Units Required: 30.5

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-106</td>
<td>Introduction to Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-109</td>
<td>Story Development and Storyboarding</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-232</td>
<td>Character and Prop Design for Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-233</td>
<td>Environmental Design for Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-100</td>
<td>Mass Media and Society</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Achievement: Animation Production

Animation Production provides the skills necessary in the animation industry with a focus on drawn animation and concept art.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core knowledge and skills required for employment in animation production.

Program Requirements:
Units Required: 18

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-106</td>
<td>Introduction to Animation</td>
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<tr>
<td>MEA-233</td>
<td>Environmental Design for Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-114</td>
<td>Digital Audio for Multimedia</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-116</td>
<td>Digital Video Editing I</td>
<td>2.0</td>
</tr>
<tr>
<td>GMD-173</td>
<td>Motion Design</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**OR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-102</td>
<td>History of Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-261</td>
<td>Advanced Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-265</td>
<td>Animation Production</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-295</td>
<td>Professional Practices/Portfolio</td>
<td>1.5</td>
</tr>
<tr>
<td>CWE-188MEA</td>
<td>Cooperative Work Experience Education</td>
<td>1.0 - 4.0</td>
</tr>
</tbody>
</table>
### Associate in Arts Degree: Computer Animation

**Student Learning Outcome:**
Students will be able to:
- Create portfolio-ready artwork demonstrating their mastery of the fundamentals of computer animation and CGI scene creation.
- Critique animation projects using industry standards.

**Program Requirements:**
Units Required: 29.5

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-100</td>
<td>Mass Media and Society</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-102</td>
<td>History of Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-109</td>
<td>Story Development and Storyboarding</td>
<td>3.0</td>
</tr>
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<td>MEA-106</td>
<td>Introduction to Animation</td>
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<td>Digital Audio for Multimedia</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-116</td>
<td>Digital Video Editing I</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-118</td>
<td>Interactive 2D Animation</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-131</td>
<td>3D Modeling and Surfacing</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-135</td>
<td>Computer Animation and Special Effects</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-231</td>
<td>Digital Sculpture</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-234</td>
<td>Character Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-235</td>
<td>Visual Effects</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-295</td>
<td>Professional Practices/Portfolio</td>
<td>1.5</td>
</tr>
<tr>
<td>GMD-173</td>
<td>Motion Design</td>
<td>3.0</td>
</tr>
<tr>
<td>CWE-188MEA</td>
<td>Cooperative Work Experience Education</td>
<td>1.0 - 4.0</td>
</tr>
</tbody>
</table>

**Recommended electives:**
- ART-124A      | Drawing I                                           | 3.0   |
- DANCE-111    | Fundamentals of Dance                              | 1.0   |
- THEATR-241   | Movement for the Performer                         | 3.0   |
- PHOTO-150    | Introduction to Cameras and Composition            | 3.0   |
- MEA-108      | Scriptwriting Fundamentals                         | 3.0   |
- MEA-116      | Digital Video Editing I                            | 2.0   |
- MEA-114      | Digital Audio for Multimedia                       | 2.0   |
- MEA-116      | Digital Video Editing I                            | 2.0   |
- MEA-265      | Animation Production                               | 3.0   |

### Certificate of Achievement: Computer Animation

**Student Learning Outcome:**
Students will be able to create portfolio-ready artwork demonstrating their mastery of the fundamentals of computer animation and CGI scene creation.

**Program Requirements:**
Units Required: 18.5

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-118</td>
<td>Interactive 2D Animation</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-131</td>
<td>3D Modeling and Surfacing</td>
<td>3.0</td>
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<tr>
<td>MEA-135</td>
<td>Computer Animation and Special Effects</td>
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<tr>
<td>MEA-231</td>
<td>Digital Sculpture</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-234</td>
<td>Character Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-235</td>
<td>Visual Effects</td>
<td>3.0</td>
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<td>MEA-295</td>
<td>Professional Practices/Portfolio</td>
<td>1.5</td>
</tr>
<tr>
<td>GMD-173</td>
<td>Motion Design</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Recommended Electives:**
- MEA-114      | Digital Audio for Multimedia                       | 2.0   |
- MEA-116      | Digital Video Editing I                            | 2.0   |
- MEA-265      | Animation Production                               | 3.0   |

### Associate in Arts Degree: Filmmaking

**Student Learning Outcome:**
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in the filmmaking industry.

**Program Requirements:**
Units Required: 29.5

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-101</td>
<td>Television and Film Media Aesthetics</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-120</td>
<td>Introduction to Cinematography</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Plus two units from the following:**
- MEA-111     | Exploring Video Field Production                   | 2.0   |
- MEA-112     | Exploring Video Studio Production                  | 2.0   |
- MEA-113     | Exploring Online Media                             | 2.0   |

**Plus seventeen units from the following:**
- MEA-100     | Mass Media and Society                             | 3.0   |
### Associate in Arts Degree: New Media Journalism

**Student Learning Outcome:**
Students will be able to demonstrate proficiency in the core skills and knowledge required for new media journalism.

**Program Requirements:**
Units Required: 24.5

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-100 Writing for Journalism and New Media</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-125 News Reporting and Anchoring</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-225 Advanced News Media Production</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Fundamental Skills** (in addition to the requirements below, complete 3 additional units from MEA department) (19.5 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-103 Exploring Contemporary Television</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-108 Scriptwriting Fundamentals</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-116 Digital Video Editing I</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-180 Filmmaking I</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-201 Film Style Seminar</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-280 Filmmaking II: Directing and Producing</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Required Electives:**
- Capstone (needs only 1 unit of CWE-188MEA, and choose 3 units of any MEA Elective) (5.5 units)
- MEA-295 Professional Practices/Portfolio   | 1.5   |
- CWE-188MEA Cooperative Work Experience Education | 1.0 - 4.0 |

### Associate in Arts Degree: Media Entertainment Arts - Sound Arts

**Student Learning Outcome:**
Students will be able to demonstrate proficiency in the core skills and knowledge required for sound arts.

**Program Requirements:**
Units Required: 26.5

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-103 Exploring Contemporary Television</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-108 Scriptwriting Fundamentals</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-110 Writing for Journalism and New Media</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-112 Exploring Video Studio Production</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-113 Exploring Online Media Communication</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-114 Digital Audio for Multimedia</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-115 Sound for Film, Television &amp; New Media</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Plus fourteen units from the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-108 Scriptwriting Fundamentals</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-110 Writing for Journalism and New Media</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-116 Digital Video Editing I</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-119 Announcing and Media Performance</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-120 Introduction to Cinematography</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Required Electives:**
- Capstone (needs only 1 unit of CWE-188MEA, and in addition, choose 3 units from any MEA 200-level elective course) (5.5 units)
- CWE-188MEA Cooperative Work Experience Education | 1.0 - 4.0 |
- MEA-295 Professional Practices/Portfolio     | 1.5   |
Certificate of Specialization: News Reporting and Anchoring

Student Learning Outcome:
Students will be able to report a news story in new media journalism.

Program Requirements:
Units Required: 11

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-110</td>
<td>Writing for Journalism and New Media</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-119</td>
<td>Announcing and Media Performance</td>
<td>2.0</td>
</tr>
<tr>
<td>MEA-125</td>
<td>News Reporting and Anchoring</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-225</td>
<td>Advanced News Media Production</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Certificate of Achievement: Video Game Animation

A certificate designed to prepare students to enter the video game animation industry.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in the field of video game animation.

Program Requirements:
Units Required: 23.5

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEA-106</td>
<td>Introduction to Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-109</td>
<td>Story Development and Storyboarding</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-131</td>
<td>3D Modeling and Surfacing</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-218</td>
<td>Real-Time Video Game Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-231</td>
<td>Digital Sculpture</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-232</td>
<td>Character and Prop Design for Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-234</td>
<td>Character Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>MEA-295</td>
<td>Professional Practices/Portfolio</td>
<td>1.5</td>
</tr>
<tr>
<td>GSM-047</td>
<td>Introduction to Photoshop</td>
<td>1.0</td>
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</table>

Recommended electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSCI-235</td>
<td>C Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>CMPSCI-236</td>
<td>C++ Object Oriented Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>CEE-188MEA</td>
<td>Cooperative Work Experience Education</td>
<td>1.0 - 4.0</td>
</tr>
</tbody>
</table>

MEA 090L MEDIA PRODUCTION LAB
Units: 1.00
54.00 hours lab

A lab for the currently-enrolled Media Entertainment Arts student who wishes to increase skills through the use of the Media Entertainment Arts lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in the Media Entertainment Arts program. Offered pass/no-pass only. Units do not apply to the associate degree.

ME 091L ADVANCED MEDIA PRODUCTION LAB
Units: 1.00
54.00 hours lab

A lab for the currently-enrolled advanced Media Entertainment Arts student who wishes to increase skills through the use of the Media Entertainment Arts lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in the Media Entertainment Arts program. Offered pass/no-pass only. Units do not apply to the associate degree.

ME 100 MASS MEDIA AND SOCIETY
Units: 3.00
UC:CSU 54.00 hours lecture

Surveys and evaluates mass media, including newspapers, television, motion pictures, radio, publishing, advertising, and new and emerging digital media. Historical and theoretical perspectives are highlighted in order to critically examine the complex relationship between society and contemporary mass communications.

ME 101 TELEVISION AND FILM MEDIA AESTHETICS
Units: 3.00
CSU 54.00 hours lecture

Surveys and examines the fundamental components of cinematic art, as found in television, film, and digital media. Students analyze how various dramatic, narrative, and technological conventions are used to tell stories and create meaning. Representative television programs, films, and new digital media are viewed and discussed to understand the structure of the moving image.

ME 102 HISTORY OF ANIMATION
Units: 3.00
UC:CSU 54.00 hours lecture

Surveys and analyzes animated motion picture and television masterpieces from their inception to the present, including the ideas and values of the examined animated films as reflected and emphasized through artistic techniques.
MEA 103 EXPLORING CONTEMPORARY TELEVISION
Units: 3.00
CSU 54.00 hours lecture
Surveys and analyzes contemporary American and global television media content and genres, such as news-cast, sports coverage, action/adventure, episodic drama, situation comedy, news documentary/news magazine, and reality-based scripted programming. Examines the television's narrative strategies and industrial practices, and relates the broader effects of contact and consumption on popular culture.

MEA 106 INTRODUCTION TO ANIMATION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: ART-124B
Introduces the principles of animation, laws of motion, timing, analysis, and the production of a short animated narrative video using traditional drawing methods.

MEA 108 SCRIPTWRITING FUNDAMENTALS
Units: 3.00
CSU 54.00 hours lecture
Introduces writing for film, television, and electronic media. Surveys standard industry script formats for commercials, broadcast, and film and television narratives. Students analyze and compare produced scripts from early drafts through the final on-screen product to develop practical skills that emphasize clarity, economy, and visualization.

MEA 109 STORY DEVELOPMENT AND STORYBOARDING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces story development and storyboarding for animation emphasizing understanding traditional story structure for animated film, television, and internet. Also explores a variety of storyboarding techniques, including the use of digital software and animatics.

MEA 110 WRITING FOR JOURNALISM AND NEW MEDIA
Units: 3.00
CSU 54.00 hours lecture
Examines and develops language and style as it applies to basic, broadcast and new media journalism. Emphasizes practical application for online and broadcast journalism. Students analyze and perform script development of news excerpts applicable to new media and television production.

MEA 111 EXPLORING VIDEO FIELD PRODUCTION
Units: 2.00
CSU 27.00 hours lecture, 27.00 hours lab
Introduces the theory, terminology, and operation of field video production, including camera operation, portable lighting, audio, and video recording equipment. Examines the aesthetics and fundamentals of scripting, producing, and directing on location for broadcast and multimedia outlets. Students who have earned credit for RTVF-112 cannot receive credit for this course.

MEA 112 EXPLORING VIDEO STUDIO PRODUCTION
Units: 2.00
CSU 27.00 hours lecture, 27.00 hours lab
Introduces the theory and technology of video studio production, including lighting, camera, switcher, special effects, microphones, audio mixer, and videotape recorders. Examines the production process from script to screen through a variety of in-class studio projects. Students who have earned credit for RTVF-112 cannot receive credit for this course.

MEA 113 EXPLORING ONLINE MEDIA COMMUNICATION
Units: 2.00
CSU 27.00 hours lecture, 27.00 hours lab
Introduces conceptual foundations of online media communication, including production, distribution, access, and storage. Examines Weblogs (blogs), internet-based audio/visual media, and emerging mobile technologies to analyze the impact of online media communication on society, culture, and commerce.

MEA 114 DIGITAL AUDIO FOR MULTIMEDIA
Units: 2.00
CSU 27.00 hours lecture, 27.00 hours lab
Introduces methods of applying audio to various forms of digital media, including the hardware, software, and technical processes employed in recording, editing, and mixing digital audio for CD-ROMs, DVDs, video, and the Internet.

MEA 116 DIGITAL VIDEO EDITING I
Units: 2.00
CSU 27.00 hours lecture, 27.00 hours lab
Introduces non-linear editing technology and media management skills. Students learn basic Final Cut Pro operation and workflow, including importing, manipulating, and exporting digital media for a variety of formats.
### MEA 118 INTERACTIVE 2D ANIMATION
Units: 2.00
CSU 27.00 hours lecture, 27.00 hours lab
Introduces 2D computer animation. Students produce a short narrative film using characters.

### MEA 119 ANNOUNCING AND MEDIA PERFORMANCE
Units: 2.00
CSU 27.00 hours lecture, 27.00 hours lab
Presents the theory and practice of announcing for media, emphasizing developing an individual 'on air personality.' Students learn how vocal delivery, eye contact, and body language combine to direct attention and create meaning in a highly personal yet ethically responsible fashion.

### MEA 120 INTRODUCTION TO CINEMATOGRAPHY
Units: 2.00
CSU 18.00 hours lecture, 54.00 hours lab
Examines the well-disciplined creative control of film/video cameras and lighting for both studio and field production, including the principles of grip, gaff and electrics.

### MEA 125 NEWS REPORTING AND ANCHORING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: MEA-110
Presents beginning instruction and practice in new media creation and television production including news-gathering, writing, field camera operation, on camera reporting, and editing.

### MEA 131 3-D MODELING AND SURFACING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces 3-D computer design, including modeling, surfacing, textures, lighting and rendering through the use of Maya software. Students learn how Maya 'nodes' work with polygon and subdivision modeling as well as surfacing controls. Students learn how to design and explore camera and lighting setups.

### MEA 135 COMPUTER ANIMATION AND SPECIAL EFFECTS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: MEA-131
Introduces 3-D computer animation and special effects through the use of Maya software. Students learn how the graph editor works to control animation, how to apply the principles of motion and emotion to animated scenes, and how to create visual special effects used in animation and live-action entertainment.

### MEA 155 SOUND FOR FILM, TELEVISION & NEW MEDIA
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: MEA-114
Introduces the tools and techniques used to create professional audio for film, television, and new media. Explores recording methods for both studio and location sound recording and mixing, and examines related concepts, including microphone placement, room acoustics, multi-source mixing, signal flow, and non-linear recording/editing.

### MEA 159 MUSIC FOR FILM, TELEVISION AND NEW MEDIA
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: MEA-120
Introduces basic training in visual storytelling, directing cast and crew, and organizing a film production. Key concepts of narrative structure and production protocol are grounded in technical knowledge of both 16mm film and digital video formats.

### MEA 201 FILM STYLE SEMINAR
Units: 3.00
CSU 54.00 hours lecture
Investigates the nature of film style through the examples of individual directors by examining what constitutes 'style' and how it develops in relation to factors such as era, genre, technology, politics, commerce, aesthetics, and critical influence. Builds fundamental communication skills for directors and producers in professional film.

### MEA 206 DIGITAL VIDEO EDITING II
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-116
Examines motion picture editing theory in its historical and technical contexts. Students analyze and perform editing processes using stylistically appropriate techniques and devices. Topics include the development and use of film grammar, continuity and montage editing, narrative structure, and experimental techniques.
## MEDIA ENTERTAINMENT ARTS PROGRAM CONVERSION

### Course Revisions

<table>
<thead>
<tr>
<th>New Course No.</th>
<th>New Course Name</th>
<th>New Units</th>
<th>Old Course No.</th>
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<td>Open Radio, Television, Film Lab</td>
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<td>Structure of the Moving Image</td>
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<td>Sound for Film, Television &amp; New Media</td>
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<td>Texture Mapping for Computer Animation</td>
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</table>
MEA 215 PHOTOJOURNALISM AND NEWS PHOTOGRAPHY
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-120
Introduces contemporary photojournalism and news photography through applications of theory and concepts of visual communication to digital photographic processes to produce news stories, photographic series, and photo-essays. Note: It is recommended that students have access to a Digital SLR camera with manual exposure and interchangeable lenses. (Same as PHOTO-215)

MEA 218 REAL-TIME VIDEO GAME ANIMATION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-131
Design, create, and animate within a real-time, virtual, 3-D game environment using 3-D character and set modeling, character animation, surface texturing, and virtual set lighting.

MEA 225 ADVANCED NEWS MEDIA PRODUCTION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: MEA-125
Presents advanced principles of scripting, gathering and editing of television news production for airing on broadcast, cable television, and the Internet (Webcasting). Advances techniques of television field and studio production using digital broadcast production technologies.

MEA 230 ONLINE PRODUCTION AND NEW MEDIA MANAGEMENT
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-225
Capstone course offering instruction and practice in producing television news as well as online publishing and production management, emphasizing the role of the producer in the television and new media news team and supervision of the Cougar News website.

MEA 231 DIGITAL SCULPTURE
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-131
Presents digital sculpting software to create 3-D computer images or characters from concept to digital model as well as a professional production process to create digital 3-D creatures for films and games.

MEA 232 CHARACTER AND PROP DESIGN FOR ANIMATION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: ART-124B
Introduces traditional and digital tools to create animated models, emphasizing emotional content and clarity of design, as well as technical conventions.

MEA 233 ENVIRONMENTAL DESIGN FOR ANIMATION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-106 Recommended Preparation: ART-124A
Presents design, composition, perspective, atmospheric and psychological lighting, and camera placement as applied to the construction of scenes, the congruency of sequences, and the designing of environments for animation.

MEA 234 CHARACTER ANIMATION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-135
Explores 3-D computer character animation through the use of Maya software to create characters showing action and emotions, including facial animation and nonlinear editing.

MEA 235 VISUAL EFFECTS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-135. Recommended Preparation: GMD-173
Advances the practice and theory of using computer generated special effects combined with live action, video, and film. Addresses compositing special effects in a variety of different styles and looks as well as the use of green-screen or matting and rotoscoping and digital set extensions.

MEA 255 DIGITAL AUDIO POST-PRODUCTION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-155
Examines advanced audio techniques and technologies for the audio post-production process, including digital sound editing, sound design, and mixing of audio soundtracks for film/video media.
ME 261 ADVANCED ANIMATION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-106
Examines 2-D character animation and its techniques in depth. Students will complete advanced animation exercises, as well as design and produce a short animated film.

ME 265 ANIMATION PRODUCTION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-106, MEA-131, MEA-135
Presents designing, planning, and creating an animated film in a team-based environment.

ME 280 FILMMAKING II: DIRECTING AND PRODUCING
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: MEA-180
Examines advanced filmmaking techniques to create film projects that reflect the personal style of the writer-director, including management skills in directing and producing.

ME 295 PROFESSIONAL PRACTICES/PORTFOLIO
Units: 1.50
CSU 18.00 hours lecture, 27.00 hours lab
Provides advanced students with the business and career skills required for entry-level industry positions or transfer to four-year film/media schools. Topics include portfolio design and assembly, writing resumes, cover letters, and artist statements, networking, personal presentation, and applying for industry jobs and film festivals.

MEDICAL LABORATORY TECHNICIAN

Associate in Science Degree: Medical Laboratory Technician
The Medical Laboratory Technology Associate Degree program prepares students for employment in clinical laboratories, industry and biotechnology. The MLT Program curriculum, an integration of classroom lectures, student laboratories and clinical training, fosters development of analytical and problem-solving skills required in this profession.

PREREQUISITES – completed with minimum 2.50 GPA
1. Anatomy (4 semester or 6 quarter units)
2. Physiology (4 semester or 6 quarter units)
3. Microbiology (4 semester or 6 quarter units)
4. Preparatory General Chemistry (4 semester or 6 quarter units)
5. Phlebotomy Certification
6. English 101 (3 semester units or 5 quarter units)
Completing program prerequisites, does not assure admission into the program.

APPLICATION PROCEDURE:
1. Submit College of the Canyons application and obtain a student identification number.
2. Submit the following documents to Admissions and Records:
   - Official sealed transcripts from all colleges attended, except COC (must include all coursework regardless if MLT prerequisite or not)
   - For transcripts from other countries, an official sealed foreign transcript evaluation from a NACES approved agency
   - Official College Board AP English score
   - A copy of high school transcript, copy of diploma, OR copy of GED certificate
3. Submit MLT Program Application to the Allied Health and Public Safety Division Office. Evidence of completion of Phlebotomy must be attached to the application. A valid COC email address is required.
4. The MLT application and official transcripts will be evaluated to determine if applicant meets current MLT Program selection criteria. Applicants will not be eligible for selection if admission requirements are not met.

5. Selected applicants must attend and complete the mandatory program orientation or they will be dropped from the program.

Mandatory Requirements of all Medical Lab Technician (MLT) Students:

Once admitted to the MLT Program, students are required to complete lab experiences at affiliated hospitals and clinical labs. Students must have their own means of transportation to these off-campus sites. These facilities have requirements above and beyond the requirements of being a student on a community college campus. All students entering the program must complete the following in order to participate in program activities:

- Current Physical
- Current TB clearance – 2 Step Process or Chest Xray
- Color Blindness Screening
- Immunizations and Titors
- Drug Screening
- Current CPR card
- Current Fire Life Safety Card
- Malpractice Insurance
- Background Check and OIG/GSA Clearance
- Hepatitis B Video
- ID Badge

If these mandatory requirements are not met, the student will be blocked from registration for the MLT courses and dropped from the program.

Additional details and information about these requirements will be provided to students upon acceptance to the program. Students who have questions prior to applying the program may contact the Allied Health and Public Safety Division Office for assistance.

Student Learning Outcome:

Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as a medical laboratory technician.

Program Requirements:

Units Required: 58.75

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Required electives:

- BIOSCI-221 Introduction to Microbiology ... 5.0
- CHEM-151 Preparatory General Chemistry ... 4.0
- CHEM-151H Preparatory General Chemistry - Honors ... 4.0
- MLT-050 Phlebotomy ... 3.5

Plus eight units from the following:

- BIOSCI-201 Introduction to Human Anatomy ... 4.0
- BIOSCI-202 Introduction to Human Physiology ... 4.0
- BIOSCI-204 Human Anatomy and Physiology I ... 4.0
- BIOSCI-205 Human Anatomy and Physiology II ... 4.0

MLT 050 PHLEBOTOMY

Units: 3.50

45.00 hours lecture, 54.00 hours lab

Prerequisite: High school diploma or GED. CPR for Health Care Workers card. Once registered, students must pick up a packet from the Allied Health and Public Safety Division Office. The packet includes forms for all requirements that must be submitted prior to first class meeting. These requirements include, but are not limited to, physical, TB clearance, immunizations and titors, drug screening, CPR card, Fire Safety card, malpractice insurance, and background check. If these mandatory requirements are not met, the student will be blocked from registration for MLT-050 and dropped from the course.

Designed to prepare personnel who collect blood samples for medical laboratory analysis. Technique, equipment, and proper patient preparation will be stressed. Successful completion of the course will result in a Phlebotomy Technician Proficiency Certificate, which makes students eligible for State certification. Includes learning experiences both in on-campus skills laboratories and at affiliated clinical sites. Students must have their own means of transportation to these off-campus sites. May be repeated if used for legally mandated training.
MLT 110 CLINICAL HEMATOLOGY
LECTURE
Units: 3.00
CSU 54.00 hours lecture
Co-requisite: MLT-110L
Presents hematology from the unclassified stem cell in the bone marrow to both normal and abnormal peripheral blood cells, including the procedures used to identify these cells.

MLT 110L CLINICAL HEMATOLOGY LAB
Units: 1.00
CSU 54.00 hours lab
Prerequisite: MLT-050 Co-requisite: MLT-110
Introduces the instruments and techniques used for hematology testing, including calibration and interpretation of results. Emphasizes the morphology and identification of common human blood cells.

MLT 112 CLINICAL URINALYSIS LECTURE
Units: 1.00
CSU 18.00 hours lecture
Co-requisite: MLT-112L
Presents the properties and constituents of urine, emphasizing the interpretation of qualitative and quantitative clinical analysis of urine, and a comparison of lab results to kidney function.

MLT 112L CLINICAL URINALYSIS LAB
Units: 0.50
CSU 27.00 hours lab
Co-requisite: MLT-112
Presents urine testing, interpretation, and correlation. Emphasizes qualitative and quantitative clinical examination of urine specimens, including the principle of each reaction, quality control, interpretation, and correlation to other laboratory findings.

MLT 114 CLINICAL COAGULATION
LECTURE
Units: 1.00
CSU 18.00 hours lecture
Co-requisite: MLT-114L
Presents hemostasis, properties, and factors involved in the clotting system, including various coagulation disorders and their related laboratory findings.

MLT 114L CLINICAL COAGULATION LAB
Units: 0.75
CSU 40.50 hours lab
Co-requisite: MLT-114
Introduces the techniques and safety procedures used in the clinical coagulation laboratory, emphasizing platelet function tests and intrinsic and extrinsic clotting pathway testing.

MLT 116 CLINICAL MICROBIOLOGY
LECTURE
Units: 3.00
CSU 54.00 hours lecture
Co-requisite: MLT-116L
Introduces identification methods, theories, and techniques used in basic bacteriology, parasitology, and mycology emphasizing routine organism identification.

MLT 116L CLINICAL MICROBIOLOGY LAB
Units: 1.00
CSU 54.00 hours lab
Co-requisite: MLT-116
Introduces the various techniques and safety procedures in clinical microbiology. Emphasizes the morphology and identification of common pathogenic organisms. Must have completed BIOSCI 221 to enter the course and must be admitted to the MLT program.

MLT 118 CLINICAL IMMUNOLOGY/IMMUNOHEMATOLOGY
LECTURE
Units: 3.00
CSU 54.00 hours lecture
Co-requisite: MLT-118L
Introduces the principles of antigen and antibody reactions included in blood grouping and typing, and compatibility testing, and serological and immunohematological procedures.

MLT 118L CLINICAL IMMUNOLOGY/IMMUNOHEMATOLOGY LAB
Units: 1.00
CSU 54.00 hours lab
Co-requisite: MLT-118
Introduces serological and immunohematology procedures and techniques to measure analytes qualitatively and quantitatively.

MLT 120 CLINICAL CHEMISTRY I
LECTURE
Units: 3.00
CSU 54.00 hours lecture
Co-requisite: MLT-120L
Presents the theoretical and practical concepts associated with testing procedures used in the clinical chemistry laboratory, including the fundamentals of general laboratory principles and specific basic instrumentation and methodologies.
MLT 120L CLINICAL CHEMISTRY I LAB
Units: 1.00
CSU 54.00 hours lab
Co-requisite: MLT-120
Introduces the various types of instrumentation used in the clinical chemistry laboratory, including testing parameters, calibration, quality control, preventative maintenance, and some manual procedures.

MLT 124 CLINICAL CHEMISTRY II LECTURE
Units: 3.00
CSU 54.00 hours lecture
Prerequisite: MLT-120 and MLT-120L Co-requisite: MLT-124L
Second in two-part clinical chemistry series, emphasizing the endocrine, liver, kidney, and pancreatic functions. Also includes tumor markers, drug screening, and body fluids.

MLT 124L CLINICAL CHEMISTRY II LAB
Units: 1.00
CSU 54.00 hours lab
Prerequisite: MLT-120 and MLT 120L Co-requisite: MLT-124
Presents more advanced instrumentation used in the clinical chemistry laboratory to test different body systems as well as drug screening, tumor markers, and body fluids. Includes their principles, testing parameters, calibration, quality control, and preventive maintenance.

MLT 128 CLINICAL HEMATOLOGY/URINALYSIS/COAGULATION PRACTICUM
Units: 4.00
CSU 216.00 hours lab
Prerequisite: MLT-110 and MLT-110L, MLT-112 and MLT-112L, MLT-114 and MLT-114L
Provides entry-level clinical laboratory experience in the clinical laboratory hematology, urinalysis, and coagulation departments, emphasizing technique, accuracy, and precision.

MLT 129 CLINICAL MICROBIOLOGY PRACTICUM
Units: 4.00
CSU 216.00 hours lab
Prerequisite: MLT-116 and MLT-116L
Provides entry-level clinical laboratory experience in the clinical laboratory microbiology department, emphasizing technique, accuracy, and precision.

MLT 130 CLINICAL IMMUNOLOGY/IMMUNOHEMATOLOGY PRACTICUM
Units: 3.00
CSU 162.00 hours lab
Prerequisite: MLT-118 and MLT-118L
Provides entry-level clinical laboratory experience in the serology and blood banking departments, emphasizing technique, accuracy, and precision.

MLT 131 CLINICAL CHEMISTRY PRACTICUM
Units: 4.00
CSU 216.00 hours lab
Prerequisite: MLT-124 and MLT-124L
Provides entry-level clinical laboratory experience in the general and special chemistry departments, emphasizing technique, accuracy, and precision.
MODERN LANGUAGES

The Department of Modern Languages offers courses in French, German and Spanish. Foreign-language studies provide the student with a foundation in written communication skills of the language. From a vocational standpoint, the program provides skills in translation and interpretation, business, commerce, and foreign-language based research. Foreign-language studies include numerous opportunities for students to enhance language skills and intercultural awareness through activities such as conversational groups, cultural excursions, poetry reading, and foreign film festivals.

CHINESE

CHINESE 101 ELEMENTARY CHINESE I
Units: 4.00
UC:CSU 72.00 hours lecture
Introduces Chinese language (Mandarin) with emphasis in developing essential skills in communication. Practice in speaking and understanding as well as reading and writing Chinese characters. Introduces the geography, customs and culture of China. Corresponds to the first two years of high school Chinese. Not appropriate for native or heritage speakers.

FRNCH 101 ELEMENTARY FRENCH I
Units: 4.00
UC:CSU 72.00 hours lecture
Develops language skills in listening, reading, speaking and writing within a cultural context with a strong emphasis on communication. Corresponds to the first two years of high school French. Not appropriate for native speakers.

