Course Descriptions

Accounting

**ACTG 100 ACCOUNTING PROCEDURES**
Introduction to basic accounting principles and procedures. The accounting equation is utilized to record business transactions in journal form to create worksheets, trial balances, income statements, and balance sheets. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for MATH 110.  
**Transfer Credit:** CSU

**ACTG 121 FINANCIAL ACCOUNTING**
Introduction to the fundamentals of basic accounting including how to record business transactions, prepare financial statements, and use accounting information in accordance with generally accepted accounting principles (GAAP) and International Financial Reporting Standards (IFRS). The course includes both theoretical and practical problem-solving learning experiences to help the student develop analytical abilities in using financial data. Recommended for all business major transfer students. *Letter Grade Only. Degree Credit.*

**Units:** 4  
**Hours/semester:** 64-72 Lecture; 128-144 Homework  
**Recommended:** Eligibility for MATH 110.  
**Transfer Credit:** CSU, UC

**ACTG 131 MANAGERIAL ACCOUNTING**
This course covers accounting information used by managers, sources of this information and how this information is used when planning, directing operations, controlling cost, and decision-making. Topics include: cost concepts and cost behavior, costing systems, the analysis of cost for performance metrics, cost-volume-profit analysis, profit planning, capital budgeting, standard costs, financial statement analysis and discussion of ethical issues related to business operations and manufacturing. Recommended for all business major transfer students. *Letter Grade Only. Degree Credit.*

**Units:** 4  
**Hours/semester:** 64-72 Lecture; 128-144 Homework  
**Prerequisites:** ACTG 121  
**Transfer Credit:** CSU, UC  
**C-ID:** ACCT 120

**ACTG 180 PAYROLL ACCOUNTING**
Payroll is one of the most important accounting functions. Learn how to calculate employee compensation (wages & tips), determine employer and employee tax deductions, prepare journal entries for general ledger posting, and file the required federal and state payroll forms. The historical events that occurred and resulted in current legislation and payroll tax laws are also covered. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1.5  
**Hours/semester:** 24-27 Lecture; 48-54 Homework  
**Prerequisites:** ACTG 100 or ACTG 121 or equivalent  
**Recommended:** Eligibility for MATH 110.  
**Transfer Credit:** CSU

**ACTG 200 QUICKBOOKS**
Introduction to the financial accounting features of QuickBooks. Setting up and maintaining a computerized system from entering business transactions through the Trial Balance and preparation of Financial Statements. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for MATH 110.  
**Transfer Credit:** CSU

Anthropology

**ANTH 110 CULTURAL ANTHROPOLOGY**
This course is an introduction to the cultures and customs of human groups throughout the world with the aim of understanding how cultures function based on their world views. Topics include subsistence methods, religious belief systems, linguistics, economics, political organization, kinship, gender, sex, marriage and family systems, social stratification, and globalization. This course stresses anthropological concepts such as culture, cultural relativism, holism, ethnocentrism, cross-cultural comparisons, world view, culture change, and fieldwork. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: ANTH 120

ANTH 125 BIOLOGICAL ANTHROPOLOGY
This course covers the concepts, methods and theory of biological evolution and its application to the human species. There is a specific focus on molecular, Mendelian and population genetics mechanisms of evolution, primatology, paleoanthropology, biocultural adaptations, human variation, and current bioethical issues. The scientific method serves as the foundation of the course. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area B2
Transfer Credit: CSU (CSU GE Area B2), UC (IGETC Area 5B)
C-ID: ANTH 110

ANTH 126 BIOLOGICAL ANTHROPOLOGY LABORATORY
Laboratory course in which the students apply and practice the scientific methods, techniques and procedures used by physical anthropologists to understand human evolution, non-human primates and human variation. Students gain practical experience and a deeper understanding by participating in lab exercises, activities and experiments that explore human evolution, osteology, forensics, genetics, modern human variation, primate anatomy and behavior. Field trips may be required. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: Completion of, or concurrent enrollment in ANTH 125 and MATH 811 or appropriate scores on the College Placement Test or other multiple measures assessment,. Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.
AA/AS Degree Requirements: Area B3 - only if ANTH 125 is successfully completed prior to or concurrently with ANTH 126
C-ID: ANTH 115 L

ANTH 200 ETHNOGRAPHIC FILM
Introduction to the use of film and photography by anthropologists as a research tool through viewing films depicting different cultures from around the world. Students are expected to analyze a variety of peoples from various ethnic groups in differing cultural contexts as to their contributions to the world community without prejudice or ethnocentrism. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)

ANTH 351 ARCHAEOLOGY
Introduction to the theories, concepts, and methods employed by the archaeologist in the study of human history and pre-history. The diverse evolution of cultural systems are emphasized. The challenges and achievements of non-literate and traditional cultures, diverse communities, and social classes over time are also explored. Field trips may be required. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.
Recommended: Eligibility for MATH 120.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: ANTH 150

Architecture

ARCH 110 INTERIOR ARCHITECTURAL DRAFTING
Introduction to the tools and techniques for drafting interior spaces. Emphasis is on creating a set of architectural drawings using hand drafting standards and techniques as related to producing interior architectural
COURSE DESCRIPTIONS

drawings. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Transfer Credit: CSU

Art

ART 101 ANCIENT, CLASSICAL AND MEDIEVAL ART HISTORY
Survey of the historical development of the visual arts from Prehistory to the early Middle Ages, with an emphasis on architecture and sculpture. Themes include the inception of methods and techniques of art, the evolution of architectural principles, how religious philosophies and social and political systems are reflected in art, and the emergence of humanism. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Recommended: Eligibility for ENGL 110.

AA/AS Degree Requirements: Area C1

Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

C-ID: ARTH 110

ART 102 LATE MEDIEVAL, RENAISSANCE AND BAROQUE ART HISTORY
Survey of the historical development of the visual arts from the late Middle Ages to the 17th century. Themes include the rise of Renaissance humanism, comparison of the emergence of important art centers in Italy and Flanders, patronage, the role of the artist in society, development of new techniques, and the impact of the Protestant Reformation and Catholic Counter-Reformation on the form and content of art. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Recommended: Eligibility for ENGL 110.

AA/AS Degree Requirements: Area C1

Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

C-ID: ARTH 110

ART 103 HISTORY OF ART FROM THE BAROQUE PERIOD TO POST-IMPRESSIONISM
Survey of the historical development of the visual arts from the late 17th century to late 19th century, with an emphasis on the Enlightenment, the French Revolution, the industrial, political, and technological revolutions of the 19th century, and their influence on modern art. Focus is on Romanticism, the rise of the avant-garde, the emergence of Impressionism in France, and the art of England and America. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Recommended: Eligibility for ENGL 110.

AA/AS Degree Requirements: Area C1

Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

C-ID: ARTH 130

ART 104 HISTORY OF MODERN ART
Survey of major styles in western art from 1888 to 1999, Post-Impressionism to Post-Modernism. How art forms reflect the complexity and diversity of the modern world. Topics include the changing role of the artist in society, the impact of world events and technology on the arts, and art criticism. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Recommended: Eligibility for ENGL 100.

AA/AS Degree Requirements: Area C1

Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

C-ID: ARTH 110

ART 105 ART OF ASIA AND THE NEAR EAST
An introduction to some of the major monuments and themes of the visual arts of Asia and the Near East, this course explores the connection between great works of art and the societies, values and ideas that stimulated their creation. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Recommended: Eligibility for ENGL 110.

AA/AS Degree Requirements: Area C1

Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

C-ID: ARTH 130

ART 113 GREAT MUSEUMS OF AMERICA
A cultural and historic survey of the collections of America’s great art museums. This museum studies course traces the evolution of collecting and exhibiting art in America from the 18th century to the present, with emphasis on the history of the works of art in each museum. Museums of New York, Wash., D.C., Boston, Chicago and Philadelphia are
ART 114 THE ART HISTORY OF PARIS
A cultural and historic survey of the art and architecture of Paris: the Gallo-Roman settlement, Medieval Paris, the Renaissance and Baroque periods, revolutionary and Napoleonic Paris, the Second Empire and the Fin-de-Siècle, and modern Paris. This course includes a discussion of the historic figures, the social and political movements, and the artists who shaped the art history of the city. Emphasis is on architecture, painting, sculpture, and museum collections. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU, UC

ART 116 THE ART OF GREAT BRITAIN
A cultural and historic survey of British art and architecture from Prehistory to the 19th century. Topics include megalithic structures of the Stone Age, Celtic and Roman Britain, medieval monasteries and manuscripts, castles, cathedrals, Shakespeare's England, historic houses, the Enlightenment, the English landscape movement, Jane Austen's England, the Golden Age of British painting, and Romanticism. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 110.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

ART 118 THE ART AND ARCHITECTURE OF SPAIN
A cultural and historic survey of Spanish art and architecture from Prehistory to the 21st century. Topics include Prehistoric Spanish cave paintings, Roman Spain, Hispanic-Visigothic art, Medieval Spain, Islamic Spain, the Spanish Empire and El Greco, the Golden Age of Spanish painting, the Enlightenment and Goya, Picasso, and modern architecture in Spain. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework

ART 128 GREAT MUSEUMS OF CALIFORNIA
A cultural and historic survey of the collections of California's great art museums. This museum studies course traces the evolution of collecting and exhibiting art in California from the 19th century to the present, with emphasis on the history of the works of art in each museum. Focus is on the museums of Los Angeles and the Bay Area. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU, UC

ART 131 ART HISTORY GOES TO THE MOVIES
A cultural and historical survey of great masters of art history, and how their creative process is depicted in film. This course includes the unique political, social, economic, and religious environment of artists in their age, and how this shaped the forms and ideas of their art. The depiction of the historic setting, demonstrations of the artists at work, and re-creation of the artistic milieu of the time through film illustrates the process of artistic production and creativity. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

ART 204 DRAWING I
A basic course in drawing emphasizing line, shape, space and value. Students learn perceptual skills while using a variety of media. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Transfer Credit: CSU, UC
C-ID: ARTS 110

ART 205 DRAWING II
An intermediate level drawing course in which students build on skills and knowledge learned in Drawing I. A wide
range of media is used including brush and ink, and pastel or oil pastel. Emphasis is on developing the expressive possibilities of drawing. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Prerequisites: ART 204
Transfer Credit: CSU, UC
C-ID: ARTS 205

ART 206 FIGURE DRAWING AND PORTRAITURE
Drawing from the live model emphasizing underlying structure of the human body and the expressive use of drawing media. Portraiture is covered as it relates to individual characterization and expression. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Recommended: ART 204
Transfer Credit: CSU, UC

ART 207 LIFE DRAWING
Drawing the human figure from life. Basic concepts and skills include shape, volume, plane, contour, gesture, value/shading, composition and the study of structural anatomy. Various media will be used including charcoal and graphite. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Recommended: ART 204 or equivalent experience.
Transfer Credit: CSU, UC
C-ID: ARTS 200

ART 213 LIFE DRAWING II
Continued study of the human form as art using the techniques and materials of drawing in graphite, charcoal, pastel, ink, and mixed media. Application of more advanced studies of anatomy and expressive representations of the human figure in different environments. Studio practice drawing from live models. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Prerequisites: ART 207
Transfer Credit: CSU, UC

ART 214 COLOR
This is a fundamental art course, which approaches color from artistic, scientific, and expressive perspectives. Through studio practice, and supported by slide lectures, demonstrations, and critiques, students are introduced to the major theories of color, as well as the practical skills of using color in art and design. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Transfer Credit: CSU, UC
C-ID: ARTS 270

ART 221 PAINTING I
Introductory painting course in which students learn basic oil painting techniques. Emphasis is on handling of the medium, use of color, variety of approaches, and representation. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Recommended: ART 204
Transfer Credit: CSU, UC
C-ID: ARTS 210

ART 222 PAINTING II
Further development of concepts and techniques acquired in Painting I with an emphasis on a greater variety of subject matter and individual expression. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Prerequisites: ART 221
Transfer Credit: CSU, UC

ART 229 LANDSCAPE PAINTING
In this oil painting course, students paint the landscape directly on location. The class meets at various locations on the Peninsula to work from nature. Emphasis is on the study of composition, color, and light while working quickly and directly. Students must provide their own
transportation. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 2

**Hours/semester:** 24-27 Lecture; 24-27 Lab; 48-54 Homework

**Transfer Credit:** CSU, UC

**ART 231 WATERCOLOR I**

Introduction to transparent and opaque Watercolor. Varied approaches and techniques are used, with an emphasis on working from observation. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 24-27 Lecture; 72-81 Lab; 48-54 Homework

**Recommended:** Satisfactory completion of one or more studio art courses.

**Transfer Credit:** CSU, UC

**ART 232 WATERCOLOR II**

Continuation of ART 231. Additional exploration of watercolor painting as a vehicle for creative art expression. This includes the use of more advanced techniques as well as the development of compositional skills. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 24-27 Lecture; 72-81 Lab; 48-54 Homework

**Prerequisites:** ART 231 or equivalent.

**Transfer Credit:** CSU, UC

**ART 250 THE ART HISTORY OF ROME**

A cultural and historic survey of the art and architecture of Rome: the Etruscans, Republican and Imperial Rome, Early Christian and Medieval periods, Renaissance and Baroque Rome. This course includes a discussion of the historic figures, and the political and religious ideologies which shaped the art history of the city. Emphasis is on architecture, sculpture, painting, and mosaics. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**AA/AS Degree Requirements:** Area C1

**Transfer Credit:** CSU (CSU GE Area C1), UC (IGETC Area 3A)

**C-ID:** ARTS 100

**ART 301 TWO-DIMENSIONAL DESIGN**

An introductory studio course in the fundamentals of art and design. Students use a variety of art media in creating work that explores the use of the basic elements of two dimensional art including line, shape, value, color, space, texture, and pattern. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 24-27 Lecture; 72-81 Lab; 48-54 Homework

**Transfer Credit:** CSU, UC

**C-ID:** ARTS 101

**ART 304 GALLERY DESIGN AND MANAGEMENT**

Introduces the practical skills and theoretical background necessary for working in museums and galleries. Students plan, curate, design, install, maintain, and publicize exhibits on campus. Topics include: selection of artworks, writing of exhibition text, design and preparation of exhibits (matting and framing, props, installation and lighting), publicity, gallery security and maintenance, and care of collections. Also covered are historical and social context of museums and galleries. Students attend field trips to galleries, museums, and art studios in the Bay Area and create virtual exhibits. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 2

**Hours/semester:** 24-27 Lecture; 24-27 Lab; 48-54 Homework

**Recommended:** Eligibility for ENGL 100.

**Transfer Credit:** CSU

**ART 306 THREE-DIMENSIONAL DESIGN**

An introduction to the theories and applications of three-dimensional art and design. Students create studio projects using a variety of tools, techniques, and mediums which may include wire, paper, cardboard, clay, wood, and other materials at the instructor’s discretion. Concepts are introduced and clarified through instructor lectures and demonstrations. Three-dimensional design is a core foundational course required in many art majors. Field trips may be included. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 24-27 Lecture; 72-81 Lab; 48-54 Homework

**AA/AS Degree Requirements:** Area C1

**Transfer Credit:** CSU (CSU GE Area C1), UC (IGETC Area 3A)

**C-ID:** ARTS 101
ART 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

ASTRONOMY

ASTR 100 INTRODUCTION TO ASTRONOMY
Survey of modern astronomy: study of what our civilization knows about the universe and our place in it, including the Earth-Moon system, the Solar System, extrasolar planetary systems, the birth and death of stars, the Milky Way galaxy, and cosmology. Emphasis is also placed on how astronomers learn about the universe, such as the nature of light, telescopes, and the scientific method. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area B1
Transfer Credit: CSU (CSU GE Area B1), UC (IGETC Area 5A)

ASTR 101 ASTRONOMY LABORATORY
Introduction to the tools and methods of astronomy and understanding of the scientific process. Introduction to the celestial sphere, scale model solar system, telescopic observations, use of computer models, comparative planetology, and astronomical data representation. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: MATH 110 AND completion of, or concurrent enrollment in ASTR 100 or 115 or 125 (ASTR 115 and 125 are offered at College of San Mateo).
AA/AS Degree Requirements: Area B3 - only if ASTR 100 is successfully completed prior to or concurrently with ASTR 101
Transfer Credit: CSU (CSU GE Area B3 - only if ASTR 100 is successfully completed prior to or concurrently with ASTR 101), UC (IGETC Area 5C*)

ASTR 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

AQUATICS

AQUA 127.1 SWIM STROKE DEVELOPMENT I
A swimming course designed to expose students to the benefits of aerobic exercise through swimming. The focus is on the development of stroke mechanics including the free style, butterfly, back stroke, and breast stroke. Must be able to swim one length without touching the bottom or side walls. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

AQUA 127.2 SWIM STROKE DEVELOPMENT II
Continuation of AQUA 127.1. A swimming course designed to expose students to the benefits of aerobic exercise through swimming. The focus is on the development of stroke mechanics including the free style, butterfly, back stroke, and breast stroke. Grade Option (Letter Grade or Pass/ No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: AQUA 127.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*
AQUA 127.3 SWIM STROKE DEVELOPMENT III
An intermediate advanced level course designed to expose students to the benefits of aerobic exercise through swimming. The focus is on the development of stroke mechanics including the free style, butterfly, back stroke, and breast stroke. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: AQUA 127.2
AA/AS Degree Requirements: Physical Education
Transfer Credit: CSU, UC*

AQUA 127.4 SWIM STROKE DEVELOPMENT IV
An advanced level swim course designed to expose students to the benefits of aerobic exercise through swimming. The focus is on the development of stroke mechanics including the free style, butterfly, back stroke, and breast stroke. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: AQUA 127.3
AA/AS Degree Requirements: Physical Education
Transfer Credit: CSU, UC*

AQUA 133.1 INDIVIDUAL SWIM CONDITIONING I
Students improve fitness and overall health through swimming. The course tailors swim workouts, drills and exercises to meet individual fitness and skill levels. Entering students must be able to swim one length without touching the bottom or side walls of the pool. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Physical Education
Transfer Credit: CSU, UC*

AQUA 135.1 AQUA EXERCISE I
A beginning level cardiovascular and resistance training class conducted in a low-impact aquatic environment. Instruction includes exercises designed to improve cardiovascular endurance, muscular strength, and flexibility. Students need not be competent swimmers to participate in class. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1

Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

Biological Sciences

BIOL 100 INTRODUCTION TO THE LIFE SCIENCES
Study of the nature of the physical and chemical aspects of life, the concepts of cellular biology, life as it exists on earth today, plant and animal interrelationships and interdependencies, and the role of humans in the world of living things. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area B2
Transfer Credit: CSU (CSU GE Area B2), UC* (IGETC Area 5B)

BIOL 110 PRINCIPLES OF BIOLOGY
This introductory course addresses the biological perspective and scientific method, the chemical and cellular bases of life, cellular transport and energetics, reproduction, heredity, classification of organisms and their evolution, plant and animal physiology, and ecology. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area B2, B3
Transfer Credit: CSU (CSU GE Area B2, B3), UC (IGETC Area 5B, 5C)

BIOL 130 HUMAN BIOLOGY
Study of biological principles using the human body as a model. Topics are structure and function of major organ systems and some common disorders. Heredity, evolution, and human ecological roles are also discussed. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area B2
Transfer Credit: CSU (CSU GE Area B2), UC (IGETC Area 5B)
BIOL 132 HUMAN BIOLOGY LABORATORY
Laboratory exercises concerning mammalian anatomy and physiology and using the scientific method to analyze and interpret data and then draw appropriate conclusions. This course is a supplement to BIOL 130 Human Biology. Letter Grade Only. Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: Completion of, or concurrent enrollment in BIOL 130
AA/AS Degree Requirements: Area B3 - only if BIOL 130 is successfully completed prior to or concurrently with BIOL 132
Transfer Credit: CSU (CSU GE Area B2, B3), UC (IGETC Area 5B, 5C)
C-ID: BIOL 190; BIOL 135 S (both BIOL 225 + 230)

BIOL 225 BIOLOGY OF ORGANISMS
Designed for biology majors, this course focuses on principles of evolutionary theory, classification of organisms, and their phylogenetic relationships. Emphasis is on physiology and structures of representative plants and animals. Topics include development, behavioral biology, ecology, and population genetics. Letter Grade Only. Degree Credit.

Units: 5
Hours/semester: 48-54 Lecture; 96-108 Lab; 96-108 Homework
Prerequisites: MATH 120 or MATH 123 (offered at CSM or Skyline), or appropriate score on the College Placement Test or other multiple measures assessment.
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area B2, B3; Math Competency
Transfer Credit: CSU (CSU GE Area B2, B3), UC (IGETC Area 5B, 5C)
C-ID: BIOL 140; BIOL 135 S (both BIOL 225 + 230)

BIOL 230 CELL AND MOLECULAR BIOLOGY
This course is designed for biology majors and is an introduction to life functions at the cellular and molecular levels. Students learn about cellular structure and the macromolecular architecture of the cell, the functional processes of cellular energetics, metabolic regulation, photochemical activities, reproduction, molecular and Mendelian genetics, regulation of gene expression, and methods of recombinant DNA technology. Letter Grade Only. Degree Credit.

Units: 5
Hours/semester: 48-54 Lecture; 96-108 Lab; 96-108 Homework
Prerequisites: CHEM 210 and BIOL 210, or 215 (offered at Skyline College), or 220 (offered at College of San Mateo), or 225.
AA/AS Degree Requirements: Area B2, B3
Transfer Credit: CSU (CSU GE Area B2, B3), UC (IGETC Area 5B, 5C)
C-ID: BIOL 190; BIOL 135 S (both BIOL 225 + 230)

BIOL 240 GENERAL MICROBIOLOGY
This course introduces microorganisms in nature: their cellular and molecular structure and functions, metabolisms, genetics, gene regulation, and techniques and procedures used by microbiologists. Emphasis is on microbes that play important roles in human daily life, especially those that cause disease and impact the environment. Laboratory emphasizes isolation, cultivation, and identification of bacteria. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: BIOL 110 or BIOL 130 and BIOL 210 or 215 (offered at Skyline College), or 220 (offered at College of San Mateo) or BIOL 225 or BIOL 230 or BIOL 250 or BIOL 260 and CHEM 192 or CHEM 210 or CHEM 410 or equivalent (any college level biology course with a lab and any college level chemistry course with a lab).
AA/AS Degree Requirements: Area B2, B3
Transfer Credit: CSU (CSU GE Area B2, B3), UC (IGETC Area 5B, 5C)

BIOL 250 HUMAN ANATOMY
Students learn the macroscopic and microscopic structure of the human body organ systems through lecture and laboratory study of models and prosected human cadavers. This course is intended for students in kinesiology, nursing, radiologic technology, respiratory therapy, surgical technology, and other allied health majors. This course is an elective for pre-dental, pre-medical and pre-veterinary students. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: BIOL 100 or BIOL 101 (offered at Skyline) or BIOL 110 or BIOL 130
AA/AS Degree Requirements: Area B2, B3
BIOL 260 HUMAN PHYSIOLOGY
Students learn through lecture and laboratory experiences how human organ systems integrate functions to maintain homeostasis and to regulate change and growth processes. This course is intended for students in kinesiology, nursing, radiologic technology, respiratory therapy, and for those in related fields such as psychology. This course is an elective for pre-dental and pre-medical students. Letter Grade Only. Degree Credit.