FRNCH 102 ELEMENTARY FRENCH II
Units: 4.00
UC:CSU 72.00 hours lecture
Prerequisite: FRNCH-101
Continues the study of the fundamentals of the French language, emphasizing correct pronunciation and mastery of a practical vocabulary, oral and written expression, and the study of the cultures of the contemporary French-speaking world. Not appropriate for native speakers. Corresponds to the third year of high school French.

FRNCH 150 BEGINNING CONVERSATIONAL FRENCH
Units: 3.00
CSU 54.00 hours lecture
Presents the essentials of Italian for conversational and practical usage. Intensive practice in the expression and comprehension of spoken Italian.

FRNCH 201 INTERMEDIATE FRENCH I
Units: 4.00
UC:CSU 72.00 hours lecture
Prerequisite: FRNCH-102
Reviews French grammar, emphasizing practical and idiomatic usage as well as analyzing essays, poems and short stories in French by famous authors from the French-speaking world. Corresponds to the fourth year of high school French.

FRNCH 202 INTERMEDIATE FRENCH II
Units: 4.00
UC:CSU 72.00 hours lecture
Prerequisite: FRNCH-201
Studies more advanced grammatical structures and syntax, emphasizing practical and idiomatic usage, as well as analyzing essays, poems and short stories in French by famous authors from the French-speaking world.

FRENCH

Associate in Arts Degree: French

Student Learning Outcome:
Students will be able to demonstrate proficiency in communicating in expressive and receptive forms in French. Compare and contrast cultures and histories of the French speaking world.

Program Requirements:
Units Required: 19

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRNCH-101</td>
<td>Elementary French I</td>
<td>4.0</td>
</tr>
<tr>
<td>FRNCH-102</td>
<td>Elementary French II</td>
<td>4.0</td>
</tr>
<tr>
<td>FRNCH-150</td>
<td>Beginning Conversational French</td>
<td>3.0</td>
</tr>
<tr>
<td>FRNCH-201</td>
<td>Intermediate French I</td>
<td>4.0</td>
</tr>
<tr>
<td>FRNCH-202</td>
<td>Intermediate French II</td>
<td>4.0</td>
</tr>
</tbody>
</table>
GERMAN

GERMAN 101 ELEMENTARY GERMAN I
Units: 4.00
UC:CSU 72.00 hours lecture
An introduction to understanding, speaking, reading and writing simple German, using a basic vocabulary and stressing idiomatic expressions. Intensive drill in pronunciation and the fundamentals of German. Corresponds to the first two years of high school German.

GERMAN 102 ELEMENTARY GERMAN II
Units: 4.00
UC:CSU 72.00 hours lecture
Prerequisite: GERMAN-101
Develops linguistic and cultural proficiency at the novice high level. Taught in German. Corresponds to the third year of high school German. Not appropriate for native or heritage speakers.

ITALIAN

ITAL 101 ELEMENTARY ITALIAN I
Units: 4.00
UC:CSU 72.00 hours lecture
Develops language skills in listening, reading, speaking and writing within a cultural context with a strong emphasis on communication. Emphasizes acquisition of vocabulary, structures, and grammatical patterns necessary for comprehension and production of spoken and written Italian at the beginning level. Taught in Italian. Corresponds to the first two years of high school Italian. Not appropriate for native or heritage speakers.

ITAL 102 ELEMENTARY ITALIAN II
Units: 4.00
CSU 72.00 hours lecture
Prerequisite: ITAL-101
Develops linguistic and cultural proficiency at the novice level. Taught in Italian. Corresponds to the third year of high school Italian. Not appropriate for native or heritage speakers.

ITAL 150 CONVERSATIONAL ITALIAN
Units: 3.00
CSU 54.00 hours lecture
Presents the essentials of Italian for conversational and practical usage. Intensive practice in the expression and comprehension of spoken Italian.

SPANISH

Associate in Arts Degree: Spanish

Student Learning Outcome:
Students will be able to demonstrate proficiency in communicating in expressive and receptive forms in Spanish and compare and contrast cultures and histories of the Spanish-speaking world.

Program Requirements:
Units Required: 18

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN-150</td>
<td>Beginning Conversational Spanish</td>
<td>3.0</td>
</tr>
<tr>
<td>SPAN-201</td>
<td>Intermediate Spanish I</td>
<td>4.0</td>
</tr>
<tr>
<td>SPAN-202</td>
<td>Intermediate Spanish II</td>
<td>4.0</td>
</tr>
<tr>
<td>SPAN-240</td>
<td>Introduction to Latin American Literature</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Plus four units from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN-102</td>
<td>Elementary Spanish II</td>
<td>4.0</td>
</tr>
<tr>
<td>SPAN-102A</td>
<td>Spanish for Heritage Speakers II</td>
<td>4.0</td>
</tr>
</tbody>
</table>

SPAN 101 ELEMENTARY SPANISH I
Units: 4.00
UC:CSU 72.00 hours lecture
Develops linguistic and cultural proficiency at the novice mid level. Taught in Spanish. Corresponds to the first two years of high school Spanish. Not appropriate for native or heritage speakers. UC credit limitation: SPAN-101 and 101A combined, maximum credit one course.

SPAN 101A SPANISH FOR HERITAGE SPEAKERS I
Units: 4.00
UC:CSU 72.00 hours lecture
Focuses on developing and strengthening reading and writing skills while exploring Spanish speaking culture. Attention is given to the formal aspects of the language. Emphasis is placed on spelling, punctuation, lexical variations, idioms and cultural components of the Spanish language. This class is designed for students who communicate in Spanish and/or have near-native oral proficiency. This might include students who have acquired the language outside of the classroom setting. Students who have earned credit for SPAN-101 cannot receive credit for this course.

SPAN 102 ELEMENTARY SPANISH II
Units: 4.00
UC:CSU 72.00 hours lecture
Prerequisite: SPAN-101
Develops linguistic and cultural proficiency at the novice high level. Corresponds to the third year of high school Spanish. Not appropriate for native or heritage speakers. UC credit limitation: SPAN-102 and 102A combined, maximum credit one course.
### SPAN 102A SPANISH FOR HERITAGE SPEAKERS II
**Units:** 4.00  
**UC:CSU** 72.00 hours lecture  
**Prerequisite:** SPAN-101A  
Focuses on reading and writing with special attention to formal aspects of the language while exploring the Spanish speaking culture. Designed for students who communicate in Spanish and/or have near-native oral proficiency. Students who have earned credit for SPAN-102 cannot receive credit for this course.

### SPAN 150 BEGINNING CONVERSATIONAL SPANISH
**Units:** 3.00  
**UC:CSU** 54.00 hours lecture  
Essentials of Spanish for conversational and practical usage. Intensive practice in the expression and comprehension of spoken Spanish. Emphasizes the practical application of the language, not grammar acquisition or review.

### SPAN 201 INTERMEDIATE SPANISH I
**Units:** 4.00  
**UC:CSU** 72.00 hours lecture  
**Prerequisite:** SPAN-102  
Presents Spanish grammar at the intermediate level, emphasizing practical and idiomatic usage as well as analyzing essays, poems and short stories in Spanish by famous authors from the Spanish-speaking world.

### SPAN 202 INTERMEDIATE SPANISH II
**Units:** 4.00  
**UC:CSU** 72.00 hours lecture  
**Prerequisite:** SPAN-201  
Studies more advanced grammatical structures and syntax, emphasizing linguistic and cultural proficiency using cultural and literary materials.

### SPAN 240 INTRODUCTION TO LATIN AMERICAN LITERATURE
**Units:** 3.00  
**UC:CSU** 54.00 hours lecture  
Surveys literature and culture of Latin America from the colonial period to the present, including basic literary concepts and analysis of the four genres, narrative, essay, poetry, and drama within literary movements in Latin America. Lectures and discussions are in Spanish.

### MUSIC

#### Associate in Arts Degree: Music - Composition
The Music-Composition program is designed to give students the ability to develop an individualistic artistic voice through the exposure to the rigor of traditional music theory, performance and musicianship, with the option to choose among various elective courses to focus on their area of creative interest.

The Department of Music offers a comprehensive curriculum to prepare songwriters, electronic minded musicians, symphonic composers, pop and jazz enthusiasts, in the path toward successful creative careers.

Music students in this major must participate in at least two major performing group while enrolled in the program. Students should select a performing group that fits their performance specialty or interest.

**Student Learning Outcome:**
Students will be able to apply theoretical music concepts and performance-based skills to produce and to create original music.

**Program Requirements:**
Units Required: 21-24

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-103</td>
<td>Musicianship Skills III</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-104</td>
<td>Musicianship Skills IV</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**Plus nine units from the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-120</td>
<td>Tonal Harmony</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-121</td>
<td>Chromatic Harmony</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-122</td>
<td>Tonal Counterpoint</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-123</td>
<td>Modal Counterpoint</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-126</td>
<td>Pop and Jazz Music Theory</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Plus six units from the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-118</td>
<td>Popular Songwriting</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-125</td>
<td>Studies in Music Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-127</td>
<td>Orchestration for Strings and Woodwinds</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-128</td>
<td>Orchestration for Brass, Percussion, and Harp</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-142</td>
<td>Electronic Music Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-146</td>
<td>Electronic Music for the Stage</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Plus two units from the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-131</td>
<td>Keyboard Instruction I</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-132</td>
<td>Keyboard Instruction II</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-160</td>
<td>Guitar Studies I</td>
<td>2.0</td>
</tr>
</tbody>
</table>
MUSIC-161 Guitar Studies II .................. .2.0
MUSIC-167 Jazz Guitar Studies I ............... .2.0
MUSIC-168 Jazz Guitar Studies II ............... .2.0

Plus two - five units from the following:
MUSIC-116 Performance Ensembles for Music Theater .............. .2.0 - 4.0
MUSIC-151 Jazz Improvisation .................. .1.0
MUSIC-153 Studio Jazz Ensemble ................ .2.0
MUSIC-165 Symphony of the Canyons ............. .2.0
MUSIC-185 Symphonic Band ...................... .2.0
MUSIC-186 Music Ensemble ....................... .2.0

Recommended electives:
MUSIC-100 Fundamentals of Music ............... .3.0
MUSIC-101 Musicianship Skills I ................ .1.0
MUSIC-102 Musicianship Skills II ............... .1.0

Associate in Arts Degree: Music – Concert Performance

Music-Concert Performance students are required to audition and, once accepted, enroll in Music 189 (Individualized Lessons), to receive instruction on an instrument of their choice. Performance majors will be required to take Music 189 and Music 190 (Applied Performance) for a total of four times. Students enrolled in this program will also have to take music theory and musicianship classes to earn the degree and to participate in one of the various instrumental ensembles in residence at the college per semester.

The Music-Concert Performance option offers music students an array of traditional symphonic, Jazz ensembles and chamber groups to prepare them toward the successful transfer to four-year institutions, as well as providing valuable experiences to build a professional career in music performance.

Music students in this major must participate in at least one major performing group or activity per semester. Students should select a performing group that fits their performance specialty or interest. All ensembles and Jazz Improvisation classes are repeatable for credit up to four times all total.

Student Learning Outcome:
Students will be able to apply theoretical music concepts and performance-based skills to produce and to create original music.

Program Requirements:
Units Required: 24

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-103</td>
<td>Musicianship Skills III</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-104</td>
<td>Musicianship Skills IV</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Associate in Arts Degree: Music - Guitar Performance

Students pursuing the guitar major given the recommendation to enroll in any of the several guitar classes offered by the Music Department, while preparing to qualify for private lessons on either Jazz or Classical guitar, through the Individualized Music Lessons program. Students will be required to take Music 189 and Music 190 for four times altogether. They will also need to enroll in music theory and musicianship classes to earn the degree. They must also participate in one major group per semester.

Music students in this major must participate in at least one major performing group or activity per semester. Students should select a performing group that fits their performance specialty or interest.

Student Learning Outcome:
Students will be able to play guitar music of various styles both as a soloist and in conjunction with other musicians.

Program Requirements:
Units Required: 24

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-103</td>
<td>Musicianship Skills III</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-104</td>
<td>Musicianship Skills IV</td>
<td>1.0</td>
</tr>
</tbody>
</table>
CREDIT PROGRAMS / COURSE DESCRIPTIONS

Plus six units from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-120 Tonal Harmony</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-121 Chromatic Harmony</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-122 Tonal Counterpoint</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-123 Modal Counterpoint</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-126 Pop and Jazz Music Theory</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Take both courses below for a total of four units each:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-189 Individualized Music Lessons</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-190 Applied Performance</td>
<td>0.5 - 1.0</td>
</tr>
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</table>

Plus eight units from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-116 Performance Ensembles for Music Theater</td>
<td>2.0 - 4.0</td>
</tr>
<tr>
<td>MUSIC-151 Jazz Improvisation</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-153 Studio Jazz Ensemble</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-185 Symphonic Band</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-186 Music Ensemble</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Recommended electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-100 Fundamentals of Music</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-101 Musicianship Skills I</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-102 Musicianship Skills II</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-160 Guitar Studies I</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-161 Guitar Studies II</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-167 Jazz Guitar Studies I</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-168 Jazz Guitar Studies II</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-191 Contemporary Practices in Music Publishing</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-192 Music Business</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Associate in Arts Degree: Music - Jazz Performance

Students in the Jazz Performance option will have access to various college-based ensembles as well as jazz theory and improvisation courses to prepare them to either transfer to a four-year university or to pursue a musical career.

There is also the opportunity to enroll in the college's Applied Music courses. For all qualified students private lessons are offered for vocalists.

All students in this degree must participate in at least one major performing group or activity per semester.

The seven unit "Required Electives" option below in only required for the Applied Music option.

Student Learning Outcome:

Students will be able to sing music of various styles from different historical periods both as a soloist and in conjunction with other musicians.

Program Requirements:

Units Required: 18

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-104 Musicianship Skills IV</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-120 Tonal Harmony</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-121 Chromatic Harmony</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-122 Tonal Counterpoint</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-123 Modal Counterpoint</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-131 Keyboard Instruction I</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-132 Keyboard Instruction II</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-147 College Chorus</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-175 Festival Choir: Voices of the Canyons</td>
<td>1.0</td>
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</table>

Plus four units from the following (courses may be repeated):

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>MUSIC-150 Jazz Improvisation</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-153 Studio Jazz Ensemble</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Recommended electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-150 Jazz Improvisation</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-153 Studio Jazz Ensemble</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Associate in Arts Degree: Music - Voice Performance

Students choosing the Voice Performance option will have access to various college-based ensembles as well as theory and improvisation courses to prepare them to either transfer to a four-year university or to pursue musical careers.

There is also the opportunity to enroll in the college's Applied Music courses. For all qualified students private lessons are offered for vocalists.

All students in this degree must participate in at least one major performing group or activity per semester.

Student Learning Outcome:

Students will be able to sing music of various styles from different historical periods both as a soloist and in conjunction with other musicians.

Program Requirements:

Units Required: 18

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-101 Musicianship Skills I</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-102 Musicianship Skills II</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-103 Musicianship Skills III</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-104 Musicianship Skills IV</td>
<td>1.0</td>
</tr>
<tr>
<td>MUSIC-120 Tonal Harmony</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-121 Chromatic Harmony</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-122 Tonal Counterpoint</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-123 Modal Counterpoint</td>
<td>3.0</td>
</tr>
<tr>
<td>MUSIC-131 Keyboard Instruction I</td>
<td>2.0</td>
</tr>
<tr>
<td>MUSIC-132 Keyboard Instruction II</td>
<td>2.0</td>
</tr>
</tbody>
</table>
MUSIC 080 PRELUDE STRINGS
ENSEMBLE
Units: 0.50
27.00 hours lab
Requirement: Audition
Introduces orchestral performance for string players without previous orchestral experience. Emphasizes note reading and ensemble skills. Repertoire consists of short pieces of easy to medium easy level. Audition is required. Offered pass/no-pass only. Units do not apply to the associate degree.

MUSIC 081 SANTA CLARITA VALLEY YOUTH ORCHESTRA
Units: 1.50
18.00 hours lecture, 27.00 hours lab
Requirement: Audition
Introduces performance in instrumental ensembles, surveying the evolution of orchestral forms from baroque to the present. Offered pass/no-pass only. Units do not apply to the associate degree.

MUSIC 082 INTERMEDIATE ORCHESTRA
Units: 1.00
54.00 hours lab
Requirement: Audition
Provides opportunity to apply intermediate musical skills such as playing in upper position on a string instrument, intermediate tonguing and articulation technique on a brass or woodwind instrument, and orchestral mallet techniques on a percussion instrument. Audition is required. Offered pass/no-pass only. Units do not apply to the associate degree.

MUSIC 090L ELECTRONIC MUSIC LAB
Units: 1.00
54.00 hours lab
A lab for the currently enrolled music student who wishes to increase skills through the use of the music lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in printed schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in the Music program. Offered pass/no-pass only. Units do not apply to the associate degree.

MUSIC 100 FUNDAMENTALS OF MUSIC
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the elements of music and musical notation; music reading and sight-singing; scales and intervals.

MUSIC 101 MUSICIANSHIP SKILLS I
Units: 1.00
UC:CSU 54.00 hours lab
Prerequisite: MUSIC-100
First in a series of four comprehensive training workshops for musicians. It includes intensive practice of sight-singing, melodic and rhythmic dictations, chord recognition as well as applied music theory exercises.

MUSIC 102 MUSICIANSHIP SKILLS II
Units: 1.00
UC:CSU 54.00 hours lab
Prerequisite: MUSIC-101
Second in a series of four comprehensive training workshops providing musicians with intensive practice in sight-singing, melodic and rhythmic dictations, chord recognition and applied music theory exercises.

MUSIC 103 MUSICIANSHIP SKILLS III
Units: 1.00
UC:CSU 54.00 hours lab
Prerequisite: MUSIC-102
Third in a series of four comprehensive training workshops providing musicians with intensive practice in sight-singing, melodic and rhythmic dictations, chord recognition and applied music theory exercises.

MUSIC 104 MUSICIANSHIP SKILLS IV
Units: 1.00
UC:CSU 54.00 hours lab
Prerequisite: MUSIC-103
Fourth in a series of four comprehensive training workshops providing musicians with intensive practice in sight-singing, melodic and rhythmic dictations, chord recognition and applied music theory exercises.
MUSIC 105 MUSIC APPRECIATION  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Surveys musical masterpieces through all eras of musical evolution. Develops an appreciation and understanding of music in relation to culture and other art forms through listening experiences, lecture, and discussion.

MUSIC 106 DEVELOPMENT OF JAZZ  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Presents jazz as a cultural medium, including its historical background and development in the United States.

MUSIC 107 HISTORY OF ROCK & ROLL  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Explores the rise of rock and roll as a modern musical genre and examines its place in modern society.

MUSIC 108 WORLD MUSIC  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Surveys non-Western cultures through their musical traditions.

MUSIC 112 MUSIC HISTORY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Presents the main periods and styles of Western music from the Middle Ages to the present, including the most important composers as well as the cultural context in which their music was created.

MUSIC 116 PERFORMANCE ENSEMBLES FOR MUSIC THEATER  
Units: 2.00-4.00  
UC:CSU 108.00-216.00 hours lab  
Rehearsal and performance of music for scenes and complete musical theater productions produced in conjunction with Theater and other performing arts departments. Ability to sing or play a wind, brass, string or percussion instrument is assumed. Offered pass/no-pass only.

MUSIC 118 POPULAR SONGWRITING  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
Introduces popular song writing and the construction of lyrics for the commercial music industry. Basic knowledge of music fundamentals is assumed.

MUSIC 120 TONAL HARMONY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Recommended Preparation: MUSIC-100  
Presents the theory and practice of Western harmony from the 17th century to the beginning of the 20th Century. Major topics include: diatonic triads, seventh chords, principles of voice leading, non harmonic tones and harmonic analysis of music from the classical period [c.1725-1825].

MUSIC 121 CHROMATIC HARMONY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Recommended Preparation: MUSIC-120  
Emphasizes modulatory techniques, altered chords, formal analysis of Romantic, Impressionist and Modern music literature to late 20th century compositional techniques.

MUSIC 122 TONAL COUNTERPOINT  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Presents forms of counterpoint emphasizing the tonal concept. Analyzes contrapuntal forms in the 18th century style of J.S. Bach, including imitative forms, canon, invention, and fugue.

MUSIC 123 MODAL COUNTERPOINT  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Recommended Preparation: MUSIC-100  
Presents composition practices of the 16th century emphasizing species counterpoint. Analyzes motet and mass, fugue, and other musical forms using imitative techniques.

MUSIC 125 STUDIES IN MUSIC COMPOSITION  
Units: 3.00  
UC:CSU 36.00 hours lecture, 54.00 hours lab  
Presents a technical and historical analysis of works in various music languages. Students will compose individual pieces to be performed by college-based music ensembles.

MUSIC 126 POP AND JAZZ MUSIC THEORY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Recommended Preparation: MUSIC-120  
Focuses on the theoretical principles and practices found within the styles of jazz and pop music. Emphasizes analytical comprehension of style and chordal understanding.
MUSIC 127 ORCHESTRATION FOR STRINGS AND WOODWINDS
Units: 3.00
UC:CSU 54.00 hours lecture
Recommended Preparation: MUSIC-100
A study of orchestration using the instruments of the standard symphonic ensemble with emphasis on strings and woodwinds. Course also focuses upon the use of computers, samplers and synthesizers as tools for the contemporary composer and arranger, as well as with the use of instruments from non-European traditions.

MUSIC 128 ORCHESTRATION FOR BRASS, PERCUSSION, AND HARP
Units: 3.00
UC:CSU 54.00 hours lecture
Recommended Preparation: MUSIC-100
Presents orchestration as it applies to the instruments of the standard symphonic ensemble emphasizes brass, percussion, and harp. Includes the use of computers, samplers, and synthesizers as tools for the contemporary composer and arranger, as well as instruments from non-European traditions.

MUSIC 131 KEYBOARD INSTRUCTION I
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Introduces piano playing, including five finger patterns, chords, sight-reading, technical exercises, transposition, improvisation, keyboard theory, and beginning piano literature.

MUSIC 132 KEYBOARD INSTRUCTION II
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Recommended Preparation: MUSIC-131
Presents second level piano playing, music reading, technique, scales, transposition, keyboard harmonization, and analysis of the formal structure of simple to intermediate piano literature.

MUSIC 140 VOCAL DEVELOPMENT FOR POPULAR MUSIC
Units: 1.00
CSU 54.00 hours lab
Develops vocal skills for professional singing of popular music; public performances will be scheduled.

MUSIC 141 VOICE DEVELOPMENT: FROM THE BAROQUE TO THE 21ST CENTURY
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Presents the art and technique of solo singing, including musical theater repertoire, art songs and arias from the European tradition of the last five centuries, non-Western music, American folk music, and spiritual selections.

MUSIC 142 ELECTRONIC MUSIC COMPOSITION
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Presents the composition and production of in-studio music in a variety of contemporary idioms utilizing digital technology.

MUSIC 146 ELECTRONIC MUSIC FOR THE STAGE
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Focuses on the techniques and aesthetics of music created with the computer for on-stage applications.

MUSIC 151 JAZZ IMPROVISATION
Units: 1.00
UC:CSU 54.00 hours lab
Recommended Preparation: MUSIC-100
Emphasizes understanding basic theoretical structure as well as stylistic, melodic and rhythmic considerations. Designed to assist the jazz musician. Public performance may be required.

MUSIC 153 STUDIO JAZZ ENSEMBLE
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: Audition by instructor to ensure satisfactory performance ability.
Examines the historical basis of jazz and fosters the improvement of jazz performance skills on wind, string, vocal or percussion instruments through participation in public concerts. Field trips may be required.

MUSIC 159 MUSIC FOR FILM, TELEVISION AND NEW MEDIA
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Examines technical and aesthetic tools used in electronic music production, to create soundtracks for motion picture, television, and new media. Explores music production fundamentals, including basic composition techniques in synchronization with a visual counterpart. Formerly MUSIC-129. (Same as MEA-159)
MUSIC 160 GUITAR STUDIES I
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Introduces skills for the guitar, including chord structures, sight reading, and rhythm techniques.

MUSIC 161 GUITAR STUDIES II
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Recommended Preparation: MUSIC-160
Advances the study and application of guitar skill through advanced chord structures, sight-reading (open strings through 5th position), and more complex rhythm techniques.

MUSIC 165 SYMPHONY OF THE CANYONS
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: See schedule of classes for audition information.
Examines musical styles, performance techniques and basic theoretical analysis as they relate to performance of symphonic literature, as well as orchestra accompaniment of operatic and major choral works. Includes participation in public performance with the ensemble.

MUSIC 167 JAZZ GUITAR STUDIES I
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Introduces position-playing for jazz guitar, including jazz chordal structures, rhythm comping, harmonic structure and historical context of jazz forms.

MUSIC 168 JAZZ GUITAR STUDIES II
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Recommended Preparation: MUSIC-167
An intermediate level study of position-playing for jazz guitar, including jazz chordal structures, rhythm comping and structural analysis of jazz forms.

MUSIC 169 IMPROVISATION FOR GUITARISTS
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Focuses on the many facets of improvising on the guitar. It is assumed students are able to perform on the guitar at a beginning or intermediate level.

MUSIC 170 BASS GUITAR STUDIES I
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Studies and applies basic skills on the electric bass guitar. Course focuses on the construction and performance of bass lines through chord changes in standard popular and jazz repertoire. Students will learn note-reading skills on the instrument.

MUSIC 171 BASS GUITAR STUDIES II
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Second in a series of studies on the application of intermediate skills on the electric bass guitar utilizing basic music theory concepts as they apply to the bass, including construction and performance of complex bass lines through chord changes in standard popular and jazz repertoire as well as intermediate note-reading skills on the instrument.

MUSIC 173 JAZZ VOCAL ENSEMBLE
Units: 1.00
UC:CSU 54.00 hours lab
Prerequisite: Audition
Provides the advanced singer an opportunity to learn and develop jazz vocal technique. The repertoire consists of vocal arrangements from standard and progressive jazz schools. This group refines individual selections to high performance standards and represents the College at inter-collegiate festivals, on-campus performances, and in the community. Appropriate sight-singing proficiency and ability to follow a conductor are assumed. Audition through the Department of Music; contact for time, date and other details.

MUSIC 174 COLLEGE CHORUS
Units: 1.00
CSU 54.00 hours lab
Provides training and singing for the vocal chamber group from all eras in music history.

MUSIC 175 FESTIVAL CHOIR: VOICES OF THE CANYONS
Units: 1.00
UC:CSU 54.00 hours lab
Examines musical styles, performance practices and rehearsal techniques while refining individual selections to high performance standards and represents the college at inter-collegiate festivals, on-campus performances, and in the community. Field trips may be required.
MUSIC 176 CHAMBER SINGERS
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: Audition by instructor to ensure satisfactory performance ability. Contact the Music Department for date, time, and other details.

Presents the study and performance of chamber music from the 15th to the 21st centuries, emphasizing the development of skills needed to sing from a variety of choral styles and historical periods. Represents the college at intercollegiate festivals, on-campus events, and within the community. Attendance at all scheduled performances is required.

MUSIC 177 WOMEN’S CHOIR
(LES CHANTEUSES)
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: Audition

Studies musical styles and performance practices from an historical perspective as well as correct and efficient rehearsal techniques as they apply to the selected choral literature. Represents the College at intercollegiate festivals, on-campus events, and within the community. Field trips may be required.

MUSIC 185 SYMPHONIC BAND
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: Audition Recommended Preparation: Ability to play a wind, percussion, or brass instrument is assumed.

Emphasizes the performance of college level wind and percussion standards literature including proper playing and performance technique. Extensive warm-up skills will be developed, along with scale studies and rhythmic refinement exercises. Public performances with the symphonic band are required. Audition through the Music Department; contact for time, date and other details.

MUSIC 186 MUSIC ENSEMBLE
Units: 2.00
UC:CSU 18.00 hours lecture, 54.00 hours lab

Explores chamber music literature and practices. Specific technical skills will be addressed including breathing, phrasing, tonguing, bow technique, embouchure development, as well as vocal techniques and rehearsal standards. Public performance is required.

MUSIC 189 INDIVIDUALIZED MUSIC LESSONS
Units: 1.00
CSU 54.00 hours lab
Prerequisite: Audition Co-requisites: MUSIC-190 and one of the following ensemble courses: MUSIC 080, 081, 082, 114, 116, 151, 153, 165, 173, 174, 175, 176, 177, 185 or 186.

Emphasizes technical development, the performing of musical repertoire, and the development of concert presentation skills. Individual instruction is provided by appointment.

MUSIC 190 APPLIED PERFORMANCE
Units: 1.00
UC:CSU 54.00 hours lab
Co-requisite: MUSIC-189

Preparation and presentation of music literature to be performed before the class with a subsequent critique by the other students and instructor.

MUSIC 191 CONTEMPORARY PRACTICES IN MUSIC PUBLISHING
Units: 3.00
CSU 54.00 hours lecture

Explores the business of marketing and selling music, including intellectual property statutes, copyright law, royalties and music contracts.

MUSIC 192 MUSIC BUSINESS
Units: 3.00
CSU 54.00 hours lecture

Examines the music business industry as it relates to production, recording, manufacturing, publishing, marketing, copyright and performing rights.
The Nanotechnology program trains students in entry-level technical skills for the emerging Nanotechnology workplace. This program focuses on essential science, technology and workplace skills with the goal of preparing students for entry-level jobs in a variety of industries that use laboratories for product development, testing, and quality control as related to Nanotechnology products and processes.

NANO 010 INTRODUCTION TO NANOTECHNOLOGY
Units: 2.00
36.00 hours lecture
Introduces nanotechnology in a descriptive and interdisciplinary way, including an introduction to microscopy used for nanomaterial characterization.

NANO 011 INTRODUCTION TO SEM TECHNOLOGY
Units: 0.50
9.00 hours lecture
Introduces the theory and applications of Scanning Electron Microscopy in the biological and non-biological disciplines, including comparison to optical and transmission microscopy.

College of the Canyons offers two Registered Nursing Programs that are approved by the California Board of Registered Nurses and accredited by the National League for Nursing Accreditation Commission.