Units: 5
Hours/semester: 48-54 Lecture; 96-108 Lab; 96-108 Homework
Prerequisites: BIOL 250 and CHEM 192 or CHEM 210 or CHEM 410
AA/AS Degree Requirements: Area B2, B3
Transfer Credit: CSU (CSU GE Area B2, B3), UC (IGETC Area 5B, 5C)
C-ID: BIOL 110 B

BIOL 310 NUTRITION
Comprehensive introduction to scientific principles of nutrition and the interrelationships of metabolism; nutrient functions, structure and food sources; health consequences of nutrient excesses, deficiencies and diet related chronic diseases. Emphasis is placed on evaluating the nutrient content of foods, applying information to personal diet, and using reference tools. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for MATH 110. Eligibility for ENGL 100.
AA/AS Degree Requirements: Area E1
Transfer Credit: CSU (CSU GE Area E1), UC
C-ID: NUTR 110

BIOL 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Business

BUS. 100 INTRODUCTION TO BUSINESS
Introduction to American business in the global environment providing an overview of economics, ethics, management, marketing, operations, information management, accounting, and finance. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC
C-ID: BUS 110

BUS. 101 HUMAN RELATIONS IN THE WORKPLACE
An overview of the basic behavioral science principles used to understand organizational behavior and interpersonal relations. Human relations skills are developed through a combination of theoretical knowledge and group exercises. Topics include self-knowledge, perception, self-image, self-management, communications, motivation, conflict resolution, leadership, diversity, ethical choices, and the effects they have on today's multicultural and highly diverse organizational and social groups. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC

BUS. 103 INTRODUCTION TO BUSINESS INFORMATION SYSTEMS
An introduction to computer systems and software applications and their impact on the business environment. Topics include computer architecture, hardware, software, computer terminology and theory. Students use software applications as problem solving tools for business projects. Letter Grade Only. Degree Credit.

Units: 3
COURSE DESCRIPTIONS

**BUS. 113 PERSONAL FINANCE**
This course in personal finance leads students toward financial education and enables students to obtain the foundation for a lifelong understanding of the basics of finance including money management, tax planning, investing, and retirement planning. Students learn to apply quantitative and computational methods to help them understand the basis for financial literacy. Emphasis is placed on learning the fundamental concepts of everyday finance with a hands-on approach. Instruction is based on the analysis of specific financial situations and enables students to synthesize financial documents and reports. Quantitative reasoning is emphasized for the students so that they develop their problem-solving skills. **Letter Grade Only. Degree Credit.**

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework

**BUS. 125 INTERNATIONAL BUSINESS**
Introduction to the theories and practices of international business. Various environmental, economic, political, and social constraints on doing business abroad are explored. Topics include: political economy of international trade and investment, global monetary system, foreign market analysis, and firms’ operational strategy; management issues and challenges. **Letter Grade Only. Degree Credit.**

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU, UC

**BUS. 150 ENTREPRENEURSHIP: SMALL BUSINESS MANAGEMENT**
A practical, real-world approach to conceiving, planning, organizing, and managing a small business. Provides the tools to achieve optimal benefits from limited resources and explains how to plan for growth, succession, or closing of a business. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU

**BUS. 180 MARKETING**
This course is an introduction to marketing and sales techniques used in business. Students learn about the "four Ps" of marketing (Product, Price, Place, Promotion), market segmentation, target markets, market research, marketing budgets, and the marketing plan. Internet tools for small business marketing are also included, such as social networks, blogging, images, video, and websites. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

**BUS. 201 BUSINESS LAW**
Introduction to law applied in business environments. Topics include the Constitution, other legal sources, legal systems, enforcement agencies, contracts, crimes, torts, types of business formation, and employment law. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU, UC

**BUS. 230 INTERNATIONAL MARKETING**
Survey course outlining the major dimensions of the global business environment while providing a set of conceptual and analytical tools to successfully apply the “4 Ps” (product, price, place and promotion) to global marketing. Review global economic, political-legal, and cultural environmental factors. Global market research and data sources are explored. Other topics included in this course are foreign market selection, foreign market entry, supply chain management, international pricing, and global marketing of services. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU
BUS. 401 BUSINESS COMMUNICATIONS
An overview of effective business communication skills and their direct relationship to workplace success. Emphasis is placed on the planning, organizing, composing, and revising of business documents such as letters, memos, reports, and emails. Presentation skills, professional behavior in the workplace, and current communication technologies are included with an emphasis on real world problem solving. Digital communication topics include presentation software, emails, business-relevant social media, and mobile technologies. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: ENGL 100 or ENGL 105
Transfer Credit: CSU
C-ID: BUS 115

BUS. 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Career and Personal Development

CRER 110 HONORS COLLOQUIUM IN CAREER AND PERSONAL DEVELOPMENT: TRANSFER ESSENTIALS AND PLANNING
Essential information about transferring to a four-year university. Includes university visits and exploration; transfer planning, policies, and process; academic requirements; and transfer tools and services. Students examine their life plan and achievements to develop strong personal statements; assess costs and funding resources; and learn about how changes in educational policies and regulations may affect their educational plans. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU, UC

CRER 137 LIFE AND CAREER PLANNING
Provides a comprehensive approach to life and career planning. Topics include self-assessment (values, skills, personality and interests), and an analysis of career development over the life span. An intensive career investigation that encompasses decision-making, goal-setting, job search strategies, resume writing and interviewing skills. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area E1
Transfer Credit: CSU (CSU GE Area E1), UC

CRER 300 INTRODUCTION TO SCHOLARSHIPS
Introduces students to scholarship and financial aid opportunities at the local, state, and national levels. Learn research techniques and utilize publications, software, internet sites, and community resources. Emphasis on development of a personal organizational system to manage the process of the scholarship search. Identify scholarships that meet personal criteria. Personal statements, interview techniques, resumes, organization and time management are also covered. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1.5
Hours/semester: 24-27 Lecture; 48-54 Homework
Transfer Credit: CSU, UC

CRER 401 COLLEGE SUCCESS
Provides students with essential tools, skills, and information including college policies, procedures, educational requirements, and college programs/support services. This course also assists students in time management, setting goals, decision-making skills, and other strategies for success. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Transfer Credit: CSU, UC
CRER 430 CAREER ASSESSMENT
Designed to help individuals define career and/or college major alternatives. Vocational interests, skills, and values instruments are given and results interpreted. Pass/No Pass Only. Degree Credit.

Units: 0.5
Hours/semester: 24-27 Lab
Transfer Credit: CSU

CRER 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Chemistry

CHEM 114 SURVEY OF CHEMISTRY AND PHYSICS
Equivalent to PHYS 114. A conceptual survey of physical science (physics and chemistry) intended for non-science majors at the General Education level. A general discussion of the scientific method and techniques are followed by physics, chemistry, and integrated topics. The laboratory portion covers a hands-on exploration of phenomena discussed in lecture. The physics component of the course discusses motion, force, energy, electricity and magnetism, waves and light. The chemistry component of the course focuses on chemicals and reactions common in everyday life. Concepts relating to the nature and interactions of atoms, ions, and molecules are presented. Students also learn to use and evaluate information presented on product labels, in advertisements, and online. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: MATH 110 or appropriate placement based on AB 705 mandates, or equivalent.
AA/AS Degree Requirements: Area B1, B3

CHEM 192 ELEMENTARY CHEMISTRY
Comprehensive introductory chemistry course covering basic concepts, theories and laws with emphasis on reasoning and problem solving skills. Topics include but are not limited to chemical nomenclature, stoichiometry, electron configuration, atomic orbitals, molecular geometry and bonding. The laboratory component of this course introduces students to both qualitative techniques and quantitative techniques appropriate for data collection, manipulation and analysis of a variety of chemical systems. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: MATH 110 or satisfactory score on District math placement test and other measures as appropriate that indicate proficiency in Elementary Algebra.
AA/AS Degree Requirements: Area B1, B3
Transfer Credit: CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A*, 5C)
C-ID: CHEM 101

CHEM 210 GENERAL CHEMISTRY I
This course is the first half of a two-semester sequence in general chemistry intended for students pursuing majors in physical sciences, biological sciences and engineering. The topics include atomic theory, stoichiometry, chemical bonding, thermochemistry, periodicity, molecular geometry, gas laws, solution stoichiometry, intermolecular forces and selected topics covering redox and acid-base reactions. The laboratory program includes gravimetric, colorimetric, and selected volumetric methods of analysis. Students are introduced to spreadsheet and graphical analysis of laboratory data and molecular modeling, and perform a variety of computer-interfaced experiments. Letter Grade Only. Degree Credit.

Units: 5
Hours/semester: 48-54 Lecture; 96-108 Lab; 96-108 Homework
Prerequisites: MATH 120 or MATH 123 (offered at CSM or Skyline) or satisfactory score on the College Placement Test or other multiple measures assessment that indicate proficiency in Intermediate Algebra.
Recommended: Any Preparation for Chemistry course or other measures that demonstrate proficiency in general science and preparation for study of college chemistry. This
includes completion of high school chemistry with a grade of C or better.

AA/AS Degree Requirements: Area B1, B3; Math Competency

Transfer Credit: CSU (CSU GE Area B1, B3), UC (IGETC Area 5A, 5C)

C-ID: CHEM 110; CHEM 120S (both CHEM 210 & 220 must be taken)

CHEM 220 GENERAL CHEMISTRY II

This course is the continuation of CHEM 210 and is intended for students pursuing majors in physical sciences, biological sciences and engineering. The topics discussed include properties of solutions, kinetics, equilibrium, acid-base equilibria, thermodynamics, spontaneity, electrochemistry, nuclear reactions, and the chemistry of complex ions. The laboratory program extends the use of spreadsheet, graphical analysis and computer interfaced experimentation in acid-base titrations, rates of reactions, electrochemistry and volumetric analysis. A brief qualitative analysis scheme is also carried out in the laboratory program. Letter Grade Only. Degree Credit.

Units: 5

Hours/semester: 48-54 Lecture; 96-108 Lab; 96-108 Homework

Prerequisites: CHEM 210 or equivalent

Recommended: Eligibility for ENGL 100.

AA/AS Degree Requirements: Area B1, B3

Transfer Credit: CSU (CSU GE Area B1, B3), UC (IGETC Area 5A, 5C)

C-ID: CHEM 120S (both CHEM 210 & 220 must be taken)

CHEM 231 ORGANIC CHEMISTRY I

Introduction to the chemistry of hydrocarbons with emphasis on structure and reactivity of alkanes, alkenes, alkynes, alkyl halides, and conjugated systems. Mechanisms, stereochemistry and spectroscopy are an integral part of the course. Basic synthesis, separation, purification and spectroscopic techniques are introduced in the laboratory. Designed as the first semester of a one-year organic chemistry sequence. Letter Grade Only. Degree Credit.

Units: 5

Hours/semester: 48-54 Lecture; 96-108 Lab; 96-108 Homework

Prerequisites: CHEM 220

Recommended: Eligibility for ENGL 100.

AA/AS Degree Requirements: Area B1, B3

Transfer Credit: CSU (CSU GE Area B1, B3), UC (IGETC Area 5A, 5C)

C-ID: CHEM 150; CHEM 160S (both CHEM 231 + 232)

CHEM 232 ORGANIC CHEMISTRY II

This course is a continuation of CHEM 231. It introduces the chemistry of aromatic compounds, aldehydes, ketones, carboxylic acids, carbohydrates, lipids, amino acids and proteins with emphasis on synthesis and reaction mechanisms. Laboratory work emphasizes techniques for the synthesis, purification and identification of organic compounds by spectroscopic methods. Letter Grade Only. Degree Credit.

Units: 5

Hours/semester: 48-54 Lecture; 96-108 Lab; 96-108 Homework

Prerequisites: CHEM 231

AA/AS Degree Requirements: Area B1, B3

Transfer Credit: CSU (CSU GE Area B1, B3), UC (IGETC Area 5A, 5C)

C-ID: CHEM 160S (both CHEM 231 + 232)

CHEM 410 CHEMISTRY FOR HEALTH SCIENCES

A survey of basic concepts in general, organic and biological chemistry relevant to the allied health science fields including nursing, radiological technology, respiratory therapy, etc. Letter Grade Only. Degree Credit.

Units: 4

Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework

Prerequisites: MATH 110 or equivalent

AA/AS Degree Requirements: Area B1, B3

CHEM 695 INDEPENDENT STUDY

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3

Hours/semester: 24-162 Lab
Communication Studies

COMM 110 PUBLIC SPEAKING
Provides a practical and theoretical introduction to the fundamental principles of public speaking through an audience-centered approach, and a forum for practicing public speaking skills. Students discover, develop, and criticize ideas in public discourse through research, reasoning, organization, composition, presentation, and evaluation of various types of speeches, including informative and persuasive speeches. Critical thinking & listening skills are realized through speaker and audience analysis. Speeches are delivered in both impromptu (spontaneous) and extemporaneous (prepared) modes. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A1
Transfer Credit: CSU (CSU GE Area A1), UC (IGETC Area 1C)
C-ID: COMM 110

COMM 127 ARGUMENTATION AND DEBATE
Methods of critical inquiry and advocacy. Identifying fallacies in reasoning and language, testing evidence and evidence sources, advancing a reasoned position, and defending and refuting arguments. Includes researching and analyzing significant social issues, propositions, political issues, presentations, evaluations of oral and written arguments, and evidence through written and oral discourse. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A1
Transfer Credit: CSU (CSU GE Area A1), UC (IGETC Area 1C)
C-ID: COMM 120

COMM 130 INTERPERSONAL COMMUNICATION
Introduction to various forms of interpersonal communication within relationships in personal and professional contexts, with an emphasis on both verbal and nonverbal communication. Focus on theoretical and practical considerations of behaviors which facilitate or block successful private discourse, and the role interpersonal communication plays in the formation and maintenance of identity. Class presentations are required. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A1
Transfer Credit: CSU (CSU GE Area A1), UC (IGETC Area 1C)
C-ID: COMM 130

COMM 140 SMALL GROUP COMMUNICATION
Explores current principles and theories of various types of group communication, examining group development, groups tasks and roles, group processes, and the role of collaboration in critical thinking. Students interact in a variety of group projects, exploring their role within groups, leadership, diversity in groups, problem solving, conflict management and decision making. Oral presentations are required. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A1
Transfer Credit: CSU (CSU GE Area A1), UC (IGETC Area 1C)
C-ID: COMM 140

COMM 150 INTERCULTURAL COMMUNICATION
Examines theory and knowledge of effective communication within and between cultures. Provides for the development of a more global communication perspective and greater appreciation of other cultures through increased awareness of, and sensitivity to different cultural viewpoints influenced by variables including language, verbal and nonverbal communication, and cultural values. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: COMM 150

COMM 180 INTRODUCTION TO COMMUNICATION STUDIES
A survey of the discipline of communication studies with emphasis on multiple epistemological, theoretical, and methodological issues relevant to the systematic
inquiry and pursuit of knowledge about human communication. This course explores the basic history, assumptions, principles, processes, variables, methods, and specializations of human communication. **Letter Grade Only.**

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** DSI

**Transfer Credit:** CSU (CSU GE DSI), UC (IGETC Area 4)

**C-ID:** COMM 180

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**COMM 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. **Grade Option (Letter Grade or Pass/No Pass).**

**Units:** 0.5 - 3

**Hours/semester:** 24-162 Lab

**Transfer Credit:** CSU

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**Computer Business Office Technology**

**CBOT 415 BEGINNING COMPUTER KEYBOARDING**

This course is an overview of correct keyboarding techniques using the alphabetic, numeric keys, and numeric keypad on the computer. Computer software is used to aid in developing a minimum keyboarding speed of 20 words per minute. **Grade Option (Letter Grade or Pass/No Pass).**

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 48-54 Homework

**Transfer Credit:** CSU

**C-ID:** BSOT 110 X

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**CBOT 417 SKILL BUILDING**

This course provides individualized skill-building instruction designed to develop speed, proper techniques, and accuracy in touch typing by using software with a diagnostic component to analyze each student's misstrokes and prescribe individualized remediation drills. Students apply their keyboarding skills to business-related documents. **Pass/No Pass Only.**

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 48-54 Homework

**Prerequisites:** Completion of, or concurrent enrollment in, CBOT 415 or equivalent.

**Transfer Credit:** CSU

**C-ID:** BSOT 120 X

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**CBOT 432 INTRODUCTION TO COMPUTER APPLICATIONS**

Introduction to critical skills and concepts of file management, word processing, spreadsheets, database management, and presentation software. Learn to navigate Windows, manage files and folders, create and format documents, create and format spreadsheets, use essential functions and formulas, design and build simple databases to organize information, and integrate files between applications. **Grade Option (Letter Grade or Pass/No Pass).**

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Transfer Credit:** CSU

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**CBOT 435 SPREADSHEETS**

Students plan and build worksheets using formulas and functions to solve business problems. The course covers formatting, creating formulas, including nested formulas, applying mixed, relative and absolute references, building charts, using multiple worksheets, solver, data tables, using and analyzing list data, using What-If Analysis, scenario management, and managing workbooks. **Grade Option (Letter Grade or Pass/No Pass).**

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Transfer Credit:** CSU

**C-ID:** BSOT 112 X; BSOT 122 X

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**CBOT 448 USING MICROSOFT WINDOWS**

Students learn the Windows operating system, and work with programs and file management. The course includes how to manage files and folders, maintain the computer, manage hardware, and customize Windows. **Grade Option (Letter Grade or Pass/No Pass).**

**Units:** 1.5
CBOT 457 USING POWERPOINT IN BUSINESS
Learn to create and edit presentations; insert pictures, charts, tables, and SmartArt Graphics; create and customize themes; prepare for slide show delivery; customize images; use Slide Master; work with advanced animation, hyperlinks, and action buttons; and integrate contents from other sources. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 2
Hours/semester: 32-36 Lecture; 64-72 Homework
Transfer Credit: CSU

CBOT 470 ADVANCED SPREADSHEETS
Provides instruction in the application of spreadsheet functions such as pivot tables, forms, macros, and advanced functions for business applications. Additional instruction in the use of specialized text and database functions. Other topics include the use of templates, managing workbook changes, and comparing and merging workbooks. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1.5
Hours/semester: 24-27 Lecture; 48-54 Homework
Recommended: CBOT 435
Transfer Credit: CSU

CBOT 472 BEGINNING WORD PROCESSING
Covers the basic Word skills of creating, editing, and formatting documents; working with reports and multi-page documents; using tables, columns, and graphics; using templates and Mail Merge; and using custom styles and Building Blocks. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1.5
Hours/semester: 24-27 Lecture; 48-54 Homework
Transfer Credit: CSU

CBOT 474 INTERMEDIATE WORD PROCESSING
Work with tables, pictures and shapes; edit and review documents using comments and track changes; learn how to integrate other office applications with Word; use mail merge, templates, and macros; use content controls to create forms; master documents, and desktop publishing and graphics features. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

CBOT 475 USING OUTLOOK
Students learn Outlook, a personal information management program that helps organize a wide range of tasks within an office environment. Includes sending and receiving messages and managing the Inbox, scheduling appointments and meetings using the Calendar, creating and managing tasks and journal entries using Outlook with other Office applications and using Outlook with the Internet. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1.5
Hours/semester: 24-27 Lecture; 48-54 Homework
Transfer Credit: CSU
C-ID: BSOT 106 X

CBOT 476 ADOBE ACROBAT
Learn to create, convert, store, and transport documents from various software programs using Adobe Acrobat. The course covers Adobe Reader, security and password protection, consolidation of PDF files into one Adobe PDF file, application of final edits and modifications to enhance those files. Also, learn to create online documents and interactive forms. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1.5
Hours/semester: 24-27 Lecture; 48-54 Homework
Recommended: Working knowledge of using a computer and its operating system.
Transfer Credit: CSU

CBOT 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
CIS 118 INTRODUCTION TO COMPUTER SCIENCE
Introduction to computer hardware and the programming commands to control them. Topics include: hardware, operating systems and the software development life cycle which includes design, development, documentation, the importance of review, principles of testing and maintenance; algorithm development, procedural and structured programming with C/C++; data types, variables, expressions, selection and repetition structures, functions passing by value and reference, recursion, all about arrays, file input and output (I/O), error handling, and classes. This course gives students basic computer science concepts and skills. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100. CIS 118
Transfer Credit: CSU, UC
C-ID: COMP 112

CIS 122 INTRODUCTION TO PROGRAMMING: PYTHON
Designed to teach computer programming with an introduction to Python Programming in interesting, relevant, and practical contexts. Focus is on hands-on Python programming skills, problem-solving using algorithmic thinking, abstraction, implementing an algorithm to executable code, debugging and testing software programs. Fundamental programming constructs such as variables, data types, selection, iteration, functions, data structures, file I/O, OOP and other core concepts are covered. Applications focus on computational techniques to understand data analysis, basic encryption algorithms, matrix manipulation, sorting and searching algorithms, basic game design, and more. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for MATH 110. Eligibility for ENGL 100. CIS 118
Transfer Credit: CSU, UC
C-ID: COMP 112

CIS 242 COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE
Covers the basics of integrated circuit technology, digital logic gates and circuit design, computer organization and industry standard computer architecture (ISA), microcode, number systems and data representation, machine languages, assembly languages and programming, operating systems, high-level languages and programming, and the application abstraction levels. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100. CIS 118
Transfer Credit: CSU, UC
C-ID: COMP 142

CIS 250 INTRODUCTION TO OBJECT ORIENTED PROGRAMMING: C++
Introduction to programming and software engineering for computer science majors and computer professionals. A systematic approach to the design, implementation, and management of robust C++ computer programs. Course emphasizes topics such as Object Oriented programming design, templates, big O, trees, programming documentation, testing and debugging techniques. This course conforms to the ACM CS1 standards. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100. CIS 118 and MATH 120 or MATH 123 (offered at CSM or Skyline)
Transfer Credit: CSU, UC
C-ID: COMP 122

CIS 252 INTRODUCTION TO DATA STRUCTURES - C++
Design and implementation of larger projects using object-oriented software engineering principles with emphasis on definition and use of data structures including: arrays, stacks, queues, linked lists, trees, hash tables, dictionaries, sets and graphs. Standard methods are used for sorting, searching and analyzing the relative efficiency of algorithms (Big-O notation). This course conforms to the ACM CS2 standards. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100. CIS 250
COURSE DESCRIPTIONS

Transfer Credit: CSU, UC  
C-ID: COMP 132

CIS 262 DISCRETE MATHEMATICS FOR COMPUTER SCIENCE
Covers topics in discrete mathematics with emphasis on computer science applications. Includes algorithms, Master's theorem, base and number representation, logic, sets and category theory, relations, functions, induction, recursion, Boolean algebra and digital circuits, combinatorics, Pascal's Identity, permutations and combinations, counting, probability, Bayes' Theorem, Statistics, algebraic structures, Binomial theorem, directed and undirected graphs, elementary number theory, discrete probability, proof techniques, induction, pigeonhole principle, sequences, Fibonacci numbers and computational complexity. Letter Grade Only. Degree Credit.  
Units: 3  
Hours/semester: 48-54 Lecture; 96-108 Homework  
Prerequisites: CIS 250 or CIS 284 and MATH 120 or MATH 123 (offered at CSM or Skyline) with a grade of C or better, or appropriate score on the College Placement Test or other multiple measures assessment.