RN Program
Nursing is an art and science incorporating knowledge from the behavioral, biological and physical sciences. It has a holistic concept of health in which the physical, emotional, psychological, intellectual, social and spiritual aspects of human functioning are interrelated, interdependent, and of equal importance. Offered is an Associate Degree in Nursing with a program of clinical components in which the student cares for patients in the acute-care setting, sub-acute setting, and home setting. The program prepares the students for an entry-level position in the health care setting. An RN (Registered Nurse), after taking a national examination, may move directly into the position of beginning staff nurse. The program prepares the student for this test.

LVN-RN Career Ladder Program
Nursing is an art and science incorporating knowledge from the behavioral, biological and physical sciences. It has a holistic concept of health in which the physical, emotional, psychological, intellectual, social and spiritual aspects of human functioning are interrelated, interdependent, and of equal importance. This program is for students already possessing a LVN license and experience as an LVN that allows them to complete a series of courses providing advance standing due to credit for their experience. Offered is an Associate Degree in Nursing with a program of clinical components in which the student cares for patients in the acute-care setting, sub-acute setting, and home setting. The program prepares the students for an entry-level position in the health care setting. An RN (Registered Nurse), after taking a national examination, may move directly into the position of beginning staff nurse. The program prepares the student for this test.

Specific Career Ladder Requirements:
LVN to RN applicants must have completed an approved LVN program. Copy of California LVN license must be provided with application.

The following requirements are due prior to beginning the LVN to RN Program:
- Proof of approved I.V. certification course
- LVN to RN students are required to work as an LVN
  Proof of a minimum of 4 months of employment as an LVN.

An additional 30 unit option is available to LVN’s.
30 Unit Option:
The Career Ladder Student may also choose a "30 Unit Option" plan. The LVN who chooses the "30 Unit Option" must have met the microbiology and physiology requirements with a grade of C or better. The applicant must then take Nursing 109, 126, 234, and 240. Upon satisfactory completion of these classes, the applicant would be eligible to apply to take the RN licensure examination. NOTE: Students who complete this option (30 units) will take NCLEX-RN as a non-graduate. This status will not change even if student goes on to obtain a degree. There is no restriction to practice within California. The student may have difficulty in transferring to another state or territory. The student may also have difficulty applying to a college/university for an advanced degree.

Applicants to this curriculum alternative must meet with the Program Director for objective counseling that includes admission process, course requirements, and an explanation of the advantages/disadvantages of this route to licensure. TEAS test is required, but results will not deny admission to the program. The applicant is not required to meet college admission requirements.

RN AND LVN TO RN NURSING PROGRAM PREREQUISITES:
1. English 101 (3 units or 5 quarter units)
2. Anatomy (4 semester units or 6 quarter units)
3. Physiology (4 semester units or 6 quarter units)
4. Microbiology (4 semester units or 6 quarter units)
5. Eligibility for Math 070: Intermediate Algebra

The College of the Canyons Registered Nursing Program is committed to servicing the community by providing the highest level of nursing education to all qualified students. The ability to enter the nursing program shall not be hindered by issues of age, sex, religion, ethnic origin, race, or socioeconomic status. Open access shall be the means by which all program participants are selected, all information disseminated, and all selection procedures are determined. Therefore, the following serves as a selection process outline for any, and all, nursing programs at College of the Canyons which require a specific selection process: applications, selection information, and individual program procedures are openly distributed from the Allied Health Office and are provided to any person requesting such data. Potential and current applicants are requested to attend a Nursing Information Session. These sessions are given once each semester. Information covers general campus information and provides specific data pertaining to selection requirements of the nursing programs. The counseling department determines transferability of non-nursing courses. The Director of Nursing and/or Assistant Nursing Program Director determines the transferability of nursing courses.

SELECTION CRITERIA FOR RN AND LVN TO RN PROGRAMS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
To be considered for entrance, all prerequisites and previous nursing courses must be completed with a 2.5 GPA or higher. Completing the prerequisites, however, does not ensure admission into the program.

SELECTION CRITERIA FOR RN PROGRAMS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
Students will be admitted to the program based on their scholastic eligibility and placement on a nursing assessment test as per SB 1309.

SCHOLASTIC ELIGIBILITY:
Scholastic eligibility is determined through a statewide approved formula which calculates the student's probability of successfully completing the ADN program. The formula uses the following criteria:

- Core Biology GPA – all Anatomy, Physiology, and Microbiology courses taken at the college level.
- Core Biology repetitions – the number of times a student has repeated a Core Biology course including withdrawals.
- English GPA – all credit English course grades regardless of the level of the course.
- Overall GPA – the college GPA as it appears on college transcripts excluding non-credit and not-for-credit courses.
- Students must have a minimum required score of 70 to be eligible for admission.

To be more competitive for admission, students are encouraged to:

- Complete all courses without repeating or withdrawing.
- Earn a minimum of a 3.0 GPA in all Biology courses
- Earn a minimum of a 3.0 GPA in all English courses
- Earn a minimum of a 2.5 cumulative GPA

ASSESSMENT TEST:
Qualified applicants will be required to take a state approved nursing assessment test. Students must rank at the required level to be eligible for admission into the program. Currently, this is a 62% composite score on TEAS test (version V) based on the California Community College Chancellor's Office recommendation. Valid photo ID must be presented at time of test. See nursing website for updates which reflect current state guidelines and regulations.

RN Applicants:
Final selections are made using both multi-criteria screening and random selection. Qualified applicants not selected must reapply in order to be considered. The Allied Health Division Office does not retain applications or transcripts.
Students not meeting eligibility criteria are offered a remediation plan. After successful completion, students are eligible to reapply for random selection.

If the remediation plan is not complete by the deadline, the student is no longer eligible to apply to the program.

LVN to RN Applicants:
Applicants accepted into the program will first enroll in the Transitions into Nursing course, Nursing 109. Upon completion of Nursing 109, the student will be placed on a waitlist to progress in the program on a space-available basis.

APPLICATION PROCEDURE:
Follow current application process as outlined at www.canyons.edu/nursing

TRANSFER STUDENTS
Students may apply to the RN program by transfer or challenge. Students are not allowed to transfer into the first semester; students must enter first semester as a generic student. Students are only eligible to be considered for transfer if they have been in a nursing program within 12 months of the day their application is accepted and are eligible to re-enter their previous program. Students who have been out of a nursing program for more than 12 months must apply as beginning students. Student must provide letter from Director of previous nursing program stating student is clinically safe and eligible to return to their program. The Director of Nursing determines how the applicant’s previous courses correlate with the COC Nursing Program curriculum and determines what portion of the program must be taken in order to complete the nursing program at COC. The Director of Nursing has the right to accept or deny any transfer. Approved applicants MUST attend a mandatory orientation and complete Nursing 109.

SPECIAL REQUIREMENTS FOR ALL NURSING STUDENTS:
Once admitted to any of the RN programs, the student must comply with the following requirements but not limited to:

- Proof of vaccination followed by positive titers for Hepatitis B (or signed waiver), rubeola, rubella, mumps
- Proof of Diphtheria/Tetanus/Pertussis (Tdap) and annual flu vaccinations
- Negative mantoux or chest x-ray documentation for Tuberculosis clearance.
- An annual physical examination. The first physical with functional abilities verification must be within six months of beginning classes
- Current CPR certificate (American Heart Association for health care providers)
- Student Registered nurse malpractice insurance.
- Clear Background check and OIG/GSA clearance
- Clear 10 panel drug test
- L. A. City Fire Card

Associate in Science Degree: Nursing – Registered Nurse
Nursing science is an art and science incorporating knowledge from the behavioral, biological, and physical sciences. It has a holistic concept of health in which the physical, emotional, psychological, intellectual, social, and spiritual aspects of human functioning are interrelated, interdependent, and of equal importance.

Offered as an Associate Degree in Nursing with a program of clinical components in which the student cares for patients in the acute-care, sub-acute, and home setting. The program prepares the students to take the national licensure exam and for an entry-level Registered Nurse (RN) position in the health care setting.

Program Requirements:
Units Required: 61

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>NURSNG-112 Foundations of Nursing</td>
<td>4.25</td>
</tr>
<tr>
<td>NURSNG-114 Fundamentals of Nursing</td>
<td>6.50</td>
</tr>
<tr>
<td>NURSNG-124 Beginning Medical Surgical Nursing</td>
<td>5.75</td>
</tr>
<tr>
<td>NURSNG-126 Psychiatric Nursing</td>
<td>3.75</td>
</tr>
<tr>
<td>NURSNG-234 Intermediate Medical-Surgical Nursing</td>
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<tr>
<td>NURSNG-236 Maternal Child Nursing</td>
<td>5.50</td>
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<tr>
<td>NURSNG-240 Advanced Medical-Surgical Nursing and Leadership</td>
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Plus eight units from the following options:

<table>
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<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>BIOSCI-201 Introduction to Human Anatomy</td>
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</tr>
<tr>
<td>BIOSCI-202 Introduction to Human Physiology</td>
<td>4.0</td>
</tr>
<tr>
<td>BIOSCI-204 Human Anatomy and Physiology I</td>
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</tr>
<tr>
<td>BIOSCI-205 Human Anatomy and Physiology II</td>
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Plus eleven units from the following options:

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<tr>
<th>Course</th>
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<td>BIOSCI-221 Introduction to Microbiology</td>
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<tr>
<td>ENGL-101 English Composition</td>
<td>3.0</td>
</tr>
</tbody>
</table>
In addition to the requirements outlined above, the student is required to take six units of the American Institutions requirement and meet the Math graduation requirement in order to obtain their associate of science degree from College of the Canyons. The physical education and diversity requirements have been waived for the RN students. Students must complete ALL requirements for the associate degree before the student will be allowed to apply for licensure. Consult with a counselor to determine the exact courses needed to complete the degree.

In order to receive an associate degree, RN students must complete all nursing education courses and all general education requirements with a grade of "C" or better. All requirements for the completion of the nursing program must be fulfilled before the student will be allowed to apply for licensure.

Associate in Science Degree: Nursing – Career Ladder LVN to RN

Nursing science is an art and science incorporating knowledge from the behavioral, biological, and physical sciences. It has a holistic concept of health in which the physical, emotional, psychological, intellectual, social, and spiritual aspects of human functioning are interrelated, interdependent, and of equal importance.

This program is for students already possessing a license as a Licensed Vocational Nurse (LVN) and experience as an LVN, which provides them advance standing due to credit for their experience. Offered as an Associate Degree in Nursing with a program of clinical components in which the student cares for patients in the acute-care, sub-acute, and home setting. The program prepares the students to take the national licensure exam and for an entry-level Registered Nurse (RN) position in the health care setting.

Program Requirements:
Units Required: 43

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>NURSNG-109</td>
<td>Transition Into Nursing</td>
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<tr>
<td>NURSNG-126</td>
<td>Psychiatric Nursing</td>
<td>3.75</td>
</tr>
<tr>
<td>NURSNG-234</td>
<td>Intermediate Medical-Surgical Nursing</td>
<td>4.75</td>
</tr>
<tr>
<td>NURSNG-240</td>
<td>Advanced Medical-Surgical Nursing and Leadership</td>
<td>8.50</td>
</tr>
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</table>

In addition to the requirements outlined above, the student is required to take six units of the American Institutions requirement and meet the Math graduation requirement in order to obtain their associate of science degree from College of the Canyons. The physical education and diversity requirements have been waived for the RN students. Students must complete ALL requirements for the associate degree before the student will be allowed to apply for licensure. Consult with a counselor to determine the exact courses needed to complete the degree.

GENERAL INFORMATION
Accrediting and approval agencies for Registered Nursing and LVN-RN Career Ladder Programs:

ACCREDITATION COMMISSION FOR EDUCATION IN NURSING INC. (ACEN)
3343 Peachtree Road NE, Suite 500
Atlanta, Georgia 30326
P: (404) 975-5000
F: (404) 975-5020

BOARD OF REGISTERED NURSING (BRN)
P.O. Box 944210
Sacramento, CA 94244-2100
(916) 322-3350
Link to RN NCLEX pass rates is posted on nursing website.
CERTIFICATES
The Nursing Department offers certificates in health related fields. Students gain experience caring for patients in a variety of community settings. State and local requirements apply to all programs, and students must meet all mandated requirements.

Certificate of Specialization: CNA – Certified Nursing Assistant
Upon completion of this course and a state test for certification, the student will be able to function as a certified nurse assistant in a skilled nursing facility providing basic patient care for residents. The CNA works under the supervision of a licensed vocational nurse or registered nurse.

Program Requirements:
Units Required for certificate: 6

NURSNG-050 Nurse Assistant Training . . . . . . . . . .6.0

NURSNG 045 BASIC EKG INTERPRETATION
Units: 1.50
27.00 hours lecture maximum
Presents basic EKG interpretation including basic principles, normal sinus rhythm, dysrhythmias of focal origin and rhythm blocks. Designed for practicing nurses, student nurses, and those seeking to become a monitor technician.

NURSNG 050 NURSE ASSISTANT TRAINING
Units: 6.00
67.50 hours lecture maximum, 121.50 hours lab maximum
Recommended Preparation: ENGL-081
Prerequisite: TB test and physical exam within the last six months. Proof of vaccination for hepatitis B (or signed waiver), rubeola, rubella, mumps, diphtheria, and tetanus required. In order to register, a packet must be picked up in the Nursing Office. Forms must be completed and submitted to the instructor on the first day of class.

Nurse Assistant Training
Presents the fundamental nursing skills needed to care for the hospitalized patient. Includes clinical practice in a skilled nursing facility with emphasis on the role and responsibilities of the nurse assistant, safety principles and infection control, basic patient care skills, and emotional, social, and spiritual needs of the patient. Upon completion, the student will be eligible to take the California test for certification.

NURSNG 051 HOME HEALTH AIDE
Units: 1.75
22.50 hours lecture maximum, 27.00 hours lab maximum
Recommended Preparation: ENGL-091
Prerequisite: CNA Certification, TB test, physical examination within the last six months. Proof of vaccination for hepatitis B (or signed waiver), rubeola, rubella, mumps, diphtheria, and tetanus. Criminal clearance and current CPR card (for health-care providers) required. In order to register, all students must pick up a pre-enrollment packet in the Nursing Office. These forms must be completed and submitted prior to the first class.

Provides theory and practical application of knowledge and skills needed to function as a home health aide. Emphasizes interpretation of client needs, personal care services, nutrition, and cleaning and care tasks in the home. Upon completion, the student will be eligible for California certification. Units do not apply to the associate degree.

NURSNG 061 INTERPRETATION OF LABORATORY TESTS
Units: 1.00
18.00 hours lecture maximum
Provides an in-depth review and analysis of laboratory values and integration of the nursing process across the life span. Offered pass/no-pass only.

NURSNG 089 SUCCESS IN FUNDAMENTAL NURSING
Units: 1.00
18.00 hours lecture maximum
Co-Requisite: Nursing 112 and Nursing 114.
Expands on students’ critical thinking skills focusing on content from NURSNG 112 & 114.

NURSNG 092 SUCCESS IN BEGINNING MEDICAL/ SURGICAL NURSING
Units: 0.50
9.00 hours lecture
Co-requisite: NURSNG-124
Expands on students’ critical thinking skills focusing on content from NURSNG 124. Units do not apply to the associate degree. Offered pass/no-pass only.

NURSNG 093 SUCCESS IN MATERNAL NEWBORN AND PEDIATRIC NURSING
Units: 0.50
9.00 hours lecture
Co-requisite: NURSNG-236
Expands on students’ critical thinking skills focusing on content from NURSNG-236. Units do not apply to the associate degree. Offered pass/no-pass only.
NURSNG 094 SUCCESS IN PSYCHIATRIC NURSING
Units: 0.50
9.00 hours lecture
Co-requisite: NURSNG-126
Expands on students' critical thinking skills focusing on content from NURSNG-126. Units do not apply to the associate degree. Offered pass/no-pass only.

NURSNG 095 SUCCESS IN INTERMEDIATE MEDICAL/SURGICAL NURSING
Units: 0.50
9.00 hours lecture
Co-requisite: NURSNG-234
Expands on students' critical thinking skills focusing on content from NURSNG-234. Units do not apply to the associate degree. Offered pass/no-pass only.

NURSNG 096 SUCCESS IN ADVANCED MEDICAL/SURGICAL NURSING
Units: 1.00
18.00 hours lecture maximum
Co-requisite: NURSNG-240
Expands on students' critical thinking skills focusing on content from NURSNG-240. Units do not apply to the associate degree. Offered pass/no-pass only.

NURSNG 109 TRANSITION INTO NURSING
Units: 4.00
CSU 31.50 hours lecture, 121.50 hours lab
Prerequisite: Admission to the Nursing Program.
Designed to assist all transfer, returning, and LVN to RN students to successfully integrate into the Registered Nursing Program, including the knowledge, skills, and attitudes necessary to address health problems of adult and elderly patients as a provider of care, manager of care, and member of the nursing profession. Emphasizes a patient-centered approach by focusing on their multifaceted needs and the integrated concepts of person, health, environment, and nursing. Formerly NURSNG-103.

NURSNG 112 FOUNDATIONS OF NURSING
Units: 4.25
CSU 36.00 hours lecture, 121.50 hours lab
Prerequisite: Admission to the Nursing Program.
Prepares the student for patient-centered nursing by focusing on the physiological, psychological, socio-cultural, developmental, and spiritual needs of patients across the lifespan and the integrated concepts of person, health, environment, and nursing. NURSNG-112 & 114 are equivalent to NURSNG-110 & 111.

NURSNG 114 FUNDAMENTALS OF NURSING
Units: 6.50
CSU 63.00 hours lecture, 162.00 hours lab
Prerequisite: NURSNG-112
Presents the knowledge, skills, and attitudes necessary to provide basic care to adult and elderly patients at a fundamental level. Emphasizes a patient-centered approach by focusing on their multifaceted needs and integrated concepts related to wellness and health alterations of mobility and protection. NURSNG-112 & 114 are equivalent to NURSNG-110 & 111.

NURSNG 124 BEGINNING MEDICAL SURGICAL NURSING
Units: 5.75
CSU 63.00 hours lecture, 121.50 hours lab
Prerequisite: NURSNG-114
Presents the knowledge, skills, and attitudes necessary to provide care for non-complex health problems of adult and elderly patients at a beginning level. Emphasizes a patient-centered approach by focusing on their multifaceted needs and integrated concepts related to wellness and alterations of oxygenation, tissue perfusion, nutrition, elimination, metabolism, and sexuality. Formerly NURSNG-120.

NURSNG 126 PSYCHIATRIC NURSING
Units: 3.75
CSU 40.50 hours lecture, 81.00 hours lab
Prerequisite: NURSNG-114 and PSYCH-101/101H
Presents the knowledge, skills, and attitudes necessary to provide care for health problems of psychiatric patients across the life-span at a beginning level. Emphasizes a patient-centered approach by focusing on their multifaceted needs and integrated concepts related to wellness and psychological health alterations. Formerly NURSNG-220.

NURSNG 130 NURSING CLINICAL PRACTICE
Units: 2.00
CSU 108.00 hours lab maximum
Prerequisite: Prerequisite: NURSNG-124, TB test and physical exam within the last six months. Proof of vaccination for Hepatitis B (or signed waiver), rubeola, rubella, mumps, polio, diphtheria, and tetanus required. In order to register, a packet must be picked up in the Allied Health Office. Forms must be completed and submitted to the Allied Health Office by the deadline provided.
Provides additional clinical practice to students emphasizing beginning and intermediate medical/surgical skills. Not appropriate for students who have completed a nursing program. Offered pass/no-pass only.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>CSU Hours</th>
<th>Prerequisite(s)</th>
<th>Description</th>
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<tbody>
<tr>
<td>NURSNG 206</td>
<td>OPERATING ROOM NURSING</td>
<td>4.75</td>
<td>81.00</td>
<td>NURSNG-234</td>
<td>Presents theory of operating room nursing, including the three areas of perioperative nursing care: preoperative assessment and planning, intraoperative implementation, and postoperative evaluation.</td>
</tr>
<tr>
<td>NURSNG 210</td>
<td>NURSING INTERNSHIP</td>
<td>3.00</td>
<td>153.00</td>
<td>NURSNG-120</td>
<td>Clinical internship giving students the opportunity to apply skills and knowledge learned in the nursing program in a sponsoring acute care facility with an assigned preceptor. Students must attend scheduled clinical conferences held by the assigned College of the Canyons nursing faculty member. Students must work 153 hours to receive credit. Offered pass/no-pass only.</td>
</tr>
<tr>
<td>NURSNG 212</td>
<td>PHYSICAL ASSESSMENT</td>
<td>1.00</td>
<td>18.00</td>
<td></td>
<td>Designed to develop an in-depth review and synthesis of physical assessment skills and knowledge covering the life span. Integration of the health history, physical examination techniques, and the nursing process is emphasized. Offered pass/no-pass only.</td>
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<tr>
<td>NURSNG 215</td>
<td>PHARMACOLOGICAL PRINCIPLES</td>
<td>3.00</td>
<td>54.00</td>
<td></td>
<td>Presents in-depth pharmacological principles, including drug classifications, pharmacokinetics, pharmacodynamics, pharmacotherapeutics, legal and ethical issues, patient and family education, and dosage calculation.</td>
</tr>
<tr>
<td>NURSNG 234</td>
<td>INTERMEDIATE MEDICAL-SURGICAL NURSING</td>
<td>4.75</td>
<td>45.00</td>
<td>NURSNG-124 and NURSNG-126</td>
<td>Presents the knowledge, skills, and attitudes necessary to provide care for complex health problems of adult and elderly patients at an intermediate level. Emphasizes management of patient-centered care by focusing on the multifaceted needs of patients and integrated concepts related to wellness and alterations health. Formerly NURSNG-222.</td>
</tr>
<tr>
<td>NURSNG 236</td>
<td>MATERNAL CHILD NURSING</td>
<td>5.50</td>
<td>58.50</td>
<td>NURSNG-234</td>
<td>Presents the knowledge, skills, and attitudes necessary to provide care for the pediatric, newborn, maternal patient and their families at the intermediate level. Emphasizes management of patient and family-centered care by focusing on the multifaceted needs of the family and integrated concepts related to wellness and alterations health. Formerly NURSNG-122.</td>
</tr>
<tr>
<td>NURSNG 240</td>
<td>ADVANCED MEDICAL-SURGICAL NURSING AND LEADERSHIP</td>
<td>8.50</td>
<td>72.00</td>
<td>NURSNG-234 and NURSNG-236</td>
<td>Presents the knowledge, skills, and attitudes necessary to provide care for complex and multi-system health problems of the adult and elderly patient at an advanced level. Manages groups of patients and provides leadership for patient-centered care by focusing on their multifaceted needs and integrated concepts related to wellness and alterations of oxygenation, tissue perfusion, elimination, mobility, sensation, and cognition. Prepares the student for transition into practice. Formerly NURSNG-232.</td>
</tr>
<tr>
<td>NURSNG 242</td>
<td>CRITICAL CARE NURSING II</td>
<td>3.00</td>
<td>54.00</td>
<td></td>
<td>Recommended Preparation: For RN or LVN students. A study of current concepts of critical care nursing of disease processes for each of the major body systems: pulmonary, cardiovascular, neurological, renal, endocrine, hematological, immunologic, gastrointestinal and multisystem. Critical care equipment and procedures related to the care of these clients will be discussed. Psychosocial and ethical and legal aspects of critical care nursing will be addressed.</td>
</tr>
<tr>
<td>NURSNG 244</td>
<td>EMERGENCY ROOM NURSING</td>
<td>3.00</td>
<td>54.00</td>
<td></td>
<td>Presents current concepts of emergency room nursing practice related to trauma and major medical/surgical emergencies, including special populations and legal and regulatory issues.</td>
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</tbody>
</table>
NURSNG 246 DISASTER NURSING AND EMERGENCY PREPAREDNESS
Units: 3.00
54.00 hours lecture
Prerequisite: NURSNG-222 or RN, LVN license.
Prepares nurses for major public health emergencies, including tornadoes, floods, hurricanes, earthquakes, infectious disease outbreaks, and biological, chemical, and radiological events. Covers information that is applicable to any catastrophe, including legal and ethical issues, psychosocial impact, crisis communications, and care of children during disasters.

NURSNG 250 TRANSITION TO PROFESSIONAL PRACTICE
Units: 3.00
CSU 162.00 hours lab
Prerequisite: TB test, physical examination within the last six months. Proof of vaccination for hepatitis B (or signed waiver), rubeola, rubella, mumps, diphtheria, and tetanus. Criminal clearance and current CPR card (for health-care providers) required. Malpractice insurance, LA City Fire Card and RN license obtained within the past 18 months.
Supports registered nurses licensed within the last 18 months in their progression from education to professional practice. While working with pre-arranged preceptors in acute care facilities, students will have the opportunity to expand upon the knowledge and skills learned in a pre-licensure nursing program. Offered pass/no-pass only.

PARALEGAL

Associate in Arts Degree: Paralegal Studies
The paralegal profession continues to be one of the fastest growing professions in the United States. COC’s Paralegal Studies curriculum prepares students for positions as paralegals in order to improve the accessibility, quality, and affordability of legal services. The Paralegal Studies program goals are to ensure that students who successfully complete the Paralegal Studies Program by obtaining an associate degree have: a broad-based understanding of the American legal system and the role of the paralegal in that legal system; the legal theoretical background needed to perform paralegal tasks in substantive areas of law and legal specialties; the knowledge of procedural law emphasizing the paralegal’s role in litigation, mediation, and arbitration; the skills in areas including investigation, legal research, conducting an interview, and written and oral communications; ethically serve the public and the legal system; and the tools needed to become contributing members of the legal profession. Successful paralegals have excellent organizational skills and the ability to perform complex, detailed work quickly and accurately, as well as the ability to work well under pressure. Examples of tasks commonly delegated to paralegals include performing legal and public records research, obtaining and organizing evidence, interviewing clients and witnesses, conducting legal research, and drafting legal documents.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as a paralegal.

Program Requirements:
Units Required: 31

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>PARLGL-101</td>
<td>Introduction to Law</td>
<td>3.0</td>
</tr>
<tr>
<td>PARLGL-104</td>
<td>Contract Law</td>
<td>3.0</td>
</tr>
<tr>
<td>PARLGL-105</td>
<td>Tort Law</td>
<td>3.0</td>
</tr>
<tr>
<td>PARLGL-106</td>
<td>Legal Analysis and Writing</td>
<td>3.0</td>
</tr>
<tr>
<td>PARLGL-107</td>
<td>Legal Ethics</td>
<td>1.0</td>
</tr>
<tr>
<td>PARLGL-108</td>
<td>Legal Research</td>
<td>3.0</td>
</tr>
<tr>
<td>PARLGL-109</td>
<td>Computer Literacy for Paralegals</td>
<td>3.0</td>
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<tr>
<td>PARLGL-111</td>
<td>Civil Litigation I</td>
<td>3.0</td>
</tr>
<tr>
<td>PARLGL-112</td>
<td>Civil Litigation II</td>
<td>3.0</td>
</tr>
<tr>
<td>PARLGL-150</td>
<td>Family Law</td>
<td>3.0</td>
</tr>
<tr>
<td>PARLGL-200</td>
<td>Paralegal Seminar</td>
<td>1.0</td>
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</table>
Plus a minimum of two units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Units</th>
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<tbody>
<tr>
<td>CWE-188PLGL</td>
<td>Cooperative Work Experience</td>
<td>1.0 - 4.0</td>
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Recommended electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>PARLGL-140</td>
<td>Bankruptcy</td>
<td>3.0</td>
</tr>
<tr>
<td>PARLGL-180</td>
<td>Estate Planning</td>
<td>3.0</td>
</tr>
<tr>
<td>POLISC-150</td>
<td>Introduction to American Government and Politics</td>
<td>3.0</td>
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</table>

OR

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>POLISC-150H</td>
<td>Introduction to American Government And Politics - Honors</td>
<td>3.0</td>
</tr>
</tbody>
</table>

PARLGL 101 INTRODUCTION TO LAW
Units: 3.00
CSU 54.00 hours lecture
Provides an overview of the history, philosophy, and practices of the legal profession, including paralegals, in the United States while introducing legal concepts, terms and theories.

PARLGL 104 CONTRACT LAW
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: PARLGL-101
Examines contract law, including formation of contracts, statute of frauds, third-party rights and remedies, liability for breach of contract, and the Uniform Commercial Code.

PARLGL 105 TORT LAW
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: PARLGL-101
Introduces tort law including the study of negligence, strict liability and intentional torts.

PARLGL 106 LEGAL ANALYSIS AND WRITING
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: ENGL-101 or ENGL-101H
Examines the processes of analysis and writing found within the legal profession, including preparation of legal memoranda.

PARLGL 107 LEGAL ETHICS
Units: 1.00
CSU 18.00 hours lecture
Examines legal ethics and rules of professional responsibility, including unauthorized practices of law, confidentiality, conflicts of interest, and advice and solicitation, as they affect legal professionals.

PARLGL 108 LEGAL RESEARCH
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: PARLGL-101
Examines legal research tools (hard copy and computer databases) and strategies, including primary authority (cases, statutes, regulations, and constitution) and secondary authority.

PARLGL 109 COMPUTER LITERACY FOR PARALEGALS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Examines the specific software applications and document preparation processes used in the legal profession. Familiarity with computer keyboarding and the Windows operating system is assumed.

PARLGL 110 CIVIL LITIGATION I
Units: 3.00
CSU 54.00 hours lecture
Examines the basic functions and procedures found within a civil law office, including pre-suit considerations, initial pleadings, challenges to pleadings, interrogatories, depositions, discovery law and motion, and the review of legal ethics. Students who have earned credit for PARLGL 110 cannot receive credit for this course.

PARLGL 111 CIVIL LITIGATION II
Units: 3.00
CSU 54.00 hours lecture
Prerequisite: PARLGL-111
Examines the basic functions and procedures found within a civil law office, including third party depositions, discovery subpoenas, request for admissions, demand for inspection, demand for physical or mental exam, calendaring trial deadlines, preparation for motion for summary judgment, trial and appeal, and the review of legal ethics. Students who have earned credit for PARLGL-110 cannot receive credit for this course.

PARLGL 140 BANKRUPTCY
Units: 3.00
CSU 54.00 hours lecture
Overview of the basic functions, procedures and ethics involved when examining various forms of bankruptcy law. Introduces the techniques of intake, preparation, and filing of the necessary forms to resolve bankruptcy cases.

PARLGL 150 FAMILY LAW
Units: 3.00
CSU 54.00 hours lecture
Examines legal ethics and rules of professional responsibility, including unauthorized practices of law, confidentiality, conflicts of interest, and advice and solicitation, as they affect legal professionals.
PARLGL 180 ESTATE PLANNING  
Units: 3.00  
CSU 54.00 hours lecture  
Focuses on the preparation of wills, trusts, life insurance, annuities, tax issues and administration after death.

PARLGL 200 PARALEGAL SEMINAR  
Units: 1.00  
CSU 18.00 hours lecture  
Provides the capstone course for the Paralegal Program, including interning in a law office or other place of employment of paralegals. Students will review rules of ethics, write resumes, create portfolios, practice interview techniques, and develop skills necessary for employment as a paralegal, while participating in a seminar setting.

PARLGL 201 AGING AND THE LAW  
Units: 3.00  
CSU 54.00 hours lecture  
Examines the legal, ethical, and social issues impacting aging adults as well as introduces law-related documentation processes and procedures used to serve older clients.

PHILOSOPHY

Associate in Arts Degree: Philosophy  
Philosophy is the activity of trying to make sense of our world through sustained and rigorous thinking about the most difficult questions rooted in the minds of human beings. Thus, the study of philosophy invites reflection upon and analysis of the nature of reality, value, and the self. Courses in philosophy offer students the opportunity for self-development and the building of a coherent view of world and culture. Majoring in philosophy is an excellent way to develop skills in argument analysis as well as critical reasoning, and thus is relevant to understanding problems and evaluating solutions in any area of study or employment. The study of philosophy is excellent preparation for careers in law, journalism, politics, and university teaching. Study in philosophy does not focus on what to think, but on how to think. The program in Philosophy is designed as preparation for transfer to a four-year university with a major in Philosophy, Humanities, or any liberal arts discipline.

Student Learning Outcome:  
Students will be able to critically engage with the world of ideas, both historical and contemporary, enabling them to interpret and understand their place in the world as citizens and active participants in the expression of human culture and values.

Program Requirements:  
Units Required: 21

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>PHILOS-101</td>
<td>Introduction to Philosophy</td>
<td>3.0</td>
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<td>OR</td>
<td>PHILOS-101H Introduction to Philosophy – Honors</td>
<td>3.0</td>
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<tr>
<td>Plus three units from the following:</td>
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<tr>
<td>PHILOS-106</td>
<td>Critical Reasoning</td>
<td>3.0</td>
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<tr>
<td>OR</td>
<td>PHILOS-230 Symbolic Logic</td>
<td>3.0</td>
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<tr>
<td>Plus three units from the following:</td>
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<tr>
<td>PHILOS-120</td>
<td>Introduction to Ethics</td>
<td>3.0</td>
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<tr>
<td>OR</td>
<td>PHILOS-240 Contemporary Moral Problems</td>
<td>3.0</td>
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<tr>
<td>Plus three units from the following:</td>
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<tr>
<td>PHILOS-110</td>
<td>History of Early Philosophy</td>
<td>3.0</td>
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<tr>
<td>OR</td>
<td>PHILOS-111 History of Philosophy-Renaissance Through the 19th Century</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Plus three units from the following:

PHILOS-102 Introduction to Eastern Religion & Philosophy .......... 3.0

OR

PHILOS-220 Introduction to Comparative Religion .. 3.0

OR

PHILOS-225 Introduction to Philosophy of Religion .......... 3.0

Plus three units from the following:

PHILOS-112 History of Philosophy - 20th Century Philosophy .......... 3.0

OR

PHILOS-250 Environmental Ethics .......... 3.0

Plus three additional units from any of the above courses that have not yet been taken. .......... 3.0

PHILOS 101 INTRODUCTION TO PHILOSOPHY
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys major western and non-western philosophies, philosophical figures and philosophical issues, including theory of knowledge, nature of reality, the mind/body problem, philosophy of religion, political philosophy, and ethical theory.

PHILOS 101H INTRODUCTION TO PHILOSOPHY – HONORS
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: ENGL-101 or ENGL-101H
Surveys major western and non-western philosophies philosophical figures and philosophical issues, including theory of knowledge, nature of reality, the mind/body problem, philosophy of religion, political philosophy, and ethical theory. Honors component requires expanded and more complex reading and writing assignments.

PHILOS 102 INTRODUCTION TO EASTERN RELIGION AND PHILOSOPHY
Units: 3.00
UC:CSU 54.00 hours lecture
Explores philosophies contained in Hinduism, Buddhism, Confucianism, Taoism and Shinto.

PHILOS 106 CRITICAL REASONING
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces reasoning skills for evaluating and understanding arguments, including using deductive and inductive logic, identifying common fallacies and evaluating beliefs, claims, and forms of evidence. UC credit limitation: PHILOS-106 and SOCI-108 combined, maximum credit one course.

PHILOS 110 HISTORY OF EARLY PHILOSOPHY
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys ancient and medieval European philosophical thought from the Pre-Socratics through Medieval philosophers, including Socrates, Plato, Aristotle, Anselm, Augustine, Abelard and Aquinas.

PHILOS 111 HISTORY OF PHILOSOPHY: RENAISSANCE THROUGH THE 19TH CENTURY
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys western philosophical thought from the Renaissance through the 19th century, including the philosophical systems of empiricism, rationalism, skepticism and idealism.

PHILOS 112 HISTORY OF PHILOSOPHY - 20TH CENTURY PHILOSOPHY
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys 20th and 21st century investigations into notions of human nature, the place of individuals in history, and the determination of value and choice. Topics include European existentialism (Nietzsche, Sartre, Camus, etc.), analytical philosophy, and contemporary thinkers and movements.

PHILOS 120 INTRODUCTION TO ETHICS
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys some of the major classical and contemporary ethical theories with emphasis on their application to typical life situations in a modern society.

PHILOS 220 INTRODUCTION TO COMPARATIVE RELIGION
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys major world religions, Eastern and Western, including historical roots, major doctrines and figures, and central philosophical concerns.
PHILOS 225 INTRODUCTION TO PHILOSOPHY OF RELIGION
Units: 3.00
UC:CSU 54.00 hours lecture
Recommended Preparation: PHILOS-101 or PHILOS-220
Surveys philosophical problems relating to religious belief. Topics include the existence of God, religious experience, the relationship between faith and reason, concepts of God, religion and ethics, miracles, religious language, the problem of evil, personal destiny and religious diversity.

PHILOS 230 SYMBOLIC LOGIC
Units: 3.00
UC:CSU 54.00 hours lecture
C-ID PHIL 210
Recommended Preparation: PHILOS-101
Introduces symbolism and methods of modern logic, including translation of arguments in English into formal logic, development of the idea of logical validity, evaluation of arguments by using truth tables and methods of natural deduction.

PHILOS 240 CONTEMPORARY MORAL PROBLEMS
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces ethical theory and applied contemporary moral issues in areas such as medicine, business, health care, technology and the environment.

PHILOS 250 ENVIRONMENTAL ETHICS
Units: 3.00
UC:CSU 54.00 hours lecture
Recommended Preparation: PHILOS-101
Examines complex moral issues raised by our interactions with non-human animals and the natural world, including pollution, global warming, sustainability, ecofeminism, animal rights, Third World development, property rights, fossil fuel dependency, deep ecology, “Green” politics, species preservation, rights and duties to nature, and the need for developing new, clean technologies. These issues will be examined in light of ethical theories such as utilitarianism, deontological ethics and social contract theory.

PHOTOGRAPHY

Associate in Arts Degree: Fine Art Photography
The primary goal of this degree is to provide the student a foundation of knowledge and technical abilities for art photography. Elective courses allow for preparedness specific to industry. All lower division courses are sequenced to optimize transferability to an art or photography program at a four-year university.

Along with the transferability aspect of this program, the associate degree in photography will also provide students with basic photographic competencies. The student learning outcomes for this program are:

- Compose effective photographic images using a SLR digital camera, and utilizing rules of composition.
- Define and apply the vocabulary used in photography.
- Examine historical and contemporary uses of photography.
- Evaluate photographic prints using critical and aesthetic standards.
- Create and design a photographic portfolio, as well as, analyze, appraise and evaluate the portfolios of others photographers (both student and professional).

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core academic skills and knowledge required for transfer into a photography program at a four-year college or university.

Program Requirements:
Units Required: 30

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART-110</td>
<td>Art History: Ancient to Medieval</td>
<td>. . . .3.0</td>
</tr>
<tr>
<td>ART-111</td>
<td>Art History: Renaissance to Modern</td>
<td>. . . .3.0</td>
</tr>
<tr>
<td>ART-124A</td>
<td>Drawing I</td>
<td>. . . .3.0</td>
</tr>
<tr>
<td>ART-140</td>
<td>Beginning Design: Two-Dimensional Media</td>
<td>. . . .3.0</td>
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<tr>
<td>ART-141</td>
<td>Beginning Design: Three-Dimensional Media</td>
<td>. . . .3.0</td>
</tr>
<tr>
<td>PHOTO-140</td>
<td>History of Photography</td>
<td>. . . .3.0</td>
</tr>
<tr>
<td>PHOTO-150</td>
<td>Introduction to Cameras and Composition</td>
<td>. . . .3.0</td>
</tr>
<tr>
<td>PHOTO-155</td>
<td>Photography</td>
<td>. . . .3.0</td>
</tr>
<tr>
<td>PHOTO-160</td>
<td>Black and White Photography</td>
<td>. . . .3.0</td>
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OR
Plus six units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Units</th>
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<tbody>
<tr>
<td>PHOTO-171</td>
<td>Handmade Book and Photographic Reproduction Process</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-180</td>
<td>Documentary and Landscape Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-185</td>
<td>Experimental Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-190</td>
<td>Studio Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-195</td>
<td>Color Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-201</td>
<td>Independent Projects in Photography</td>
<td>2.0</td>
</tr>
<tr>
<td>PHOTO-280</td>
<td>Large Format Photography and the Zone System</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-285</td>
<td>Concept Development</td>
<td>3.0</td>
</tr>
<tr>
<td>GMD-105</td>
<td>Digital Imaging</td>
<td>3.0</td>
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</tbody>
</table>

**Certificate of Achievement: Fine Art Photography**

This program is designed to prepare a student for an entry-level position in a career related to fine art photography such as fine art photographer, fine art assistant photographer, custom photographic printing, or photographic lab assistant.

**Student Learning Outcome:**

Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in fine art photography.

**Program Requirements:**

Units Required: 21

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ART-111</td>
<td>Art History: Renaissance to Modern</td>
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</tr>
<tr>
<td>PHOTO-150</td>
<td>Introduction to Cameras and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-155</td>
<td>Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-160</td>
<td>Black and White Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-295</td>
<td>Professional Practices and Portfolio</td>
<td>3.0</td>
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</table>

**Recommended Electives:**

<table>
<thead>
<tr>
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<tbody>
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<td>Experimental Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-190</td>
<td>Studio Photography</td>
<td>3.0</td>
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<tr>
<td>PHOTO-195</td>
<td>Color Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-201</td>
<td>Independent Projects in Photography</td>
<td>2.0</td>
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</tbody>
</table>

**Certificate of Achievement: Commercial Photography**

This program is designed to prepare a student for an entry-level position in a career related to commercial photography such as commercial photographer, digital imaging technician, event photographer, commercial assistant photographer, photography laboratory technician, photography restoration specialist, wedding photographer, portrait photographer, or advertising photographer.

The student learning outcomes for this program are:

- Define and apply the vocabulary used in the photographic industry.
- Compose effective photographic images using small and medium format digital cameras and utilizing rules of composition.
- Differentiate and utilize appropriate computer hardware and software for digital imaging by creating a variety of conceptually and aesthetically interesting images.
- Design and operate photographic studio lighting equipment, including evaluation and practice of advanced light metering techniques.
- Create and design a photographic portfolio, as well as, analyze, appraise and evaluate the portfolios of others photographers (both student and professional).
- Develop and assess critical organizational and business skills.

**Student Learning Outcome:**

Students will be able to demonstrate and apply the technical skills and principles of commercial photography.

**Program Requirements:**

Units Required: 21

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>PHOTO-150</td>
<td>Introduction to Cameras and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-155</td>
<td>Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-190</td>
<td>Studio Photography</td>
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<tr>
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<td>Color Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHOTO-295</td>
<td>Professional Practices and Portfolio</td>
<td>3.0</td>
</tr>
<tr>
<td>GMD-105</td>
<td>Digital Imaging</td>
<td>3.0</td>
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</tbody>
</table>

**Recommended Electives:**

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<thead>
<tr>
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<tbody>
<tr>
<td>PHOTO-200</td>
<td>Portraiture</td>
<td>3.0</td>
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<tr>
<td>PHOTO-201</td>
<td>Independent Projects in Photography</td>
<td>2.0</td>
</tr>
<tr>
<td>PHOTO-210</td>
<td>Wedding Photography</td>
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</tr>
<tr>
<td>PHOTO-285</td>
<td>Concept Development</td>
<td>3.0</td>
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</tbody>
</table>
PHOTO 090L PHOTOGRAPHIC LAB PRACTICES
Units: 1.00
54.00 hours lab
A lab for the currently-enrolled photography student who wishes to increase skills through the use of the photography lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in printed schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in the photography program. Offered pass/no-pass only. Units do not apply to the associate degree.

PHOTO 091L ADVANCED PHOTOGRAPHY LAB
Units: 1.00
54.00 hours lab
Prerequisite: PHOTO-160
A lab for the currently-enrolled photography student who wishes to increase skills through the use of the photography lab facility. Note: Students must attend faculty supervised weekly scheduled class time posted in printed schedule. Hours must be accrued at a time separate from any other class in which the student is also registered. This course is not a required course for any certificate or degree in the photography program. Offered pass/no-pass only. Units do not apply to the associate degree.

PHOTO 140 HISTORY OF PHOTOGRAPHY
Units: 3.00
UC:CSU 54.00 hours lecture
Explores the history and appreciation of photography from the nineteenth century to present. Assesses the relationship between photography and history, culture, technology, art, social values, and other concerns.

PHOTO 150 INTRODUCTION TO CAMERAS AND COMPOSITION
Units: 3.00
UC:CSU 54.00 hours lecture
Explores how artistic and mechanical principles are used to record photographic images. Students review photographic works that include major influences in the photographic world and how they relate to broader artistic and societal issues. No laboratory. It is recommended that students provide a digital or 35 MM film SLR camera capable of manual exposure adjustment. UC credit limitation: PHOTO-150 and 160 combined, maximum credit one course.

PHOTO 155 PHOTOGRAPHY
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Introduces the fundamental concepts, terminology, and techniques of photography, including the theory and basic principles of image correction and print technologies. Note: It is recommended that students provide a digital SLR camera capable of manual exposure adjustment.

PHOTO 160 BLACK AND WHITE PHOTOGRAPHY
Units: 3.00
UC:CSU 36.00 hours lecture, 54.00 hours lab
A beginning course in 35mm black and white photography integrating both mechanical and artistic principles to record photographic images. Acquaints students with basic history, mechanics, optics, chemistry, aesthetics, and lighting principles of elementary black and white photography. The student may furnish a fully manual/adjustable 35mm SLR camera. UC credit limitation: PHOTO-150 and 160 combined, maximum credit one course.

PHOTO 171 HANDMADE BOOK AND PHOTOGRAPHIC REPRODUCTION PROCESS
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Explores methods of photographic reproduction processes as related to traditional and non-traditional forms of bookbinding.

PHOTO 180 DOCUMENTARY AND LANDSCAPE PHOTOGRAPHY
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-160
Explores documentary and landscape genre photography for its aesthetic, social and political impact. Includes fieldwork and field trips.

PHOTO 185 EXPERIMENTAL PHOTOGRAPHY
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-155 or PHOTO-160
Designed for the intermediate level student, this course will explore experimental and technical process and creative camera operations, and give opportunity to fully develop an understanding of the alternative methods of photographic print making.
PHOTO 190 STUDIO PHOTOGRAPHY
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-155 and PHOTO-160
Explores the photographic studio through lectures and demonstrations, including medium format cameras, studio light equipment, and the history of studio photography will also be discussed.

PHOTO 195 COLOR PHOTOGRAPHY
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-155 or PHOTO-160
Presents the principles of light and color in digital or film photography and the practice of exposure and color printing.

PHOTO 200 PORTRAITURE
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-155 or PHOTO-160
Explores basic portrait techniques for commercial photographic and artistic use, utilizing medium format cameras.

PHOTO 201 INDEPENDENT PROJECTS IN PHOTOGRAPHY
Units: 2.00-3.00
CSU 18.00 hours lecture, 54.00-108.00 hours lab
Prerequisite: PHOTO-150, PHOTO-155, or PHOTO-160
A course for intermediate and advanced students to explore individual photographic projects and techniques. Offered pass/no-pass only.

PHOTO 210 WEDDING PHOTOGRAPHY
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-155 or PHOTO-160
Introduces essential skills for a career as a wedding photographer, including individual and group portraits, using studio lighting and electronic flash, developing skills in marketing, pricing and album production. It is recommended that students provide a 35mm or medium format film or digital SLR camera capable of manual exposure adjustment.

PHOTO 215 PHOTOJOURNALISM AND NEWS PHOTOGRAPHY
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-150
Introduces contemporary photojournalism and news photography through applications of theory and concepts of visual communication to digital photographic processes to produce news stories, photographic series, and photo-essays. Note: It is recommended that students have access to a Digital SLR camera with manual exposure and interchangeable lenses. (Same as MEA-215).

PHOTO 220 THE BUSINESS OF PHOTOGRAPHY
Units: 3.00
CSU 54.00 hours lecture
Introduces the business of photography, including training and strategies in creating studio space, marketing plans, building clientele, contracts and forms, creating portfolios and pricing.

PHOTO 280 LARGE FORMAT PHOTOGRAPHY AND THE ZONE SYSTEM
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-160
Expands black and white film based on utilizing large format cameras, including perspective controls, chemicals and materials, and the zone system and its variations. NOTE: To access facilities outside of class time, students must register for PHOTO-090L, Open Lab.

PHOTO 285 CONCEPT DEVELOPMENT
Units: 3.00
UC:CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-155 or PHOTO-160
Presents advanced theory, concept development and execution of the creative process. UC credit limitation: PHOTO 160, 285 and ART 250 combined: maximum credit, two courses.

PHOTO 295 PROFESSIONAL PRACTICES AND PORTFOLIO
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: PHOTO-160
Provides essential career skills for the field of photography, including preparation and presentation of a photographic portfolio, entrepreneurial and communication skills, and project planning and team work.
PHYSICAL SCIENCE

Physical Science classes prepare students to understand and appreciate nature and become knowledgeable about fundamental forces in nature, the basic principles behind modern technology and energy sources, and the role of science in everyday life. Physical Science may be utilized in such professions as teaching, serving as a technical administrator in government and industry, or completing legal work with patents, scientific librarianship, and scientific journalism.

PHYSCI 101 PHYSICAL SCIENCE
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab
Recommended Preparation: MATH-070
Introduces the non-science major to a survey of chemistry, and physics. Includes mechanics, heat, light, sound, motion, magnetism, electricity, light, atomic structure, chemical bonding, chemical reaction rates and their practical applications. Topics are developed with a minimum of mathematical presentation. UC credit limitation: No credit if taken after a college level course in Physics or Chemistry.

PHYSICS

The Physics program provides curriculum concerned with the properties of matter and energy, their interactions and transformations. The Physics program includes both major and non-major courses. The following is a sample of career options available for physics. Most require a baccalaureate degree, and some require a graduate degree: air pollution operations, consumer safety officer, engineer, teacher, astrophysicist and physicist.

Associate in Science Degree: Physics for Transfer
The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an “associate degree for transfer,” a newly established variation of the associate degrees traditionally offered at a California community college. The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students are required to complete:

A. a minimum of 18 semester units in the major with a grade of C or better while maintaining a minimum grade point average (GPA) of at least 2.0 in all CSU transferable coursework.

B. 60 semester CSU-transferable units using the California State University-General Education-Breadth pattern (CSU-GE Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.

C. No more than 60 semester units are required.

This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements. At the time of catalog publication, a student may earn an AS-T in Physics. Additional majors are being developed. Please see a counselor or visit www.canyons.edu for more information.
Student Learning Outcome:
Students will be able to:
– Reason conceptually and logically about physical phenomena using scientific models involving the fundamental physics principles of kinematics, kinetics, energy conservation, electromagnetism, thermodynamics, optics, and modern physics.
– Utilize appropriate instruments to measure and examine examples of physics phenomena and relate the results of experimental data to the concepts discussed in the lecture portion of the class.

Program Requirements:
Units Required: 27

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>PHYSIC-220</td>
<td>Physics for Scientists and Engineers: Mechanics of Solids and Fluids</td>
<td>4.0</td>
</tr>
<tr>
<td>PHYSIC-221</td>
<td>Physics for Scientist &amp; Engineers: Electricity &amp; Magnetism</td>
<td>4.0</td>
</tr>
<tr>
<td>PHYSIC-222</td>
<td>Physics for Scientist &amp; Engineers: Wave Motion, Heat, Optics &amp; Modern Physics</td>
<td>4.0</td>
</tr>
<tr>
<td>MATH-211</td>
<td>Calculus I</td>
<td>5.0</td>
</tr>
<tr>
<td>MATH-212</td>
<td>Calculus II</td>
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</tr>
<tr>
<td>MATH-213</td>
<td>Calculus III</td>
<td>5.0</td>
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</table>

PHYSIC 101 INTRODUCTION TO PHYSICS
Units: 4.00
UC:CSU 72.00 hours lecture

Recommended Preparation: MATH-070
Introduces classical and modern physics, including physical principles concerning motion, gravity, heat, light, sound, electricity, magnetism, the atom, the nucleus, relativity, and quantum mechanics.

PHYSIC 110 GENERAL PHYSICS I
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab

Prerequisite: MATH-102
Introduces the mechanics of solids and fluids, heat and wave motion. Designed for students majoring in the life sciences or any other major requiring a non-calculus-based physics course. UC credit limitation: PHYSICS 110-111, and 20-221-222 combined, maximum credit one series.

PHYSIC 111 GENERAL PHYSICS II
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab

Prerequisite: PHYSIC-110
Introduces electricity and magnetism, optics, and modern physics. Designed for students majoring in the life sciences or any other major requiring a non-calculus-based physics course. UC credit limitation: PHYSICS 110-111 and 220-221-222 combined, maximum credit one series.

PHYSIC 220 PHYSICS FOR SCIENTISTS AND ENGINEERS: MECHANICS OF SOLIDS AND FLUIDS
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab

Prerequisite: MATH-211
Presents a calculus-based introductory study of particle and rigid body statics and dynamics, vibrational motion, and fluid mechanics.

PHYSIC 221 PHYSICS FOR SCIENTISTS AND ENGINEERS: ELECTRICITY AND MAGNETISM
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab

Prerequisite: PHYSIC-220 and credit for or concurrent enrollment in MATH-212.
Presents electric and magnetic fields, circuit theory and electromagnetic induction.

PHYSIC 222 PHYSICS FOR SCIENTISTS AND ENGINEERS: WAVE MOTION, HEAT, OPTICS, AND MODERN PHYSICS
Units: 4.00
UC:CSU 54.00 hours lecture, 54.00 hours lab

Prerequisite: PHYSIC 220
Introduces modern physics, including heat, thermodynamics and kinetic theory, wave motion and sound, geometric and physical optics. UC credit limitation: PHYSICS 110-111 and 220-221-222 combined, maximum credit one series.
PLUMBING TECHNOLOGY

The Plumbing Technician courses are designed to provide entry level knowledge and skills to students seeking employment as a plumber performing new installation and repair of plumbing systems. Students will gain a broad knowledge of different types of plumbing systems; and their design installation and maintenance.

PLMB 030 PLUMBING FUNDAMENTALS
Units: 3.00
54.00 hours lecture
Presents fundamental methods, materials and uses of tools in the plumbing industry, including occupational safety and technical drawings.

PLMB 050 PRINCIPLES AND PRACTICES
Units: 3.00
36.00 hours lecture, 54.00 hours lab
Prerequisite: PLMB-030
Presents the skills used in the plumbing industry, including creating plumbing systems and installing fixtures.

PLMB 060 CONSTRUCTION PRACTICES AND INSTALLATION
Units: 4.00
36.00 hours lecture, 108.00 hours lab
Prerequisite: PLMB-030
Recommended Preparation: PLMB-050
Presents plumbing systems in new residential and light commercial settings, including blueprints, specifications, calculations, fabrication and installation of piping systems, fixtures and appliances.

PLMB 065 PLUMBING SERVICE AND REPAIR
Units: 4.00
36.00 hours lecture, 108.00 hours lab
Prerequisite: PLMB-030
Recommended Preparation: PLMB-050
Presents troubleshooting and plumbing repair in existing residential and light commercial buildings.

POLITICAL SCIENCE

Public authority, responsibility, and acquisition of power are studied in the discipline of political science. Introductory courses are for students interested in learning about American government, politics in general and relationships with other political systems in the world. Students majoring in political science who are pre-law will particularly benefit from the more advanced courses in the department. Students interested in foreign service, international relations and/or communications will enjoy participating in the Model United Nations program offered by the department. A major in political science is of benefit to students seeking careers in law, the military, economics, law enforcement, business, and public administration. An associate degree is not available in political science.

POLISC 150 INTRODUCTION TO AMERICAN GOVERNMENT AND POLITICS
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the institutions, activities, and issues of American and California Governments while presenting an overview of the major ideas and forces that shape the use of public power in American society. The Constitution, the three branches of government, political parties, interest groups, and the media are among the major topics covered. Satisfies the Title V U.S. Constitution requirement and the California State and Local Government requirement.

POLISC 150H INTRODUCTION TO AMERICAN GOVERNMENT AND POLITICS - HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Recommended Preparation: ENGL-101 or ENGL-101H
Examines the institutions, activities, and issues of American and California governments, including an overview of the major ideas and forces that shape the use of public power in American society, the Constitution, the three branches of government, political parties, interest groups, and the media. Additional reading, writing, and research techniques are required.
POLISC 200 INTRODUCTION TO POLITICAL SCIENCE
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the nature, scope and methodology of political science, including basic concepts, terms, contending theories, institutions and sub-fields in the discipline. This course does not meet the Title V American Institutions requirement in U.S. Constitution, California state and local government.

POLISC 210 MODEL UNITED NATIONS
Units: 3.00
CSU 54.00 hours lecture
May be taken three times for credit
Examines the norms, rules, and procedures of the United Nations leading to participation in a United Nations simulation. Emphasizes parliamentary procedure, international advocacy, the role of the United Nations, and extemporaneous speaking. Field trip required.

POLISC 230 POLITICAL THEORY
Units: 3.00
UC:CSU 54.00 hours lecture
Explores the major political concepts and theories from the early Greeks to modern day political philosophers, including the origins of government, state power, justice, and the distribution of political and economic resources that impact our conceptions of the "good life."

POLISC 250 COMPARATIVE GOVERNMENT AND POLITICS
Units: 3.00
UC:CSU 54.00 hours lecture
Provides a comparative, analytical, and theoretical study of political cultures, government institutions, and political processes from selected regions of the world.

POLISC 270 INTERNATIONAL RELATIONS
Units: 3.00
UC:CSU 54.00 hours lecture
Analyzes the basic historical, geographical, economic, ideological, and strategic factors which underlie conflict and cooperation among nations, including between international actors and structures of the international system.

POLISC 290 ETHNIC AND GENDER POLITICS
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the history, issues, and political processes that affect the status and power of ethnic and gender groups which have traditionally been politically and economically disadvantaged in the United States, including issues of inclusion and exclusion; otherness and scapegoating; and, barriers of inequality among politically marginalized groups.
## PSYCHOLOGY

### Associate in Arts Degree: Psychology for Transfer

The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an “associate degree for transfer”, a newly established variation of the associate degrees traditionally offered at a California community college. The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete a minimum of 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor’s degree (unless the major is a designated “high-unit” major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements.

### Student Learning Outcome:

Students will be able to assess the influence of a variety of factors that contribute to behavior and mental processes, evaluate psychological concepts, and compare and contrast theoretical perspectives, empirical findings, and historical trends in the field of Psychology.

### Program Requirements:

#### Units Required: 18

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH-101</td>
<td>Introduction to Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-101H</td>
<td>Introduction to Psychology - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-102</td>
<td>Physiological Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-103</td>
<td>Introduction to Behavioral Research Methods</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-104</td>
<td>Statistics for the Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td><strong>Plus three units from the following:</strong></td>
<td></td>
</tr>
<tr>
<td>PSYCH-109</td>
<td>Social Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-172</td>
<td>Developmental Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-172H</td>
<td>Developmental Psychology - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-225</td>
<td>Psychology of Learning and Behavior</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### Associate in Arts Degree: Psychology

The Associate in Arts degree in Psychology will provide students with an introduction to the field of human behavior including the major perspectives, scientific foundations, and applied areas. The intent is to prepare students for future academic study in the field. The degree includes curriculum that can lead to a baccalaureate degree in psychology at a four-year college or university. The degree can also be a terminal, two year option of study for students interested in psychology who do not wish to pursue a baccalaureate degree in the field.

### Student Learning Outcome:

Students will be able to assess the influence of a variety of factors that contribute to behavior and mental processes, evaluate psychological concepts, and compare and contrast theoretical perspectives, empirical findings, and historical trends in the field of Psychology.

### Program Requirements:

#### Units Required: 24-25

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH-101</td>
<td>Introduction to Psychology</td>
<td>3.0</td>
</tr>
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</table>

**OR**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH-109</td>
<td>Social Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-172</td>
<td>Developmental Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-172H</td>
<td>Developmental Psychology - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-225</td>
<td>Psychology of Learning and Behavior</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Plus three units from the following that have not already been selected from the courses listed above:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH-100</td>
<td>Psychology as a Major and Profession</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-105</td>
<td>Personal Growth and Adjustment</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-109</td>
<td>Social Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-126</td>
<td>Cognitive Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-172</td>
<td>Developmental Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-172H</td>
<td>Developmental Psychology - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-230</td>
<td>Human Sexuality</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-235</td>
<td>Psychology of Gender Roles</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-240</td>
<td>Abnormal Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYCH-272</td>
<td>Adult Development and Aging</td>
<td>3.0</td>
</tr>
</tbody>
</table>
PSYCH 101H INTRODUCTION TO PSYCHOLOGY - HONORS
Units: 3.00
UC:CSU 54.00 hours lecture
Recommended Preparation: ENGL-101 or ENGL-101H
Examines behavior through an explanation of major concepts, theoretical perspectives, research findings, and historical trends in psychology. Topics include biological, physiological, and cognitive processes; states of consciousness; learning, memory and intelligence; life span development; psychological disorders and therapies; and social behavior. Additional reading, writing, critical thinking, and research techniques are required.