AA/AS Degree Requirements: Math Competency  
Transfer Credit: CSU, UC  
C-ID: COMP 152

CIS 284 INTRODUCTION TO OBJECT ORIENTED PROGRAMMING- JAVA
Introduction to programming and software engineering for computer science majors and computer professionals. A systematic approach to the design, implementation, and management of robust Java computer programs. Course emphasizes object oriented programming design, programming documentation, testing and debugging techniques. This course conforms to the ACM CS1 standards. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.  
Units: 3  
Hours/semester: 48-54 Lecture; 96-108 Homework  
Prerequisites: CIS 284 or equivalent experience programming in JAVA.  
Recommended: Eligibility for ENGL 100.  
Transfer Credit: CSU, UC  
C-ID: COMP 122

CIS 286 INTRODUCTION TO DATA STRUCTURES - JAVA
Design and implementation of larger projects using object-oriented software engineering principles with emphasis on definition and use of data structures including arrays, stacks, queues, linked lists, n-trees, binary trees, hash tables, dictionaries, sets and graphs using JAVA. Standard methods are used for sorting, searching, analyzing the relative efficiency of algorithms (Big-O notation) and recursion. This course conforms to the ACM CS2 standards. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.  
Units: 3  
Hours/semester: 48-54 Lecture; 96-108 Homework  
Prerequisites: CIS 284 or equivalent experience programming in JAVA.  
Recommended: Eligibility for ENGL 100.  
Transfer Credit: CSU, UC  
C-ID: COMP 132

CIS 294 INTRODUCTION TO OBJECT ORIENTED PROGRAMMING: SWIFT
Introduction to programming and software engineering for computer science majors and computer professionals. A systematic approach to the design, implementation, and management of robust Swift computer programs. Course emphasizes Object Oriented programming design, programming documentation, testing and debugging techniques. This course conforms to the ACM CS1 standards. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.  
Units: 3  
Hours/semester: 48-54 Lecture; 96-108 Homework  
Recommended: Eligibility for ENGL 100. CIS 118  
Transfer Credit: CSU, UC

CIS 295 INTRODUCTION TO CLOUD COMPUTING
An introduction to Amazon Web Services (AWS) and cloud computing, which shift information systems from physical infrastructure to the internet. Explains how to evaluate business and technical benefits of AWS and cloud computing and cloud applications. Includes an analysis of storage, servers, and software applications, as well as a discussion of job opportunities. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.  
Units: 3  
Hours/semester: 48-54 Lecture; 96-108 Homework  
Recommended: Eligibility for ENGL 100.  
Transfer Credit: CSU

CIS 296 DATABASE ESSENTIALS IN THE CLOUD
Amazon Web Services (AWS) and cloud database management, which support multiple data storage options.
Definitions, operations, and scaling of SQL (Structured Query Language) and noSQL data storage. Considers factors to balance and design data storage. Principles are applied by performing exercises using both relational and non-relational database approaches. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*  
**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU

**CIS 297 AMAZON WEB SERVICES (AWS) AND CLOUD COMPUTE ENGINES**

Explore how Amazon Web Services (AWS) and other cloud computing systems are built using a common set of core technologies, algorithms, and design principles centered around distributed systems. Students use various cloud platforms to provision, load-balance and scale their applications. The course discusses, from a developer perspective, the most important reasons for using Amazon Web Services (AWS) and other cloud computing services and examines the underlying design principles of scalable cloud applications. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*  
**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Corequisites:** Completion of, or concurrent enrollment in, CIS 284  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU, UC

**CIS 298 AMAZON WEB SERVICES (AWS) AND CLOUD SECURITY**

Protection of the confidentiality, integrity and availability of computing systems and data. Uses of redundant and layered controls, continuous validation and testing, and automation to ensure that the Amazon Web Services (AWS) and cloud infrastructures are continuously monitored and protected. Examination of shared responsibility models. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*  
**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Prerequisites:** CIS 295  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU

**CIS 321 IPHONE PROGRAMMING: SWIFT**

Introduction to programming the iPhone or iPad, introduction to programming concepts, variables, assignments, selection, repetition, functions, object-oriented classes with their outlets and actions, Swift syntax, CocoaTouch environment, XCode IDE and the iPhone SDK to write original GUI programs for the iPhone, iPod Touch or iPad. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*  
**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU

**CIS 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*  
**Units:** 0.5 - 3  
**Hours/semester:** 24-162 Lab  
**Transfer Credit:** CSU

**Cooperative Education**

**COOP 670 COOPERATIVE EDUCATION/WORK EXPERIENCE**

Students may receive credit for work experience related to their major field or to their established career goal. Students must attend one orientation which is offered the first three weeks of each semester. Each unit requires 75 hours per unit for paid work and 60 hours per unit for unpaid work during the semester. May be repeated for credit up to 16 units. The unit limitation applies to any Cooperative Education Work Experience (any combination of 670, 671 and/or 672 courses) offered within the SMCCCD. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*  
**Units:** 1 - 4  
**Hours/semester:** 1-3 Lab; 75-300 Work Experience; 60-240 Field Experience
COURSE DESCRIPTIONS

Transfer Credit: CSU

Dance

DANC 100 DANCE APPRECIATION
An overview of dance history, beginning with classical era, folk and ethnic dance. This course surveys the development of Modern, Ballet, Jazz and other dance forms through video analysis. NOTE: This course is not activity-based and is not applicable to the specific area requirement in Physical Education for the Associate Degree. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

DANC 115.1 MEXICAN FOLKLORIC DANCE I
Beginning level of the cultural dances of México. Students learn the skills of dance while improving their technique, poise, self-confidence and creative ability as well as deepening their understanding of and appreciation for the rich and colorful heritage that each dance represents. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 115.2 MEXICAN FOLKLORIC DANCE II
Continuation of DANC 115.1. Covers the Intermediate level of the cultural dances of México. Students learn the skills of dance while improving their technique, poise, self-confidence and creative ability as well as deepening their understanding of and appreciation for the rich and colorful heritage that each dance represents. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 115.1 or demonstrated skill.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 115.3 MEXICAN FOLKLORIC DANCE III
Continuation of DANC 115.2. Covers the Intermediate to advanced level of the cultural dances of México. Students learn the skills of dance while improving their technique, poise, self-confidence and creative ability as well as deepening their understanding of and appreciation for the rich and colorful heritage that each dance represents. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 115.2 or demonstrated skill.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 115.4 MEXICAN FOLKLORIC DANCE IV
Continuation of DANC 115.3. Covers the Advanced level of the cultural dances of México. Students learn the skills of dance while improving their technique, poise, self-confidence and creative ability as well as deepening their understanding of and appreciation for the rich and colorful heritage that each dance represents. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 115.3 or demonstrated skill.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 117.1 TAP DANCE I
This course covers beginning tap dance technique, tap vocabulary, dance combinations and rhythmic patterns while developing musicality and basic performance skills. Opportunities are available to perform, in order to better appreciate tap dance. Choreography and improvisational group projects/presentations are developed over the course of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 117.2 TAP DANCE II
Continuation of DANC 117.1. This course covers intermediate tap dance technique, tap vocabulary, dance combinations and rhythmic patterns while developing musicality and basic performance skills. Opportunities are available to perform, in order to better appreciate tap dance. Choreography and improvisational group projects/presentations are developed over the course of the
DANC 117.3 TAP DANCE III
Continuation of DANC 117.2. This course covers intermediate to advanced tap dance technique, tap vocabulary, dance combinations and rhythmic patterns while developing musicality and basic performance skills. Opportunities are available to perform, in order to better appreciate tap dance. Choreography and improvisational group projects/presentations are developed over the course of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 117.1 or demonstrated skill level.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 117.4 TAP DANCE IV
Continuation of DANC 117.3. This course covers advanced tap dance technique, tap vocabulary, dance combinations and rhythmic patterns while developing musicality and basic performance skills. Opportunities are available to perform, in order to better appreciate tap dance. Choreography and improvisational group projects/presentations are developed over the course of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 117.2 or demonstrated skill level.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 121.1 CONTEMPORARY MODERN DANCE I
Beginning level instruction in the Contemporary Modern Dance style, including warm-up and floor movement with an emphasis on proper techniques, creativity, style and self expression. Students learn short dance phrases and will be expected to choreograph and perform a modern dance by the end of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 117 or DANC 117.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 121.2 CONTEMPORARY MODERN DANCE II
Intermediate level instruction in the Contemporary Modern Dance style, including warm-up and floor movement with an emphasis on proper techniques, creativity, style and self expression. Students learn short dance phrases and are expected to choreograph and perform a modern dance by the end of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 121 or DANC 121.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 121.3 CONTEMPORARY MODERN DANCE III
Advanced intermediate level instruction in the Contemporary Modern Dance style, including warm-up and floor movement with an emphasis on proper techniques, creativity, style and self expression. Students learn short dance phrases and are expected to choreograph and perform a modern dance by the end of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 121.2
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 121.4 CONTEMPORARY MODERN DANCE IV
Advanced level instruction in the Contemporary Modern Dance style, including warm-up and floor movement with an emphasis on proper techniques, creativity, style and self expression. Students learn short dance phrases and are expected to choreograph and perform a modern dance by the end of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
**Prerequisites:** DANC 121.3

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 125.1 SALSA I**

Beginning techniques of partner salsa dancing. Proper body placement, lead and follow techniques, and stylization applied to dance patterns. Shine steps are covered. Dance etiquette and rhythm of salsa music covered. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1

**Hours/semester:** 48-54 Lab

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 125.2 SALSA II**

Continuation of DANC 125.1. A thorough review of Salsa I is provided. Intermediate salsa patterns including more complex turns, patterns, and shines are introduced. Greater emphasis on the development of dance stylization, timing, and safety. Student choreography and presentation is encouraged. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1

**Hours/semester:** 48-54 Lab

**Prerequisites:** DANC 125.1 or demonstrated skill.

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 125.3 SALSA III**

Continuation of DANC 125.2. Includes a quick review of DANC 125.1 and a thorough review of DANC 125.2. More complex patterns are demonstrated and practiced, with emphasis on dance pattern design at the Intermediate/Advanced level. Student choreography and "learning by teaching" is required. Includes emphasis on partner dancing safety and core body awareness, and improving balance, strength, and flexibility in preparation for advanced patterns and stage performance. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1

**Hours/semester:** 48-54 Lab

**Prerequisites:** DANC 125.2 or demonstrated ability.

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 125.4 SALSA IV**

Continuation of DANC 125.3. Designed for the advanced student who has already demonstrated Intermediate/Advanced ability in lead/follow technique, dance pattern complexity, and proper timing. Longer and more difficult dance combinations are covered without introduction or emphasis of the basics. Choreography of intermediate/advanced shines and partner patterns required. Student learning by teaching required. Performance required. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1

**Hours/semester:** 48-54 Lab

**Prerequisites:** DANC 125.3 or demonstrated ability.

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 130.1 JAZZ DANCE I**

Covers various movement forms with an emphasis on rhythm, style and proper techniques. Students learn a variety of jazz phrases and are expected to choreograph and perform a jazz dance at the introductory level by the end of the semester. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1

**Hours/semester:** 48-54 Lab

**Prerequisites:** DANC 130.1

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 130.2 JAZZ DANCE II**

Continuation of DANC 130.1. This course covers various movement forms with an emphasis on rhythm, style and proper techniques. Students learn a variety of jazz phrases and are expected to choreograph and perform a jazz dance at the intermediate level by the end of the semester. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1

**Hours/semester:** 48-54 Lab

**Prerequisites:** DANC 130.1

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 130.3 JAZZ DANCE III**

Continuation of DANC 130.2. This course covers various movement forms with an emphasis on rhythm, style and proper techniques. Students learn a variety of jazz phrases and are expected to choreograph and perform a jazz dance at the advanced intermediate level by the end of the
semesters. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 130.2  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 130.4 JAZZ DANCE IV**  
Continuation of DANC 130.3. This course covers various movement forms with an emphasis on rhythm, style and proper techniques. Students learn a variety of jazz phrases and are expected to choreograph and perform a jazz dance at the advanced level by the end of the semester. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 130.3  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 140.1 BALLET I**  
Beginning barre, floor technique and movement fundamentals with emphasis on body control, form and special patterns. Students learn a variety of dance phrases and are expected to perform a ballet dance at the end of the semester. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 140.2 BALLET II**  
Intermediate barre, floor technique and movement fundamentals with emphasis on body control, form and special patterns. Students learn a variety of dance phrases and are expected to perform a ballet dance at the end of the semester. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 140.1  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 140.3 BALLET III**  
Advanced intermediate barre, floor technique and movement fundamentals with emphasis on body control, form and special patterns. Students learn a variety of dance phrases and are expected to perform a ballet dance at the end of the semester. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 140.2  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 140.4 BALLET IV**  
Advanced barre, floor technique and movement fundamentals with emphasis on body control, form and special patterns. Students learn a variety of dance phrases and are expected to perform a ballet dance at the end of the semester. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 140.3  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 150.1 HIP HOP I**  
Provides students with beginning practical experience in current hip-hop dance trends and techniques. The class covers terminology and a brief history of hip-hop dance. Students learn and perform beginning hip-hop dance steps. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 150.2 HIP HOP II**  
Continuation of DANC 150.1. Intermediate dance techniques and movement which include direction and rhythmic changes. Limited student choreography which includes a variety of intermediate hip-hop phrases is also included. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1  
**Hours/semester:** 48-54 Lab
Prerequisites: DANC 150.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 150.3 HIP HOP LLL
Continuation of DANC 150.2. Intermediate/advanced dance techniques, routines and group presentations. Emphasis on individual student and group choreography. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 150.2
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 150.4 HIP HOP LV
Continuation of DANC 150.3. Advanced dance techniques, and movement which include level changes, rhythmic and direction changes. Choreography and improvisational group projects/presentations which include exploring performance aspect of hip-hop dance. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 150.3
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 151.1 SOCIAL DANCE I
The basic steps of social ballroom dances are covered. Basic dance vocabulary, technique, body placement, and the relationships between music, rhythm and the dances are emphasized throughout the course. Students are instructed in lead and follow techniques and dance etiquette. The basic patterns of the following social ballroom dances are taught: Waltz, East Coast Swing, Cha Cha Cha, Rumba, Foxtrot, Merengue and Tango. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 151.2 SOCIAL DANCE II
Continuation of DANC 151.1. Refines the basic skills of social ballroom dances. Emphasis is given to lead and follow, various techniques, complex steps, varied rhythm and certain dance style. Intermediate level social dance figures are introduced in the following dances: Waltz, East Coast Swing, Cha Cha Cha, Rumba, Foxtrot, Merengue and American Tango. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 151.1 or demonstrated skill.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 151.3 SOCIAL DANCE III
Continuation of DANC 151.2. Refines the intermediate skills of social ballroom dances. Emphasis is given to lead and follow, various techniques, complex steps, varied rhythm and certain dance style. Intermediate/Advanced level social dance figures are introduced in the following dances: Waltz, East Coast Swing, Cha Cha Cha, Rumba, Foxtrot, and American Tango. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 151.2 or demonstrated skill.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 151.4 SOCIAL DANCE IV
Continuation of DANC 151.3. Refines the intermediate/advanced skills of social ballroom dances. Longer and more difficult dance combinations are covered without introduction of, or emphasis on the basics. Specific emphasis is given to the dance style and technique of each dance. Advanced level social dance figures are introduced in the following dances: Waltz, East Coast Swing, Cha Cha Cha, Rumba, Foxtrot, Merengue and American Tango. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: DANC 151.3 or demonstrated skill.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC

DANC 161.1 TANGO ARGENTINO I
This course is designed to introduce students to the essence of beginning level Argentine Tango (the dance of love) as well as basic improvisational skills. Viewing tango as
a language, students develop musicality and focus on the connection between partners in order to dance confidently in social settings around the world. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 161.2 TANGO ARGENTINO II**

Continuation of DANC 161.1. This course is designed to introduce students to the essence of intermediate level Argentine Tango (the dance of love) as well as basic improvisational skills. Viewing tango as a language, students develop musically and focus on the connection between partners in order to dance confidently in social settings around the world. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 161.1 or demonstrated skill level.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 161.3 TANGO ARGENTINO III**

Continuation of DANC 161.2. This course is designed to introduce students to the essence of advanced level Argentine Tango (the dance of love) as well as basic improvisational skills. Viewing tango as a language, students develop musically and focus on the connection between partners in order to dance confidently in social settings around the world. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 161.2 or demonstrated skill level.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 161.4 TANGO ARGENTINO IV**

Continuation of DANC 161.3. This course is designed to introduce students to the essence of expert level Argentine Tango (the dance of love) as well as basic improvisational skills. Viewing tango as a language, students develop musically and focus on the connection between partners in order to dance confidently in social settings around the world. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 161.3 or demonstrated skill level.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 350.1 CARDIO DANCE I**

Beginning level steps, stretches, and toning exercises choreographed to Latin, hip hop, jazz, ballet, modern, popular, and contemporary dance rhythms. Designed to increase cardiovascular health while learning dance movements in a non-competitive environment. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 350.2 CARDIO DANCE II**

Continuation of DANC 350.1. Intermediate level steps, stretches, and toning exercises choreographed to Latin, hip hop, jazz, ballet, modern, popular, and contemporary dance rhythms. Designed to increase cardiovascular health while learning dance movements in a non-competitive environment. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 350.1  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 350.3 CARDIO DANCE III**

Continuation of DANC 350.2. Advanced intermediate level steps, stretches, and toning exercises choreographed to Latin, hip hop, jazz, ballet, modern, popular, and contemporary dance rhythms. Designed to increase cardiovascular health while learning dance movements in a non-competitive environment. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 350.2  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

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**DANC 350.4 CARDIO DANCE IV**

Continuation of DANC 350.3. Advanced level steps, stretches, and toning exercises choreographed to Latin, hip hop, jazz, ballet, modern, popular, and contemporary dance rhythms. Designed to increase cardiovascular health while learning dance movements in a non-competitive environment. **Grade Option (Letter Grade or Pass/No Pass)**. **Degree Credit**.

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** DANC 350.3  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 391 DANCE COMPOSITION - THEORY AND CHOREOGRAPHY**

Provides the student with basic skills and knowledge of the choreographic principles. Through discussion and practical experience, the students develop a basic understanding of dance as a performing art form. Study of basic dance choreography to include construction of a phrase, structure and form in a composition, and the basic elements of time, space and energy. **Grade Option (Letter Grade or Pass/No Pass)**. **Degree Credit**.

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Transfer Credit:** CSU, UC

**DANC 400.1 DANCE PERFORMANCE AND PRODUCTION I**

Beginning level theory and practice in dance composition, evaluation and program production. Students become familiar with all types of choreography principles and stage production. Includes emphasis on a variety of dance forms from traditional Western European to ethnic. **Grade Option (Letter Grade or Pass/No Pass)**. **Degree Credit**.

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 400.2 DANCE PERFORMANCE AND PRODUCTION II**

Intermediate level theory and practice in dance composition, evaluation and program production. Students become familiar with all types of choreography principles and stage production. Includes emphasis on a variety of dance forms from traditional Western European to ethnic. **Grade Option (Letter Grade or Pass/No Pass)**. **Degree Credit**.

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC

**DANC 672 COOPERATIVE EDUCATION: INTERNSHIP**

Supervised internship in cooperation with private or public sector employers. Designed to apply knowledge and learn new skills, directly related to the student's program of study, outside of the normal classroom environment. Students must attend one orientation which is offered the first three weeks of each semester. Each unit requires 60 hours per unit for unpaid work or 75 hours per unit for paid work during the semester. May be repeated for credit up to 16 units. The unit limitation applies to any Cooperative

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Education Work Experience (any combination of 670, 671 and/or 672 courses) offered within the SMCCCD. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1 - 3  
**Hours/semester:** 75-225 Work Experience; 60-180 Field Experience  
**Prerequisites:** A minimum of 12 completed units in the occupational discipline.  
**Transfer Credit:** CSU

### DAN C 695 INDEPENDENT STUDY

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 0.5 - 3  
**Hours/semester:** 24-162 Lab  
**Transfer Credit:** CSU, UC

### Digital Art and Animation

#### MART 314 INTRODUCTION TO COMPUTER GRAPHICS

State of the art computer graphics software are introduced with respect to print, web and motion graphics. Introduction to typography, graphic layout/design fundamentals, web interface design and animation/motion principles and other computer graphics software applications. Following a fine arts approach students generate their own creative content for print and/or electronic publication. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework  
**Transfer Credit:** CSU, UC

#### MART 325 DIGITAL PAINTING

Using digital painting software and drawing tablets, students use digital tools for the artistic expression of the concepts and techniques of traditional painting. Some painting and computer knowledge desirable. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 48-54 TBA; 48-54 Homework  
**Transfer Credit:** CSU

#### MART 362 INTRODUCTION TO DIGITAL PHOTOGRAPHY

An introduction to the theory and technology of digital photography. Exploration of the digital camera in both professional and consumer use. Techniques of taking a photograph, types of storage, transferring of images, image editing, and optimizing final output will be evaluated. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework  
**Transfer Credit:** CSU, UC

#### MART 363 ADVANCED DIGITAL PHOTOGRAPHY

Intermediate to advanced photographic techniques covering the complete cycle of production from image setup to output. Emphasis is placed on developing skills in creating digital photographic imagery for creative and professional expression through a mixture of exercises, lecture, and demonstration. Topics include advanced camera skills, composition, color management, Lightroom and other asset management systems. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework  
**Recommended:** MART 362 or previous experience with raster image editing software (Photoshop or equivalent)  
**Transfer Credit:** CSU, UC

#### MART 366 COLOR MANAGEMENT AND THEORY

Create a successful color management workflow from digital image to digital print. Understand and use color, calibration, and create profiles to get the desired color output. Topics include pre-press file management, RGB to 4-color ink, paper, output, proofing, and industry standards. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework  
**Recommended:** MART 376 is strongly recommended.
MART 371 USER INTERFACE/USER EXPERIENCE DESIGN
Covers the fundamentals of user-centered interface design concepts and practices for web, mobile devices, and other applications. Students gain an understanding of how users interact with an interface and are introduced to the concepts of usability, interface associations and aesthetics, and the user experience. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Transfer Credit: CSU

MART 372 DIGITAL ILLUSTRATION
Using Adobe Illustrator and other digital design software students will develop strategies for content development, visual cohesiveness and graphic production techniques. Topics include design, layout, typography, and color principles, vector graphics versus raster graphics and project preparation for print. The student will create projects ranging from promotional posters and business cards, to bottle labels and restaurant menus. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Transfer Credit: CSU

MART 374 UX RESEARCH METHODS
Introduction to the essentials of user experience (UX) research. This class teaches the basics of user experience research methodology, planning, and execution with industry-standard tools, including docs, spreadsheets, study administering and data gathering software, prototypes, and presentation slides. Practical application of skills learned to inform product development and UX design are also covered. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Transfer Credit: CSU, UC

MART 376 INTRODUCTION TO DIGITAL IMAGING
An introduction to the theory and technology of digital imaging, this project based course includes assignments covering specific concepts as well as allowing the student creativity to explore the topic and software. Students work with digital images using digital manipulation and image correction tools software such as Adobe Photoshop® to create digital photographs and imagery. Students’ images become part of a basic portfolio. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Transfer Credit: CSU, UC

MART 378 DIGITAL PAGE LAYOUT
An introductory course in page layout for graphic design for both print and electronic publication. Through projects and assignments, students integrate sound design principles and digital software skills in the creation of multiple page documents. Both Macintosh and Windows environments are supported. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Transfer Credit: CSU

MART 379 INTRODUCTION TO DIGITAL ANIMATION
A project-based course in which both traditional and digital animation techniques such as storyboarding and frame-by-frame animation are explored through the use of 2D digital animation software as a medium for the development of creative computer-based animation. Other topics included in this course deal with the implementation of successful graphic user interface solutions for web design and stand-alone applications using the scripting capabilities of the software. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Transfer Credit: CSU, UC

MART 380 ADVANCED DIGITAL ANIMATION
This course utilizes 2D digital animation software as a medium for the development and exploration of computer-based cinematic animations, advanced interactive projects...
as well as the application of basic scripting principles. The class is project-based and geared towards the creation of interactive, self-contained and optimized applications, both for a web media and offline presentations. Student projects are developed through the integration of rich media such as audio and video with interactive code and advanced animation techniques. Further independent instruction is encouraged through a wide range of sources such as internet tutorials, books and experimentation. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework

**Prerequisites:** MART 389 or equivalent

**Transfer Credit:** CSU

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**MART 385 CODING FOR DESIGNERS AND ARTISTS**

Introduction to writing scripts and code for artists and designers. Using JavaScript and ActionScript, students learn the fundamentals of coding by creating interactive animated graphics. Activities include drawing graphics, controlling animation, working with sound, and interacting with user inputs. Coding concepts covered include working with variables and arrays, writing functions, working with loops and logic, creating classes and objects, and translating between different coding languages. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework

**Transfer Credit:** CSU

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**MART 389 DIGITAL MEDIA CAREERS**

Introduction to the digital media job market and employment niches. The class describes digital media and the varied work environments including full time and contract opportunities, as well as job search techniques, resume and cover letter writing skills. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 16-18 TBA; 32-36 Homework

**Recommended:** Eligibility for ENGL 100.

**Transfer Credit:** CSU

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**MART 390 PORTFOLIO CREATION**

Portfolio creation is the culminating course for those students interested in the various Certificates of Completion, Certificates of Proficiency, and Associate of Arts Degree in Digital Art and Animation. Students develop a portfolio consisting of work accomplished to date. The portfolio may be print-based or web-based following a format appropriate with the student's career/academic goals. The students also include a résumé that is appropriate for their field of interest and learn the skills necessary to conduct a successful job interview. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 16-18 TBA; 32-36 Homework

**Prerequisites:** MART 362 or MART 372 or MART 376 or MART 379 or MART 421 or MART 422 or MART 424 or MART 432 or Instructor permission via portfolio review.