PSYCH 102 PHYSIOLOGICAL PSYCHOLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: PSYCH-101 or PSYCH-101H
Examines the functional and anatomical aspects of the nervous system in order to interpret behavior in terms of physiological processes, including cellular and organizational structure of the nervous system, the effects of psychoactive substances on the nervous system, the means by which sensory systems detect and process environmental events, and the biological basis of a variety of complex behaviors and mental processes.

PSYCH 103 INTRODUCTION TO BEHAVIORAL RESEARCH METHODS
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the basic principles and concepts of research methodology used in psychology including: naturalistic observation, case study, questionnaire, co-relational research, and laboratory experiments. Research design and the process of data analysis are also reviewed using classic studies, while providing added insight into the scientific method.

PSYCH 104 STATISTICS FOR THE BEHAVIORAL SCIENCES
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: MATH-070 or MATH-075
Examines the methods used in social and behavioral science to analyze and interpret data generated by social and behavioral science research. Emphasis is placed on gathering of data and the computation, interpretation, application, and presentation of statistics. Topics include: measures of central tendency and variability, graphing techniques, descriptive and inferential statistics, hypothesis testing, sampling, probability, non-parametric and parametric statistics, the normal distribution, t-tests, correlation, one-way and two-way analysis of variance, and use of the Statistical Package for the Social Sciences (SPSS). UC credit limitation: ECON-291, MATH-140, MATH-140H, PSYCH-104 and SOCI-137 combined, maximum credit one course.
PSYCH 105 PERSONAL GROWTH AND ADJUSTMENT  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Emphasizes the application of theoretical psychology to the personal growth and self-knowledge issues relevant to college students. Explores topics such as the search for identity, stress, emotions and interactions with others.

PSYCH 109 SOCIAL PSYCHOLOGY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Introduces the psychological theories, psychological research and applications in major areas of social psychology, including communication and social interaction, group dynamics, attitudes, stereotyping and prejudice, altruism and aggression, person perception and social cognition, roles, and cultural differences.

PSYCH 126 COGNITIVE PSYCHOLOGY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Explores the theory and research related to information-processing, focusing on attention, perception, memory storage and information retrieval. Also highlights work in artificial intelligence and cognitive neuroscience which serves to describe and explain cognitive processes.

PSYCH 172 DEVELOPMENTAL PSYCHOLOGY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Surveys human development, emphasizing changes occurring throughout the lifespan, including the physical, emotional, cognitive, and social growth of infants, toddlers, preschoolers, schoolchildren, adolescents, and adults.

PSYCH 172H DEVELOPMENTAL PSYCHOLOGY - HONORS  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Prerequisite: ENGL-101 or ENGL-101H  
Surveys human development throughout the lifespan, emphasizing physical, emotional, cognitive, and social changes occurring from the prenatal period through late adulthood. Additional reading, writing, critical thinking, and research techniques are required.

PSYCH 175 HEALTH PSYCHOLOGY  
Units: 3.00  
CSU 54.00 hours lecture  
Introduces the research, theoretical, and methodological approaches utilized in health psychology, including health behavior, primary prevention techniques, stress & coping strategies, treatment settings, and management of chronic and terminal illnesses. Relationships between psychological, biological, and social factors are also examined.

PSYCH 180 POSITIVE PSYCHOLOGY  
Units: 3.00  
CSU 54.00 hours lecture  
Explores the theory and research on the sources and effects of positive cognitive states, positive emotional states, and prosocial behavioral processes. Also examines Western and Eastern cultural approaches to the understanding of human strengths, developmental influences on positive functioning, methods for measuring and enhancing human strengths, and the benefits of human strengths, positive experiences and positive environments.

PSYCH 225 PSYCHOLOGY OF LEARNING AND BEHAVIOR  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Recommended Preparation: PSYCH-101 or PSYCH-101H  
Introduces behavioral psychology, covering such topics as classical conditioning, operant conditioning, observational learning, and behavior modification.

PSYCH 230 HUMAN SEXUALITY  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Prerequisite: PSYCH-101 or PSYCH-101H  
Explores the psychological and physiological aspects of human sexuality, including social and biological foundations of sexuality, human anatomy, reproduction, birth process, sexual behavior and attitudes in contemporary society, historical views of sexuality, cross cultural views of sexuality, sexual dysfunction, sexually transmitted diseases, and sexual problems and issues in our society.

PSYCH 235 PSYCHOLOGY OF GENDER ROLES  
Units: 3.00  
UC:CSU 54.00 hours lecture  
Examines the psychological development of women and men as related to gender issues, including the development of sex roles and the extent to which these roles influence, or are influenced by physiology, the family, education, work, and interpersonal relationships.
PSYCH 240 ABNORMAL PSYCHOLOGY
Units: 3.00
UC:CSU 54.00 hours lecture
Recommended preparation: PSYCH-101 or PSYCH-101H
Examines the history, patterns, and causes of maladaptive behavior as reviewed in the field of abnormal psychology, including clinical assessments using the current Diagnostic and Statistical Manual, therapies, and prevention strategies.

PSYCH 272 ADULT DEVELOPMENT AND AGING
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys adult human development and aging, emphasizing changes occurring throughout the adult years. Examines the physical, emotional, cognitive, and social growth and aging of adults. Cross cultural studies of development and aging will also be discussed throughout the course.

PUBLIC SAFETY – AGENCY TRAINING

The College, in conjunction with various community partner agencies, provides additional advanced training courses that are approved by the State Fire Marshal, the California Department of Forestry and Fire Protection, and the Commission on Peace Officer Standards Training (P.O.S.T). These advanced training courses are part of the Los Angeles County Fire Department (FIRET), Los Angeles County Lifeguard (FIRETL), Los Angeles Sheriff Department (LESD), and Los Angeles Police Department (LEPD) series.

Registration for the following courses is limited to students who have successfully completed program prerequisites in all courses listed below. The courses listed below may be repeated if used for legally mandated training and are offered pass/no-pass only unless otherwise noted.

FIRE TECHNOLOGY ADVANCED TRAINING (FIRET)

FIRET 001 FALL FIRE FIGHTER IN-SERVICE TRAINING
Units: 4.00
44.00 hours lecture, 36.00 hours lab
Provides updated information and skills in the areas of fire apparatus, specialized emergency operations, current department policy and procedures, and fire suppression and investigation.

FIRET 002 WINTER FIRE FIGHTER IN-SERVICE TRAINING
Units: 4.00
44.00 hours lecture, 36.00 hours lab
Provides updated information and skills in the areas of fire apparatus, specialized emergency operations, current department policy and procedures, and fire suppression and investigation.

FIRET 003 SPRING FIRE FIGHTER IN-SERVICE TRAINING
Units: 4.00
45.50 hours lecture, 35.00 hours lab
Provides updated information and skills in the areas of fire apparatus, specialized emergency operations, current department policy and procedures, and fire suppression and investigation.
FIRET 004 SUMMER FIRE FIGHTER IN-SERVICE TRAINING
Units: 4.00
45.50 hours lecture, 35.00 hours lab
Provides updated information and skills in the areas of fire apparatus, specialized emergency operations, current department policy and procedures, and fire suppression and investigation.

FIRET 010 FIRE APPARATUS DRIVER/OPERATOR 1A
Units: 2.00
24.00 hours lecture, 16.00 hours lab
Presents techniques and practice in driving emergency vehicles, basic maintenance and pre-trip inspections. This course applies to the requirements for Driver/Operator as established by the California State Board of Fire Services.

FIRET 011 FIRE APPARATUS DRIVER/OPERATOR 1B
Units: 2.00
24.00 hours lecture, 16.00 hours lab
Prerequisite: FIRET-010
Presents updated content reflecting the 2009 NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications. Focusing on methods for performing basic hydraulics and techniques on basic inspections, documentation, maintenance, and troubleshooting fire pumps.

FIRET 012 FIRE APPARATUS DRIVER/OPERATOR 1C
Units: 2.00
20.00 hours lecture, 20.00 hours lab
Prerequisite: FIRET-011
Covers truck operations and driver responsibilities, recognized standards, and related laws for fire apparatus.

FIRET 013 FIRE COMMAND 1A
Units: 2.00
40.00 hours lecture
Provides instruction and simulation time pertaining to the initial decision and action processes at a working fire. Topics include the fire officer, fire behavior, fireground resources, operations, and management.

FIRET 014 FIRE COMMAND 1B
Units: 2.00
40.00 hours lecture,
Prerequisite: FIRET-013
Provides information on tactics, strategies, and scene management for multi-casualty incidents, hazardous materials incidents, and wildland fires. Each student also has the opportunity to increase his or her knowledge and skills by handling initial operations at these types of incidents through simulation and class activities.

FIRET 015 FIRE COMMAND 1C
Units: 2.00
40.00 hours lecture,
Prerequisite: FIRET-014
Designed around the responsibilities of the Company Officer at a wildland/urban interface incident. It will bring the structural Company Officer out of the city and into the urban/interface; in other words, from his or her comfort zone into an area that could very well be quite unfamiliar.

FIRET 016 TRAINING INSTRUCTOR 1A
Units: 2.00
40.00 hours lecture
This is the first of a three-course series. Topics include methods and techniques for training, selecting, adapting, organizing, and using instructional materials appropriate for teaching cognitive lessons; criteria and methods to evaluate teaching and learning efficiency.

FIRET 017 TRAINING INSTRUCTOR 1B
Units: 2.00
40.00 hours lecture
Prerequisite: FIRET-016
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.

FIRET 018 TRAINING INSTRUCTOR 1C
Units: 2.00
40.00 hours lecture
Prerequisite: FIRET-017
This is the third of a three-course series. Topics include a variety of methods and techniques for developing lesson plans and tests in accordance with the latest concepts in career education.
FIRET 020 I-200 INCIDENT COMMAND SYSTEM
Units: 0.15-0.50
8.00-24.00 hours lecture
Intended for fire personnel who understand the Incident Command System. Develops the necessary foundation for the student to participate as a member of a wildland fire incident. Topics include the principles and features of ICS, an organizational overview, incident facilities, incident resources, and common responsibilities.

FIRET 021 I-300 INTERMEDIATE ICS
Units: 0.50
24.00 hours lecture
Expands knowledge of ICS organization and operation with regard to supervisory roles on expanding or type 3 incidents. Includes ICS fundamentals review, incident/event assessment and agency guidance in establishing incident objectives, incident resource management, planning process, demobilization, transfer of command, and close out.

FIRET 022 I-400 ADVANCED ICS
Units: 0.50
24.00 hours lecture
Present the theories and techniques needed to manage large single-agency and complex multi-agency/multi-jurisdictional responses. Topics include fundamentals for command and general staff, major and/or complex incident/event management, area command and multi-agency coordination.

FIRET 023 GPS LAND NAVIGATION TECHNICIAN
Units: 0.50
16.00 hours lecture, 8.00 hours lab
Introduces land navigation techniques using a map and compass as well as navigation using a GPS unit. The lecture based class will conclude with a field exercise where students will demonstrate knowledge and skills learned.

FIRET 024 L-280 FOLLOWERSHIP TO LEADERSHIP
Units: 0.25
16.00 hours lecture
Introduces fundamental leadership concepts of the wildland fire service, focusing on the framework, values and principles that guide wildland fire leaders in providing leadership across a broad range of missions.

FIRET 025 S-190 INTRODUCTION TO WILDLAND FIRE BEHAVIOR
Units: 0.15
8.00 hours lecture
Provides an introduction to wildland fire behavior issues that are important to wildland fire spread and safety to firefighters involved in suppression.

FIRET 026 S-290 INTERMEDIATE WILDLAND FIRE BEHAVIOR
Units: 0.75
32.00 hours lecture
Second course in a series designed to prepare the prospective fireline supervisor to undertake safe and effective fire management operations and predict fire behavior.

FIRET 027 S-390 INTRODUCTION TO WILDLAND FIRE BEHAVIOR CALCULATIONS
Units: 0.75
32.00 hours lecture
Develops knowledge and skills required for effective fire behavior predictions.

FIRET 028 S-490 ADVANCED WILDLAND FIRE BEHAVIOR CALCULATIONS
Units: 2.00
40.00 hours lecture
Instructs advanced wildland fire behavior for effective and safe fire management operations.

FIRET 030 S-212 WILDFIRE CHAINSAWS
Units: 0.75
24.00 hours lecture, 12.00 hours lab
Provides introduction to the function, maintenance and use of internal combustion engine powered chainsaws and their tactical wildland fire application. This course prepares the student to be a “Trainee Faller A,” performing low complexity project and fireline tasks under the supervision of a fully qualified evaluator.

FIRET 031 S-215 FIRE OPERATIONS IN THE URBAN INTERFACE
Units: 0.75
16.00 hours lecture, 16.00 hours lab
Prepares initial attack incident commanders and company officers to effectively deal with wildland fires that threaten life, property, and improvements.
FIRET 032 S-223 FIRELINE EMT
Units: 0.25
16.00 hours lecture
Designed to meet the training needs of an incident FEMT as outlined in the Field Operations Guide, ICS 420-1, Firescope California.

FIRET 033 S-230 FIRE CREW SUPERVISOR
Units: 0.50
24.00 hours lecture
Presents training for the single resource boss position from initial dispatch through demobilization to the home unit. Topics include operational leadership, preparation and mobilization, assignment preparation, risk management, entrapment avoidance, safety and tactics, offline duties, demobilization, and post incident responsibilities.

FIRET 034 S-231 ENGINE BOSS - SINGLE RESOURCE
Units: 2.00
40.00 hours lecture
Presents information and skills associated with Engine Boss. Topics include engine and crew capabilities and limitations, information sources, fire size-up considerations, tactics, and wildland/urban interface tactics.

FIRET 035 S-234 IGNITION OPERATIONS
Units: 0.75
16.00 hours lecture, 16.00 hours lab
Provides training in the functional roles and responsibilities connected with firing operations. Topics include: planning, ignition procedures and techniques, and equipment applicable to wildland and prescribed fire. Addresses the role of the ignition specialist or firing boss as the organization manages escalation from a non-complex to a complex situation.

FIRET 036 S-244 FIELD OBSERVER
Units: 2.00
40.00 hours lecture
Designed for individuals responsible for conducting field observations. Topics covered include: field observer skills, how weather conditions contribute to wild land fires, safety tactics and strategies.

FIRET 037 S-245 DISPLAY PROCESSOR
Units: 0.15
4.00 hours lecture, 4.00 hours lab
Presents the skills necessary to perform as a Display Processor (DPRO), including general roles and responsibilities, assisting the Situation Unit Leader with producing incident maps, inputs for the Incident Status Summary Form (ICS-209).

FIRET 038 S-248 STATUS/CHECK-IN RECORDER
Units: 0.25-0.50
16.00-24.00 hours lecture
Introduce students to the tools and techniques used to perform the duties of a status check-in recorder (SCKN).

FIRET 039 S-349 RESOURCES UNIT LEADER/DEMOBILIZATION UNIT LEADER
Units: 0.75
32.00 hours lecture
Designed to meet the training needs of a RESL and DMOB as outlined in the Wildland Fire Qualification System Guide (PMS 310-1) and the position task books developed for these positions.

FIRET 040 S-258 INCIDENT COMMUNICATION TECHNICIAN
Units: 0.15-4.00
4.00-40.00 hours lecture, 4.00-40.00 hours lab
Provides prerequisite knowledge and skills necessary to perform the tasks of a communications technician (COMT) in the Incident Command System (ICS). Includes installation, maintenance, and troubleshooting of NAational Incident Radio Support Cache (NIRSC) communications equipment on incidents.

FIRET 041 S-270 BASIC AIR OPERATIONS
Units: 0.25
16.00 hours lecture
Introduces principles of aviation management and safety, including agency aircraft, tactical and logistical uses of aircraft, and requirements for take-off and landing areas.

FIRET 042 S-271 HELICOPTER CREW MEMBER
Units: 0.50-2.00
24.00-40.00 hours lecture
This course is designed to provide student proficiency in all areas of the tactical, logistical use of helicopters to achieve efficiency and standardization.

FIRET 043 S-370 INTERMEDIATE AVIATION OPERATIONS
Units: 0.50-0.75
24.00-36.00 hours lecture
This course of study is to provide Incident Commanders and other fire line supervisors with an understanding of the aviation tools and knowledge to effectively use aviation resources safely, effectively and efficiently on a wildland fire incident.
<table>
<thead>
<tr>
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<th>Units</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRET 044</td>
<td>S-330 STRIKE TEAM LEADER</td>
<td>0.75</td>
<td>32.00</td>
<td>Provides tactics and strategy as it relates to the management of a strike team or task force and meets the S-330 training requirements of the California Incident Command Certification System (CICCS) for the position of Strike Team/Task Force Leader-All Risk.</td>
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<tr>
<td>FIRET 045</td>
<td>S-336 FIRE SUPPRESSION TACTICS</td>
<td>0.75</td>
<td>32.00</td>
<td>Prepares experienced Single Resource Bosses and Initial Attack Incident Commanders in the tactics necessary at the Strike Team/Task Force Leader level. Designed to meet training requirements in ICS Operations and is specific to wildland fire suppression.</td>
</tr>
<tr>
<td>FIRET 046</td>
<td>S-346 SITUATION UNIT LEADER</td>
<td>2.00</td>
<td>40.00</td>
<td>Designed to meet the training needs of a Situation Unit Leader (SITL) as outlined in the Wildland Fire Qualification System Guide (PMS 310-1).</td>
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<tr>
<td>FIRET 047</td>
<td>S-348 RESOURCES UNIT LEADER</td>
<td>0.25</td>
<td>20.00</td>
<td>Prepares the student for duties and responsibilities of a resource unit leader (RESL) on large scale incidents, including organizing and managing the unit, check-in, tracking resource status, operational planning and resources unit products.</td>
</tr>
<tr>
<td>FIRET 048</td>
<td>S-354 FACILITIES UNIT LEADER</td>
<td>0.15-4.00</td>
<td>8.00-80.00</td>
<td>Course objectives include 1) arrive at incident properly equipped, gather information to assess the assignment, and begin initial planning activities of a FACL; 2) plan, staff, and manage the facilities unit in a safe manner to meet the needs of the incident; 3) coordinate with the logistics units and other sections to assist in accomplishing the overall objectives of the facilities unit; and 4) utilize the National Interagency Mobile Food Services and Shower Facilities Contracts to ensure services are provided to the government.</td>
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<tr>
<td>FIRET 049</td>
<td>S-355 GROUND SUPPORT UNIT LEADER</td>
<td>0.25</td>
<td>16.00</td>
<td>Addresses the following: 1) Arrive at incident properly equipped, gather information to assess the assignments, and begin initial planning activities of a GSUL; 2) plan, staff, and manage the ground support unit in a safe manner to meet the needs of the incident; 3) coordinate with the logistics units and other sections to assist in accomplishing the incident objectives; and 4) demobilize the ground support unit.</td>
</tr>
<tr>
<td>FIRET 050</td>
<td>S-356 SUPPLY UNIT LEADER</td>
<td>0.25</td>
<td>16.00</td>
<td>Reviews the functions, relationships, and strategies used by management, specifically supply unit leaders throughout the fire process, including mobilization and demobilization techniques.</td>
</tr>
<tr>
<td>FIRET 051</td>
<td>S-358 COMMUNICATIONS LEADER</td>
<td>0.50</td>
<td>24.00</td>
<td>Designed to prepare the student to accomplish the duties and responsibilities of a communications unit leader on a large incident.</td>
</tr>
<tr>
<td>FIRET 052</td>
<td>S-359 MEDICAL UNIT LEADER</td>
<td>0.50</td>
<td>24.00</td>
<td>Provides instruction in operational settings, including situational assessment skills, coordination with other operational units, and ability to plan, staff and organize the medical unit team.</td>
</tr>
<tr>
<td>FIRET 053</td>
<td>S-381 LEADERSHIP AND ORGANIZATIONAL DEVELOPMENT</td>
<td>0.50</td>
<td>24.00</td>
<td>Designed to provide the experienced wildland firefighter with the communication and supervision skills necessary to perform as a unit leader on a wildland fire incident.</td>
</tr>
<tr>
<td>FIRET 054</td>
<td>S-400 INCIDENT COMMANDER</td>
<td>0.50</td>
<td>24.00</td>
<td>Delivers information for operating as an Incident Commander within the framework of ICS. Subjects covered include: incident briefing, incident planning, incident management, unified command, and incident demobilization.</td>
</tr>
</tbody>
</table>
FIRET 055 S-403 INFORMATION OFFICER  
Units: 0.50 - 0.75  
28.00-32.00 hours lecture  
Covers training requirements for a Public Information Officer Type 2. Topics include information organization and assignment, developing a communications strategy, information operations, creating a safe environment, effective media relations, incident within an incident, community relations analysis, documentation, demobilization, and transitioning.

FIRET 056 S-404 SAFETY OFFICER  
Units: 0.50  
24.00 hours lecture  
Designed to meet the training needs of the Safety Officer position in the incident command system. Topics include safety officer effectiveness, analysis techniques, safety messages, briefings and reports, and high hazard operations.

FIRET 057 S-420 COMMAND AND GENERAL STAFF  
Units: 2.00  
40.00 hours lecture  
Presents advanced training for individuals to be assigned to the Command and General Staff positions on a wildland fire incident. Topics develop the skills and knowledge that are necessary to perform on wildland Type 2 incidents in a command or general staff position, information required to set up organizational elements necessary to mitigate a wildland fire incident, how to request additional resources as needed, and supervision issues related to coordination of staff activity.

FIRET 058 S-430 OPERATIONS STAFF CHIEF  
Units: 0.75  
32.00 hours lecture  
Presents the information necessary to meet the training requirements of the Operations Section Chief. Includes information to assess incident and determine immediate needs and actions, a description of the six principles of command and the six basic rules of emergency operations management, delineation of the relationship between general staff and the Operations Section Chief, and how to supervise the operations function from situation unit field observers and operations personnel.

FIRET 059 S-440 PLANNING SECTION CHIEF  
Units: 0.50  
24.00 hours lecture  
Designed to meet a portion of the training needs of the planning section chief type 2 (PSC2). Topics include information gathering, strategies, meetings and briefings, incident action plan (IAP), interactions, forms, documents, supplies, demobilization, and an optional technology section. In the final exercise, students observe a simulated planning meeting and use the information derived to find errors in an IAP.

FIRET 060 S-445 INCIDENT TRAINING SPECIALIST  
Units: 0.15-0.50  
12.00-24.00 hours lecture  
Designed for individuals qualifying within the ICS as an Incident Training Specialist, including how to organize and implement an incident training program, develop appropriate training scenarios and preparing incident documentation.

FIRET 061 J-342 DOCUMENTATION UNIT LEADER  
Units: 0.15  
8.00 hours lecture  
Introduces procedures for mobilization and demobilization on an incident, duplication of the IAP and requirements for maintaining incident records.

FIRET 062 J-362 STAGING AREA MANAGER  
Units: 0.15  
8.00 hours lecture  
Presents the skills necessary to perform duties as the staging manager, including establishing and maintaining staging areas where resources are assigned prior to being given a specific fire assignment.

FIRET 063 J-158 RADIO OPERATOR  
Units: 0.15-0.75  
8.00-32.00 hours lecture  
Covers required duties of a radio operator.

FIRET 064 S-300 EXTENDED ATTACK INCIDENT COMMANDER  
Units: 0.25  
16.00 hours lecture  
Focuses on leadership and command as they relate to the ICT3 position and presented in participative lecture format with multiple tactical decision games for students to practice new knowledge.
FIRET 070 RESCUE SYSTEMS I
Units: 2.00
40.00 hours lecture
Introduces rescue systems procedures including team organization, environmental considerations and specialized situations.

FIRET 071 RESCUE SYSTEMS 2
Units: 2.00
40.00 hours lecture
Provides advanced heavy rescue system techniques. Key topics include structural building types, wood and mechanical shores, crib capacities, floor weight calculations, building search, confined space considerations, damaged structure hazard assessment, use of small power and hand tools, air bags, and USAR ICS. A State Fire Marshal course.

FIRET 072 TRENCH RESCUE
Units: 0.50
12.00 hours lecture, 12.00 hours lab
Provides fire service personnel with hands-on application of the techniques necessary to safely affect a rescue from an excavation or trenching cave-in. Topics include: critical considerations while responding to trenching emergencies, evaluation of cave-in scenes, basic life support procedures and temporary protection for victims, specialized tool usage, shoring techniques, and below grade rescue safety procedures.

FIRET 073 CONFINED SPACE RESCUE
Units: 2.00
20.00 hours lecture, 20.00 hours lab
Provides intensive hands-on training to prepare firefighters to respond to confined space emergencies. Topics include identifying confined spaces, permit-required confined spaces, hazards associated with permit required confined space, target industries and hazards, state and federal regulations, components of a rescue operation, and the roles and responsibilities of the rescue team.

FIRET 074 RIVER AND FLOOD RESCUE
Units: 0.50
8.00 hours lecture, 16.00 hours lab
Provides training of fire service personnel in water rescue techniques. Topics include swift water rescue, submerged vehicles, drowning, use of engine/truck company equipment for water rescue, use of rafts and boats, and underwater search and recovery.

FIRET 075 LOW ANGLE RESCUE
Units: 0.50
24.00 hours lecture
Provides students with techniques for using rope, webbing, hardware friction devices, and litters in low angle rescue situation. Topics include: rope related equipment, anchor systems, safety lines, stretcher lashing and rigging, mechanical advantage systems and single and double line rescue systems.

FIRET 076 IAFF FIRE GROUND SURVIVAL
Units: 0.25
8.00 hours lecture, 8.00 hours lab
Provides the step-by-step tools to use in a MAYDAY situation or leading to the rescue, including the use of mnemonics, case studies, and life saving techniques needed to facilitate a successful MAYDAY rescue.

FIRET 077 ADVANCED ROPE RESCUE
Units: 0.75
32.00 hours lecture
Provides the requirements for in-service certification of firefighters in high angle rescue situations.

FIRET 090 COUNTY OF LOS ANGELES FIRE DEPARTMENT EXPLORER ACADEMY
Units: 2.50
20.00 hours lecture, 72.00 hours lab
Introduces various manipulative skills associated with fire department activities such as, but not limited to; hydrant operation, hose evolutions, ladder evolutions, breathing apparatus evolutions, and tying of department approved knots. Additionally, Explorers will learn about basic fire behavior, fire chemistry and physics, classes of fires, and extinguishing techniques.

FIRET 091 HAZMAT – FIRST RESPONDER OPERATIONAL REFRESHER
Units: 0.15
3.50 hours lecture, 4.50 hours lab
This is a 3 module FRO refresher course. Students will participate in three distinct scenarios designed to engage the various knowledge and skills required of the First Responder Operational. During these scenarios, the student will develop and implement the strategy, tactics, and tasks necessary to respond to an over-turned tanker. (306/406) Experiencing a hazardous materials leak, they will formulate and implement the strategies, tactics, and tasks necessary to rescue simulated injured workers inside a warehouse. Students will develop and implement the strategy, tactics, and tasks necessary to perform required emergency operations in a simulated hazardous situation.
FIRE HL 001 OCEAN LIFEGUARD TRAINING ACADEMY
Units: 14.75
210.00 hours lecture, 90.00 hours lab
Prepares the student for employment as an ocean lifeguard. Major topics include: CPR, First aid, rescue drills, surf and ocean swimming, rescue board proficiency, skin diving proficiency, communication, and environmental hazard identification. May be repeated if used for legally mandated training.

FIRE HL 002 LIFEGUARD CADET
Units: 4.25
36.00 hours lecture, 104.00 hours lab
Provides selected Junior Lifeguards interested in becoming Ocean Lifeguards with more extensive training through supplemental curriculum items and tower internships.

FIRE HL 003 OCEAN LIFEGUARD RECHECK INSTRUCTOR TRAINING
Units: 0.15
8.00 hours lecture
Provides required annual recertification for returning lifeguards. Topics include teaching guidelines and program policy for recheck instructors, department updates, teaching techniques, review of CPR changes, running skills stations, and the recheck agenda.

FIRE HL 004 LIFEGUARD ACADEMY INSTRUCTOR TRAINING
Units: 2.00
10.00 hours lecture, 30.00 hours lab
Training for Lifeguard Training Academy instructors. Topics include teaching techniques, lecture preparation, Ocean Lifeguard Training Manual review, and candidate discipline.

FIRE HL 005 ANNUAL OCEAN LIFEGUARD RECERTIFICATION/INSERVICE - PERMANENT
Units: 11.25
170.00 hours lecture, 40.00 hours lab
Provides annual recheck for all permanent lifeguards. Monthly in-service drills and physical fitness logs are completed by all permanent lifeguards. Topics include department updates, medical skills and rescue skills.

FIRE HL 006 ANNUAL OCEAN LIFEGUARD RECERTIFICATION/INSERVICE - RECURRENT
Units: 3.00
10.00 hours lecture, 50.00 hours lab
Provides annual recheck for all recurrent Lifeguards. Monthly in-service drills and physical fitness logs are completed by all permanent lifeguards. Topics include Department updates, medical skills and rescue skills.

FIRE HL 007 JUNIOR LIFEGUARD INSTRUCTOR CERTIFICATION
Units: 1.75
20.00 hours lecture, 30.00 hours lab
Provides all new and returning Junior Lifeguard instructors with required annual certification. Covers teaching guidelines and program policy for the upcoming summer program. Topics include ocean and beach safety, lifeguard skills, ocean conditions, basic first aid and CPR.

FIRE HL 008 ADVANCED DIVER INSERVICE TRAINING
Units: 4.25
52.00 hours lecture, 52.00 hours lab
Provides inservice training for Underwater Rescue and Recovery Unit divers, as well as for Auxiliary and Guest Divers who are working towards meeting the requirements for the Rescue and Recovery Unit. Topics include diver safety, underwater search techniques, victim and property recovery, and maintaining the underwater crime scene.