**Transfer Credit:** CSU

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**MART 392 CONTENT STRATEGY AND UX WRITING**

Introduction to the essentials of content strategy and user experience (UX) writing. This class teaches the basics of information architecture, writing for user interfaces, and content management using industry-standard tools such as docs, spreadsheets, design software, and presentation slides. Practical application of skills learned to develop content for user interfaces are also covered. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework

**Transfer Credit:** CSU, UC

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**MART 393 UX DATA VISUALIZATION**

This course provides an introduction as well as hands-on experience in data visualization for user experience (UX). It introduces students to the theory and design principles for creating meaningful displays of quantitative and qualitative data to facilitate decision-making and design modifications or choices. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework

**Transfer Credit:** CSU, UC

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**MART 394 INTERACTION DESIGN**

This course covers the essentials of interaction and visual design principles and how they are applied. Students learn how to evaluate and analyze the uses of interactive media
and understand how viewing interactive media on a variety of screen sizes and devices may impact the experience. They also learn how to apply the principles of design and usability when creating interactive content. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72

**Transfer Credit:** CSU, UC

**MART 400 MOTION GRAPHICS**

Digital integration of audio, video and motion graphics through the creation of experimental short narrative scenes. Covers preproduction and production techniques, emphasizing editing and compression methods for web or DVD delivery. Successful story-telling through the use of storyboarding, camera composition and scene sequencing techniques. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 16-18 TBA; 32-36

**Transfer Credit:** CSU

**MART 405 STORYBOARD DEVELOPMENT FOR ANIMATION AND INTERACTIVE MEDIA**

Introduction to storyboarding and the planning processes of visual storytelling. Translation of concepts such as shot types, continuity, pacing, transitions and sequencing into a visual narrative. Exploration of cinematic vocabulary and storyboard technique in the creation of both personal and professional expression. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72

**Transfer Credit:** CSU

**MART 416 DRAWING FOR ANIMATION**

Techniques and concepts of drawing for animation. Topics include 2- and 3-point perspective, anatomy (human, animal, and comparative), gesture, quick sketch, and sequential drawing. Emphasis on capturing movement and pose using line. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72

**Recommended:** Completion of MART 376 or equivalent.

**Transfer Credit:** CSU

**MART 417 PRINCIPLES OF ANIMATION**

Using paper and pencil, students learn the fundamental principles underlying all quality animation. Techniques like squash and stretch, overlap, follow-through, weight, arcs, solid dimensional drawing, and appeal are presented. Applying traditional animation skills to applications like Flash, After Effects, and Maya are also included. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 24-27 TBA; 72-81

**Transfer Credit:** CSU

**MART 418 HISTORY OF ANIMATION**

This course is a multicultural and multidisciplinary approach to the production and development of animation throughout history. Material spans the roots of animation before film technology to modern commercial and artistic animated productions. Topics include experimental and traditional animation techniques, an overview of current technologies and the aesthetics and visual styles in different genres. The history of animation is viewed through its social context and impact since its inception, through the past century to the contemporary era. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 16-18 TBA; 32-36

**Transfer Credit:** CSU, UC

**MART 420 INTRODUCTION TO 3D MODELING AND ANIMATION**

Basic concepts of 3D modeling and animation using Autodesk Maya including the production of three-dimensional computer animation and the different approaches to modeling in a 3D environment. Familiarization with both the interface and the production process of 3D animation. Texture mapping, lighting and rendering of simple animation and environments. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72

**Transfer Credit:** CSU
MART 421 ADVANCED 3D MODELING AND ANIMATION
Continuation of MART 420. Further development of concepts and techniques introduced in MART 420 to establish a solid foundation in storytelling, modeling, animation, texture creation and lighting. Rendering professional final scenes using state-of-the-art 3D animation software such as Autodesk Maya. Also covered is the production process and pipeline used in video game companies and animation studios and the final delivery of projects created for various media. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Prerequisites: MART 420 or equivalent experience
Transfer Credit: CSU

MART 422 INTRODUCTION TO RIGGING
Basic and advanced rigging techniques for 3D models using Autodesk Maya. Students explore character rigging, vertex weighting, control setup, IK/FK switching, on-screen control setup and advanced blend shape techniques. Also introduced will be MEL scripting, creating and using expressions, creating channels and setting up functionality with set driven keys. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Prerequisites: MART 420 or equivalent experience
Transfer Credit: CSU

MART 424 3D ANIMATION FUNDAMENTALS
Fundamental principles of performance animation in 3D animation software. Students will develop skills in conveying weight, understanding timing, the use of arcs in movement, and bringing anthropomorphic characters to life. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Recommended: Familiarity with 3D animation tools.
Transfer Credit: CSU

MART 425 ADVANCED 3D ANIMATION
Continuation of concepts and techniques covered in MART 424. The principles of animation are covered in depth as they apply to the 3D environment: bipedal locomotion (walks, runs, gait changes), weight, balance, and character performance. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework
Recommended: Completion of MART 424 is strongly recommended, or approval of instructor via demo reel review.
Transfer Credit: CSU

MART 431 SPECIAL EFFECTS AND COMPOSITING
Techniques for the creation of special effects through digital compositing for film and video. Merging original 2D images such as photographs or other still images generated in Photoshop or Corel Painter with 3D images created in Autodesk Maya. Different output formats and uses for these compositing techniques in diverse industries. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1.5
Hours/semester: 24-27 Lecture; 16-18 TBA; 32-36 Homework
Recommended: Prior experience in After Effects or equivalent.
Transfer Credit: CSU

MART 432 3D ENVIRONMENTS AND HARD SURFACE MODELING
Course covers the creation of 3D worlds and modeling of non-organic forms such as vehicles, surroundings, architecture and mechanical devices as well as developing the look and feel of 3D environments where characters interact. Students learn to use different reference materials and research inspirational resources when generating a world concept. Various rendering techniques and the creative presentation of final work are also covered. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1.5
Hours/semester: 24-27 Lecture; 16-18 TBA; 32-36 Homework
Recommended: MART 420 or 3D software experience.
Transfer Credit: CSU
MART 433 ADVANCED SPECIAL EFFECTS AND COMPOSITING
Continuation of the techniques presented in MART 431. Advanced techniques for the creation of special effects for film and video. Combining 2D video and animated footage with 3D footage created in commercial 3D animation software. Creating and compositing special effects through particle generation and rendering. Optimizing and outputting final footage for use in video, film, and gaming. **Letter Grade Only. Degree Credit.**

**Units:** 1.5
**Hours/semester:** 24-27 Lecture; 16-18 TBA; 32-36 Homework
**Recommended:** MART 431 or equivalent experience.
**Transfer Credit:** CSU

MART 441 INTRODUCTION TO VIDEO GAME DESIGN
Introduction to the essentials of game design using industry-standard game engine, spreadsheets, presentation slides, photo editing, 3D modeling, and reference art to convey game design ideas and specifications. Practical application of skills learned to develop games. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework
**Transfer Credit:** CSU

MART 442 HISTORY OF VIDEO GAMES
Explores the origin and history of ancient to modern games including board games, card games, arcade amusements, and video games of all kinds. Includes game companies, historic platforms, and common jargon used in the industry. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework
**Transfer Credit:** CSU

MART 443 GAME DESIGN FUNDAMENTALS
Fundamentals of game design are examined through the theories of fun, challenge, polish, responsiveness and the emotional content of making games. Students build a board or card game and develop a game design document from initial pitch through game specifications. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework
**Recommended:** MART 441
**Transfer Credit:** CSU

MART 445 3D GAME SCRIPTING
Explores using a 3D game engine for building 3D levels and creating gameplay using systematic approaches to design. Includes importing 3D assets and scripting character controllers and interactive elements. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework
**Recommended:** MART 441
**Transfer Credit:** CSU

MART 446 STORYTELLING WITH GAMES
Discussion and development of plots, character archetypes, and challenges in storytelling that provide the structure to create a unique story experience through gameplay. Examines the aesthetics of games, the designer/player contract, and the Hero’s Journey. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework
**Recommended:** MART 441
**Transfer Credit:** CSU

MART 447 3D LEVEL DESIGN
Covers artistic, functional and storytelling aspects of video game level design: prototyping, layout and simple scripting of events. Using a 3D game engine, students design and build a single player and multiplayer level. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3
**Hours/semester:** 48-54 Lecture; 32-36 TBA; 64-72 Homework
**Recommended:** MART 445
**Transfer Credit:** CSU

MART 450 COLLABORATIVE GAME PRODUCTION
Students use project management techniques to organize and communicate as game development prototype teams. Methods explored include Ad hoc, Waterfall, and Agile
techniques. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework

Recommended: MART 445

Transfer Credit: CSU

**MART 451 RAPID GAME DEVELOPMENT**

Students conceive and develop multiple games in a rapid development environment. Brainstorming, conceptualizing, and "finding the fun" of multiple game styles, polishing and adding pizzazz to the game - called JUICE. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework

Recommended: MART 445

Transfer Credit: CSU

**MART 452 ADVANCED GAME DESIGN**

In-depth exploration of enjoyable gameplay. How to use tutorials, achievements, analytics, and funnels to refine the gameplay experience based on player's experience. Designing economies and challenge ramping to avoid player burnout and turnover, and encourage engagement. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework

Recommended: MART 443

Transfer Credit: CSU

**MART 455 INDIE GAME DEVELOPMENT & ENTREPRENEURSHIP**

Freelancing and independent studios as the future of creative game design. This course covers the fundamentals of starting and operating small studios, crowdfunding, investment funding, staying compliant with state and local laws, understanding contracts, marketing, and selling projects. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 32-36 TBA; 64-72 Homework

Transfer Credit: CSU

**MART 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3

Hours/semester: 24-162 Lab

Transfer Credit: CSU

**Early Childhood Education**

**ECE. 191 CHILDREN’S LITERATURE**

An overview of the body of world literature deemed appropriate and enriching for children from infancy to adolescence. Designed to impart knowledge about and practice in storytelling techniques, as well as practical experience in presenting age-appropriate literature to children and youth. Theory and practice in discerning literary genres, criteria for selection, and techniques for using classic and contemporary literature with young people. Letter Grade Only. Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Recommended: Eligibility for ENGL 100.

AA/AS Degree Requirements: Area C2

Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)

C-ID: ENGL 180

**ECE. 201 CHILD DEVELOPMENT**

This course examines the progression of development in the physical, cognitive, social, and emotional domains and identifies developmental milestones for children from conception through adolescence. Emphasis on interactions between biological processes and environmental factors. Students observe children, evaluate individual differences, and analyze characteristics of development at various stages according to developmental theories. Letter Grade Only. Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Recommended: Eligibility for ENGL 100.
COURSE DESCRIPTIONS

AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: CDEV 100

ECE. 210 EARLY CHILDHOOD EDUCATION PRINCIPLES
This course provides the historical contexts and theoretical perspectives of developmentally appropriate practice in early care and education for children birth through age eight. Explores the typical roles and expectations of early childhood educators. Identifies professional ethics, career pathways, and professional standards. Introduces best practices for developmentally appropriate learning environments, curriculum, and effective pedagogy for young children including how play contributes to children's learning, growth, and development. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU
C-ID: ECE 120

ECE. 211 EARLY CHILDHOOD EDUCATION CURRICULUM
This course in an introduction to developmentally appropriate curriculum and environments for children birth through age eight. Students use knowledge of children's development, theories of learning and development, and examples from various models of developmentally appropriate practice to plan responsive, intentional environments and curriculum in all content areas to support children's development and learning integrated throughout indoor and outdoor settings. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU
C-ID: ECE 130

ECE. 212 CHILD, FAMILY, AND COMMUNITY
This course introduces the processes of socialization focusing on the interrelationship of family, school, and community institutions. They explore the role of collaboration between family, community, and schools in supporting children's development, birth through adolescence. And they build strategies to support children and families from socially and economically diverse backgrounds as they engage in education and social service systems. Letter Grade Only. Degree Credit.
Units: 3
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU
C-ID: CDEV 110

ECE. 213 THE SCHOOL AGE CHILD
The focus of this course is relevant and responsible program planning for before and after school child care. Also presented are the developmental needs of the child 5- to 12-years (middle childhood) and family involvement in child care and the social and economic implications, and available community resources for child care. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 223 INFANT AND TODDLER DEVELOPMENT
A study of human development from pre-conception to age three including physical, cognitive, language, social, and emotional growth and development. Applies theoretical frameworks to interpret behavior and interactions between heredity and environment. Emphasizes the role of family and relationships in development. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 225 CARE AND EDUCATION FOR INFANTS AND TODDLERS
Reviews regulations governing child-care centers, essential policies, principles and practices that lead to quality care and developmentally appropriate curriculum for children from birth to 36 months. Applies current theory and research to the care and education of infants and toddlers in group settings. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 240 ADMINISTRATION I: BUSINESS/LEGAL
Introduction to the administration of early childhood programs. Covers program types, budget, management, regulations, laws, development and implementation of policies and procedures. Examines administrative tools, philosophies, and techniques needed to organize, open, and operate an early care and education program. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: ECE. 201, ECE. 210, ECE. 211 and ECE. 212
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 241 ADMINISTRATION II: PERSONNEL AND LEADERSHIP
Effective strategies for personnel management and leadership in early care and education settings. Includes legal and ethical responsibilities, supervision techniques, professional development, and reflective practices for a diverse and inclusive early care and education program. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: ECE. 201, ECE. 210, ECE. 211 and ECE. 212
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 242 ADULT SUPERVISION AND MENTORING
This course prepares classroom teachers to mentor novice teachers while addressing the needs of children, parents, and other staff in Early Childhood Education settings. Students study principles of classroom supervision and practice mentoring and guidance strategies. Cross cultural communication is emphasized. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

Units: 2
Hours/semester: 32-36 Lecture; 64-72 Homework
Prerequisites: ECE. 201, ECE. 210, ECE. 211 and ECE. 212
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 244 CURRICULUM AND STRATEGIES FOR PREK-KINDERGARTEN
This course reviews criteria for high quality prekindergarten and transitional kindergarten experiences including foundational learning skills and the design of appropriate learning environments. Key topics include developmental, political and economic issues affecting school readiness, social and economic stressors and their affect on school readiness and success. *Letter Grade Only. Degree Credit.*

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 247 FOUNDATIONS FOR SCHOOL SUCCESS
Reviews criteria for curriculum and program planning to prepare children to transition from preschool into kindergarten/early elementary grades. Topics covered include: strategies for parent engagement; play-infused curriculum design to support development in all domains/subject areas; kindergarten expectations and curriculum alignment; current research, policies and issues. *Letter Grade Only. Degree Credit.*

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 254 TEACHING IN A DIVERSE SOCIETY
This course examines the impact of various societal influences on the development of children's personal and social identity. Content includes developmentally appropriate, inclusive, culturally relevant, and anti-bias approaches. Self-examination and reflection on issues related to social identity, stereotypes, and bias are explored. *Letter Grade Only. Degree Credit.*

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 255 MULTILINGUAL LEARNERS: LANGUAGE AND LITERACY DEVELOPMENT
Children's language and literacy acquisition focusing on the connection between language and brain development. Course covers the expressive and receptive functions
of language; theories of language acquisition; first and second language acquisition; code-switching; dual language learning support; varieties of English such as Black English Vernacular; and the revitalization of tribal languages. *Grade Option (Letter Grade or Pass/No Pass).* Degree Credit.

**Units:** 1  
**Hours/semester:** 16-18 Lecture; 32-36 Homework  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU

**ECE. 260 CHILDREN WITH SPECIAL NEEDS**

Introduces the variations in development of children with special needs ages birth through eight and the resulting impact on families. Includes an overview of historical and societal influences, laws relating to children with special needs, and the identification and referral process. *Grade Option (Letter Grade or Pass/No Pass).* Degree Credit.

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100. ECE. 201  
**Transfer Credit:** CSU

**ECE. 263 CURRICULUM AND STRATEGIES FOR CHILDREN WITH SPECIAL NEEDS**

Best practices in early childhood special education including curriculum modification and support strategies to facilitate the development of cognitive, motor, social, emotional and language development in young children (birth to 8 years of age). Examines intervention plans and interdisciplinary collaboration across both inclusive and self-contained classrooms through a family-focused culturally sensitive framework. *Grade Option (Letter Grade or Pass/No Pass).* Degree Credit.

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100. ECE. 201, ECE. 260  
**Transfer Credit:** CSU

**ECE. 271 FOUNDATIONAL CONCEPTS IN MULTILINGUAL LEARNING**

The course surveys current dual/multi language learning research and practice, foundational concepts in dual/multilingual learning, and teaching strategies that promote cognitive-linguistic competence in young children. *Grade Option (Letter Grade or Pass/No Pass).* Degree Credit.

**Units:** 1  
**Hours/semester:** 16-18 Lecture; 32-36 Homework  
**Transfer Credit:** CSU

**ECE. 273 MULTILINGUAL LEARNERS: PERSONALIZED ORAL LANGUAGE LEARNING (POLL)**

This course reviews instructional methods that support learning and development of children’s home language and literacy skills as well as English. Students study effective oral language strategies such as modifications, adaptations, enhancements in the environment, and teaching methods that ensure full access and active participation of all learners. *Grade Option (Letter Grade or Pass/No Pass).* Degree Credit.

**Units:** 1  
**Hours/semester:** 16-18 Lecture; 32-36 Homework  
**Prerequisites:** ECE. 271 or equivalent.  
**Transfer Credit:** CSU

**ECE. 275 CHILDREN’S LANGUAGE AND LITERACY DEVELOPMENT**

Explores the process of children's language acquisition, emotional development, and literacy development from a culturally sensitive and family focused framework. Highlights the teacher’s role in promoting creativity and self-expression through verbal and symbolic language that respects children’s cultural and linguistic backgrounds. *Letter Grade Only.* Degree Credit.

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU

**ECE. 280 CULTURAL HUMILITY: CULTIVATING AN EQUITY MINDSET**

The course examines the impact of values, beliefs, implicit and explicit biases on teacher interactions with culturally and linguistically diverse children and families. Concepts such as cultural humility, anti-bias, and reciprocal communication are discussed from an equity-mindset framework necessary to create quality learning environments for all children. *Letter Grade Only.* Degree Credit.

**Units:** 1  
**Hours/semester:** 16-18 Lecture; 32-36 Homework  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU
ECE. 313 HEALTH, SAFETY AND NUTRITION
Laws, regulations, standards, policies, procedures, and best practices related to health, safety, and nutrition in care and education settings for children birth through middle childhood. Includes the teacher's role in prevention strategies, nutrition and meal planning, integrating health safety and nutrition experiences into daily routines, and overall risk management. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU
C-ID: ECE 220

ECE. 333 OBSERVATION AND ASSESSMENT OF YOUNG CHILDREN
This course introduces the appropriate use of assessment and observation tools as well as strategies to document young children's development and learning. The use of findings to inform and plan learning environments and experiences are emphasized. Recording strategies, rating systems, portfolios, and multiple assessment tools are practiced, along with strategies for collaboration with families and professionals. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: ECE. 201
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 362 PARTNERING WITH FAMILIES
This course focuses on developing culturally and linguistically inclusive communication skills to promote establishment of reciprocal relationships between families and educators. Students learn about strategies that promote effective communication and interactions with multilingual and multiracial families including biological parents, adoptive families, families experiencing homelessness, and extended family members. Letter Grade Only. Degree Credit.

Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU
C-ID: ECE 210

ECE. 364 MULTILINGUAL PRACTICES IN ACTION
Foundational knowledge and skills for supporting multilingual learners and their families. Students use case studies to design and implement research-based language and literacy practices to promote equitable learning opportunities for all children including those with special needs. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

ECE. 366 PRACTICUM IN EARLY CHILDHOOD EDUCATION
In this course students demonstrate developmentally appropriate early childhood program planning and teaching competencies under the supervision of Early Childhood Education faculty and other qualified early education professionals. Students utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Reflective practice are emphasized as student teachers design, implement, and evaluate approaches, strategies, and techniques that promote development and learning. Content includes exploration of career pathways, professional development, and educator responsibilities. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 16-18 Lecture; 96-108 Field Experience; 32-36 Homework
Prerequisites: ECE. 201 or PSYC 201 (offered at College of San Mateo and Skyline College), and ECE. 210 and ECE. 211 and ECE. 212 and ECE. 333; Placements at approved sites only, under the direct supervision of an individual who holds a Master Teacher Permit or higher, issued by the CA Commission on Teacher Credentialing.
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU
C-ID: ECE 210

ECE. 369 REFLECTIVE TEACHING SEMINAR
This course is designed for teachers working in early childhood or transitional kindergarten settings who have completed a practicum or student teaching course and would like to advance their teaching practice or explore a new direction. Students develop their teaching philosophy through practice and reflection. Students assess, document, and describe children's learning and development as a
COURSE DESCRIPTIONS

ECE 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

ECON 100 PRINCIPLES OF MACRO ECONOMICS
The American macroeconomic system and its effects on social, cultural and political environments by focusing on aggregate economic analysis. Allocation mechanisms for scarce resources, such as supply and demand, are discussed and utilized. Aggregate measures of economic activity such as GDP, unemployment, labor participation rates and price indices are defined, examined and critiqued. Finally, the course examines macroeconomic equilibrium, money and financial institutions, the Federal Reserve System, the Solow model of long run growth, the role of saving in the Solow model, short run (Keynesian) monetary and fiscal policy stabilization policy, the Classical model of the economy and international economics. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: MATH 110 or MATH 112 (offered at CSM or Skyline) or MATH 190, or appropriate score on the College Placement Test or other multiple measures assessment that indicate proficiency in Elementary Algebra.
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: ECON 201

ECON 102 PRINCIPLES OF MICRO ECONOMICS
This course focuses on choices of individual economic decision makers within the framework of supply and demand. Topics include: scarcity, marginality, specialization and trade, equilibrium, elasticity, factor markets, and externalities. Price and output decisions under competitive, imperfectly competitive, and monopolistic markets. Profit maximization and loss minimization strategies for the individual firm are analyzed. Comparative economic systems are also examined. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: MATH 110 or MATH 112 (offered at CSM or Skyline) or MATH 190, or appropriate score on the College Placement Test or other multiple measures assessment that indicate proficiency in Elementary Algebra.
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: ECON 202

ECON 230 ECONOMIC HISTORY OF THE UNITED STATES
An advanced discussion and analysis of the economic development of the American economy from 1860 to the present time. The class takes economic concepts mastered in a macroeconomics course (e.g. of opportunity cost, moral hazard, monetary theory and policy, fiscal theory and policy, the Keynesian, Monetarist and Austrian schools of thought) and places them in an historical context. Among the topics discussed are: the history of industrial growth, the history of land and resource use, the role of immigration and migration of various ethnic and cultural groups as it relates to the economic development of the U.S. Historical periods examined include: Antebellum and Postbellum South, the Great Depression (1929-1944), the Keynesian revolution and the counter revolution (Monetarist, Classical and Austrian (1945-2009), Great Moderation (mid 1970s - 2007) and the Great Recession (2007-2009). Events studied include, slavery, the transportation revolution, the growth of nationalized markets, the development of money and banking, trade patterns, organized labor, changes in agricultural production, and America's integration into the
world economy. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** Completion of, or concurrent enrollment in, ECON 100 and appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

**AA/AS Degree Requirements:** D US-1; DSI

**Transfer Credit:** CSU (CSU GE DSI, D US-1), UC (IGETC Area 4)

### Education

**EDUC 200 INTRODUCTION TO CLASSROOM TEACHING**

A survey of the teaching profession including: pedagogical methods; theories of learning; planning, delivering and assessing instruction; classroom management, professional and ethical considerations; diversity; and standards for the teaching profession. A minimum of 48 hours of structured fieldwork in public school elementary classrooms that represent California's diverse student population, and includes cooperation with at least one carefully selected and campus-approved certificated classroom teacher. **Letter Grade Only. Degree Credit.**

**Units:** 3

**Hours/semester:** 32-36 Lecture; 48-54 Field Experience; 64-72 Homework

**Recommended:** Eligibility for ENGL 100. Eligibility for MATH 110.

**Transfer Credit:** CSU, UC

**C-ID:** EDUC 200

**EDUC 249 REDEFINING LEADERSHIP: INDIVIDUALS EFFECTING CHANGE**

Leadership is examined from both theoretical and practical perspectives through the Phi Theta Kappa (PTK) Leadership Development Studies curriculum. This course is designed to provide emerging and existing leaders the opportunity to explore the underlying theoretical basis of leadership and develop or improve their ability to exercise leadership. The course integrates original works from leadership scholars, readings from the humanities, experiential exercises, and feature films. While learning about leadership theories, students explore nationally and internationally accepted leadership models as a framework for developing the necessary skills and strategies to build their capacity for leadership in their personal and professional lives. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Recommended:** Eligibility for ENGL 100.

**Transfer Credit:** CSU, UC

**EDUC 265 POSITIVE BEHAVIOR SUPPORT IN INCLUSIVE SETTINGS**

This course reviews strategies for behavior management and guidance. Children's behaviors are analyzed from a developmentally appropriate and culturally sensitive framework that honors children's developmental differences, as well as the diverse cultural and contextual factors that help shape their behaviors. **Letter Grade Only. Degree Credit.**

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Recommended:** Eligibility for ENGL 100.

**Transfer Credit:** CSU, UC

**EDUC 300 APPLIED INCLUSIVE STRATEGIES**

Foundational knowledge and skills for supporting children with special needs. Students learn how to implement Universal Design for Learning (UDL), positive behavior support plans, and special education concepts in the classroom. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 1

**Hours/semester:** 8-9 Lecture; 24-27 Lab; 16-18 Homework

**Recommended:** Eligibility for ENGL 100. ECE. 260 and ECE. 263 and EDUC 265

**Transfer Credit:** CSU

**EDUC 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 0.5 - 3

**Hours/semester:** 24-162 Lab
Engineering

ENGR 100 INTRODUCTION TO ENGINEERING
Introduction to the engineering profession and its different fields. The course explains the engineering education pathways and explores effective strategies for students to reach their full academic potential. It also provides an understanding of engineering processes and tools including experimentation, data analysis, and computer and communication skills. Emphasis is given to academic success strategies, technical communications, ethical considerations, and engineering design and analysis skills applied to illustrative projects and problems drawn from various engineering fields. A spreadsheet program (Microsoft Excel) and a high-level computer language (MATLAB or equivalent) are an integral part of the course. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 32-36 Lecture; 48-54 Lab; 64-72 Homework
Prerequisites: MATH 130 or MATH 225
Transfer Credit: CSU, UC
C-ID: ENGR 110

ENGR 111 SURVEYING
Theory and applications of plane surveying: office computations and design, operation of surveying field equipment, and production of engineering plans/maps. Topics include distances, angles, and directions; differential leveling; traversing; boundary and topographic surveys; volume/earthwork; horizontal and vertical curves; land description techniques; construction applications; and Global Positioning System (GPS). Field work using tapes, levels, transits, theodolites, total stations, and GPS. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: MATH 130 or appropriate score on the College Placement Test or other multiple measures assessment.
AA/AS Degree Requirements: Math Competency
Transfer Credit: CSU, UC
C-ID: ENGR 180

ENGR 210 ENGINEERING GRAPHICS
This course covers the principles of engineering drawings in visually communicating engineering designs and an introduction to computer-aided design (CAD). Topics include the development of visualization skills; orthographic projections; mechanical dimensioning and tolerancing practices; and the engineering design process. Assignments develop sketching and 2-D and 3-D CAD skills. The use of CAD software is an integral part of the course. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: MATH 130
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU, UC
C-ID: ENGR 110

ENGR 215 COMPUTATIONAL METHODS FOR ENGINEERS AND SCIENTISTS
Covers the fundamentals of procedural programming and computational methods for science and engineering. Topics include induction, iteration and recursion; approximations, floating-point computations, introduction to data structures and object oriented programming. Students will be given laboratory projects that use the MATLAB programming language to solve problems and examples drawn from algebra, trigonometry, calculus and elementary physics. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 32-36 Lecture; 48-54 Lab; 64-72 Homework
Prerequisites: MATH 251
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Math Competency
Transfer Credit: CSU, UC
C-ID: ENGR 220

ENGR 230 STATICS
This course covers vector treatment of force systems acting on particles and rigid bodies; two- and three-dimensional problems; equilibrium problems involving trusses, frames, machines, distributed forces, fluid statics, internal forces and friction; centroids and moments of inertia; shear and moment diagrams for beams and virtual work. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework

Prerequisites: MATH 130 or appropriate score on the College Placement Test or other multiple measures assessment.
AA/AS Degree Requirements: Math Competency
Transfer Credit: CSU, UC
C-ID: ENGR 180
Prerequisites: MATH 252 and PHYS 250
Transfer Credit: CSU, UC
C-ID: ENGR 130

ENGR 240 ENGINEERING DYNAMICS
This course covers the fundamentals of kinematics and kinetics of particles and rigid bodies. Topics include kinematics of particle motion; Newton's second law, work-energy and momentum methods; kinematics of planar and three-dimensional motions of rigid bodies; D'Alembert's principle, work-energy and momentum principles for rigid body motion; introduction to mechanical vibrations. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: ENGR 230
Transfer Credit: CSU, UC
C-ID: ENGR 230

ENGR 260 CIRCUITS AND DEVICES
An introduction to the theory and techniques of circuit analysis. Circuit laws and nomenclature, resistive circuits with DC sources, controlled sources, ideal operational amplifiers, natural and complete responses of first- and second-order circuits, steady-state sinusoidal analysis, power calculations, amplifiers, and three-phase circuits. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: PHYS 260 and completion of, or concurrent enrollment in, MATH 275
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU, UC
C-ID: ENGR 260

ENGR 261 CIRCUITS AND DEVICES LABORATORY
Introduction to the design, construction, and measurement of electrical circuits using electrical test and measurement instruments as well as circuit simulation software. The course covers the interpretation of measured and simulated data based on principles of circuit analysis for DC circuits, complete response of first and second-order RLC circuits, and sinusoidal steady-state (AC) circuits. The course also includes the design, measurement, and analysis of circuits with diodes, rectifiers, transistors, and operational amplifiers Letter Grade Only. Degree Credit.

Units: 1

Hours/semester: 48-54 Lab
Prerequisites: Completion of, concurrent enrollment in ENGR 260
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU, UC
C-ID: ENGR 260 L

ENGR 270 MATERIALS SCIENCE
The internal structures and resulting behaviors of materials used in engineering including metals, ceramics, polymers, composites, and semiconductors. The course emphasizes developing the ability to select materials to meet design criteria and to understand the effects of heat, stress, imperfections, and chemical environments upon material properties and performance. Laboratory exercises provide observation of material structures and behaviors, experience operating testing equipment, and the preparation of experimental reports. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: CHEM 210 and PHYS 250
Transfer Credit: CSU, UC
C-ID: ENGR 270

ENGR 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

English as a Second Language

ESL 400 COMPOSITION FOR MULTILINGUAL STUDENTS
Designed for advanced English language learners. Students plan, organize, compose, and revise expository essays
based on the analysis of complex fiction and nonfiction texts from diverse American authors and works of social, historical, and cultural importance. Students synthesize academic sources to support arguments. Students utilize advanced English grammar, mechanics, and vocabulary. 

**Letter Grade Only. Degree Credit.**

**Units:** 5

**Hours/semester:** 80-90 Lecture; 160-180 Homework

**Prerequisites:** ESL 924 or appropriate score on the College Placement Test or other multiple measures assessment.

**Transfer Credit:** CSU, UC

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**ESL 800 ESL PREPARATORY COURSE**

Beginning-level English-language instruction for speakers of other languages. Developmental practice in all language skills: grammar, vocabulary, listening, speaking, reading, and writing. Preparation for ESL Level I courses. 

**Letter Grade Only. Units do not apply toward AA/AS degree.**

**Units:** 5

**Hours/semester:** 80-90 Lecture; 160-180 Homework

**Recommended:** One year of previous English language study.

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**ESL 808 INTENSIVE GRAMMAR REVIEW**

This course is for students whose native language is other than English. Students review, practice, and synthesize the grammar in reading, writing, listening/speaking skills of standard English in an academic context.

**Letter Grade Only. Units do not apply toward AA/AS degree.**

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Recommended:** ESL 911 and ESL 921 or equivalent, or appropriate skill level as indicated by ESL placement test and other measures as necessary.

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**ESL 836 ENGLISH PRONUNCIATION**

This is a course for students whose native language is other than English. It is designed to train participants to American intonation and pronunciation. There is additional attention to analysis of pronunciation of language related to academic disciplines and vocational areas.

**Letter Grade Only. Units do not apply toward AA/AS degree.**

**Units:** 2

**Hours/semester:** 32-36 Lecture; 64-72 Homework

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**ESL 837 INTERMEDIATE VOCABULARY DEVELOPMENT**

In this course students learn to use word analysis skills to expand vocabulary, as well as to use strategies for understanding new words from contexts. There is additional attention to analysis of word parts and to expanding vocabulary via domains and concepts related to academic disciplines and vocational areas.

**Letter Grade Only. Units do not apply toward AA/AS degree.**

**Units:** 2

**Hours/semester:** 32-36 Lecture; 64-72 Homework

**Recommended:** ESL 911 and ESL 921 or equivalent, or appropriate skill level as indicated by ESL placement test and other measures as necessary.

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**ESL 911 READING AND LISTENING-SPEAKING I**

Introduces students to high-beginning integrated practice in reading, speaking and listening for academic English. Special attention is paid to high beginning vocabulary and comprehension of original authentic readings and lectures.

**Letter Grade Only. Units do not apply toward AA/AS degree.**

**Units:** 5

**Hours/semester:** 80-90 Lecture; 160-180 Homework

**Recommended:** Appropriate skill level as indicated by ESL placement test and other measures as necessary.

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**ESL 912 READING AND LISTENING-SPEAKING II**

Introduces students to intermediate integrated practice in reading, speaking and listening for academic English. Special attention is paid to intermediate vocabulary and comprehension of original authentic readings and lectures.

**Letter Grade Only. Units do not apply toward AA/AS degree.**

**Units:** 5

**Hours/semester:** 80-90 Lecture; 160-180 Homework

**Recommended:** ESL 911 and ESL 921 or equivalent, or appropriate skill level as indicated by ESL placement test and other measures as necessary.

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**ESL 913 READING AND LISTENING - SPEAKING III**

Introduces students to high-intermediate integrated practice in reading, speaking and listening for academic English. Special attention is paid to advanced vocabulary and comprehension of original authentic readings and lectures. The course is designed to prepare students for college-level entry courses.

**Letter Grade Only. Units do not apply toward AA/AS degree.**

**Units:** 5
**Hours/semester:** 80-90 Lecture; 160-180 Homework  
**Prerequisites:** ESL 912 or appropriate score on the College Language Placement Test or other multiple measures assessment.

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**ESL 914 READING AND LISTENING - SPEAKING IV**  
Introduces students to advanced integrated practice in reading, speaking and listening for academic English. Special attention is paid to advanced vocabulary and comprehension of original authentic readings and lectures. The course is designed to prepare students for college-level entry courses. *Letter Grade Only. Units do not apply toward AA/AS degree.*  
**Units:** 5  
**Hours/semester:** 80-90 Lecture; 160-180 Homework  
**Prerequisites:** ESL 913 or appropriate score on the College Language Placement Test or other multiple measures assessment.

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**English**

**ENGL 100 READING AND COMPOSITION**  
An intensive reading and writing course based on the study of primarily non-fiction materials of culturally diverse writers. Course writing emphasizes the expository and the argumentative forms. Emphasis is placed on writing coherent, compelling essays demonstrating critical thinking skills and the basic elements of building a convincing argument. *Letter Grade Only. Degree Credit.*  
**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Prerequisites:** Appropriate skill level as indicated by at least a 2.6 high school GPA, successful completion of ESL or ESOL 400, or other measures as applicable.

**AA/AS Degree Requirements:** Area A2  
**Transfer Credit:** CSU (CSU GE Area A2), UC (IGETC Area 1A)  
**C-ID:** ENGL 100

**ENGL 105 INTENSIVE COMPOSITION AND READING**  
A reading and writing course based on the study of primarily non-fiction materials of culturally diverse writers. Includes instruction on how to read complex texts as well as how to write coherent and compelling persuasive essays. *Letter Grade Only. Degree Credit.*  
**Units:** 5  
**Hours/semester:** 80-90 Lecture; 160-180 Homework
Prerequisites: Appropriate skill level as indicated by high school GPA, successful completion of ESL or ESOL 400, or other measures as applicable.

AA/AS Degree Requirements: Area A2
Transfer Credit: CSU (CSU GE Area A2), UC (IGETC Area 1A)
C-ID: ENGL 100

ENGL 110 COMPOSITION, LITERATURE, AND CRITICAL THINKING

Students read novels, short stories, poetry, and drama written by diverse authors using analytical lenses that call attention to race, culture, gender, and other dynamics at play in literature. They write persuasive essays that demonstrate critical interpretation, the use of evidence and research strategies. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: ENGL 100 or ENGL 105
AA/AS Degree Requirements: Area A3; Area C2
Transfer Credit: CSU (CSU GE Area A3; Area C2), UC (IGETC Area 1B)
C-ID: ENGL 110 (both ENGL 110 + 165); ENGL 120

ENGL 161 CREATIVE WRITING I

Students learn and practice the craft of writing short stories, sketches, poetry, short drama, journals, reportage and other literary forms for both personal enjoyment and professional training. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC
C-ID: ENGL 200

ENGL 162 CREATIVE WRITING II

In this advanced Creative Writing class, students continue to learn and practice the craft of writing short stories, sketches, poetry, short drama, journals and/or reportage or other literary forms. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: ENGL 161
Transfer Credit: CSU, UC

ENGL 164 CREATIVE NON-FICTION

The craft of writing the non-fiction genres, such as memoir, personal narrative, biography, autobiography, or journal. Discussion and critiques of works by established authors. Workshop of students’ own writing. Guidelines for submission for publication. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC

ENGL 165 ADVANCED COMPOSITION

In this advanced course in non-fiction writing, students analyze texts from writers of diverse ethnic, cultural and socio-economic backgrounds and gender/sexual orientations. Students are taught to read and think critically as they apply their analytical skills to the writing of nuanced text-based arguments. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: ENGL 100 or ENGL 105
AA/AS Degree Requirements: Area A3
Transfer Credit: CSU (CSU GE Area A3), UC (IGETC Area 1B)
C-ID: ENGL 105; ENGL 110 (both ENGL 110 + 165)

ENGL 200 INTRODUCTION TO LINGUISTICS: A SURVEY OF LANGUAGE

Equivalent to LING 200. The origin, development, acquisition, and evolution of spoken and written languages are studied in this course. Topics include phonetics/ phonology, morphology, syntax, semantics, and pragmatics. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for Eligibility for ENGL 100 or ENGL 105.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
ENGL 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

ENGL 847 ACCELERATED ACADEMIC READING AND WRITING
Pre-transfer course that prepares students for college-level reading and writing. The course focuses on thesis construction, essay organization, and the use of evidence as well as sentence-level writing skills. Text-based assignments incorporate reading strategies to improve comprehension, fluency, analysis, and vocabulary. Letter Grade Only. Degree Credit.
Units: 5
Hours/semester: 80-90 Lecture; 160-180 Homework

Environmental Science & Technology

ENVS 101 ENVIRONMENTAL SCIENCE LABORATORY
An introduction to environmental science that explores the causes, impacts, and solutions to contemporary environmental issues through lab, field, and written exercises. Coursework highlights the methods and tools used in environmental fields and the interdisciplinary nature of the issues and solutions. Letter Grade Only. Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: Completion of, or concurrent enrollment in ENVS 100 (offered at Skyline), or, ENVS 115
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area B1, B2
Transfer Credit: CSU (CSU GE Area B1, B2), UC (IGETC Area 5A, 5B)

ENVS 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

ENVS 115 ENVIRONMENTAL SCIENCE
Introduction to environmental issues from a scientific perspective, focusing on physical, chemical, and biological processes within the Earth system, the interaction between humans and these processes, and the process and role of science in finding sustainable solutions. Topics include contemporary environmental issues related to resource use, pollution, and human population growth. Field trips may be required. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area B1, B2
Transfer Credit: CSU (CSU GE Area B1, B2), UC (IGETC Area 5A, 5B)

Ethnic Studies

ETHN 103 ASIAN AMERICAN STUDIES
This course examines how US institutions ideologically constructed the category of Asian-ness and materially engaged with “Asian” peoples within the United States and its territories. Ethnic Studies theory will be applied to describe critical events in Asian American histories, cultures, and intellectual traditions including an examination of how “Asian” communities interact with each other and other racialized/ethnicized communities. This includes a focus on topics ranging from self-determination to imperialism in a
move toward building a just and equitable society. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**AA/AS Degree Requirements:** DSI; Area F  
**Transfer Credit:** CSU (CSU GE DSI; Area F), UC (IGETC Area 4)

**ETHN 105 AFRICAN AMERICAN HISTORY AND CULTURE**

This is a survey of the history of African Americans from their origins in Africa to the present, with special emphasis on their contributions to California's social, political and economic institutions. It examines the political, economic, social, and cultural factors as well as interactions between African Americans and the larger society while analyzing the intersection of race and racism. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**AA/AS Degree Requirements:** Area C2, D US-1; DSI; Area F  
**Transfer Credit:** CSU (CSU GE Area C2; DSI, D US-1; Area F), UC (IGETC Area 4)

**ETHN 107 INTRODUCTION TO NATIVE AMERICAN STUDIES**

This course provides an introduction to the study of Native American histories, experiences, intellectual traditions, and forms of artistic expression. Students engage with texts that confront the structural genocide underlying the construction of the U.S. settler state, and explore Native practices of resistance, resilience, and regeneration. Course materials include fiction, poetry, spoken word, and other creative texts, as well as historical and archival studies. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**AA/AS Degree Requirements:** Area C2, D US-1; DSI; Area F  
**Transfer Credit:** CSU (CSU GE Area C2; DSI, D US-1; Area F), UC (IGETC Area 4)

**ETHN 108 RETHINKING RACE, GENDER, AND NATION**

This course introduces students to the theoretical, methodological, and substantive foundations of Ethnic Studies. Through a re-examination of U.S. history, students develop an understanding of the relationships between racial formation and the production of social and economic inequality. Readings focus on the interrelated processes of settler-colonial land expropriation, chattel slavery, multiple forms of migration, overseas imperial expansion, inter- and intra-national circulations of economic value, and the historical development of the U.S. settler legal regime. Particular attention is given to the ways in which race and ethnicity have been historically co-constituted with other socially-constructed identities, such as gender, sexuality, class, and citizenship. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**AA/AS Degree Requirements:** DSI; Area F  
**Transfer Credit:** CSU (CSU GE DSI; Area F), UC (IGETC Area 4)

**ETHN 109 BORDERS AND CROSSINGS**

This introductory Ethnic Studies course examines how U.S. processes of racial formation and gendering are related to multiple transnational circulations – of commodities, bodies, labor, capital, knowledge, and culture. We interrogate the material and ideological work of borders – particularly nation-state borders, but also the borders and boundaries of racial and ethnic categories, gendered and sexualized identities, languages, forms of labor, and disciplinary categories of knowledge. Also explored are the many ways in which such borders are variously resisted, contested, transgressed, transcended, and transformed over time. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**AA/AS Degree Requirements:** DSI; Area F  
**Transfer Credit:** CSU (CSU GE DSI; Area F), UC (IGETC Area 4)