FIRE HL 009 PERSONAL WATERCRAFT SURF RESCUE INSTRUCTOR
Units: 0.50
10.00 hours lecture, 10.00 hours lab
Provides training and certification for instructors of Personal Watercraft Rescue. Major topics include pre and post operations techniques, craft launch and retrieval, craft operation in the surfline, rescue techniques and emergency procedures. After successful completion of this course students become certified PWC Surf Rescue class instructors.

FIRE HL 010 BOAT AND MARINE FIREFIGHTING
Units: 2.00
40.00 hours lecture
Covers basic firefighting tactics and strategies particular to marine, boat and other watercraft fires.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Lecture Hours</th>
<th>Lab Hours</th>
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<tr>
<td>FIRETL 011</td>
<td>PERSONAL WATERCRAFT SURF RESCUE - BASIC</td>
<td>1.25</td>
<td>20.00</td>
<td>10.00</td>
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<tr>
<td></td>
<td>Introduces Personal Watercraft Surf Rescue. Major topics include pre and post operations techniques, craft launch and retrieval, craft operation in the surfline, rescue techniques and emergency procedures.</td>
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<tr>
<td>FIRETL 012</td>
<td>PERSONAL WATERCRAFT SURF RESCUE - OPERATOR</td>
<td>0.50</td>
<td>10.00</td>
<td>10.00</td>
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<td></td>
<td>Builds on the skills learned in the Personal Watercraft Surf Rescue - Basic class. Major topics include pre and post operations techniques, craft launch and retrieval, advanced craft operation in the surfline, rescue techniques with rescuers and emergency procedures. After successful completion of this course students become certified craft operators.</td>
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<tr>
<td>FIRETL 013</td>
<td>RESCUE BOAT OPERATOR</td>
<td>2.00</td>
<td>16.00</td>
<td>24.00</td>
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<td></td>
<td>Introduces basic rescue boat operations for emergency rescue personnel. Topics include ocean navigation, boat handling, rescues at sea, weather and emergency communications.</td>
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<tr>
<td>FIRETL 014</td>
<td>CPR INSTRUCTOR CERTIFICATION</td>
<td>0.25</td>
<td>8.00</td>
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<td></td>
<td>Reviews CPR Guidelines as well as effective teaching and testing techniques. Upon completion students are certified to teach CPR.</td>
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<tr>
<td>FIRETL 015</td>
<td>EMT RECERTIFICATION FOR LIFEGUARDS - PERMANENT</td>
<td>0.25</td>
<td>16.00</td>
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<td></td>
<td>Provides an intensive review of primary EMT training for permanent lifeguards.</td>
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<tr>
<td>FIRETL 016</td>
<td>EMT RECERTIFICATION FOR LIFEGUARDS - RECURRENT</td>
<td>0.50</td>
<td>24.00</td>
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<tr>
<td></td>
<td>Provides an intensive review of primary EMT training for recurrent lifeguards.</td>
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<tr>
<td>LEPD 051</td>
<td>PEAK PERFORMANCE FOR LAW ENFORCEMENT</td>
<td>0.25</td>
<td>16.00</td>
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<td></td>
<td>Provides training for certification as a Peak Performance Instructor.</td>
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<tr>
<td>LEPD 052</td>
<td>JUVENILE PROCEDURES SCHOOL</td>
<td>0.75</td>
<td>32.00</td>
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<td></td>
<td>Provides a full understanding of the function of Child Protection Section's Injury Control Unit. Identification and investigation of child abuse cases, role of the Department of Children and Family Services and how it interfaces with law enforcement, mandated laws and procedures regarding the completion of juvenile petitions, and the State of California Welfare and Institution Code as it relates to juveniles.</td>
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<tr>
<td>LEPD 053</td>
<td>VICE SCHOOL</td>
<td>2.00</td>
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<td>Designed to provide students with an overview of vice operations, responsibilities, and risk management.</td>
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<tr>
<td>LEPD 054</td>
<td>GANG AWARENESS BASIC</td>
<td>0.50</td>
<td>24.00</td>
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<td></td>
<td>Prepares all gang impact team members assigned to GED/CLEAR to gather gang-related intelligence and information, identify gang crime patterns, monitor gang activity, and implement crime suppression strategies.</td>
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<tr>
<td>LEPD 055</td>
<td>GANG SUPERVISOR COURSE</td>
<td>0.25</td>
<td>8.00</td>
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<td></td>
<td>Designed for police supervisory personnel in the supervision of a unit that is responsible for monitoring and reducing gang activity.</td>
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<tr>
<td>LEPD 056</td>
<td>LAW ENFORCEMENT PROTECTIVE MEASURES</td>
<td>0.15</td>
<td>8.00</td>
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<td></td>
<td>Provides the knowledge and skills needed to respond to and manage incidents involving acts of terrorism, including the concepts of terrorist threats, terrorist activities, weapons of mass destruction, potential targets of terrorism, incident command and law enforcement response actions, and prevention methods.</td>
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</tbody>
</table>
LEPD 057 WEAPONS OF MASS DESTRUCTION
Units: 0.15
8.00 hours lecture
Explores the scope and nature of weapons of mass destruction (WMD) and hazardous materials (HAZMAT). Students will recognize and identify major problem elements, the types of materials used and the risks posed by WMD/HAZMAT incidents. Students will explore and design and assess appropriate response actions, including Incident Command Systems (ICS) protocol.

LEPD 058 WARRANT SERVICES TACTICS
Units: 0.15
8.00 hours lecture
Provides information to officers to evaluate and assess the correct tactical approach on the service of various warrants.

LEPD 059 PATROL OFFICER AUTO THEFT INVESTIGATION
Units: 0.15
8.00 hours lecture
Provides auto theft investigation training for patrol officers.

LEPD 060 IDAP-DRIVING UNDER INFLUENCE APPREHENSION
Units: 2.00
40.00 hours lecture
Provides peace officers with the knowledge, skills, and abilities to effectively increase the deterrence of Driving Under the-influence (DUI) violations, resulting in a reduction of the number of collisions, deaths, and injuries caused by impaired drivers.

LEPD 061 NARCOTICS SCHOOL
Units: 2.00
40.00 hours lecture
Designed for field officers and intended to provide the most current information available concerning drug identification and narcotics investigations. POST certified and CPT awarded.

LEPD 062 DRUG RECOGNITION EXPERT UPDATE
Units: 0.15-4.00
8.00-80.00 hours lecture
Provides content required to re-certify a police officer as a Drug Recognition Expert. Focuses on new drug trends, case law, investigative techniques, drug recognition evaluation and review, and legal requirements.

LEPD 063 DRUG INFLUENCE 11550 H/S
Units: 4.00
80.00 hours lecture
Provides an introduction to enforcement of 11550 H/S, Under the Influence of Controlled Substances.

LEPD 080 TACTICAL COMMUNICATIONS
Units: 0.15
8.00 hours lecture
Provides the theory and methods of tactical communication for law enforcement officers.

LEPD 099 URBAN SEARCH AND RESCUE FOR LAW ENFORCEMENT
Units: 0.50
24.00 hours lecture
Provides law enforcement personnel with the knowledge and skills necessary to conduct urban search and rescue.

LEPD 100 BASIC ACADEMY
Units: 24.00
CSU 550 hours lecture, 370 hours lab
Provides training in basic law enforcement tactics and techniques specifically used by the Los Angeles Police Department. Examines community relations, criminal law, criminal evidence, patrol procedures, investigation, vehicle codes, vehicle operations, communications, physical conditioning, health and safety, self-defense tactics, weapons, and marksmanship. Letter grade.

LEPD 111 LEADERSHIP PART I
Units: 2.00
CSU 40.00 hours lecture
Introduces the role of the supervisor in the area of Leadership. Presents modern behavioral science theories to enhance student’s understanding of human motivation, satisfaction, and performance

LEPD 112 LEADERSHIP PART II
Units: 2.00
CSU 40.00 hours lecture
Provides framework to help supervisors organize their knowledge and experience into effective leader actions and integrate the course content into daily leadership practices.

LEPD 113 LEADERSHIP PART III
Units: 2.00
CSU 40.00 hours lecture
Presents challenges to develop and achieve personal potential and integrate the course content into daily leadership practices.
LEPD 114 LEADERSHIP PART IV  
Units: 2.00  
CSU 40.00 hours lecture  
Inspire students to adopt a lifelong commitment to the study of leadership and integrate the course content into daily leadership practices.

LEPD 120 WATCH COMMANDER SCHOOL  
Units: 2.00  
CSU 40.00 hours lecture  
Introduces the various responsibilities associated with the Watch Commander position.

LEPD 121 DETECTIVE TRAINING SCHOOL  
Units: 2.00  
CSU 40.00 hours lecture  
Provides detectives and detective trainees with information necessary to perform their assignments. Topics include report writing, crime scenes, evidence, surveillance, warrants, interview and interrogation, case presentation, and courtroom testimony.

LEPD 122 DETECTIVE TRAINING SCHOOL  
Units: 4.00  
CSU 80.00 hours lecture  
Provides detectives and detective trainees with information necessary to perform their assignments. Topics include report writing, crime scenes, evidence, surveillance, warrants, interview and interrogation, case presentation, and courtroom testimony.

LEPD 123 BASIC HOMICIDE SCHOOL (PRESLEY)  
Units: 2.00  
CSU 36.00 hours lecture, 4.00 hours lab  
Provides the training needs of detectives responsible for investigation homicides.

LEPD 140 ICI CRIMINAL INVESTIGATION CORE COURSE  
Units: 4.00  
CSU 80.00 hours lecture  
Provides training for law enforcement personnel assigned to follow-up investigations. The Core Course contains curriculum generic to all investigation specialties.

LEPD 142 ICI VEHICLE THEFT FOUNDATION SPECIALTY COURSE  
Units: 2.00  
CSU 40.00 hours lecture  
Provides training needs of investigators assigned to investigate vehicle thefts.

LEPD 143 ICI HOMICIDE INVESTIGATION  
Units: 4.00  
CSU 80.00 hours lecture  
Introduces laws and investigative theories and methodologies for students to achieve the skills required to perform a homicide investigation.

LEPD 144 ICI SEXUAL ASSAULT  
Units: 2.00  
CSU 40.00 hours lecture  
Presents a 5 module course over the length of 40 hours, focusing on sexual offender typology, victim advocacy, collection of evidence, investigative procedures, and medical and forensic exams are covered extensively.

LEPD 145 ICI GANG INVESTIGATION FOUNDATION SPECIALTY COURSE  
Units: 2.00  
CSU 40.00 hours lecture  
Designed to develop law enforcement personnel capable of investigating and testifying in gang related criminal trials.

LESD 010 ARREST AND CONTROL – DRIVER TRAINING  
Units: 0.15  
4.00 hours lecture, 4.00 hours lab  
Provides continued professional training in P.O.S.T. perishable skills.

LESD 011 BASIC TACTICAL COMMUNICATIONS  
Units: 0.15-4.00  
8.00-80.00 hours lecture  
Designed to teach students the basic communication skills needed to effectively communicate with inmates in a custody setting. As this course is skills-oriented, the training is practical, immediately applicable and teaches real skills. It will include: learning the basics (sizing up the situation), add-ons (communicating with inmates), and the application (controlling behaviors).
LESD 012 FIRST AID RECERTIFICATION  
Units: 0.15-4.00  
8.00-80.00 hours lecture  
Designed to review the philosophies and concepts of first aid and personal safety mandated by the State of California Emergency Medical Services Authority (EMSA). Instructs staff to apply proper first aid procedures when confronted with a medical emergency.

LESD 014 PRISONER TRANSPORTATION & SECURITY  
Units: 0.15-4.00  
8.00-80.00 hours lecture  
Familiarizes students with department rules and regulations in the transporting of prisoners and their safety.

LESD 015 JAIL INTELLIGENCE GATHERING  
Units: 0.15-4.00  
8.00-80.00 hours lecture  
Familiarizes students with the principles of analytical interviewing, enabling enhancement of abilities and success during interviews.

LESD 016 BASIC REPORT WRITING SKILLS  
Units: 0.15-4.00  
8.00-80.00 hours lecture  
Provides students with the basic report writing skills needed to investigate and write reports. Uses written exercises and practical application to assist the students in basic report writing skills and techniques.

LESD 017 CPR RECERTIFICATION  
Units: 0.15-4.00  
8.00-80.00 hours lecture  
Reviews the philosophies and basic principles of CPR and the mechanics of basic life support.

LESD 018 SUPERVISORY LINE DEPUTY - SUPERVISORY COURSE  
Units: 0.25  
14.00 hours lecture, 2.00 hours lab  
Introduces the essential supervisory principles and concepts that lead students to accomplish daily supervisory tasks. The students will develop skills that will assist them in problem solving and critical decision making.

LESD 019 ANGER MANAGEMENT  
Units: 0.15  
8.00 hours lecture  
Designed to enable the student to understand and recognize the many aspects of anger and become skilled at dealing with and managing anger and related issues.

LESD 020 AR-15 RIFLE  
Units: 1.00  
16.00 hours lecture  
Covers departmental approved use of the AR-15 rifle use.

LESD 100 BASIC ACADEMY  
Units: 24.00  
CSU 560 hours lecture, 356 hours lab  
Provides training in basic law enforcement tactics and techniques specifically used by the Los Angeles Sheriff Department. Examines community relations, criminal law, criminal evidence, patrol procedures, investigation, vehicle codes, vehicle operations, communications, physical conditioning, health and safety, self-defense tactics, weapons, and marksmanship. Letter grade.

RADIO, TELEVISION AND FILM  
(See Media Entertainment Arts)
REAL ESTATE

Associate in Science Degree and Certificate of Achievement: Real Estate

The Real Estate program involves the study of California real estate principles, practices, procedures, and law. It offers courses mandated by the California Department of Real Estate to prepare those who desire a career in real estate.

Students must successfully complete and pass the Real Estate Principles class (REAL-100), the Real Estate Practices class (REAL 101), and one additional class (of the student's choosing from the approved list) in the Real Estate Department to academically qualify for the California Real Estate Sales license and examination. These classes may also be applied to the academic requirement for the California Real Estate Broker license and examination.

On successful completion of the full program, the student will be academically qualified to apply to take the California Real Estate Broker examination.

Target occupations for this course of study include real estate sales, real estate broker, mortgage broker, property manager, loan broker, and escrow officer.

Students are advised to check current California Department of Real Estate (DRE) academic requirements prior to registering for any course to ensure that it satisfies current requirements as a mandatory or elective course for the Real Estate Sales or Real Estate Broker licenses. The DRE requirements change periodically and the Real Estate Program does not warrant that the listed courses meet current requirements.

Student Learning Outcome:

Students will be able to demonstrate proficiency in the core knowledge required for the California Department of Real Estate examination for real estate sales and real estate broker licenses.

Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>REAL-100</td>
<td>Real Estate Principles</td>
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<tr>
<td>REAL-101</td>
<td>Real Estate Practices</td>
<td>3.0</td>
</tr>
<tr>
<td>REAL-105</td>
<td>Real Estate Financing</td>
<td>3.0</td>
</tr>
<tr>
<td>REAL-115</td>
<td>Legal Aspects of Real Estate</td>
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<tr>
<td>REAL-120</td>
<td>Real Estate Appraisal I</td>
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</tr>
<tr>
<td>BUS-201</td>
<td>Principles of Accounting I</td>
<td>5.0</td>
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Plus six units from the following:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>BUS-211</td>
<td>Business Law</td>
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<tr>
<td>REAL-121</td>
<td>Real Estate Appraisal II</td>
<td>3.0</td>
</tr>
<tr>
<td>REAL-130</td>
<td>Escrow Procedures and Processing</td>
<td>3.0</td>
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<tr>
<td>REAL-150</td>
<td>Mortgage Loan Brokering</td>
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</table>

REAL 100 REAL ESTATE PRINCIPLES

Units: 3.00
CSU 54.00 hours lecture

Introduces real estate fundamentals by emphasizing the concepts of real property ownership, the sale of real property, contract law, real property law, appraisal, financing, and the business aspects of buying and selling real estate under California law. A State of California required course for the Real Estate Sales License exam.

REAL 101 REAL ESTATE PRACTICES

Units: 3.00
CSU 54.00 hours lecture

Examines the theoretical and practical aspects of office operation systems, ethics, obtaining and processing listings, fundamentals of escrow, financing and appraisal within the real estate industry. A State of California required course for the Real Estate Sales License.

REAL 105 REAL ESTATE FINANCING

Units: 3.00
CSU 54.00 hours lecture

Overview of real estate finance in California, including analyses of lending sources, loan processing, governmental loans, appraisals and methods of financing commercial and residential properties. This course satisfies one of the California Department of Real Estate Salesperson electives and is required of applicants for the Real Estate Broker examination.

REAL 115 LEGAL ASPECTS OF REAL ESTATE

Units: 3.00
CSU 54.00 hours lecture

Examines California real estate law emphasizing practical applications, including sources of real estate law, classes of property, fixtures, easements, estates or interests in real property, contracts, agency, conveyances, and security devices.
REAL 120 REAL ESTATE APPRAISAL I
Units: 3.00
CSU 54.00 hours lecture
Covers real estate appraisals, the appraisal process as well as the different approaches, methods, and techniques used to determine the value of real property. Emphasizes residential and single unit property. Approved by Department of Real Estate (DRE) for Sales and Broker's educational requirements.

REAL 121 REAL ESTATE APPRAISAL II
Units: 3.00
CSU 54.00 hours lecture
Provides an advanced appraisal course covering the methods and techniques used in the appraisal of specialty and more complex income-producing properties. Approved by the California Department of Real Estate for the Sales and Broker's license.

REAL 130 ESCROW PROCEDURES AND PROCESSING
Units: 3.00
CSU 54.00 hours lecture
Provides an overview of the Real Estate escrow process emphasizing on the procedures used in the State of California. Can be used to satisfy the California Department of Real Estate's requirement for both Salespersons or Brokers.

REAL 150 MORTGAGE LOAN BROKERING
Units: 3.00
CSU 54.00 hours lecture
Fundamental theories and principles of Federal and California law regarding Mortgage Loan Brokering. Incorporates California Departments of Real Estate (DRE) and Corporations requirements for Loan Brokering. Qualifies as one of the California DRE classes for the Broker's License.

RECREATION MANAGEMENT

Associate in Arts Degree: Recreation Management
An Associate in Arts degree in Recreational Management involves classes and field experiences which assist the student to prepare for work in the recreation and leisure industry. Recreational managers are responsible for planning and assisting in a variety of programs and overseeing the daily operations of recreational facilities for public agencies (federal, state, county or municipal), private non-profit agencies and business. The diverse curriculum exposes students the wide range of possibilities for work and career within recreation and leisure industry. Course work includes courses on recreation and contemporary society, outdoor recreation, therapeutic recreation for special populations, and planning programs and events.

Student Learning Outcome:
Students will be able to:
- Analyze the motives, values, and benefits to the individual as well as society, that are associated with recreation and leisure experiences.
- Demonstrate entry level proficiencies desired by local municipal organizations, businesses, and non-profit agencies within the recreation and leisure industry.

Program Requirements:
Units Required: 23-24

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<td>Planning Programs and Events for Recreation Experiences</td>
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<td>Sociological Issues of Life and Longevity</td>
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Recommended electives:
BUS-110 Principles of Management .......... 3.0
PSYCH-172 Developmental Psychology ........ 3.0
OR
PSYCH-172H Developmental Psychology -
Honors ............................................. 3.0

REC 101 RECREATION AND LEISURE IN CONTEMPORARY SOCIETY
Units: 3.00
CSU 54.00 hours lecture
Investigates the contributions of play, leisure and recreation to the social, psychological and economic well being of individuals and groups, incorporating local, regional, national and international perspectives.

REC 102 PLANNING PROGRAMS AND EVENTS FOR RECREATION EXPERIENCES
Units: 3.00
CSU 54.00 hours lecture
Presents the principles and practice of effective recreational leadership including program and event planning as it relates to play, recreation, and leisure experiences. Requires field work visits to recreation programs.

REC 103 RECREATION AND THE NATURAL ENVIRONMENT
Units: 3.00
CSU 54.00 hours lecture
Introduces recreational use of outdoor/natural areas and the trends, both past and present, that create changing patterns of use, including an overview of human, animal, and technological impacts on outdoor recreation resources.

REC 104 INTRODUCTION TO THERAPEUTIC RECREATION AND SPECIAL POPULATIONS
Units: 3.00
CSU 54.00 hours lecture
Introduces the characteristics and needs of individuals with disabilities and special populations as they relate to the delivery of recreation and leisure services, including the nature and function of recreation in rehabilitation agencies and therapeutic settings, plus planning and adapting recreational programs in various settings.

REC 105 LEADERSHIP IN RECREATION AND LEISURE SERVICES
Units: 3.00
CSU 54.00 hours lecture
Focuses on the foundations of leadership and management skills integral for recreational leaders, emphasizing leadership theories and developing competencies and skills for effective leadership. Examines leadership roles in various recreation and leisure settings.

REC 124 CHALLENGE ROPES COURSE EXPERIENCE
Units: 1.00
CSU 54.00 hours lab
Builds students’ self confidence, communication skills, and leadership skills through participation in activities which incorporate high and low ropes courses, zip lines and climbing walls.
SERVICE LEARNING

Service Learning opportunities exist through various courses and are designed to tie volunteer experiences to course content. An associate degree is not available in Service Learning.

SRVLR 100 INTRODUCTION TO SERVICE-LEARNING
Units: 1.00
CSU 18.00 hours lecture
Introduces the philosophy and methods involved in Service-Learning, including experiential learning through community service.

SIGN LANGUAGE

Associate in Arts Degree: American Sign Language Interpreting
The American Sign Language Interpreting program is a comprehensive two-year program designed to award students with an Associate in Arts degree in American Sign Language Interpreting. The degree will provide students with transfer opportunities to a four-year college or university as well as equip them with the necessary skills for entry-level positions within the field of interpreting.

Students may take American Sign Language courses to satisfy the General Education language requirement. They may also take the courses for pleasure or practical usage in communication with the deaf community, as well as to prepare for a profession that will require communication competence in the language. Enrollment in the courses will provide students with opportunities to develop their linguistic skills as well as their cultural awareness.

Interpreters work in a variety of settings. These include, but are not limited to: educational, legal, medical, religious, community, theater, rehabilitation, and freelance.

Students with an American Sign Language Interpreting degree will develop the following competencies:

* Advanced American Sign Language skills
* Knowledge of the Code of Ethics for Interpreters
* Knowledge of principles, practices, and procedures of interpreting
* Knowledge of Deaf Culture
* Knowledge of interpreting techniques
* Interpreting skills (English to ASL)
* Transliterating skills (English to MCE)
* American Sign Language/MCE to English skills
* Cultural bridging techniques
* Idiomatic and specialized vocabulary skills
* Knowledge of specialized settings and applied techniques
* Fingerspelling skills: Expressive and receptive
* Historical knowledge of American Sign Language, Deaf Culture, and Interpreting
* Knowledge of the structure of American Sign Language
Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment as an interpreter.

Program Requirements:
Units Required: 38

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<td>Interpreting: Principles and Practices</td>
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<td>SIGN-113</td>
<td>Creative Uses of Sign</td>
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SIGN 103 AMERICAN SIGN LANGUAGE III
Units: 4.00
UC:CSU 72.00 hours lecture
Prerequisite: SIGN-102
Continues the study of American Sign Language (ASL) whereby students develop expressive and receptive language skills with an increased emphasis on complex vocabulary, grammatical structures, and cultural awareness. Field assignments required.

SIGN 104 AMERICAN SIGN LANGUAGE IV
Units: 4.00
UC:CSU 72.00 hours lecture
Prerequisite: SIGN-103
An advanced study of American Sign Language (ASL) whereby students develop expressive and receptive language skills with an emphasis placed on fluency and refinement of complex vocabulary, grammatical structures, and cultural awareness. Students gain a greater ability to utilize various verb types, temporal markers, adverbial and adjectival structures. Field assignments required.

SIGN 110 AMERICAN DEAF CULTURE
Units: 3.00
UC:CSU 54.00 hours lecture
Studies various aspects of American Deaf Culture, including the description of deafness, deaf people, the Deaf community as defined by audiology and/or cultural means, service for and by Deaf people, and culture as reflected in the arts and language of Deaf people. Field assignments required.

SIGN 111 FINGERSPELLING
Units: 2.00
CSU 36.00 hours lecture
Prerequisite: SIGN-102
Develops basic skills in receptive and expressive finger-spelling. Strongly recommended for prospective teachers, interpreters, and other professionals working with deaf people. Course taught in American Sign Language. Offered pass/no-pass only.

SIGN 112 INTERPRETING: PRINCIPLES AND PRACTICES
Units: 3.00
CSU 54.00 hours lecture
Prerequisite: SIGN-102
Introduces the field of sign language interpreting including the history of interpreting, models of interpretation, professional standards, code of ethics, interpreter assessments, credentialing, roles and responsibilities.
**SIGN 113 CREATIVE USES OF SIGN**  
Units: 3.00  
CSU 54.00 hours lecture  
*Prerequisite: SIGN-103*  
Introduces students to artistic expressions of American Sign Language including poetry, storytelling, play on signs, songs, puns, jokes, handshape stories, and theatrical presentation of signs. Perspective, movement, characterization, form, and technique will be explored.

**SIGN 200 SPECIALIZED SIGNS AND SETTINGS**  
Units: 3.00  
CSU 54.00 hours lecture  
*Prerequisite: SIGN-104, 110 and 112*  
Introduces students to specialized signs for vocabulary and specialized terminology presented in a variety of environments including educational, religious, medical, legal, and theatrical. Special settings (deaf-blind, tactile, oral, teaming, and video-relay) will be analyzed and interpreting techniques will be applied.

**SIGN 201 INTERPRETING I**  
Units: 3.00  
CSU 54.00 hours lecture  
*Prerequisite: SIGN-104, 110 and 112*  
Introduces the process of consecutive interpreting including skills for analyzing, processing, and interpreting English meaning while conveying it accurately into American Sign Language.

**SIGN 202 TRANSLITERATING I**  
Units: 3.00  
CSU 54.00 hours lecture  
*Prerequisite: SIGN-104, 110 and 112*  
Introduces the process of consecutive transliteration, analyzing, processing, and interpreting English meaning while conveying it accurately into a Manually Coded English form.

**SIGN 203 SIGN TO ENGLISH INTERPRETING/TRANSLITERATING I**  
Units: 3.00  
CSU 54.00 hours lecture  
*Prerequisite: SIGN-104, 110 and 112*  
Introduces the skills required for accurate Sign to English interpreting/transliteration. Takes a theoretical and practical approach to analyzing the process and discussing common techniques and difficulties.

**SIGN 204 INTERPRETING II**  
Units: 3.00  
CSU 54.00 hours lecture  
*Prerequisite: SIGN-201*  
Develops advanced, simultaneous interpreting skills, including the skills for analyzing, processing, and interpreting English meaning and conveying it simultaneously into American Sign Language.

**SIGN 205 TRANSLITERATING II**  
Units: 3.00  
CSU 54.00 hours lecture  
*Prerequisite: SIGN-202*  
Develops the advanced process of simultaneous transliterating, including skills for analyzing, processing, and interpreting English meaning while conveying it accurately into a Manually Coded English form.

**SIGN 206 SIGN TO ENGLISH INTERPRETING/TRANSLITERATING II**  
Units: 3.00  
CSU 54.00 hours lecture  
*Prerequisite: SIGN-203*  
Develops the advanced skills and knowledge for accurate simultaneous Sign to English interpretation/transliteration. Takes a theoretical and practical approach to analyzing the process and discussing solutions to common difficulties.
SOCIAL SCIENCE

Associate in Arts Degree: Social Science
Social Science is the study of people as members of a society. It examines individual and group behavior, communication and decision-making from a contemporary view, as well as historical roots and evolving perspectives. This degree takes an interdisciplinary approach to the field and is designed to provide an overview of the broad range of courses that constitute and are available in the social sciences.

Student Learning Outcome:
Students will be able to analyze current and historical individuals or groups using concepts and theories from the social sciences.

Program Requirements:
Units Required: 24

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<td>3.0</td>
<td>HIST-161</td>
<td>World History I</td>
<td>161</td>
<td></td>
</tr>
</tbody>
</table>

CREDIT PROGRAMS / COURSE DESCRIPTIONS
SOCIETY

Associate in Arts Degree: Sociology for Transfer

The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an “associate degree for transfer,” a newly established variation of the associate degrees traditionally offered at a California community college. The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete a minimum of 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor's degree (unless the major is a designated “high-unit” major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements.

Student Learning Outcome:
Students will be able to analyze a social issue using sociological concepts.

Program Requirements:
Units Required: 18

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI-101</td>
<td>Introduction to Sociology</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-101H</td>
<td>Introduction to Sociology - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-102</td>
<td>Introduction to Sociological Research Methods</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH-140</td>
<td>Introductory Statistics</td>
<td>4.0</td>
</tr>
<tr>
<td>MATH-140H</td>
<td>Introductory Statistics - Honors</td>
<td>4.0</td>
</tr>
<tr>
<td>PSYCH-104</td>
<td>Statistics for the Behavioral Sciences</td>
<td>3.0</td>
</tr>
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</table>

Plus six units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH-109</td>
<td>Social Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-103</td>
<td>Intimate Relationships and Families</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-103H</td>
<td>Intimate Relationships and Families Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-108</td>
<td>Thinking Critically About Social Issues</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-150</td>
<td>Introduction to Criminology</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-200</td>
<td>Introduction to Women's Studies</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-200H</td>
<td>Introduction to Women's Studies Honors</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Plus three units from the following that have not already been selected from the courses listed above:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH-109</td>
<td>Social Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-103</td>
<td>Intimate Relationships and Families</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-103H</td>
<td>Intimate Relationships and Families Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-105</td>
<td>Multiculturalism in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-108</td>
<td>Thinking Critically About Social Issues</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-110</td>
<td>Self and Society</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-136</td>
<td>Field Experience in Qualitative Research</td>
<td>2.0</td>
</tr>
<tr>
<td>SOCI-150</td>
<td>Introduction to Criminology</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-200</td>
<td>Introduction to Women's Studies</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-200H</td>
<td>Introduction to Women's Studies Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-207</td>
<td>Social Problems</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-208</td>
<td>Sociology of Death and Dying</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-210</td>
<td>Sociology of Deviance, Crime and Social Control</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-230</td>
<td>Sociology of Sexualities</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-233</td>
<td>Sociological Issues of Life and Longevity</td>
<td>3.0</td>
</tr>
</tbody>
</table>
## Associate in Arts Degree: Sociology

The Sociology major is designed to prepare students for further studies in the discipline which will lead to the B.A., M.A., and/or Ph.D. degrees. The Associate in Arts degree in Sociology will provide an introduction to the major theoretical perspectives, research methodologies, and related sub-areas associated with the field. The degree incorporates the primary courses required for the baccalaureate degree at many four-year colleges and universities, as well as establishes the foundation needed for later graduate studies. Students can also pursue the A.A. degree in Sociology, yet decide not to attain the baccalaureate degree. The field of sociology provides students with a broad based knowledge of human behavior and social interaction, which is transferable to a multitude of areas, including education, law, medicine, government, administration of justice, and organizations.