**ETHN 265 EVOLUTION OF HIP HOP CULTURE: A SOCIO-ECONOMIC AND POLITICAL PERSPECTIVE**

This course traces the evolution of Hip Hop from its African roots through the diaspora as a cultural form of expression by examining music, dancing, spoken word, philosophy, and lifestyles. Also, Hip Hop is analyzed from social, economic, and political perspectives. It is explored as a product of the
African American struggle as reflected in music, poetry, lyrics, dance, artists, and major issues associated with Hip Hop. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**AA/AS Degree Requirements:** Area C2; Area F  
**Transfer Credit:** CSU (CSU GE Area C2; Area F), UC (IGETC Area 3B)

**ETHN 288 AFRICAN-AMERICAN CINEMA**

This course explores the rich and diverse history of African American filmmaking. Focusing on films written and/or directed by African Americans, this seminar traces the history of filmmaking from the silent era to the present day. In exploring Black cultural production and creative expression, students consider the ways in which film is used as a medium of protest, resistance, and cultural affirmation. We look at films through the critical lenses of Ethnic Studies theory, race and representation in American cinema while locating our analysis within larger frameworks of Hollywood's representation of African Americans and various cultural and social movements within local and global contexts. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**AA/AS Degree Requirements:** Area C1; Area F  
**Transfer Credit:** CSU (CSU GE Area C1; Area F), UC (IGETC Area 3A)

**Fashion Design and Merchandising**

**FASH 100 PRINCIPLES OF DESIGN**

An overview of design principles and elements used in fashion to create effective and successful garment designs. Focus is on the recognition, analysis and evaluation of good design in both ready to wear and student's original designs. Other topics include sketching and presentation techniques. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Transfer Credit:** CSU

**FASH 110 BEGINNING CLOTHING CONSTRUCTION**

Designed to provide an overview of basic sewing techniques, sewing machine skills, and an understanding of fabrics and patterns. The focus is on clothing construction techniques for students with little or no sewing experience. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 16-18 TBA; 80-90 Homework  
**Transfer Credit:** CSU

**FASH 111 TECHNIQUES OF FIT**

An overview of various pattern alteration techniques for skirts and bodices based on individual figure variations. Techniques examine sizing methods, ease assessment, fabric variability, and the identification of figure variations. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 16-18 TBA; 80-90 Homework  
**Transfer Credit:** CSU

**FASH 113 TEXTILES**

An introduction to the study of natural and chemical fibers, yarns, fabrics, finishing, and dyeing. Students also analyze methods used for purchasing and caring for clothing. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Transfer Credit:** CSU, UC

**FASH 114 INTRODUCTION TO ITALIAN FASHION**

An introduction to the Italian Fashion Industry from pre-World War II to the present day. Students analyze designers, fabrics, and manufacturing techniques and the implications for global fashion. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Transfer Credit:** CSU

**FASH 115 INTERMEDIATE CLOTHING CONSTRUCTION**

Provides an overview of intermediate sewing techniques for constructing collars, buttonholes, sleeves, hems, zippers, pockets, and other garment details. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3
COURSE DESCRIPTIONS

Hours/semester: 48-54 Lecture; 16-18 TBA; 80-90 Homework
Recommended: FASH 110 or basic sewing skills.
Transfer Credit: CSU

FASH 116 TAILORING
An overview of techniques applied to the construction of suits and coats. Students analyze and adapt patterns for proper fit and evaluate and select fabrics for specific garments. Collars, sleeves, linings, welt pockets and bound buttonholes are covered. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 16-18 TBA; 80-90 Homework
Transfer Credit: CSU

FASH 118 FLAT PATTERN
An introduction to basic pattern-making to create garment designs. Students learn to manipulate darts and draft a variety of necklines, collars, sleeves, skirts and dresses from a master pattern. Students work with half scale, quarter scale and full scale patterns. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 16-18 TBA; 80-90 Homework
Transfer Credit: CSU

FASH 122 ADVANCED TAILORING
Advanced tailoring techniques for the construction of jackets and coats. Students demonstrate mastery of collars, lapels, pockets, bound buttonholes, welt pockets, sleeves, and linings for suits and coats. Garments are constructed from commercial patterns or the student's original design with pattern adaptation for personal fit. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 16-18 TBA; 80-90 Homework
Prerequisites: FASH 116
Transfer Credit: CSU

FASH 123 INTRODUCTION TO THE FASHION INDUSTRY
This course is an introduction to the fashion industry. Students analyze trends and manufacturing techniques and their implications for fashion. Terminology, careers, and job responsibilities applicable to the fashion industry are covered. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU

FASH 132 TROUSER CONSTRUCTION
Learn techniques used for pants construction. Topics include fly front zippers, various waistline treatments, various pocket techniques, linings, underlinings, hems and cuffs. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Transfer Credit: CSU

FASH 133 COPYING READY-TO-WEAR
Learn how to make a pattern from an existing garment without taking the garment apart. Through demonstration and hands-on experience, use the materials needed to generate this pattern from the existing garment, and make a muslin garment to test this pattern and refine it to ensure an exact duplicate of the original. Also included are facings, hem allowances, and other pertinent pattern drafting knowledge. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Recommended: Basic sewing skills
Transfer Credit: CSU

FASH 134 BEGINNING MILLINERY
Introduction to methods of designing and constructing millinery. Fundamental techniques of hat design and construction including blocking and shaping straw, buckram, and fabric using traditional wooden hat blocks. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Transfer Credit: CSU

FASH 140 BASIC SERGING
Introduction to the use of the serger sewing machine for creating a variety of seams, as well as functional and decorative edge finishes used in the construction of
garments. Students explore tension, stitch formation, threading and maintenance. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Transfer Credit: CSU

FASH 146 DESIGNER TECHNIQUES IN SEWING
An overview of designer details in ready-to-wear fashion and application of these techniques in clothing construction. Learn to design and sew garments with unique collars, sleeves, pockets, and hems. Changing components of a garment for different designs is a focus of the class. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 16-18 TBA; 80-90 Homework
Transfer Credit: CSU

FASH 150 HISTORY OF FASHION
A survey course of fashions of Western civilization from ancient cultures to the present day. Students analyze fashion trends as influenced by cultural, industrial and political developments. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1)

FASH 151 FASHION MERCHANDISING
Examines the retail and wholesale aspects of the fashion industry by studying trends, consumer behavior and fashion marketing. Covers globalization of the apparel industry, production costs, display, fashion promotion and advertising as well as career choices such as retail buyers, store managers, fashion directors, visual merchandisers, and sales associates. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU

FASH 162 ADVANCED FLAT PATTERN
A comprehensive study of pattern making and the drafting techniques used for creating more advanced garment design. Students make patterns for and sew various full-scale garments with many different necklines, collars, sleeves, skirts, and dresses. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 16-18 TBA; 80-90 Homework
Prerequisites: FASH 118
Transfer Credit: CSU

FASH 163 PATTERN GRADING
Techniques for taking a sized pattern and grading it up and down into multiple sizes. Course includes an overview of different size ranges, methods of grading, and grading rules. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Transfer Credit: CSU

FASH 164 FASHION ILLUSTRATION
An overview of sketching for clothing design with emphasis on perception development through specific drawing exercises to develop fashion figure proportions. A variety of media and drawing techniques will be used to create fashion sketches. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU

FASH 167 THE CUSTOM DRESS FORM
Learn how to create a customized dress form used for design development and sewing construction. Students are fitted in customized covers, and foam dress forms are shaped to fit these covers. Information on ordering/purchasing dress forms is provided in the first class meeting. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Transfer Credit: CSU

FASH 168 FASHION DRAPING
An overview of designing clothing on a dress form. Students use this 3-dimensional design process to create patterns for original designs. The translation of fashion ideas from
design principles while draping with muslin to finished garments is also examined. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Transfer Credit:** CSU

**FASH 169 EVENING GOWN CONSTRUCTION**

Students learn advanced sewing techniques used in the construction of evening gowns. They create gowns incorporating the techniques learned in class, including working with difficult fabrics and bias. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 2  
**Hours/semester:** 32-36 Lecture; 64-72 Homework  
**Recommended:** Eligibility for MATH 110. Basic sewing skills  
**Transfer Credit:** CSU

**FASH 170 FRENCH PATTERN DRAFTING**

Learn the French couture method for drafting a master pattern. The master pattern, known as the moulage, is a form-fitting pattern that duplicates the figure exactly with no ease added. It is used to create the sloper and basic sleeve. These are used to design many different garment styles. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 2  
**Hours/semester:** 32-36 Lecture; 64-72 Homework  
**Recommended:** Basic sewing skills  
**Transfer Credit:** CSU

**FASH 171 PANTS DRAFTING**

Learn techniques for measuring and drafting a basic pant sloper. The students then make the pattern in muslin and refine fit to produce a pattern that fits their own figures. From this basic block, students draft jean and dress pant slopers. Drafting pant details such as pockets, pleats, waistbands and fly-front zippers are discussed. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 2  
**Hours/semester:** 32-36 Lecture; 64-72 Homework  
**Recommended:** Basic sewing skills  
**Transfer Credit:** CSU

**FASH 172 BUSTIER**

Introduction to the proper pattern work and construction techniques to create a well-fitting, well-performing strapless bodice (bustier), which can be adapted to evening wear or bridal wear. As these garments must fit closely, a well-fitting sloper, or the moulage from the French pattern drafting course is recommended. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 16-18 Lecture; 32-36 Homework  
**Recommended:** Basic sewing skills  
**Transfer Credit:** CSU

**FASH 173 LINGERIE DESIGN AND CONSTRUCTION**

Learn about the world of lingerie encompassing intimate apparel and loungewear and gain a knowledge base of appropriate fabrics and construction techniques specific to creating lingerie. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 16-18 Lecture; 32-36 Homework  
**Recommended:** FASH 110 or basic sewing skills  
**Transfer Credit:** CSU

**FASH 175 ADVANCED ILLUSTRATION**

Develop advanced fashion rendering skills and figure styles using a variety of media and drawing techniques to create original fashion illustrations. Emphasis is on developing flair, movement, and attitude in the fashion figure. Drawing flats, specs, floats, and fabric renderings are also covered. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Prerequisites:** FASH 164 or equivalent  
**Transfer Credit:** CSU

**FASH 178 COMPUTERIZED PATTERN GRADING**

Learn how to use PAD, a professional computerized pattern development system, to grade patterns into multiple sizes. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 16-18 Lecture; 32-36 Homework  
**Prerequisites:** FASH 163  
**Transfer Credit:** CSU
FASH 180 COMPUTERIZED PATTERN DESIGN
Designed to teach PAD, a professional computerized pattern development software, to draft and develop patterns for original designs. Students have the opportunity to utilize flat pattern skills to develop patterns used in the apparel industry, as well as learn the process of digitizing and plotting patterns using PAD software and hardware. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU

FASH 195 PORTFOLIO DEVELOPMENT
Overview of portfolio assembly methods for fashion design, with emphasis on professional display techniques of student’s original designs. Course covers presentation techniques, materials, content considerations, organization, and layout choices. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Transfer Credit: CSU

FASH 196 INTRODUCTION TO THE COSTUME INDUSTRY
Introduction to the theater costuming industry as a profession. Students have the opportunity to visit costume shops throughout the Bay Area, learn the various jobs which are needed within a costume shop, and understand the process of designing theatrical costumes from concept to completion. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Transfer Credit: CSU

FASH 197 PATTERN DESIGN FOR HISTORIC COSTUME
Pattern development and construction of historical costumes, from the Middle Ages to the beginning of the twentieth century. Learn how to apply the principles of modern pattern making to various historical styles and use this knowledge to design and create historical costumes. The unique cut and construction of each historical period is covered, along with undergarments and accessories necessary for each period. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: FASH 110 or basic sewing skills.
Transfer Credit: CSU

FASH 199 COSTUMING FOR THEATRICAL PRODUCTION
Learn to create costumes for an actual theatrical production. All aspects of theater costuming are utilized, including script analysis, design, pattern development, fitting, construction and alterations. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: FASH 110 or equivalent sewing experience.
Transfer Credit: CSU

FASH 225 APPAREL ANALYSIS
Provides students with an overview of the apparel production cycle: how apparel products are designed, created, and distributed. Students analyze garment design and construction features in order to understand their relationship to apparel cost and quality. Style terminology, sizing, price points, fabric choices, sustainability and other factors in apparel production are also discussed. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU

FASH 226 VISUAL MERCHANDISING AND DISPLAY
Explores the visual merchandising and display methods used within the fashion and related industries and the role each method plays in these industries. Introduces the equipment, materials and techniques used to create dynamic visual displays. Students critique and create visual displays and visual merchandising materials. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU

FASH 672 COOPERATIVE EDUCATION: INTERNSHIP
Supervised internship in cooperation with private or public sector employers. Designed to apply knowledge and learn new skills, directly related to the student’s program of study,
outside of the normal classroom environment. Students must attend one orientation which is offered the first three weeks of each semester. Each unit requires 60 hours per unit for unpaid work or 75 hours per unit for paid work during the semester. May be repeated for credit up to 16 units. The unit limitation applies to any Cooperative Education Work Experience (any combination of 670, 671 and/or 672 courses) offered within the SMCCCD. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1 - 3

**Hours/semester:** 75-225 Work Experience; 60-180 Field Experience

**Prerequisites:** A minimum of 12 completed units in the occupational discipline.

**Transfer Credit:** CSU

**FASH 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 0.5 - 3

**Hours/semester:** 24-162 Lab

**Transfer Credit:** CSU (CSU GE Area E2), UC*

**Fitness**

**FITN 112 CROSS-TRAINING**

A course designed to develop aerobic fitness, by concurrently training in two or more dynamic endurance activities (fitness walking, running, hiking, elliptical machine, stair master, stationary bike and/or step platform) combined with anaerobic exercise (strength training, free weights, functional training, sprints, plyometric training, and/or high intensity movement). Emphasis is placed on group exercise utilizing multiple aerobic activities plus anaerobic exercises to produce cross-training effect. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1

**Hours/semester:** 48-54 Lab

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC*

**FITN 117 FITNESS ASSESSMENT, STRENGTH AND CONDITIONING**

Improve quality of life by adopting, maintaining or increasing daily physical activity in a fitness setting. FITN 117 is an introductory course that examines the importance of both strength and cardiovascular training in maintaining healthy body composition. The course analyzes proper lifting techniques, safe operation of exercise machines, gym etiquette, fundamental exercises for each muscle group, basic human anatomy as it relates to the student’s fitness/health goals, and workout structure to reach these goals. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1

**Hours/semester:** 48-54 Lab

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC*

**FITN 118 BEGINNING FITNESS CENTER**

Continuation of FITN 117. FITN 118 is the second installment of a series of courses that promotes participation in physical activity while in a fitness setting, fostering lifelong health and wellness. Examines the importance of both strength and cardiovascular training to maintain healthy body composition. Explores the advantages of free-weight exercises, workout organization, types of strength training, aerobic versus anaerobic training, basic exercise physiology, fitness assessment and goal-setting. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1

**Hours/semester:** 48-54 Lab

**Prerequisites:** FITN 117

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC*

**FITN 119 INTERMEDIATE FITNESS CENTER**

Continuation of FITN 118. FITN 119 is the third installment of the series designed for students ready for intermediate to advanced level concepts of resistance and cardiovascular training. Examines the importance of physical activity and physical fitness to maintain healthy body composition. Students are introduced to multi-joint exercises, Olympic-style lifting techniques, functional training concepts as well as other advanced level exercises, to promote improved performance for sport, recreation and real-life activity. Students should demonstrate the appropriate strength, skill and technique to perform exercises safely. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Units:** 1
FITN 122 TOTAL BODY BURN
A comprehensive group activity course designed to improve upper and lower body muscular endurance, tone, flexibility and body composition using light weights and high repetitions. Additional emphasis is placed on posture, coordination, and balance using body weight exercises. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 128.1 CORE STRENGTH AND FUNCTIONAL TRAINING I
Basic exercises incorporating a stability ball and other functional exercise equipment that build a foundation for functional movement, emphasizing core strength, while increasing whole body fitness, flexibility, stabilization, balance and coordination. The course is suitable for all fitness levels and prepares students for all types of physical activity from everyday movement to athletic engagement. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 128.2 CORE STRENGTH AND FUNCTIONAL TRAINING II
Continuation of Fitness 128.1. Intermediate level course incorporating exercises on stability ball and other functional fitness equipment that builds a foundation for functional movement, emphasizing core strength, while increasing whole body fitness, flexibility, stabilization, balance and coordination. The course is suitable for students at an intermediate fitness level and prepares participants for all types of physical activity from everyday movement to athletic engagement. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 128.1 or demonstrated skill level.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 152 BASKETBALL CONDITIONING
A comprehensive basketball conditioning course designed for the intercollegiate community college basketball athlete. Course emphasizes cardiovascular fitness, strength, speed, skill and agility with and without the ball. Fitness and skill assessments are ongoing throughout the course. May be repeated for credit up to 3 times. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 0.5 - 1.5
Hours/semester: 24-81 Lab
Recommended: Demonstrated ability is required.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 153 SOCCER CONDITIONING
A comprehensive group activity course designed to improve the total fitness level of the competitive intercollegiate community college soccer athlete. Course emphasizes cardiovascular fitness, strength, speed, balance and agility with and without the ball. Assessments of the students' fitness levels are made through a series of fitness tests. May be repeated for credit up to 3 times. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 154 VOLLEYBALL CONDITIONING
A comprehensive group activity course designed to improve the total fitness level of the competitive intercollegiate community college volleyball athlete. Course emphasizes cardiovascular fitness, strength, speed, balance and agility with and without the ball. Assessments of the students’ fitness levels are made through a series of fitness tests. May be repeated for credit up to 3 times. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*
FITN 210 VARSITY WEIGHT CONDITIONING
Intended for out-of-season varsity athletes to provide fitness and strength training programs that prepare them for intercollegiate competition. Includes sport-specific training, speed, agility, strength, and circuit workouts. Free weights, weight machines, jump ropes and speed ladders are used. May be repeated for credit up to 3 times. Letter Grade Only. Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Recommended: Demonstrated skill in athletic competition
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 227.1 TRX® SUSPENSION TRAINING I
An introductory group exercise class utilizing the TRX® Suspension Trainer. Muscular strength, balance, flexibility, and core stability are trained via leveraging gravity to complete bodyweight exercises in three of the six TRX® foundational movement categories. Topics include proper set-up, safe practices, philosophy of suspension training, and proper exercise technique. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 227.2 TRX® SUSPENSION TRAINING II
Continuation of FITN 227.1. Includes a review of proper set-up, safe practices, philosophy of suspension training, and proper exercise technique. The remaining three TRX® foundational movement categories are introduced. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 227.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 227.3 TRX® SUSPENSION TRAINING III
Continuation of FITN 227.2. Includes a review of proper set-up, safe practices, philosophy of suspension training, and proper exercise technique. The TRX® Rip Trainer is introduced as a supplemental tool to incorporate rotational training. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 227.2
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 227.4 TRX® SUSPENSION TRAINING IV
Continuation of FITN 227.3. Includes a review of proper set-up, safe practices, and proper exercise technique for the TRX® Suspension Trainer and Rip Trainer. The Functional TRX model introduces add-on modalities in the form of smash balls, heavy ropes, kettlebells, and sandbags. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 227.3
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 235 BOOT CAMP
A group fitness class consisting of cardiovascular endurance training that uses various methods other than long distance continuous running. Methods include Fartlek training, sprints, and interval training, combined with active recovery in between. Workouts target all muscle groups and vary daily. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 301.1 SPINNING I
A beginning level aerobic exercise class performed on a stationary racing bicycle and done to high-cadence music. An exciting and fast-paced workout to improve aerobic conditioning. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*
FITN 301.2 SPINNING II
Continuation of FITN 301.1. Intermediate level aerobic exercise performed on a stationary racing bicycle and done to high-cadence music. An exciting and fast-paced workout to improve aerobic conditioning. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 301.1 or demonstrated skill level.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 301.3 SPINNING III
Continuation of FITN 301.2. Intermediate advanced aerobic exercise performed on a stationary racing bicycle and done to high-cadence music. An exciting and fast-paced workout to improve aerobic conditioning. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 301.2 or demonstrated skill level.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 304.1 WALKING FITNESS I
A beginning level low impact course that aims to improve cardiovascular fitness through a gradual progression of exercises that includes a dynamic warm-up and proper cool-down stretching while emphasizing distance and timed walks. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 304.2 WALKING FITNESS II
An intermediate level low impact course that aims to improve cardiovascular fitness through a gradual progression of exercises that includes a dynamic warm-up and proper cool-down while introducing hill and incline walking. Emphasis is placed on distance and timed walking. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 304.1

FITN 304.3 WALKING FITNESS III
An advanced intermediate level low impact course that aims to improve cardiovascular fitness through a gradual progression of exercises that includes a dynamic warm-up, a proper cool-down, hill and incline walking, and cross-training exercises to enhance walking time and distance. Emphasis is placed on distance and timed walking. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 304.2
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 304.4 WALKING FITNESS IV
An advanced level low impact course that aims to improve cardiovascular fitness through a gradual progression of exercises that includes a dynamic warm-up, a proper cool-down, hill and incline walking, cross-training exercises and speed walking. Emphasis is placed on distance and timed walking. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 304.3
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 308.1 HIKING AND TREKKING FOR FITNESS I
Introduction to the cardiovascular and fitness related benefits of hiking and trekking. A fitness course for the outdoor enthusiast, classes are conducted on local Bay Area trails. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 332.1 FLEXIBILITY AND STRETCHING I
The focus of this course is to help condition and tone the body through low impact fitness techniques and total body
FITN 332.2 FLEXIBILITY AND STRETCHING II
Continuation of FITN 332.1. The focus of this course is to help condition and tone the body through low impact fitness techniques and total body stretching, proper breathing techniques, and exercises for flexibility at an intermediate level. Emphasis is placed on a dynamic warm-up and static stretching exercises. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 332.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 334.1 YOGA I
Designed to educate students in Hatha Yoga at a beginning level. A fitness course using yoga postures to increase flexibility, strength and endurance; improve balance, posture and breathing; and teach relaxation techniques. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 334.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 334.2 YOGA II
Designed to educate students in Hatha Yoga at an intermediate level. A fitness course using yoga postures to increase flexibility, strength and endurance; improve balance, posture and breathing; and teach relaxation techniques. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 334.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 334.3 YOGA III
Designed to educate students in Hatha Yoga at an advanced intermediate level. A fitness course using yoga postures to increase flexibility, strength and endurance; improve balance, posture and breathing; and teach relaxation techniques. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 334.2
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 334.4 YOGA IV
Designed to educate students in Hatha Yoga at an advanced level. A fitness course using yoga postures to increase flexibility, strength and endurance; improve balance, posture and breathing; and teach relaxation techniques. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 334.3
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 335.1 PILATES I
Training of the muscles in the torso through controlled exercises taught at a beginning level. Designed to improve posture, coordination, balance, flexibility and build core strength. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 335.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 335.2 PILATES II
Training of the muscles in the torso through controlled exercises taught at an intermediate level. Designed to improve posture, coordination, balance, flexibility and build core strength. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 335.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 335.3 PILATES III
Training of the muscles in the torso through controlled exercises taught at an advanced intermediate level. Designed to improve posture, coordination, balance, flexibility and build core strength. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 335.2
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

FITN 335.4 PILATES IV
Training of the muscles in the torso through controlled exercises taught at an advanced level. Designed to improve posture, coordination, balance, flexibility and build core strength. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: FITN 335.3
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

Funeral Services Education

FSE. 200 INTRODUCTION TO FUNERAL SERVICE
Survey of the history of the funeral service industry and a comprehensive overview of the field of funeral service. Students learn the role and skills of the funeral service practitioner. This course provides insight into the funeral service industry and the career opportunities available. Letter Grade Only. Degree Credit.

Units: 2
Hours/semester: 32-36 Lecture; 64-72 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

FSE. 210 FUNERAL DIRECTING I
This course introduces the general practices of funeral directing. It focuses on the sociological phenomena that affect all the elements of funeral service including cultural differences, family structures, and factors of change that relate to funeralization. It also includes notification of death, transfer and disposition of bodies, arrangement conferences, pre-planned funerals, and post-arrangement follow-up. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 40-45 Lecture; 24-27 Lab; 80-90 Homework
Prerequisites: FSE. 200 and acceptance into the Funeral Service Program.
Corequisites: Concurrent enrollment in, FSE. 220
Transfer Credit: CSU

FSE. 212 FUNERAL SERVICE SCIENCE
This course is designed for the Funeral Service Education student. Course material expands on general anatomy, chemistry, microbiology, and pathological concepts as related to the preparation, presentation, and sanitation of the human remains. Letter Grade Only. Degree Credit.

Units: 5
Hours/semester: 80-90 Lecture; 160-180 Homework
Prerequisites: BIOL 240 and BIOL 250 and CHEM 410 and FSE. 200 and acceptance into the Funeral Service Program.
Corequisites: Concurrent enrollment in, FSE. 210
Transfer Credit: CSU

FSE. 215 FUNERAL DIRECTING II
This course introduces the basic philosophies of a cross-section of religious and ethnic funeral practices and the role of the funeral practitioner in directing each type. Example cultural groups include African-American, Islamic, Protestant, Buddhist and Hindu among others. It also includes procedures for fraternal, military, and celebrity funerals. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 40-45 Lecture; 24-27 Lab; 80-90 Homework
Prerequisites: FSE. 210 and FSE. 220
Corequisites: Concurrent enrollment in, FSE. 230
Transfer Credit: CSU

FSE. 220 FUNERAL SERVICE LAW AND ETHICS
This course introduces law and the judicial system as they pertain to the funeral industry. Topics include sources of law, the legal status of a dead human body, the duty of burial, rights to control funeral arrangements and final disposition, liability for funeral expenses, torts involving the dead human body and the funeral director, wills, estates, probate, cemeteries, crematories, and state and federal
laws and regulations. Personal and professional ethics that
guide decisions and actions in the proper treatment of the
dead are also included. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: BUS. 201 and FSE. 200 and acceptance into
the Funeral Service Education Program.
Corequisites: Concurrent enrollment in, FSE. 210
Transfer Credit: CSU

FSE. 225 PSYCHOLOGY OF DEATH AND DYING
This course is an introduction to thanatology and basic
psychological terminology and theories, with an emphasis
on the study of grief, bereavement, and mourning. The
content provides the knowledge required of the funeral
director to work effectively with families as a facilitating
agent. Follow-up programs initiated by the funeral director
are examined in detail as well as community support
groups with whom the funeral director participates. Major
emphasis is placed on the student identifying problem
areas in the field, intervening, and professional referral.
Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: FSE. 210
Corequisites: Concurrent enrollment in, FSE. 230
Transfer Credit: CSU

FSE. 230 MERCHANDISING IN THE FUNERAL
SERVICE INDUSTRY
This course introduces merchandising as it applies to
the funeral service profession. The curriculum is divided
into two main sections. The first covers construction and
features of caskets, outer burial containers, and other
funeral-related products. The second section examines
methods of pricing, display, presentation, and control of
funeral merchandise. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: FSE. 210 and FSE. 220
Corequisites: Concurrent enrollment in, FSE. 215
Transfer Credit: CSU

FSE. 235 FUNERAL SERVICE MANAGEMENT
This course introduces the basic principles of management
as they apply to the practice of the funeral profession. It
explores the role and function of an effective manager,
emphasizing the functions of planning, organizing,
motivating, directing, and controlling. Specific areas of
funeral service practice and managerial guidelines for those
areas are covered. Topics also include management theory
as it relates to funeral service practice. Letter Grade Only.
Degree Credit.

Units: 3
Hours/semester: 40-45 Lecture; 24-27 Lab; 80-90
Homework
Prerequisites: ACTG 100
Corequisites: Concurrent enrollment in, FSE. 250 and FSE.
260
Transfer Credit: CSU

FSE. 250 RESTORATIVE ART
This course introduces the techniques of creating an
acceptable physical appearance of the deceased for the
benefit of the survivors. Topics include the study of facial
features, cosmetics, and restorative treatment for a variety
of situations faced by the practitioner. Letter Grade Only.
Degree Credit.

Units: 5
Hours/semester: 48-54 Lecture; 96-108 Lab; 96-108
Homework
Corequisites: Concurrent enrollment in, FSE. 260
Transfer Credit: CSU

FSE. 260 EMBALMING I
This course introduces the phenomenon of death relative to
the human body. It includes the processes of preservation,
restoration, and sanitation in treating the dead human
body. The course outlines the legal and social aspect of
embalming, the use of anatomical systems in preservation
and the application of chemical preservatives to slow
decomposition. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108
Homework
Prerequisites: FSE. 212
Corequisites: Concurrent enrollment in, FSE. 250
Transfer Credit: CSU

FSE. 265 EMBALMING II
This course is a continuation of FSE. 260. It is the study of
vascular anatomy, case analysis, the selection and injection
of embalming fluids, and treatment of specific conditions
requiring special attention including traumatic deaths,
time considerations, moisture considerations and tissue procurement. Letter Grade Only. Degree Credit.

Units: 2
Hours/semester: 32-36 Lecture; 64-72 Homework
Prerequisites: FSE. 250 and FSE. 260
Corequisites: Concurrent enrollment in, FSE. 270
Transfer Credit: CSU

FSE. 270 FUNERAL SERVICE COUNSELING
This course examines communication skills and the role of the funeral director as facilitator, counselor, and caregiver. Topics include specific communication and counseling techniques as they are applied in funeral service practice as well as normal and abnormal grief reactions, children and death, crisis intervention counseling, and dealing with stress and burnout. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: FSE. 235 and FSE. 250 and FSE. 260
Corequisites: Concurrent enrollment in, FSE. 265 and FSE. 280
Transfer Credit: CSU

FSE. 280 FUNERAL SERVICE EDUCATION PRACTICUM
This course provides an opportunity to apply classroom instruction in funeral service education to real-world practice in the community. The student participates in an off-site lab experience at approved off-campus preceptor sites. Additionally, students prepare for the National Board Examination. Letter Grade Only. Degree Credit.

Units: 5
Hours/semester: 16-18 Lecture; 192-216 Field Experience; 32-36 Homework
Prerequisites: Students must show proof they have completed all general education and competency requirements for graduation and FSE. 250 and FSE. 260
Corequisites: Concurrent enrollment in, FSE. 265 and FSE. 270
Transfer Credit: CSU

Geography

GEOG 100 PHYSICAL GEOGRAPHY
A study of the Earth and the processes that create and shape its physical features and landforms. Topics include Earth dimensions and motions, seasons, map reading, weather and climate, tectonic and surface process, landforms, and tools used by geographers. Emphasis is placed on recognizing, describing, and interpreting the spatial distribution of Earth features, the processes that form these features, and their relationship to humanity. Field trip may be required. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area B1
Transfer Credit: CSU (CSU GE Area B1), UC (IGETC Area 5A)
C-ID: GEOG 110

GEOG 101 PHYSICAL GEOGRAPHY LAB
Practical application of the basic concepts of Physical Geography. Students use the tools of geography, such as maps and field observations, to enrich their understanding of the Earth's physical processes. Topics include Earth-Sun relationships, weather, climate, tectonic and surface processes, landforms, water, and ecosystems. Fieldtrips may be required. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: Completion of, or concurrent enrollment in, GEOG 100
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area B3 - only if GEOG 100 is successfully completed prior to or concurrently with GEOG 101
Transfer Credit: CSU (CSU GE Area B3 - only if GEOG 100 is successfully completed prior to or concurrently with GEOG 101), UC (IGETC Area 5C*)

GEOG 110 CULTURAL GEOGRAPHY
Cultural geography is the spatial study of human populations, cultural origins, and the diffusion of cultural expression over time. Topics include demography, the influence of environmental landscape modification, language, religion, political and economic systems, and the role of factors on human settlement, urbanization and technology. Emphasis is placed on the spatial interactions amongst nature, society, and culture. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** DSI

**Transfer Credit:** CSU (CSU GE DSI), UC (IGETC Area 4)

**C-ID:** GEOG 120

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**GEOG 150 WORLD REGIONAL GEOGRAPHY**

Geographic analysis of the physical, cultural, and population patterns of world regions. A critical examination, with historical context, is also made of the economy and politics, sociocultural issues, environmental issues, and measures of human well-being within each region. This course is aimed at helping students make sense of world events, environments, cultures, conflicts, and lifestyles, and to begin to prepare them for life in an increasingly global community. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** DSI

**Transfer Credit:** CSU (CSU GE DSI), UC (IGETC Area 4)

**C-ID:** GEOG 125

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**GEOG 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 0.5 - 3

**Hours/semester:** 24-162 Lab

**Transfer Credit:** CSU

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**Geology**

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**GEOL 100 INTRODUCTION TO GEOLOGY**

An introduction to Earth materials, landforms, and the processes that shape the Earth. Course includes the study of rocks and minerals, plate tectonics, volcanoes, earthquakes, and surface processes such as landslides, rivers, and glaciers. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** Area B1

**Transfer Credit:** CSU (CSU GE Area B1), UC (IGETC Area 5A)

**C-ID:** GEOL 100; GEOL 101 - GEOL 100 & 101 must be taken

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**GEOL 101 GEOLOGY LABORATORY**

An introduction to earth materials through the identification of minerals and rocks. Interpretation of geologic processes and landforms by analyzing maps and other data. Includes the study of plate tectonics, geologic time, and surface processes such as rivers, groundwater and glaciers. Field trips may be required. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1

**Hours/semester:** 48-54 Lab

**Prerequisites:** Completion of, or concurrent enrollment in GEOL 100

**AA/AS Degree Requirements:** Area B3 - only if GEOL 100 is successfully completed prior to or concurrently with GEOL 101

**Transfer Credit:** CSU (CSU GE Area B3 - only if GEOL 100 is successfully completed prior to or concurrently with GEOL 101), UC (IGETC Area 5C*)

**C-ID:** GEOL 100L; GEOL 101 - GEOL 100 & 101 must be taken

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**GEOL 121 EARTH SCIENCE**

An interdisciplinary study of the planet Earth, stressing the interconnectedness of Earth systems. Topics include Earth materials, geologic processes and landforms, atmosphere processes, the hydrosphere, ocean characteristics and processes, Earth/Sun relationships, and the Solar System. A fieldtrip may be required. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 4

**Hours/semester:** 48-54 Lecture; 48-54 Lab; 96-108 Homework

**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** Area B1, B2, B3

**Transfer Credit:** CSU (CSU GE Area B1, B2, B3), UC (IGETC Area 5A, 5C)

**C-ID:** GEOL 121

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**GEOL 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 0.5 - 3

**Hours/semester:** 24-162 Lab

**Transfer Credit:** CSU
provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Health Science

HSCI 100 GENERAL HEALTH SCIENCE
Analysis of contemporary health issues with a focus on understanding basic health information, increasing patient engagement with healthcare providers, and preventing disease. The course also covers social factors influencing health outcomes. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area E1
Transfer Credit: CSU (CSU GE Area E1), UC

HSCI 116 WOMEN’S HEALTH ISSUES
The physiological, psychological, and sociological aspects of different stages of a woman’s life including menstruation, contraception, pregnancy, and menopause. The course also covers the effects of diet, physical fitness, and disease on women's physical and mental well-being. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area E1
Transfer Credit: CSU (CSU GE Area E1), UC

History

HIST 100 HISTORY OF WESTERN CIVILIZATION I
This course surveys the civilizations of Europe and the Mediterranean Region in the ancient, medieval and early modern eras. Topics include: Mesopotamia, Ancient Egypt, the Hebrews, the Minoans, Greece, Rome, the development and spread of Christianity, Europe during the medieval, Renaissance and Reformation periods, and the Age of Exploration. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 110.

AA/AS Degree Requirements: Area C2; DSI
Transfer Credit: CSU (CSU GE Area C2; DSI), UC (IGETC Area 3B; Area 4)

C-ID: HIST 170

HIST 101 HISTORY OF WESTERN CIVILIZATION II
This course explores the history of Western Civilization from 1500 to the present. The focus is on examining and analyzing the historical trajectories European societies followed out of the Middle Ages to the modern world. Topics include the Renaissance, the Protestant Reformation, the Scientific Revolution, the Age of Exploration and Conquest, the Atlantic exchange, absolutism, constitutionalism, the Enlightenment, the Age of Revolution, industrialization, modern nationalism, imperialism, World War I, World War II, and post-war Europe. Intellectual, art, gender, and class history will be integrated throughout the course. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 110.

AA/AS Degree Requirements: Area C2; DSI
Transfer Credit: CSU (CSU GE Area C2; DSI), UC (IGETC Area 3B; Area 4)

C-ID: HIST 180

HIST 104 WORLD HISTORY I
This course explores the origins and development of diverse societies and civilizations of the world from the Paleolithic era through 1500. The focus of this class is on examining and analyzing the ways in which the world’s peoples and societies compare, connect and/or diverge. Broad themes and major turning points, such as migration, trade, state-building, the Neolithic Revolution, and the development of the first civilizations, lead us to raise questions about the nature of the human experience both past and present. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 110.

AA/AS Degree Requirements: Area C2; DSI
HIST 106 WORLD HISTORY II
This course explores diverse civilizations and societies of the Middle East, Africa, Asia, Europe, Oceania and the Americas from 1500 to the present. The focus of this class is on examining and analyzing the ways in which the world's peoples and societies compare, connect and/or diverge. Themes such as imperialism, industrialization, globalization, and the environment are examined, as well as cross-cutting global phenomena and ideas, such as race and racial difference, nationalism, and feminism. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 110.
AA/AS Degree Requirements: Area C2, D US-1, D US-2; DSI
Transfer Credit: CSU (CSU GE Area C2; DSI), UC (IGETC Area 3B; Area 4)
C-ID: HIST 160

HIST 201 U.S. HISTORY THROUGH 1877
This course explores U.S. history from pre-Columbian times to 1877. The focus is on the political, economic, social and cultural forces that have shaped the nation and the varied experiences and contributions of the diverse peoples of America. Topics covered include indigenous cultures, European colonization, the American Revolution, Constitution, American institutions, slavery and the Civil War and Reconstruction. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 110.
AA/AS Degree Requirements: Area C2, D US-1, D US-2; DSI
Transfer Credit: CSU (CSU GE Area C2; DSI), UC (IGETC Area 3B; Area 4)
C-ID: HIST 130

HIST 202 U.S. HISTORY FROM 1877 TO THE PRESENT
This course explores U.S. history from 1877 to the present day. The focus is on the political, economic, social and cultural forces that have shaped the modern nation and the varied experiences and contributions of the diverse peoples of America. Topics covered include the Gilded Age, “roaring 20s,” Great Depression, World Wars, the sixties, the Reagan era, the War on Terror and the Obama presidency. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2, D US-1; DSI
Transfer Credit: CSU (CSU GE Area C2; DSI), UC (IGETC Area 3B; Area 4)
C-ID: HIST 140

HIST 242 AFRICAN-AMERICAN HISTORY
Explores and analyzes the experiences of African Americans in U.S. history. Subjects include: African societies, the slave trade, the evolution of a race-based slave system in America, the evolution of African American culture, abolitionism, the Civil War and Reconstruction, segregation, the Harlem Renaissance, the civil rights movement, and current issues. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 3B; Area 4)

HIST 245 RACE, ETHNICITY AND IMMIGRATION IN THE U.S.
Historical introduction to race and the interconnected experiences of diverse racial, ethnic, and immigrant groups. Special attention is paid to the ways in which race and ethnicity have intersected with immigration, class, and gender to shape American institutions, social life, and identities over time. Grassroots struggles for liberation and justice, from early abolitionism to the Immigrant Rights and Black Lives Matter movements, are also examined. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2, D US-1; DSI
Transfer Credit: CSU (CSU GE Area C2; DSI), UC (IGETC Area 3B; Area 4)
HIST 246 HISTORY OF LATINOS IN THE U.S.
Explores the history of Latinos in the United States from the pre-Columbian heritage to the present. Topics include, the formation of Latino/a communities and identities, including Mexican American, Puerto Rican, Cuban, Central American and other communities; racial, gender and class differences; U.S. foreign and domestic policies and their impacts; the struggle for civil rights; Latino/a contributions to the development of the U.S.; and current issues. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3
**Hours/semester:** 48-54 Lecture; 96-108 Homework
**Recommended:** Eligibility for ENGL 100.
**AA/AS Degree Requirements:** Area C2; DSI
**Transfer Credit:** CSU (CSU GE Area C2; DSI), UC (IGETC Area 3B; Area 4)

HIST 247 WOMEN IN U.S. HISTORY
Explores and analyzes the experiences of women in U.S. history. Topics include: women's rights, feminism, and the struggle to achieve equality; women's contributions to the social, political, economic, and cultural development of the United States; the impacts of race, ethnicity, class, and sexuality on women's lives and identities; and current issues. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3
**Hours/semester:** 48-54 Lecture; 96-108 Homework
**Recommended:** Eligibility for ENGL 100.
**AA/AS Degree Requirements:** Area C2; DSI
**Transfer Credit:** CSU (CSU GE Area C2; DSI), UC (IGETC Area 3B; Area 4)

HIST 422 MODERN LATIN AMERICA
This course explores and analyzes the history of Latin America from independence to the present. The focus is on the social, political, economic and cultural developments that make Latin America unique. Themes such as nation-building, neocolonialism, democracy and dictatorship, social revolution, African and indigenous cultures, women and gender, the Cold War, globalization and relations with the United States and the world are all considered. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3
**Hours/semester:** 48-54 Lecture; 96-108 Homework
**Recommended:** Eligibility for ENGL 100.
**AA/AS Degree Requirements:** DSI

HIST 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 0.5 - 3
**Hours/semester:** 24-162 Lab
**Recommended:** Eligibility for ENGL 100.
**Transfer Credit:** CSU

**Human Services**

HMSV 100 INTRODUCTION TO SOCIAL WORK AND HUMAN SERVICES
An introductory overview of social welfare and social service institutions in the U.S. The course presents an historical perspective of the development of U.S. social work and human services. Special attention is given to the policies and procedures of current social service delivery systems as well as the importance of cultural sensitivity within those settings. *Letter Grade Only. Degree Credit.*

**Units:** 3
**Hours/semester:** 48-54 Lecture; 96-108 Homework
**Recommended:** Eligibility for ENGL 100.
**Transfer Credit:** CSU

HMSV 121 SOCIAL WORK AND HUMAN SERVICES SEMINAR
This course provides the student who is participating in a supervised field experience in a community organization, agency, or institution with a weekly class meeting that provides the academic element to the experiential course offering. The application of concepts gained in the prerequisite or corequisite course to the field experience are be emphasized. This course is designed to provide the student with an opportunity to develop skills that would facilitate gaining employment in the human services field. *Letter Grade Only. Degree Credit.*

**Units:** 1
**Hours/semester:** 16-18 Lecture; 32-36 Homework
Prerequisites: HMSV 100
Corequisites: Concurrent enrollment in, HMSV 122
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

HMSV 122 SOCIAL WORK AND HUMAN SERVICES FIELDWORK
This course offers the student a supervised field experience in a community organization, agency, or institution, allowing the student to apply knowledge and learn new skills outside of the classroom environment. This course is designed to provide the student with an opportunity to observe, practice, and develop skills that would facilitate gaining employment in the human services field. Letter Grade Only. Degree Credit.