### Student Learning Outcome:

Students will be able to analyze a social issue using sociological concepts.

### Program Requirements:

Units Required: 24

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI-101</td>
<td>Introduction to Sociology</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCI-101H</td>
<td>Introduction to Sociology - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td><strong>Plus the following:</strong></td>
<td></td>
</tr>
<tr>
<td>SOCI-102</td>
<td>Introduction to Sociological Research Methods</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-108</td>
<td>Thinking Critically About Social Issues</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td><strong>Plus 12 units from the following:</strong></td>
<td></td>
</tr>
<tr>
<td>SOCI-103</td>
<td>Intimate Relationships and Families</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCI-103H</td>
<td>Intimate Relationships and Families Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-105</td>
<td>Multiculturalism in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-110</td>
<td>Self and Society</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-150</td>
<td>Introduction to Criminology</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-200</td>
<td>Introduction to Women's Studies</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCI-200H</td>
<td>Introduction to Women's Studies - Honors</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-205</td>
<td>Society and the Environment</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-207</td>
<td>Social Problems</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-208</td>
<td>Sociology of Death and Dying</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-210</td>
<td>Sociology of Deviance, Crime and Social Control</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-230</td>
<td>Sociology of Sexualities</td>
<td>3.0</td>
</tr>
<tr>
<td>SOCI-233</td>
<td>Sociological Issues of Life and Longevity</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### Plus three units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI-137</td>
<td>Statistics for the Social Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH-140</td>
<td>Introductory Statistics</td>
<td>4.0</td>
</tr>
<tr>
<td>MATH-140H</td>
<td>Introductory Statistics - Honors</td>
<td>4.0</td>
</tr>
</tbody>
</table>

### Recommended Electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI-136</td>
<td>Field Experience in Qualitative Research</td>
<td>2.0</td>
</tr>
</tbody>
</table>

### SOCI 101 INTRODUCTION TO SOCIOLOGY

Units: 3.00

UC:CSU 54.00 hours lecture

C-ID SOCI 110

Examines small group interactions and cultural patterns of American and other societies using the conceptual, theoretical, and methodological principles and applications to explain how values, roles, norms, social interaction, and social inequality as well as other concepts influence individuals, groups and society.

### SOCI 101H INTRODUCTION TO SOCIOLOGY - HONORS

Units: 3.00

UC:CSU 54.00 hours lecture

C-ID SOCI 110

*Recommended Preparation: ENGL-101 or ENGL-101H*

Examines small group interactions and cultural patterns of American and other societies using the conceptual, theoretical, and methodological principles and applications to explain how values, roles, norms, social interaction, and social inequality as well as other concepts influence individuals, groups and society. Additional reading, writing, and research techniques are required.

### SOCI 102 INTRODUCTION TO SOCIOLOGICAL RESEARCH METHODS

Units: 3.00

UC:CSU 54.00 hours lecture

Introduces scientific methods used in contemporary sociological research with focus on ethics, quantitative and qualitative research design, data collection and data analysis.

### SOCI 103 INTIMATE RELATIONSHIPS AND FAMILIES

Units: 3.00

UC:CSU 54.00 hours lecture

C-ID SOCI 130

Examines the various forms of intimate partner relationships that exist within a diverse, multicultural society. Social, cultural, and political constructs that apply to the definition, status and legality of human partnerships are analyzed.
**SOCI 103H INTIMATE RELATIONSHIPS AND FAMILIES HONORS**
Units: 3.00
UC:CSU 54.00 hours lecture

*Recommended Preparation: ENGL-101 or ENGL-101H*

Examines the various forms of intimate partner relationships that exist within a diverse, multicultural society. Social, cultural, and political constructs that apply to the definition, status, and legality of human partnerships are analyzed. Additional reading, writing and research techniques are required.

**SOCI 105 MULTICULTURALISM IN THE UNITED STATES**
Units: 3.00
UC:CSU 54.00 hours lecture

Explores several levels of cultural diversity in the context of a complex, modern society, while providing the skills to understand and live in an increasingly multicultural U.S. society.

**SOCI 108 THINKING CRITICALLY ABOUT SOCIAL ISSUES**
Units: 3.00
UC:CSU 54.00 hours lecture

*Prerequisite: ENGL-101 or ENGL-101H*

Compares and contrasts the content, meaning and interpretation of social phenomena as reported by the media and scientific community. Literary criticism, logic, argumentation, and persuasion are used to analyze the content and validity of social issues. UC credit limitation: PHILS-205 and SOCI-108 combined, maximum credit one course.

**SOCI 110 SELF AND SOCIETY**
Units: 3.00
UC:CSU 54.00 hours lecture

Examines ways in which culture and socialization affect individual conduct, including social structures and social institutions, and their effect on the development of self identity, attitudes, values and norms of social behavior.

**SOCI 136 FIELD EXPERIENCE IN QUALITATIVE RESEARCH**
Units: 2.00-3.00
CSU 18.00 hours lecture, 54.00-108.00 hours lab

*Recommended Preparation: SOCI-102*

Integrates lecture and field experience to enable students to learn and practice qualitative research skills. Field trips are required.

**SOCI 137 STATISTICS FOR THE SOCIAL SCIENCES**
Units: 3.00
UC:CSU 54.00 hours lecture

*C-ID SOCI 125*

*Prerequisite: MATH-070 or MATH-075*

Examines methods used in sociology to gather quantitative data and to compute, interpret, apply, and present statistical analyses via the use of SPSS. UC credit limitation: ECON-291, MATH-140, MATH-140H, PSYCH-104 and SOCI-137 combined, maximum credit one course.

**SOCI 150 INTRODUCTION TO CRIMINOLOGY**
Units: 3.00
UC:CSU 54.00 hours lecture

*C-ID SOCI 160*

Explores the scientific study of crime and criminality and the definition of crime and its violations as well as the laws and methods used to control criminal behavior.

**SOCI 200 INTRODUCTION TO WOMEN'S STUDIES**
Units: 3.00
UC:CSU 54.00 hours lecture

Provides an overview of the academic field of womens studies, including the topics of socialization, communication, politics, crime, sexuality and religion.

**SOCI 200H INTRODUCTION TO WOMEN'S STUDIES HONORS**
Units: 3.00
UC:CSU 54.00 hours lecture

*Recommended Preparation: ENGL-101 or ENGL-101H*

Provides an overview of the academic field of women's studies, including the social and cultural consequences of living in a 'gendered world.' Socialization, communication, politics, crime, sexuality, and religion are examined, as well as the historical and cross-cultural aspects of gender relationships. Additional reading, writing, and research techniques are required.

**SOCI 205 SOCIETY AND THE ENVIRONMENT**
Units: 3.00
UC:CSU 54.00 hours lecture

Examines the interconnections between the social and biological features of society, as well as the sociological ramifications of environmental policies and cultural practices.
SOCI 207 SOCIAL PROBLEMS
Units: 3.00
UC:CSU 54.00 hours lecture
Applies sociological principles and the research process to identify and analyze selected contemporary social problems that are occurring in the United States. Issues of crime, substance abuse, overpopulation, poverty, gender violence, and the environment are examined nationally, while global comparisons are also reviewed.

SOCI 208 SOCIOLOGY OF DEATH AND DYING
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the cultural, social, and political meanings of death as it exists within the United States and abroad while analyzing the importance of death and its related processes as parts of socially constructed meanings recognized and practiced by society.

SOCI 210 SOCIOLOGY OF DEVIANCE, CRIME AND SOCIAL CONTROL
Units: 3.00
UC:CSU 54.00 hours lecture
Provides a sociological explanation of deviance, crime, and social control found within the United States, including the societal norms, values, and beliefs that influence socially constructed definitions of deviant behavior.

SOCI 230 SOCIOLOGY OF SEXUALITIES
Units: 3.00
UC:CSU 54.00 hours lecture
Explores sociological perspectives, theories, and research of sexuality from historical and contemporary social, cultural, and gendered contexts in a diverse society.

SOCI 233 SOCIOLOGICAL ISSUES OF LIFE AND LONGEVITY
Units: 3.00
UC:CSU 54.00 hours lecture
Examines the life course of older adults and the aging process, including the cultural, social, and political influences that shape concepts of growing old.

SOLAR
Certificate of Specialization: Solar Energy Technician
The Solar Energy Technician certificate of specialization is designed to provide entry level skills to students seeking employment as an installer of solar panels or solar thermal systems. Students will gain a broad knowledge of alternative energy, system design and installation techniques. The program will prepare students for the North American Board of Certified Energy Practitioners (NABCEP) exams in Entry Level Solar Thermal and Entry Level Photovoltaic.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required to design and install basic solar electrical (photovoltaic) systems, and basic solar thermal systems.

Program Requirements:
Units Required: 13

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLAR-050</td>
<td>Photovoltaic Systems</td>
<td>5.0</td>
</tr>
<tr>
<td>SOLAR-052</td>
<td>Solar Thermal Systems</td>
<td>5.0</td>
</tr>
<tr>
<td>SOLAR-101</td>
<td>Introduction to Energy Technology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

SOLAR 050 PHOTOVOLTAIC SYSTEMS
Units: 5.00
54.00 hours lecture, 108.00 hours lab
Prerequisite: SOLAR-101
Presents the principles of photovoltaics, including site evaluation, system design, performance simulation, permitting, installation, and rebates and financial incentives. Prepares students for the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Photovoltaics Examination.

SOLAR 052 SOLAR THERMAL SYSTEMS
Units: 5.00
54.00 hours lecture, 108.00 hours lab
Prerequisite: SOLAR-101
Introduces solar thermal technology, including solar hot water systems, thermal pool heating, and solar radiant floor heating systems. Prepares students for the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Solar Thermal Exam.
SOLAR 101 INTRODUCTION TO ENERGY TECHNOLOGY
Units: 3.00
CSU 54.00 hours lecture
Introduces major types of energy and their sources and interrelationships while exploring concepts of renewability, sustainability, and environmental impacts.

THEATRE

Associate in Arts Degree: Theatre Arts for Transfer
The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an “associate degree for transfer,” a newly established variation of the associate degrees traditionally offered at a California community college. The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete:

A. A minimum of 18 semester units in the major with a grade of C or better while maintaining a minimum grade point average (GPA) of at least 2.0 in all CSU transferable coursework.

B. 60 semester CSU-transferable units using the California State University-General Education-Breadth pattern (CSU-GE Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.

C. No more than 60 semester units are required.

This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements. At the time of catalog publication, a student may earn an AA-T in Theatre Arts. Additional majors are being developed. Please see a counselor or visit www.canyons.edu for more information.

Student Learning Outcome:
Students will be able to:

– Demonstrate a basic level of competency as a performer or technician (stagecraft, make-up design, costume construction or stage lighting technology) performing the duties of either in a realized production.

– Analyze and critique dramatic literature and/or performance.

SPANISH
(See Modern Languages)

SPORTS MEDICINE
(See Kinesiology)
## THEATRE

**Program Requirements:**
Units Required: 18
Choose three units from the following:

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>THEATR-110 Understanding Theatre</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-220 Theatre History I</td>
</tr>
</tbody>
</table>

**Plus three units from the following:**

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>THEATR-140 Acting Fundamentals</td>
</tr>
</tbody>
</table>

**Plus three units from the following:**

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190A New Plays Workshop &amp; Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190B Classical Theatre Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190C Theatre Production – Comedy</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190D Theatre Production – Drama</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-191 Technical Theatre Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-193 Summer Theatre Workshop</td>
</tr>
</tbody>
</table>

**Plus nine units from the following that have not been taken above:**

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>THEATR-120 Stagecraft</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-130 Costume Crafts</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-141 Scene Performance</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-150 Introduction to Lighting Design</td>
</tr>
<tr>
<td>2.5</td>
<td>THEATR-180 Theatrical Make-up</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190A New Plays Workshop &amp; Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190B Classical Theatre Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190C Theatre Production – Comedy</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190D Theatre Production – Drama</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-191 Technical Theatre Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-193 Summer Theatre Workshop</td>
</tr>
</tbody>
</table>

**Associate in Arts Degree: Theatre**
The Theatre program at College of the Canyons is designed to provide students with the lower-division major preparation for transfer to a four-year university with a major in Theatre.

Career opportunities for theatre professionals are diverse and serve people at all stages of life, in settings that touch our lives almost daily: live theatrical presentations and performances, recorded medium (including: film, television, radio, video, computer games), large public events and conventions, recreation, art and education programming in both the private and public sectors and amusement parks and attractions. Participation in these settings include, performers, designers, writers, directors, and managers.

**Student Learning Outcome:**
Students will be able to demonstrate performance techniques and proficiency in one or more technical area.

**Program Requirements:**
Units Required: 22.5 – 24

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>THEATR-110 Understanding Theatre</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-140 Acting Fundamentals</td>
</tr>
</tbody>
</table>

**Plus one and a half - two units from the following:**

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190 Theatre Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190A New Plays Workshop &amp; Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190B Classical Theatre Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190C Theatre Production – Comedy</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-190D Theatre Production – Drama</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-191 Technical Theatre Production</td>
</tr>
<tr>
<td>1.5 – 4.0</td>
<td>THEATR-193 Summer Theatre Workshop</td>
</tr>
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</table>

**Plus twelve - thirteen units from the following:**

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>THEATR-061 Auditioning for Stage, Film and Television</td>
</tr>
<tr>
<td>2.0</td>
<td>THEATR-126 Improvisation</td>
</tr>
<tr>
<td>2.0</td>
<td>THEATR-127 Improvisational Performance</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-141 Scene Performance</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-144 Acting for the Camera</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-161 Musical Theatre</td>
</tr>
<tr>
<td>2.5</td>
<td>THEATR-180 Theatrical Make-Up</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-220 Theatre History I</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-221 Theatre History II</td>
</tr>
</tbody>
</table>

**Plus three units from the following:**

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>THEATR-120 Stagecraft</td>
</tr>
<tr>
<td>3.0</td>
<td>THEATR-130 Costume Crafts</td>
</tr>
</tbody>
</table>

**Associate in Arts Degree: Theatre – Performance**
An Associate in Arts degree in Theatre – Performance Emphasis offers courses in both theory and practice. Students acquire an immediately useful set of theatre skills, including acting, voice, movement, and script-analysis, while working with a wide spectrum of production experiences in which to practice them. Courses in history, theory and criticism place the art of theatre in its larger historical context.
The Performance major will acquire a strong foundation in theatre and the dramatic form. Requirements for the major include all aspects of the dramatic event: creation, rehearsal, and performance. Practical experience is gained in a number of performance spaces and genres. Students are provided with the opportunity to participate in a professional setting, giving the student an understanding of the theatrical production and dramatic experience.

**Student Learning Outcome:**
Students will be able to demonstrate advanced performance techniques.

**Program Requirements:**

Units Required: 23

| THEATR-110 | Understanding Theatre .................. | 3.0 |
| THEATR-140 | Acting Fundamentals .................. | 3.0 |
| THEATR-141 | Scene Performance .................. | 3.0 |

*Plus three units from the following:*

| THEATR-120 | Stagecraft .................. | 3.0 |
| THEATR-130 | Costume Crafts .................. | 3.0 |

*Plus three units from the following:*

| THEATR-190 | Theatre Production .................. | 1.5 – 4.0 |
| THEATR-190A | New Plays Workshop & Production .................. | 1.5 – 4.0 |
| THEATR-190B | Theatre Production .................. | 1.5 – 4.0 |
| THEATR-190C | Theatre Production - Comedy .................. | 1.5 – 4.0 |
| THEATR-190D | Theatre Production - Drama .................. | 1.5 – 4.0 |

*Plus eight units from the following:*

| THEATR-061 | Auditioning for Stage, Film and Television .................. | 2.0 |
| THEATR-126 | Improvisation .................. | 2.0 |
| THEATR-127 | Improvisational Performance .................. | 2.0 |
| THEATR-144 | Acting for the Camera .................. | 3.0 |
| THEATR-161 | Musical Theatre .................. | 3.0 |
| THEATR-180 | Theatrical Make-Up .................. | 2.5 |
| THEATR-191 | Technical Theatre Production .................. | 1.5 – 4.0 |
| THEATR-195 | Solo Performance .................. | 3.0 |
| THEATR-240 | Acting Shakespeare .................. | 3.0 |
| THEATR-241 | Movement for the Performer .................. | 3.0 |
| THEATR-242 | Voice for the Performer .................. | 3.0 |

**THEATR 060 THE BUSINESS OF ACTING**

Units: 2.00

36.00 hours lecture

Covers acting as a business and becoming a working professional in the entertainment industry. Topics also include: pictures, resumes, agents, unions, interviewing, auditioning and marketing.

**THEATR 061 AUDITIONING FOR STAGE, FILM AND TELEVISION**

Units: 2.00

18.00 hours lecture, 54.00 hours lab

Prerequisite: THEATR-140

Presents processes for professional work in theatre, television and film, including selection, preparation and performance of material with which to audition.

**THEATR 100 THEATRE APPRECIATION**

Units: 3.00

UC:CSU 54.00 hours lecture

Surveys theatre by exploring the creation and presentation of theatrical performances. Students are required to attend on-campus and regional live performances.

**THEATR 110 UNDERSTANDING THEATRE**

Units: 3.00

UC:CSU 54.00 hours lecture

Analyzes theatre and the theatrical event from the audience perspective, including the functions of the producer, architect, playwright, director, actors, designers, and critics.

**THEATR 120 STAGECRAFT**

Units: 3.00

UC:CSU 36.00 hours lecture, 54.00 hours lab

Provides the theory and practical application of scenic elements for the stage including design, construction, painting, rigging, safety practices, methods of shifting scenery, handling scenery and handling properties.

**THEATR 126 IMPROVISATION**

Units: 2.00

UC:CSU 18.00 hours lecture, 54.00 hours lab

Introduces the history, theories, principles and practices of theatrical improvisation, including exercises, games and situational scenes designed to hone performance skills.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>CSU/UC Hours</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEATR 127</td>
<td>IMPROVISATIONAL PERFORMANCE</td>
<td>2.00</td>
<td>18.00</td>
<td>THEATR-126</td>
<td>Further develops improvisational skills, including spontaneity, physicalization, character and ensemble. Improvisational techniques are directed towards live performance. Requires public performance.</td>
</tr>
<tr>
<td>THEATR 130</td>
<td>COSTUME CRAFTS</td>
<td>3.00</td>
<td>36.00</td>
<td></td>
<td>Presents basic design and construction techniques as applied to theatrical costuming and the theatre process, including tools, materials, fabrics and construction techniques.</td>
</tr>
<tr>
<td>THEATR 140</td>
<td>ACTING FUNDAMENTALS</td>
<td>3.00</td>
<td>54.00</td>
<td></td>
<td>Introduction to the basic principles and techniques of acting as an artistic discipline. Analysis of plot, character and language. Development of voice and movement skills. Provides theory and process through the use of games, exercises, performances of scenes, monologues, readings and lecture.</td>
</tr>
<tr>
<td>THEATR 141</td>
<td>SCENE PERFORMANCE</td>
<td>3.00</td>
<td>36.00</td>
<td>THEATR-140</td>
<td>Designed for more advanced theater students to further develop voice, movement and the ability to analyze dramatic text and characters through extended scene work.</td>
</tr>
<tr>
<td>THEATR 144</td>
<td>ACTING FOR THE CAMERA</td>
<td>3.00</td>
<td></td>
<td>THEATR-126 or THEATR-140</td>
<td>Presents the fundamental techniques required in acting before the camera, including guidelines for following the specific demands of the camera.</td>
</tr>
<tr>
<td>THEATR 150</td>
<td>INTRODUCTION TO LIGHTING DESIGN</td>
<td>3.00</td>
<td>36.00</td>
<td></td>
<td>Introduces the theory and practice of designing light for a live theatrical production. Emphasizes lighting instruments, controls, and the aesthetics of color, distribution, intensity, and movement of light, as well as practical experience in the design and implementation of a light plot.</td>
</tr>
<tr>
<td>THEATR 161</td>
<td>MUSICAL THEATRE</td>
<td>3.00</td>
<td>54.00</td>
<td></td>
<td>Develops vocal skills, choreographic movement and acting techniques for musical theatre, including exercises, solo and fully-staged scenes.</td>
</tr>
<tr>
<td>THEATR 170</td>
<td>INTRODUCTION TO STAGE MANAGEMENT</td>
<td>3.00</td>
<td>54.00</td>
<td></td>
<td>Explores basic stage managerial skills for organizing, preparing, and fulfilling theatrical productions from inception through rehearsal and performance.</td>
</tr>
<tr>
<td>THEATR 180</td>
<td>THEATRICAL MAKE-UP</td>
<td>2.50</td>
<td></td>
<td></td>
<td>Presents the theory, design and application of makeup for the theatre, including corrective, character and non-realistic. Practical use of theatrical makeup materials for the various theatrical forms.</td>
</tr>
<tr>
<td>THEATR 190</td>
<td>THEATRE PRODUCTION</td>
<td>1.50-4.00</td>
<td>18.00-216.00</td>
<td></td>
<td>Provides a study and laboratory exploration of all aspects of theatre production involving actor, technician and manager, and their contributions to the total aesthetic effect of a dramatic production before a public audience.</td>
</tr>
<tr>
<td>THEATR 190A</td>
<td>NEW PLAYS WORKSHOP AND PRODUCTION</td>
<td>1.50-4.00</td>
<td></td>
<td></td>
<td>Provides for the exploration, development, revision, and presentation of new and original theatrical pieces involving playwrights, actors, directors and designers in the process. The course offers close examination of the playwrights function in the theatrical process, the playwright and director relationship as well as the performer's participation with and relationship to newly created dramatic work.</td>
</tr>
</tbody>
</table>
THEATR 190B CLASSICAL THEATRE PRODUCTION
Units: 1.50-4.00
UC:CSU 18.00 hours lecture, 27.00-216.00 hours lab
Prerequisite: Audition
Explores a classical play through lecture, research and rehearsals. Includes textual analysis, historical research, connecting text to dramatic action on stage, and developing vocal and breath techniques for handling heightened text. Culminates in public performances of the play.

THEATR 190C THEATRE PRODUCTION - COMEDY
Units: 1.50-4.00
UC:CSU 18.00 hours lecture, 27.00-216.00 hours lab
Prerequisite: Audition
Explores a comedic play through lecture, rehearsals and performance, stage, and developing physical and vocal technique for comic delivery, including textual analysis, historical research, connecting text to comedic action, culminating in public performances.

THEATR 190D THEATRE PRODUCTION - DRAMA
Units: 1.50-4.00
UC:CSU 18.00 hours lecture, 27.00-162.00 hours lab
Prerequisite: Audition
Explores a dramatic play through lecture, rehearsals and performance, including textual analysis, historical research, connecting text to dramatic action, culminating in public performances.

THEATR 191 TECHNICAL THEATRE PRODUCTION
Units: 1.50-4.00
UC:CSU 18.00 hours lecture, 27.00-162.00 hours lab
Recommended Preparation: THEATR-120
Provides technical support for TH 190 (A-D), Theatre Production, and TH 193, Summer Theatre Workshop, through the installation and operation of scenery, props, lights, sound, and wardrobe for the complete run of a theatrical production.

THEATR 193 SUMMER THEATRE WORKSHOP
Units: 1.50-4.00
UC:CSU 18.00 hours lecture, 27.00-162.00 hours lab
Prerequisite: Audition
Focuses on production and performance of one or more summer stock presentations.

THEATR 195 SOLO PERFORMANCE
Units: 3.00
CSU 36.00 hours lecture, 54.00 hours lab
Recommended Preparation: THEATR-140 and/or THEATR-126
Introduces the essential elements of an original solo show, including writing, giving and receiving feedback, rewriting, rehearsal and performance.

THEATR 220 THEATRE HISTORY I
Units: 3.00
UC:CSU 54.00 hours lecture
Surveys theatre from ancient times through the 18th century.

THEATR 221 THEATRE HISTORY II
Units: 3.00
UC:CSU 54.00 hours lecture
A study of theatre as a product and reflection of its time, from the late 18th century to the present. Examination and analysis of the effects of the audiences upon playwright, actor, director and settings.

THEATR 240 ACTING SHAKESPEARE
Units: 3.00
UC:CSU 36.00 hours lecture, 54.00 hours lab
Prerequisite: THEATR-140
Explores Shakespeare's plays and poetry from a performance perspective, through research, exercises, monologues and scene study.

THEATR 241 MOVEMENT FOR THE PERFORMER
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the fundamentals of vocal production for the performer. Develops the performer's instrument as it pertains to the body through awareness, relaxation, flexibility, and responsiveness in order to communicate openly and effectively, including movement as a key to character development and as an aid to understanding the complex relationship between the actor, character and text.

THEATR 242 VOICE FOR THE PERFORMER
Units: 3.00
UC:CSU 54.00 hours lecture
Introduces the fundamentals of vocal production for the performer. Develops the performer's instrument as it pertains to the voice by eliminating negative habits and tension and improving vocal support, tonal production, vocal quality and articulation. Explores voice as an aid in understanding the complex relationship between the actor, the character and the text.
WATER SYSTEMS TECHNOLOGY

Associate in Science Degree and Certificate of Achievement: Water Systems Technology

Water Systems Technology is the study of water treatment and distribution processes. The program is designed to prepare students seeking a career in drinking water treatment and distribution. The Water Systems Technology program also provides instruction for water personnel interested in career advancement as well as continuing education opportunities for State certified Water Treatment and Water Distribution Operators for certification renewal. Coursework will help prepare students for various certification examinations given by the State of California-Department of Public Health. Upon completion of the program, students will acquire skills and knowledge in water treatment concepts, chemical dosage techniques, water distribution, water chemistry, water quality, water mathematical calculations and other skills needed in this vital industry. The students completing the program can become employed as a distribution operator, water treatment plant operator, water service representative, water quality specialist, wastewater collection worker and/or wastewater treatment operator.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in the water industry.

Program Requirements:
Units Required: 21

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>WATER-020</td>
<td>Introduction to Water Systems Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>WATER-030</td>
<td>Waterworks Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>WATER-031</td>
<td>Advanced Waterworks Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>WATER-032</td>
<td>Water Supply</td>
<td>3.0</td>
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<tr>
<td>WATER-035</td>
<td>Water Quality</td>
<td>3.0</td>
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Plus six units from the following:

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<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER-040</td>
<td>Water Distribution Operator I</td>
<td>3.0</td>
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<tr>
<td>WATER-041</td>
<td>Water Distribution Operator II</td>
<td>3.0</td>
</tr>
<tr>
<td>WATER-050</td>
<td>Water Treatment Plant Operation</td>
<td>3.0</td>
</tr>
<tr>
<td>WATER-052</td>
<td>Water Treatment Plant Operation</td>
<td>3.0</td>
</tr>
</tbody>
</table>

WATER 020 INTRODUCTION TO WATER SYSTEMS TECHNOLOGY
Units: 3.00
54.00 hours lecture
Explores the technologies, potential career opportunities and the State of California certification requirements in the water industry. Topics include water sources, water quality, water treatment, water distribution, and related topics.

WATER 030 WATERWORKS MATHEMATICS
Units: 3.00
54.00 hours lecture
Introduces basic mathematical principles related to water distribution and treatment systems; including areas, volumes, pressure, flow rates, unit conversion, chemical dosage, detention time, and filtration rates. Assists in preparation for Water Distribution and Treatment Operator Certification Examinations.

WATER 031 ADVANCED WATERWORKS MATHEMATICS
Units: 3.00
54.00 hours lecture
Prerequisite: WATER-030
Examines advanced study of mathematical principles related to pump hydraulics: horsepower, flow rates, pump curves, chemical dosages, detention time, filtration and backwash rates, CT calculations and various utility management analyses related to budget preparations, water rate structures, and demand design forecasting. Focuses on mathematical computations within the expected range of knowledge on the California Department of Public Health Certification exams for D3, D4, D5, T3, and T4.

WATER 032 WATER SUPPLY
Units: 3.00
54.00 hours lecture
Recommended Preparation: WATER-030
Examines the sources of drinking water supplies, with special emphasis on water in California. Explores the uses of water, including residential, commercial/institutional, and landscaping demands. It also examines the roles and methods of conservation on water demand management.

WATER 035 WATER QUALITY
Units: 3.00
54.00 hours lecture
Examines basic principles of chemistry and microbiology, and applies them to drinking water quality and related state and federal regulations.
WATER 040 WATER DISTRIBUTION OPERATOR I
Units: 3.00
54.00 hours lecture
Recommended Preparation: WATER-030
Introduces basic concepts and processes of drinking water distribution systems, including a general background of drinking water sources, regulations, water system design, and various distribution system appurtenances. Assists in the preparation of California Department of Public Health Operator Certification Exams for Grades I and II.

WATER 041 WATER DISTRIBUTION OPERATOR II
Units: 3.00
54.00 hours lecture
Recommended Preparation: WATER-040 or four years of employment in a water treatment plant, water distribution system or hold a valid Grade I license.
PRESENTS intermediate to advanced principles of water distribution. Assists in preparation for Grade III & IV Water Distribution Operator's Certificate examination given by the State of California Department of Public Health.

WATER 050 WATER TREATMENT PLANT OPERATION PROCESSES I
Units: 3.00
54.00 hours lecture
Recommended Preparation: WATER-030 & WATER-035
Presents the basic operating principles and techniques of the conventional surface water treatment processes of coagulation, flocculation, sedimentation, and filtration, plus those of disinfection processes. Assists in preparation for Grade T1 and T2 Water Treatment Plant Operator's Certificate examination given by the State of California Department of Public Health.

WATER 052 WATER TREATMENT PLANT OPERATION PROCESSES II
Units: 3.00
54.00 hours lecture
Recommended Preparation: WATER-031 and 050.
Examines advanced topics in conventional surface water treatment processes and disinfection, as well as non-conventional treatment processes. Assists in preparation for Grade T3 and T4 Water Treatment Plant Operator's Certificate examination given by the State of California Department of Public Health.

WELDING

Associate in Science Degree and Certificate of Achievement: Welding Technology
Welding Technology is a career technical education program designed to prepare students for a variety of entry-level positions in today's welding and fabrication related industries. Course offerings range from very basic welding fundamentals to the most technically advanced. Students gain skillfulness in safety procedures, applied theory, metal fabrication, and related welding processes. Emphasis is placed on individual instruction. Instructors are AWS Certified Welding Inspectors/Educators. Welding curriculum is aligned with the American Welding Society SENSE Entry Welder Program. Students can earn welder certifications in accordance with the American Welding Society (AWS), The Los Angeles Department of Building and Safety (LADBS), and The American Society of Mechanical Engineers (ASME). Upon successful completion of the program, students are prepared to enter into the following career opportunities: welder, welding inspector, welding technician/fitter, pipe fitter/welder, and metal fabricator.

Student Learning Outcome:
Students will be able to demonstrate proficiency in industry recognized principles and practices as they apply to today's welding and metal fabrication industries.

Program Requirements:
Units Required: 30

Complete fifteen units from one of the four options below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD-101A</td>
<td>Introduction to Shielded Metal Arc Welding</td>
<td>2.5</td>
</tr>
<tr>
<td>WELD-101B</td>
<td>Intermediate Shielded Metal Arc Welding</td>
<td>2.5</td>
</tr>
<tr>
<td>WELD-101C</td>
<td>Advanced Shielded Metal Arc Welding</td>
<td>2.5</td>
</tr>
<tr>
<td>WELD-104</td>
<td>Introduction to Gas Tungsten Arc Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WELD-105</td>
<td>Advanced Gas Tungsten Arc Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WELD-165</td>
<td>Pipe Welding Fundamentals</td>
<td>3.0</td>
</tr>
<tr>
<td>CWE-188WELD</td>
<td>Cooperative Work Experience Education</td>
<td>1.0 - 4.0</td>
</tr>
</tbody>
</table>

College of the Canyons
**WELDING**

**WELD-092** Introduction to Metal Fabrication .2.0
**WELD-093** Intermediate Metal Fabrication .2.0
**WELD-094** Advanced Metal Fabrication .2.0
**WELD-101A** Introduction to Shielded Metal Arc Welding .2.5
**WELD-104** Introduction to Gas Tungsten Arc Welding .2.0
**WELD-105** Advanced Gas Tungsten Arc Welding .2.0
**CWE-188** Cooperative Work Experience Education .1.0 - 4.0

**OR**
**WELD-120** Industrial Welding I .5.0
**WELD-122** Industrial Welding II .5.0
**WELD-124** Industrial Welding III .5.0

**OR**
**WELD-101A** Introduction to Shielded Metal Arc Welding .2.5
**WELD-101B** Intermediate Shielded Metal Arc Welding .2.5
**WELD-101C** Advanced Shielded Metal Arc Welding .2.5

**WELD-114A** Introduction to Robotic Welding Automation .2.5
**WELD-114B** Intermediate Robotic Welding Automation .2.5
**WELD-114C** Advanced Robotic Welding Automation .2.5

*Required electives:*
**WELD-080** Non-Destructive Testing .3.0
**WELD-130** Welding Metallurgy .3.0
**WELD-132** Blueprint Reading for Welders and Fabricators .3.0
**MFGT-090** Measurements and Computations .3.0
**ENGL-094** Introduction to Technical Reading and Writing .3.0

**ENGL-204** Technical Report Writing .3.0

*Recommended electives:*
**WELD-096** Welding Certification and License Preparation .3.0

**Student Learning Outcome:**
Students will be able to demonstrate advanced level skills to produce quality welds in the flat, horizontal, vertical, and overhead positions using the shielded metal arc welding process.

**Students will be able to:**
- Analyze the theory and skills necessary for performing advanced programming and operational tasks as per AWS Robotic Arc Welding standards.
- Safely operate common robotic welding automation systems while performing advanced programming and welding functions.

**Program Requirements:**
Units Required: 16.5

**WELD-114A** Introduction to Robotic Welding Automation .2.5
**WELD-114B** Intermediate Robotic Welding Automation .2.5
**WELD-114C** Advanced Robotic Welding Automation .2.5

*Plus nine units from the following:*
**WELD-080** Non-Destructive Testing .3.0
**WELD-130** Welding Metallurgy .3.0
**WELD-132** Blueprint Reading for Welders and Fabricators .3.0
**WELD-133** Welding Inspection .3.0

**Certificate of Specialization: Welding Technology - Shielded Metal Arc Welding**

The Welding Technology Certificate of Specialization in Shielded Metal Arc Welding (SMAW) is designed for those interested in welding structural steel. Course work includes a comprehensive study with an emphasis on application of fundamental welding techniques and industry practices. Program completers are prepared for entry level employment into industries such as steel construction and maintenance & repair, and general fabrication.

**Student Learning Outcome:**
Students will be able to demonstrate advanced level skills to produce quality welds in the flat, horizontal, vertical, and overhead positions using the shielded metal arc welding process.

**Program Requirements:**
Units Required: 16.5

**WELD-101A** Introduction to Shielded Metal Arc Welding .2.5
**WELD-101B** Intermediate Shielded Metal Arc Welding .2.5
**WELD-101C** Advanced Shielded Metal Arc Welding .2.5

**Certificate of Specialization: Welding Technology – Robotic Welding Automation**

The Welding Technology Certificate of Specialization in Robotic Welding Automation provides training to gain the technical and applied skills required to perform advanced programming and operational tasks as per the American Welding Society standards and specifications for robotic welding.
### WELD 080 NON-DESTRUCTIVE TESTING
**Units:** 3.00
54.00 hours lecture

Surveys common non-destructive testing (NDT) theories and applications as they relate to industry recognized quality control systems. Emphasizes proper evaluation methods using eddy current test (ET), liquid dye penetrate test (PT), magnetic particle test (MT), radiographic test (RT), and ultrasonic test (UT). Field trips may be required. Units do not apply to the associate degree.

### WELD 092 INTRODUCTION TO METAL FABRICATION
**Units:** 2.00
18.00 hours lecture, 54.00 hours lab

**Recommended Preparation:** WELD-132

First in a three-part series of courses examining the principles and practices of metal fabrication. Emphasis is placed on safe proper operation of drilling, cutting, threading, grinding, and related equipment. Students are introduced to layout and design techniques used to fabricate basic metal projects. Units do not apply to the associate degree.

### WELD 093 INTERMEDIATE METAL FABRICATION
**Units:** 2.00
18.00 hours lecture, 54.00 hours lab

**Prerequisite:** WELD-092

Second in a three-part series of courses examining the principles and practices of metal fabrication. Emphasis is placed on safe proper operation of bending, turning, cutting, milling and related equipment. Students are introduced to enhanced layout and design techniques used to fabricate basic metal projects.

### WELD 094 ADVANCED METAL FABRICATION
**Units:** 2.00
18.00 hours lecture, 54.00 hours lab

**Prerequisite:** WELD-093

Third in a three-part series of courses examining the principles and practices of metal fabrication. Emphasis is placed on safe proper operation of metal working equipment. Students construct complex projects that involve design, layout, machining, fabrication, and welding technology.

### WELD 096 WELDING CERTIFICATION AND LICENSE PREPARATION
**Units:** 3.00
54.00 hours lecture

**Recommended Preparation:** WELD-101C & WELD-124

Reviews the practical applications and fundamental concepts to prepare students for the Los Angeles City Department of Building and Safety written structural welding certification test.

### WELD 101A INTRODUCTION TO SHIELDED METAL ARC WELDING
**Units:** 2.50
CSU 27.00 hours lecture, 54.00 hours lab

The first of a three-part series introducing the theory and application of shielded metal arc welding (SMAW). Emphasizes safety procedures, use of SMAW welding equipment and proper welding techniques in accordance with the American Welding Society SENSE program.

### WELD 101B INTERMEDIATE SHIELDED METAL ARC WELDING
**Units:** 2.50
CSU 27.00 hours lecture, 54.00 hours lab

**Prerequisite:** WELD-101A

The second of a three-part series in the theory and application of shielded metal arc welding (SMAW). Emphasizes safety procedures, use of SMAW welding equipment and intermediate level welding techniques in accordance with the American Welding Society SENSE program.

### WELD 101C ADVANCED SHIELDED METAL ARC WELDING
**Units:** 2.50
CSU 27.00 hours lecture, 54.00 hours lab

**Prerequisite:** WELD-101B

The third of a three-part series in the theory and application of shielded metal arc welding (SMAW). Emphasizes safety procedures, use of SMAW welding equipment and advanced level welding techniques in accordance with the American Welding Society SENSE program. Welder performance certification is emphasized.

### WELD 104 INTRODUCTION TO GAS TUNGSTEN ARC WELDING
**Units:** 2.00
CSU 18.00 hours lecture, 54.00 hours lab

Introduces the principles and practices of gas tungsten arc welding (GTAW), including basic welding-joint design, expansion, contraction, and residual stress in welding of metals.
WELD 105 ADVANCED GAS TUNGSTEN ARC WELDING
Units: 2.00
CSU 18.00 hours lecture, 54.00 hours lab
Prerequisite: WELD-104
Provides further development and strengthening of gas tungsten arc welding (GTAW) skills. Emphasizes theory, techniques and applications of GTAW commonly used in the aerospace, pharmaceutical and motor sport industries. Upon completion, students can earn welder performance certifications in accordance with the American Welding Society D17.1 code.

WELD 114A INTRODUCTION TO ROBOTIC WELDING AUTOMATION
Units: 2.50
CSU 27.00 hours lecture, 54.00 hours lab
The first of a three-part series introducing fundamental theory and hands-on application of robotic welding automation. Emphasizes safety awareness, programming techniques, and basic gas metal arc welding applications using six-axis robotic welding systems.

WELD 114B INTERMEDIATE ROBOTIC WELDING AUTOMATION
Units: 2.50
CSU 27.00 hours lecture, 54.00 hours lab
Prerequisite: WELD-114A
The second of a three-part series introducing intermediate level theory and hands-on application of robotic welding automation. Emphasizes safety awareness, programming techniques, and intermediate gas metal arc welding applications using six-axis robotic welding systems.

WELD 114C ADVANCED ROBOTIC WELDING AUTOMATION
Units: 2.50
CSU 27.00 hours lecture, 54.00 hours lab
Prerequisite: WELD-114B
The third of a three-part series introducing advanced level theory and hands-on application of robotic welding automation. Emphasizes safety awareness, programming techniques, and advanced GMAW welding applications using six-axis robotic welding systems.

WELD 120 INDUSTRIAL WELDING I
Units: 5.00
CSU 54.00 hours lecture, 108.00 hours lab
First in a three-part series providing theory and technical skills training towards completion of the American Welding Society SENSE Level I - Entry Welder program. Examines related safety, mathematics, metallurgy, and weld-joint design associated with associated welding and thermal cutting processes.

WELD 122 INDUSTRIAL WELDING II
Units: 5.00
CSU 54.00 hours lecture, 108.00 hours lab
Recommended Preparation: WELD-120
Second in a three-part series providing theory and technical skills training towards completion of the American Welding Society SENSE Level I - Entry Welder program. Focuses on gas metal arc welding in addition to development of flux cored arc welding skills. Examines related safety, mathematics, metallurgy, and weld-joint design associated with associated welding and thermal cutting processes.

WELD 124 INDUSTRIAL WELDING III
Units: 5.00
CSU 54.00 hours lecture, 108.00 hours lab
Recommended Preparation: WELD-122
Third in a three-part series providing theory and technical skills training towards completion of the American Welding Society SENSE Level I - Entry Welder program. Examines the gas tungsten arc welding process. Safety, mathematics, metallurgy, and weld-joint design are studied in detail. Provides the levels of proficiency needed for various certifications available in today’s welding industry.

WELD 130 WELDING METALLURGY
Units: 3.00
CSU 54.00 hours lecture
Introduces basic metallurgy as applied to welding. Common heat treatment procedures, welding enhancement procedures, and thermal control of stress and strain in relation to ferrous and non-ferrous metals are emphasized. Proper determination of chemical contents of common steels, cast irons, stainless steels, and aluminum alloys are demonstrated.

WELD 132 BLUEPRINT READING FOR WELDERS AND FABRICATORS
Units: 3.00
CSU 54.00 hours lecture
Recommended Preparation: MFGT-100
Examines blueprint interpretation practices commonly used by welding and metal fabrication industries. Exposure to common drawing types, symbols, views, lines, dimensions, and tolerances. Emphasis is placed on the analysis of welding symbols as approved by the American Welding Society (AWS) and International Organization of Standardization (ISO).
WELD 133  WELDING INSPECTION  
Units: 3.00  
CSU 54.00 hours lecture  
Examines weld inspection principles and practices in order to prepare students for the American Welding Society's Certified Welding Inspector (CWI) exam, including welding theory, hands-on inspection, and a survey of respective welding codes.

WELD 165  PIPE WELDING FUNDAMENTALS  
Units: 3.00  
CSU 36.00 hours lecture, 54.00 hours lab  
Prerequisite: WELD-101  
Examines both theory and application of pipe welding using the shielded metal arc welding (SMAW) process. Procedures leading to skillfulness in pipe weld-joint design, pre-weld fit up, basic metallurgy, weld symbols, and related codes and standards are emphasized.

WINE STUDIES

Certificate of Specialization: Wine Studies  
The Wine Studies program is designed to provide students desiring employment in the culinary or restaurant industry with foundational knowledge and skills in world viticulture and wine styles. The curriculum provides an introduction to wine appreciation, service and wine and food pairings. Upon completion of the program, students will have a well-developed wine palate and will be able to assist customers in wine selection.

Student Learning Outcome:
Students will be able to:
- Perform sensory evaluation on wines from a variety of world viticulture regions.
- Compare and contrast the world wine regions.

Program Requirements:
Units Required: 17

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<tr>
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<td>Wines of California</td>
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<td>WINEST-086</td>
<td>Wines of Italy</td>
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<tr>
<td>WINEST-087</td>
<td>Wines of France</td>
<td>1.5</td>
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<tr>
<td>WINEST-088</td>
<td>Wines of Australia &amp; New Zealand</td>
<td>1.5</td>
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<td>WINEST-089</td>
<td>Wines of Spain</td>
<td>1.5</td>
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<tr>
<td>WINEST-100</td>
<td>Wine Appreciation</td>
<td>3.0</td>
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<tr>
<td>WINEST-102</td>
<td>World Viticulture and Wine Styles</td>
<td>3.0</td>
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<tr>
<td>WINEST-104</td>
<td>Introduction to Wine in the Restaurant</td>
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Certificate of Specialization: Hospitality Wine Service

The Hospitality Wine Service program is designed to provide students with knowledge and skills related to providing exceptional wine service in restaurants, hotels and other culinary venues. The program provides introductory knowledge on world viticulture and wine styles but focuses on the food, business and service aspects wine and the role of wine in the hospitality industry.

Student Learning Outcome:
Students will be able to demonstrate proficiency in the core skills and knowledge required for employment in the wine service/hospitality/restaurant industry.

Program Requirements:
Units Required: 6.5

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<tr>
<th>Course Code</th>
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<td>WINEST-084</td>
<td>Wine Service and Hospitality</td>
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<tr>
<td>WINEST-085</td>
<td>Wines of California</td>
<td>2.0</td>
</tr>
<tr>
<td>WINEST-100</td>
<td>Wine Appreciation</td>
<td>3.0</td>
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</tbody>
</table>
WINEST 084 WINE SERVICE AND HOSPITALITY
Units: 1.50
27.00 hours lecture
Introduces the basics of wine service for the food service industry. Appropriate for either hospitality professionals or wine aficionados.

WINEST 085 WINES OF CALIFORNIA
Units: 2.00
36.00 hours lecture
Prerequisite: Students must be 21 years of age to enroll. Explores the major wine regions of California including the grape varieties and types of wine production. Includes the wine styles and associated wine laws, structure and culture of California. Pregnant women and persons with allergies to sulfites are advised not to take this class. Wine will be tasted.

WINEST 086 WINES OF ITALY
Units: 1.50
27.00 hours lecture
Prerequisite: Students must be 21 years of age to enroll. Introduces the major wine regions of Italy, grape varieties grown, and the wines produced. Includes the process of Italian wine making, the importance of wine in Italian cuisine and culture and the stature Italian wines have achieved worldwide. Pregnant women and persons with allergies to sulfites are advised not to take this class. Wine will be tasted.

WINEST 087 WINES OF FRANCE
Units: 1.50
27.00 hours lecture
Prerequisite: Students must be 21 years of age to enroll. Explores the major wine regions of France, the grape varieties and types of wine production. Includes the wine styles and associated wine laws, structure and culture of France. Pregnant women and persons with allergies to sulfites are advised not to take this class. Wine will be tasted.

WINEST 089 WINES OF SPAIN
Units: 1.50
27.00 hours lecture
Prerequisite: Students must be 21 years of age to enroll. Explores the major wine regions, grape varieties, and types of wine production of Spain. Includes the wine styles and associated wine laws, structure and culture of Spain. Pregnant women and persons with allergies to sulfites are advised not to take this class. Wine will be tasted.

WINEST 100 WINE APPRECIATION
Units: 3.00
CSU 54.00 hours lecture
Prerequisite: Students must be 21 years of age to enroll. Provides the basics of appreciation of different types of wine, including varietal characteristics and other components. Pregnant women and persons with allergies to sulfites are advised not to take this class. Wine will be tasted.

WINEST 102 WORLD VITICULTURE AND WINE STYLES
Units: 3.00
UC:CSU 54.00 hours lecture
Prerequisite: Students must be 21 years of age to enroll. Surveys the world of viticulture and the wine industry. Includes the history of viticulture, grapevine anatomy, worldwide grape, raisin and wine production and consumption, world wine regions and sensory evaluations. Pregnant women and persons with allergies to sulfites are advised not to take this class. Wine will be tasted.

WINEST 104 INTRODUCTION TO WINE IN THE RESTAURANT
Units: 3.00
CSU 54.00 hours lecture
Examines the management of wine purchasing, storage, and selling for the culinary arts or restaurant management professional.
CONTINUING EDUCATION
Noncredit Classes

The College’s Community Education Department provides lifelong learning classes to residents of all ages with opportunities for professional development, skills development, and language acquisition. These courses are offered tuition-free and are supported by the State of California. Courses include English as a Second Language (ESL), Immigrant Education & Citizenship, College Success Skills, programs for Older Adults (Emeritus College), Health and Safety Education, and Career Technical Education programs. Some courses may require a materials fee to be paid at the time of registration to cover the cost of supplies and materials given to students during the class. This fee does not cover the cost of any required textbooks.

COLLEGE SUCCESS SKILLS
(BASIC SKILLS)

Certificate of Completion: General Education Development Preparation
This certificate prepares students to take the General Education Development exam.

Student Learning Outcome:
Students will be able to demonstrate proficiency in reading, writing, science, social studies, mathematics, and the test taking strategies required to meet the GED requirements.

Program Requirements:
Units Required: 0
NC.BCSK-50 Test Taking Skills .................. .0.0
NC.BCSK-100 GED Preparation .................. .0.0

Certificate of Competency: Academic Skills
Students who receive this certificate have demonstrated mastery of skills in English and mathematics at the elementary and secondary levels.

Certificate of Completion: CAHSEE
This certificate is designed to prepare students to successfully pass the California High School Exit Exam (CAHSEE).

Student Learning Outcome:
Students will be able to demonstrate competency in English and Mathematics skills at the CAHSEE level.

Program Requirements:
Units Required: 0
NC.BCSK-50 Test Taking Skills .................. .0.0
NC.BCSK-090 CAHSEE Preparation .................. .0.0

Certificate of Completion: Summer Bridge
Demonstrate proficiency in elementary algebra, writing fundamentals, and college success skills.

Student Learning Outcome:
Students will be able to demonstrate proficiency in elementary algebra, writing fundamentals, and college success skills.

Program Requirements:
Units Required: 0
NC.BCSK-SBC Summer Bridge Counseling ........ .0.0
NC.BCSK-SBE Summer Bridge English ........ .0.0
NC.BCSK-SBM Summer Bridge Math ........ .0.0

Certificate of Competency: Academic Skills
Students who receive this certificate have demonstrated mastery of skills in English and mathematics at the elementary and secondary levels.

Student Learning Outcome:
Students will be able to demonstrate proficiency in English and mathematics skills at the elementary and secondary levels.

Program Requirements:
Units Required: 0
NC.BCSK-080 Academic Skills I .................. .0.0
NC.BCSK-085 Academic Skills II .................. .0.0

Certificate of Completion: Summer Bridge
Demonstrate proficiency in elementary algebra, writing fundamentals, and college success skills.

Student Learning Outcome:
Students will be able to demonstrate proficiency in elementary algebra, writing fundamentals, and college success skills.

Program Requirements:
Units Required: 0
NC.BCSK-SBC Summer Bridge Counseling ........ .0.0
NC.BCSK-SBE Summer Bridge English ........ .0.0
NC.BCSK-SBM Summer Bridge Math ........ .0.0

COLLEGE SUCCESS SKILLS
(BASIC SKILLS)

Certificate of Completion: General Education Development Preparation
This certificate prepares students to take the General Education Development exam.

Student Learning Outcome:
Students will be able to demonstrate proficiency in reading, writing, science, social studies, mathematics, and the test taking strategies required to meet the GED requirements.

Program Requirements:
Units Required: 0
NC.BCSK-50 Test Taking Skills .................. .0.0
NC.BCSK-100 GED Preparation .................. .0.0

Certificate of Competency: Academic Skills
Students who receive this certificate have demonstrated mastery of skills in English and mathematics at the elementary and secondary levels.

Certificate of Completion: CAHSEE
This certificate is designed to prepare students to successfully pass the California High School Exit Exam (CAHSEE).

Student Learning Outcome:
Students will be able to demonstrate competency in English and Mathematics skills at the CAHSEE level.

Program Requirements:
Units Required: 0
NC.BCSK-50 Test Taking Skills .................. .0.0
NC.BCSK-090 CAHSEE Preparation .................. .0.0

Certificate of Completion: Summer Bridge
Demonstrate proficiency in elementary algebra, writing fundamentals, and college success skills.

Student Learning Outcome:
Students will be able to demonstrate proficiency in elementary algebra, writing fundamentals, and college success skills.

Program Requirements:
Units Required: 0
NC.BCSK-SBC Summer Bridge Counseling ........ .0.0
NC.BCSK-SBE Summer Bridge English ........ .0.0
NC.BCSK-SBM Summer Bridge Math ........ .0.0

CONTINUING EDUCATION / NONCREDIT PROGRAMS / COURSE DESCRIPTIONS
CONTINUING EDUCATION • NONCREDIT CLASSES
CONTINUING EDUCATION / NONCREDIT PROGRAMS / COURSE DESCRIPTIONS

NC.BCSK 050 TEST-TAKING SKILLS
Units: 0.00
Addresses the skills necessary to become a successful test-taker, including test anxiety, test types, study tips, time management, and academic integrity. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK 080 ACADEMIC SKILLS I
Units: 0.00
Develops basic reading, writing, and math skills through individualized, computer-assisted instruction. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK 085 ACADEMIC SKILLS II
Units: 0.00
Continues to develop reading, writing, and math skills through individualized, computer-assisted instruction. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK 090 CAHSEE PREPARATION
Units: 0.00
Provides English and math instruction targeting California High School Exit Exam (CAHSEE) competencies for students who have not yet passed either the mathematics or the English portions of the exam. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK 100 GED PREPARATION
Units: 0.00
Prepares students to pass the five sections of the General Education Development Test: Reading, Writing I and II (essay), Science, Social Studies, and Mathematics. Students should have basic computer literacy to utilize GED tutorial software. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK E19 STUDY TECHNIQUES
Units: 0.00
Improve skills necessary for good study habits including organizing study materials, time management, concentration techniques, test preparation, test taking strategies, memory improvement, listening skills, and note taking. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK E20 SPELLING TECHNIQUES
Units: 0.00
Designed to improve spelling skills. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK E21 GRAMMAR AND SENTENCE WRITING
Units: 0.00
Reviews the fundamentals of English with emphasis on improvement of sentence grammar, word usage, mechanics and punctuation. Students focus on subjects, pronouns, verbs, avoiding fragments and run-ons, and writing coherent, grammatical sentences. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK MA1 ESSENTIAL ARITHMETIC
Units: 0.00
A first course in basic arithmetic including whole numbers, fractions, mixed numerals, decimals, and percents. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK MA2 MATH SKILLS FOR NURSES
Units: 0.00
Introduction to medication dosage calculations and dimensional analysis. Includes a review of arithmetic, metric, apothecary, household systems, conversions between the systems, calculating oral medication dosages, intravenous fluid calculations and injections. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.BCSK SBC SUMMER BRIDGE COUNSELING
Units: 0.00
Develops college success skill through discussion of college procedures, student rights, learning skills and study skills, including close collaboration with co-requisite English and mathematics courses to help ensure application of skills to materials covered in those subjects. Offered pass/no-pass only.

NC.BCSK SBE SUMMER BRIDGE ENGLISH
Units: 0.00
Prerequisite: ENGL-071 or placement into ENGL-081 as determined by the COC English assessment process. Designed to facilitate the transition of students from high school or other pre-collegiate education into an academically successful and well-balanced college lifestyle, this course will focus on the fundamentals of composing source-based paragraphs for students who need a review of intermediate English topics before entering introductory college English. Offered pass/no-pass only.
NC.BCSK SBM SUMMER BRIDGE MATH
Units: 0.00
Prerequisite: MATH-025 or MATH-026 or placement as determined by the COC math assessment process.
Designed to facilitate the transition of students from high school into an academically successful and well-balanced college lifestyle, this course focuses on the fundamental concepts of pre-algebra for those who need a review of topics before entering elementary algebra. Offered pass/no-pass only.

NC.TUTR 094 SUPERVISED TUTORING
Units: 0.00
Co-requisite: Enrollment as a COC student and referral of instructor/counselor
Provides individualized and group activities designed to support success in the classroom setting. Includes learning style assessment and follow-up, study skills workshops, group tutorials activities and assignments for individualized tutoring support. This course may be offered open entry/open exit. Offered pass/no-pass only.

ENGLISH AS A SECOND LANGUAGE (ESL)

Certificate of Competency: ESL/Beginning Level
Students who receive this certificate have demonstrated mastery of the Model Standards for Adult Education Programs Beginning Low and Beginning High levels of English skills in reading, writing, speaking and listening.

Student Learning Outcome:
Students will be able to communicate in English through reading, writing, speaking, and listening at the beginning high level.

Program Requirements:
Units Required: 0

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<td>NC.ESL-2B</td>
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Recommended Electives
NC.ESL-10 ESL Beginning Language Lab 0.0

Certificate of Competency: ESL/Intermediate Level
Students who receive this certificate have demonstrated mastery of the Model Standards for Adult Education Programs Intermediate Low and Intermediate High levels of English skills in reading, writing, speaking and listening.

Student Learning Outcome:
Students will be able to demonstrate proficiency in English through reading, writing, speaking and listening in English at the intermediate high level.

Program Requirements:
Units Required: 0

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NC.ESL 10 ESL BEGINNING LANGUAGE LAB
Units: 0.00
Develops English skills in listening, reading, speaking and writing through self-paced, computer-mediated instruction. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.ESL 1A BEGINNING LOW A
Units: 0.00
Develops basic English skills at the beginning low level through listening, speaking, reading and writing, including grammar, pronunciation, vocabulary and everyday life situations. Offered pass/no-pass only.

NC.ESL 1B BEGINNING LOW B
Units: 0.00
Prerequisite: NC.ESL-1A or Placement Test
Continues and expands the development of basic English skills at the beginning low level through listening, speaking, reading and writing, including grammar, pronunciation, vocabulary and everyday life situations. Offered pass/no-pass only.

NC.ESL 2A BEGINNING HIGH A
Units: 0.00
Prerequisite: NC.ESL-1B or Placement Test
Develops English skills at the beginning high level through listening, speaking, reading and writing, including grammar, pronunciation, vocabulary and everyday life situations. Offered pass/no-pass only.

NC.ESL 2B BEGINNING HIGH B
Units: 0.00
Prerequisite: NC.ESL-2A or Placement Test
Continues and expands the development of English skills at the beginning high level through listening, speaking, reading and writing, including grammar, pronunciation, vocabulary and everyday life situations. Offered pass/no-pass only.
NC.ESL 3A INTERMEDIATE LOW A
Units: 0.00
Prerequisite: NC.ESL-2B or Placement Test
Develops English skills at the Intermediate Low level through listening, speaking, reading and writing including grammar, pronunciation, vocabulary and everyday life situations. Offered pass/no-pass only.

NC.ESL 3B INTERMEDIATE LOW B
Units: 0.00
Prerequisite: NC.ESL-3A or Placement Test
Continues and expands English skills at the Intermediate Low level through listening, speaking, reading and writing including grammar, pronunciation, vocabulary and everyday life situations. Offered pass/no-pass only.

NC.ESL 4A INTERMEDIATE HIGH A
Units: 0.00
Prerequisite: NC.ESL-3B or Placement Test
Develops English skills at the Intermediate High level through listening, speaking, reading and writing including grammar, pronunciation, vocabulary and everyday life situations. Offered pass/no-pass only.

NC.ESL 4B INTERMEDIATE HIGH B
Units: 0.00
Prerequisite: NC.ESL-4A or Placement Test
Continues and expands English skills at the Intermediate High level through listening, speaking, reading and writing including grammar, pronunciation, vocabulary and everyday life situations. Offered pass/no-pass only.

NC.VESL 01 COMMUNICATION FOR EMPLOYMENT
Units: 0.00
50.82 hours lecture
Recommended Preparation: NC.ESL-LVL2
Introduces the nonnative speaker to basic written and verbal communication skills, as well as cultural knowledge necessary to obtain employment in the United States. Focuses on traditional and web-based employment opportunity resources, completing job applications, writing simple resumes, and answering questions at job interviews. This course may be offered open entry/open exit. Offered pass/no-pass only.

NC.CITZ 01 CITIZENSHIP FOR NATURALIZATION
Units: 0.00
Introduces the history and government of the United States, including an overview of the branches of government, the Constitution, and the Bill of Rights necessary to pass the U.S. Citizenship Examination. This course may be offered open entry/open exit. Offered pass/no-pass only.