Units: 2
Hours/semester: 96-108 Field Experience
Prerequisites: HMSV 100
Corequisites: Concurrent enrollment in, HMSV 121
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

HMSV 672 COOPERATIVE EDUCATION: INTERNSHIP
Supervised internship in cooperation with private or public sector employers. Designed to apply knowledge and learn new skills, directly related to the student’s program of study, outside of the normal classroom environment. Students must attend one orientation which is offered the first three weeks of each semester. Each unit requires 60 hours per unit for unpaid work or 75 hours per unit for paid work during the semester. May be repeated for credit up to 16 units. The unit limitation applies to any Cooperative Education Work Experience (any combination of 670, 671 and/or 672 courses) offered within the SMCCCD. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: A minimum of 12 completed units in the occupational discipline.
Transfer Credit: CSU

HUM. 650 STUDY ABROAD LIFE AND CULTURE, A HUMANITIES PERSPECTIVE
Explore the cultural elements, including literature, art, art history, drama, music and theater and philosophical movements of a foreign country as part of the Study Abroad Program. Students gain skills in cross-cultural competency as well as specific knowledge and understanding about the host country as they attend lectures, interact with local experts, participate in field trips and take part in cultural events. Students must be enrolled in the Semester Abroad Program. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Eligibility for ENGL 100.
Transfer Credit: CSU

INDV 121.1 BADMINTON I
A course designed to provide instruction and practice in the fundamentals of badminton: rules and strategies, grip, strokes, footwork, and court coverage, drills and competition, tournaments in singles and doubles. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: A minimum of 12 completed units in the occupational discipline.
Transfer Credit: CSU

INDV 121.2 BADMINTON II
Continuation of INDV 121.1. Designed to provide instruction and practice in the fundamentals of badminton at an intermediate level: rules and strategies, grip, strokes,
footwork, and court coverage, drills and competition, tournaments in singles and doubles. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: INDV 121.1 or demonstrated skill level.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

INDV 160.1 GOLF I
Techniques, rules, etiquette, and strategy for beginning golf. Practical experience associated with grip, stance, swings relative to iron and wood shots at a beginning level. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

INDV 160.2 GOLF II
Technique, rules, etiquette, and strategy for intermediate golf. Practical experience associated with grip, stance, swings relative to iron and wood shots at an intermediate level. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: INDV 160.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

INDV 160.3 GOLF III
Technique, rules, etiquette, and strategy for advanced intermediate golf. Practical experience associated with grip, stance, swings relative to iron and wood shots at an advanced intermediate level. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: INDV 160.2
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

INDV 160.4 GOLF IV
Technique, rules, etiquette, and strategy for advanced golf. Practical experience associated with grip, stance, swings relative to iron and wood shots at an advanced level. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: INDV 160.3
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

INDV 251.1 TENNIS I
Instruction in the fundamental skills of the service, forehand and the backhand strokes; court strategy and the rules of play; testing program in all tennis skills and rules. Includes use of automatic ball machine. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

INDV 251.2 TENNIS II
Continued instruction in the fundamental skills of tennis. Emphasis is placed on singles and doubles strategy including the essence of net play at the intermediate level. Forehand, backhand, and serve are emphasized as offensive and defensive weapons. Competition is included and tournaments are held. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: INDV 251.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

INDV 251.3 TENNIS III
Continued instruction on the skills of tennis at the advanced intermediate level. Emphasis is placed on ground strokes that utilize top-spin and cut-shots. Serve and volley strategies will be taught. Competition includes singles and doubles tournaments in class. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: INDV 251.2
**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC*

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**INDV 251.4 TENNIS IV**

Continued instruction on the skills of tennis at the advanced level. Emphasis is placed on doubles strategy including serve, volley and net play as offensive and defensive weapons. Competition is included and tournaments are held. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1

**Hours/semester:** 48-54 Lab

**Prerequisites:** INDV 251.3

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC*

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**Interdisciplinary Studies**

**IDST 150 HONORS RESEARCH SEMINAR**

Introductory research seminar for students currently pursuing an Honors research project. An introduction to research methods used in different disciplines and to scholarly collaboration and communication. This course focuses on formulating a research question, identifying and utilizing sources, constructing and critiquing scholarly arguments, and creating an effective final written and oral product. As students learn about scholarly research, they simultaneously identify and refine their own research topic, engage in scholarly conversations on their work, apply discipline-specific methodologies to their work, and create their own final research product and bibliography. *Letter Grade Only. Degree Credit.*

**Units:** 1

**Hours/semester:** 16-18 Lecture; 32-36 Homework

**Recommended:** Eligibility for ENGL 110.

**Transfer Credit:** CSU, UC

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**Interior Design**

**INTD 115 INTRODUCTION TO INTERIOR DESIGN**

Examination of the interior built environment with emphasis on residential design. The elements and principles of design along with historical and cultural influences are examined as they relate to the functional and aesthetic aspects of interior spaces. Students develop skills in critical analysis of interiors and create individual solutions through design projects. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Transfer Credit:** CSU

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**INTD 126 CRITICAL THINKING FOR INTERIOR DESIGNERS**

Introduces students to the analytical and creative tools designers use to make design decisions. Students explore the philosophy of design and the design process through reading design history and practice in hands-on processes of creative expression. The team consultation critique is utilized throughout the course. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Transfer Credit:** CSU

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**INTD 128 PRESENTATION TECHNIQUES**

Learn the necessary oral and visual presentation skills needed in the interior design profession. Students explore two-dimensional design techniques, including basic and quick sketch; one and two point perspectives. Development of a professional portfolio looking at the importance of social media to promote work is expected. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** ARCH 110

**Transfer Credit:** CSU

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**INTD 148 COLOR AND DESIGN**

Basic color theories and their application to design are studied in depth. Exploration of the impact of history, global and cultural influences, the effect of environment, and the psychological implications related to the application and use of color are also included. Students apply these theories and influences to appropriate projects. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Transfer Credit:** CSU

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**INTD 150 HISTORY OF INTERIORS I**

Examination of the history and design of architecture, interiors, and furniture from ancient Egypt to the 19th Century. Other topics include the influence of historical
periods on today's design. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework

**AA/AS Degree Requirements:** Area C1  
**Transfer Credit:** CSU (CSU GE Area C1), UC

**INTD 151 HISTORY OF INTERIORS II**

Examination of the history and the global, social, cultural, and political influences on design of Western and non-Western architecture, interiors, and furniture from the beginning of the 19th Century to the present time, and their impact on current design trends. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** INTD 150

**AA/AS Degree Requirements:** Area C1  
**Transfer Credit:** CSU (CSU GE Area C1), UC

**INTD 175 SPACE PLANNING AND DESIGN**

Introduction to the concept of Inclusive Design as applied to space planning. Emphasis is in creating spaces in the built environment that are responsive, adaptable, accessible, and secure to everyone through the Design Process. Students learn about products and various environments through practical projects for residential spaces while applying codes and sustainable principles of design. Space planning for commercial environments is explored. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** INTD 150

**AA/AS Degree Requirements:** Area C1  
**Transfer Credit:** CSU (CSU GE Area C1), UC

**INTD 250 PROFESSIONAL PRACTICES FOR INTERIOR DESIGNERS**

This course focuses on professionalism in interior design business ethics and working relationships with related professionals. Business practices and management tools are explored with input from professional designers involved with a variety of different types of practices. Liability, codes, and laws are examined and factored into student projects with both residential and non-residential professional practices. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** INTD 115  
**Transfer Credit:** CSU

**INTD 260 OVERVIEW OF LIGHTING DESIGN**

Overview of the study of interior lighting as it relates to residential and commercial industry including terminology, lamps, fixtures, lighting plans, design techniques, codes and energy efficient lighting practices and regulations. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** ARCH 110  
**Transfer Credit:** CSU

**INTD 272 KITCHEN AND BATH DESIGN**

Overview of the basic principles of kitchen and bath design and space layout, including drawing floor plans and elevations to scale using hand drafting and/or Computer-aided Design (CAD) software. Selection and evaluation of current product and materials are made based on client survey. Cabinetry, appliances, finish materials, barrier free design, and changing family patterns as applicable to today’s kitchens and baths are covered. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** ARCH 110 and INTD 175  
**Transfer Credit:** CSU

**INTD 276 ADVANCED KITCHEN AND BATH DESIGN**

Codes and industry standards such as the International Residential Code (IRC), National Kitchen and Bath Association (NKBA), Planning Guidelines, and Inclusive and Sustainable design practices are used to redesign kitchen and bath spaces. Students prepare construction documents required for the design and submittal, through NKBA, of plans for proposed kitchen and bath projects using Computer-Aided Design (CAD) software. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 2  
**Hours/semester:** 32-36 Lecture; 64-72 Homework

**Prerequisites:** INTD 272 and INTD 360  
**Transfer Credit:** CSU
INTD 300 STUDIO I: HOME STAGING
Overview of the current professional practices used to prepare a home for sale. Includes the selection and evaluation of methods required to prepare future home stagers with skills such as attention to details, digital and hand sketching illustrations, and business practices. Commercial staging is explored as well. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: INTD 175
Transfer Credit: CSU

INTD 301 PORTFOLIO DEVELOPMENT
Portfolio Development is the culminating course for students earning certificates of achievement and associate of arts degrees in Interior Design. Emphasis is placed on selecting several pieces of original work to build a professionally presented digital portfolio. This includes floor plans and elevations, computer-aided design (CAD) drawings, 3D computer designs, lighting plans, perspective sketches, and hand renderings. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Prerequisites: INTD 128 and INTD 175 and INTD 360 or INTD 361
Transfer Credit: CSU

INTD 350 COMMERCIAL DESIGN
Introduction of planning and design of interior spaces related to commercial projects including offices, restaurant dining areas, and retail spaces, among others. Finish materials and furniture suitable for commercial projects are examined and methods of producing presentation drawings and documents are practiced. Current codes and regulations are included in this course. Field trips required. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: INTD 175, INTD 400
Transfer Credit: CSU

INTD 357 KITCHEN AND BATH SYSTEMS
Overview of the household systems that support kitchen and bath design such as: plumbing, HVAC, and lighting. Codes and Title 24 related to building systems are reviewed. Drawings include typical installation details specifying current products and systems based on code and green building initiatives. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: ARCH 110
Transfer Credit: CSU

INTD 360 CAD APPLICATIONS FOR INTERIOR DESIGNERS
AutoCAD software is used to develop skills for completing drawings such as floor plans and elevations used by interior designers in accordance with industry standards, principles, and techniques. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 32-36 Lecture; 48-54 Lab; 64-72 Homework
Prerequisites: ARCH 110
Transfer Credit: CSU

INTD 361 CHIEF ARCHITECT FOR INTERIOR DESIGNERS
Chief Architect software creates 3D architectural home design including kitchen and bath. The software produces floor plans, elevations, and construction documents quickly and efficiently. Drawings follow industry standards and techniques. Design tools for photo-realistic renderings and virtual tours are explored. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 32-36 Lecture; 48-54 Lab; 64-72 Homework
Prerequisites: ARCH 110
Transfer Credit: CSU

INTD 367 3D MODELING SKETCHUP FOR INTERIOR DESIGNERS
Learn how to produce a set of drawings that show 3D models of structures, interiors, and construction details for residential and commercial spaces. Portfolio preparation is included. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 32-36 Lecture; 48-54 Lab; 64-72 Homework
Prerequisites: ARCH 110
Transfer Credit: CSU

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INTD 400 PRINCIPLES OF SUSTAINABLE DESIGN
Overview of the principles of sustainable design. Issues affecting homes and lifestyles as applied to residential interiors. Home energy assessment in existing residential structures using diagnostic tools such as infrared camera, moisture meters, and video cameras, among others. Local and state government policies. Field trips required. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU, UC

INTD 450 MATERIALS AND FINISHES
Guidelines for selecting interior finish materials and fabrics for appropriateness, quality, performance, and cost for residential and non-residential applications. Knowledge of and exposure to properties, uses, applicable laws and codes, environmental and sustainability requirements are also included. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU

INTD 672 COOPERATIVE EDUCATION: INTERNSHIP
Supervised internship in cooperation with private or public sector employers. Designed to apply knowledge and learn new skills, directly related to the student's program of study, outside of the normal classroom environment. Students must attend one orientation which is offered the first three weeks of each semester. Each unit requires 60 hours per unit for unpaid work or 75 hours per unit for paid work during the semester. May be repeated for credit up to 16 units. The unit limitation applies to any Cooperative Education Work Experience (any combination of 670, 671 and/or 672 courses) offered within the SMCCCD. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1 - 3
Hours/semester: 75-225 Work Experience; 60-180 Field Experience
Prerequisites: A minimum of 12 completed units in the occupational discipline.
Transfer Credit: CSU

INTD 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Kinesiology, Athletics, and Dance
(See also Aquatics, Dance, Fitness, Individual Sports, Team Sports and Varsity Sports)
(View List Of Kinesiology Families Across The District)
The majority of courses offered by the San Mateo County Community College District are now leveled to show progression from the most fundamental (level 1) to the most advanced (level 4). Course levels can be identified by a .1, .2, .3, or .4 system or by the course title. Course levels may be scheduled simultaneously. Students are advised to enroll initially at the fundamental level (.1) regardless of previous experience and be placed at the appropriate level based on instructor assessment. Adapted Physical Education and intercollegiate sports related courses are not affected by the repeatability legislation.
Kinesiology activity courses are subject to repeatability limitations. Students are now limited to a maximum of four courses per family listed below. If there is more than one course in a particular family, a student may only enroll in a maximum of four total courses within that family. After four courses within a family have been taken, a student has the option to audit should they wish to continue enrolling in courses within that family. Students who audit do not count toward meeting local minimum enrollment requirements. Thus, a class may be cancelled if enough credit seeking students are not enrolled no matter how many students wish to audit. For information about how to audit, students should refer to the audit policy in the catalog.
A course previously taken by a student, prior to course leveling within the identified family will count as a repeat and limit future enrollments of courses within that family to a maximum of four combined. Below is a matrix which identifies the previous courses (based on the 2012-2013 catalog) and the equivalent with levels. This limitation on enrollment applies to all coursework attempted by the student. Students not having previously taken a Kinesiology
or Dance activity course may have the opportunity to enroll in courses within a particular family for a maximum of four times.

**Kinesiology**

**KINE 101 INTRODUCTION TO KINESIOLOGY**
Explores the broad spectrum of kinesiology as an academic discipline, fundamental concepts and meaning of movement/physical activity, diversity of humans as moving beings, professional/career options, current/social issues, personal characteristics and professional responsibilities.

*Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** Area E1

**Transfer Credit:** CSU (CSU GE Area E1)

**C-ID:** KIN 100

**KINE 105 STRESS MANAGEMENT**
The stress process and its relation to health and disease, lifestyle, and the sociocultural environment. Analysis of physiological, psychological, sociological, and environmental parameters of stress, emphasizing development of personalized stress management strategies to enhance academic, personal, and social development across the lifespan.

*Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** Area E1

**Transfer Credit:** CSU (CSU GE Area E1)

**C-ID:** KIN 100

**KINE 109 LIFETIME FITNESS AND NUTRITION**
This course is designed to help students identify the complex relationships between diet, physical fitness, and disease. The course includes a review of physical fitness guidelines and basic nutritional guidelines for optimum health and wellness throughout various stages of the lifespan. Personal lifestyle and behavior changes are emphasized as well as the impact poor health and wellness have on our society as a whole.

*Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Recommended:** Eligibility for ENGL 100. Eligibility for MATH 110.

**AA/AS Degree Requirements:** Area E1

**Transfer Credit:** CSU, UC

**KINE 119 FIRST AID/ADULT AND PEDIATRIC CPR/ AED**
The Adult and Pediatric First Aid/CPR/AED course incorporates the latest science and teaches students to recognize and care for a variety of first aid emergencies such as burns, cuts, scrapes, sudden illnesses, head, neck, back injuries, heat and cold emergencies and how to respond to breathing and cardiac emergencies to help victims of any age - adults (about 12 years and older) and pediatric (infants and children up to 12 years of age). Students who successfully complete this course receive a certificate for Adult and Pediatric First Aid/CPR/AED through the American Red Cross valid for two years. Because the certificate for Adult CPR/AED is valid for two years, a student may file a Petition to Repeat KINE 119 if the course was completed more than 4 semesters ago. This is not an activity class.

*Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Transfer Credit:** CSU, UC

**KINE 137 STUDENT-ATHLETE SKILLS FOR SUCCESS, FIRST YEAR**
Designed to introduce the first year student-athletes to the demands of collegiate academics. This course aids in the introduction to the common challenges of students participating in competitive collegiate sports; including student-athlete schedule management, and teacher-player communication. Student-athletes participate in athletic planning and academic monitoring along with California Community College Athletic Association eligibility requirements. Note: This course is not activity-based and is not applicable to the specific area requirement in Physical Education for the Associate Degree.

*Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1

**Hours/semester:** 48-54 Lab

**Transfer Credit:** CSU

**KINE 138 STUDENT-ATHLETE SKILLS FOR SUCCESS, SECOND YEAR**
Designed for the second-year student-athletes with an emphasis on athletic and academic transfer requirements. This course aids in further exploration of the common
challenges of students participating in competitive collegiate sports during their second year of competition, including student athlete schedule management, teacher-player communication, leadership, and athletic transfer requirements in congruence with California Community College Athletic Association, National Association Intercollegiate Athletics, and National Collegiate Athletics Association bylaws and guidelines. Student athletes participate in athletic planning and academic monitoring. Note: This course is not activity-based and is not applicable to the specific area requirement in Physical Education for the Associate Degree. Grade Option (Letter Grade or Pass/No Pass). Units do not apply toward AA/AS degree.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: KINE 137
Transfer Credit: CSU

Learning Center

LCTR 100 EFFECTIVE TUTORING AND PRACTICUM
Explores a variety of procedures for understanding and utilizing effective peer tutoring practices. Under guided supervision, students use classroom experiences to connect theory to practice. Communication and study strategies, course specific tutoring expertise, and techniques for working with students from diverse cultural and academic backgrounds are emphasized. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 8-9 Lecture; 24-27 Lab; 16-18 Homework
Transfer Credit: CSU

LCTR 139 THE RESEARCH PAPER FROM A TO Z
This course guides students through the process of developing a research paper including formulating a topic and preliminary thesis, finding and integrating sources, drafting and revising, ethical use of sources material, and documentation of resources. The course may be taken either as preparation for future research paper assignments, or in conjunction with a current research assignment in another class. Letter Grade Only. Degree Credit.

Units: 2
Hours/semester: 96-108 Lab
Transfer Credit: CSU

LCTR 140 PROFESSIONAL WRITING
This self-paced course provides instruction and practice for writing in various professional capacities. From planning business documents to letters, proposals, and memos, this course is helps individuals become more professional in their written communication. Letter Grade Only. Degree Credit.

Units: 2
Hours/semester: 96-108 Lab
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

LCTR 151 HEALTH SCIENCE VOCABULARY
This self-paced course uses listening modules, and other media, to help the student learn to pronounce and remember more than one hundred roots and affixes that thousands of words used in medical science terminology are derived. Letter Grade Only. Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Transfer Credit: CSU

LCTR 698 SUPERVISED TUTORING/ACADEMIC ASSISTANCE
Students receive academic support such as tutoring or supplemental instruction in areas of academic need. No Grade Awarded (Non-Credit Course). Units do not apply toward AA/AS degree. Non-Credit.

Units: 0
Hours/semester: 48-54 Lab
Corequisites: concurrent enrollment in course in which tutorial/academic assistance is being provided.

LCTR 810 STUDY SKILLS
Designed to prepare students for academic success in college, this course teaches student success strategies through a variety of activities and assignments that encourage and promote academic success. This course covers important and practical study techniques including time management, note taking, textbook studying, memory enhancement, and test taking. Pass/No Pass Only. Units do not apply toward AA/AS degree.

Units: 1
Hours/semester: 48-54 Lab

LCTR 822 GRAMMAR TROUBLE SPOTS I
This self-paced course helps students to improve their grammar through carefully constructed exercises and practice. Course focuses common mistakes in English
grammar and how to avoid them. Pass/No Pass Only. Units do not apply toward AA/AS degree.

Units: 1
Hours/semester: 48-54 Lab

LCTR 823 GRAMMAR TROUBLE SPOTS II
Continuation of LCTR 822. This intermediate level self-paced course helps students learn the language skills necessary to understand and recognize the most common errors in grammatical forms, meaning and use. After explanations and examples, the student works through troublesome areas with ample practice of each grammatical structure. Pass/No Pass Only. Units do not apply toward AA/AS degree.

Units: 1
Hours/semester: 48-54 Lab

LCTR 840 VOCABULARY IMPROVEMENT I
This self-paced, workbook-based course helps students build vocabulary skills by learning important basic words. The course offers practice and reinforcement through various types of exercises including matching words with definitions, choosing the correct word in context, use of prefixes and suffixes, and properly identifying synonyms and antonyms. Pass/No Pass Only. Units do not apply toward AA/AS degree.

Units: 1
Hours/semester: 48-54 Lab

Prerequisites: LCTR 822 or equivalent

LCTR 841 VOCABULARY IMPROVEMENT II
This self-paced, workbook-based course, the second in a series of four increasingly challenging vocabulary improvement courses, helps students build vocabulary skills by learning important basic words. The course offers practice and reinforcement through various types of exercises including matching words with definitions, choosing the correct word in context, and properly identifying synonyms. Pass/No Pass Only. Units do not apply toward AA/AS degree.

Units: 1
Hours/semester: 48-54 Lab

LCTR 842 VOCABULARY IMPROVEMENT III
This self-paced, workbook-based course, the third in a series of four increasingly challenging vocabulary improvement courses, helps students build vocabulary skills by learning important basic words. The course offers practice and reinforcement through various types of exercises including matching words with definitions, choosing the correct word in context, and properly identifying synonyms. Pass/No Pass Only. Units do not apply toward AA/AS degree.

Units: 1
Hours/semester: 48-54 Lab

LCTR 843 VOCABULARY IMPROVEMENT IV
This self-paced, workbook-based course, the fourth in a series of four increasingly challenging vocabulary improvement courses, helps students build vocabulary skills by learning important basic words. The course offers practice and reinforcement through various types of exercises including matching words with definitions, choosing the correct word in context, and properly identifying synonyms. Pass/No Pass Only. Units do not apply toward AA/AS degree.

Units: 1
Hours/semester: 48-54 Lab

Library Science

LIBR 100 INTRODUCTION TO INFORMATION RESEARCH
Introduction to information and library research for any major or profession. Students learn how to recognize the need for information, develop a search strategy, find and evaluate resources, synthesize and integrate the information they find, and use outside resources ethically by citing using MLA, APA, or Chicago. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU, UC*

Linguistics

LING 200 INTRODUCTION TO LINGUISTICS: A SURVEY OF LANGUAGE
Equivalent to ENGL 200. The origin, development, acquisition, and evolution of spoken and written languages are studied in this course. Topics include phonetics/phonology, morphology, syntax, semantics, and pragmatics. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
**Recommended:** Eligibility for Eligibility for ENGL 100 or ENGL 105.

**AA/AS Degree Requirements:** DSI

**Transfer Credit:** CSU (CSU GE DSI), UC (IGETC Area 4)

### Literature

**LIT. 151 INTRODUCTION TO SHAKESPEARE I**

Equivalent to DRAM 151. Study of a chronological sequence of Shakespeare's plays, including works in different genres, and a selection of his sonnets and longer poetry. Reading, discussion, critical papers. The course also covers Shakespeare's role in the development of English language and literature, and his connection to contemporary political and social issues. *Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

**AA/AS Degree Requirements:** Area C2

**Transfer Credit:** CSU (CSU GE Area C2), UC (IGETC Area 3B)

**C-ID:** ENGL 145

**LIT. 200 AMERICAN LITERATURE**

Survey of literature by and about diverse Americans from 1850 to the present. Includes canonical and lesser-known works of fiction and non-fiction that shapes a multidimensional perspective of the United States. *Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

**AA/AS Degree Requirements:** Area C2

**Transfer Credit:** CSU (CSU GE Area C2), UC (IGETC Area 3B)

**C-ID:** ENGL 135

**LIT. 205 NEW VOICES IN WORLD LITERATURE**

This course is a comparative study of selected works, in translation and in English, of literature around the world, including Europe, the Middle East, Asia, and other areas, from the mid or late seventeenth century to the present. *Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

**AA/AS Degree Requirements:** Area C2

**Transfer Credit:** CSU (CSU GE Area C2), UC (IGETC Area 3B)

**C-ID:** ENGL 145

**LIT. 231 SURVEY OF ENGLISH LITERATURE I**

Surveys the literature written in the British Isles up to the last quarter of the 18th century. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

**AA/AS Degree Requirements:** Area C2

**Transfer Credit:** CSU (CSU GE Area C2), UC (IGETC Area 3B)

**C-ID:** ENGL 160

**LIT. 232 SURVEY OF ENGLISH LITERATURE II**

Survey of major English writers from the late eighteenth century to contemporary British and post-colonial periods. Acquaints students with the most important literary genres practiced in these eras, and students read and discuss a variety of texts that reveal cultural and political issues of the time, such as the rise of feminism, the issue of slavery, and the rise of British colonialism. *Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

**AA/AS Degree Requirements:** Area C2

**Transfer Credit:** CSU (CSU GE Area C2), UC (IGETC Area 3B)

**C-ID:** ENGL 165

**LIT. 252 WOMEN WRITERS: MULTICULTURAL PERSPECTIVES**

A survey of the influence of women in a global society through an examination of fiction and non-fiction by women writers. Explores the changes in women's history; the development of women's roles, globally and in American culture; and the significance of women within society. The literature sampled emphasizes a comparative approach toward analyzing writing by women from diverse
LIT. 266 BLACK LITERATURE
A survey of Black American literature from mid 18th century to the present. The literature sampled explores the development of this ethnic group; analyzes the significance of African Americans to the formation of this nation; and includes: autobiographical works, poetry, short stories, folk tales, novellas, films, music, and art. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)

LIT. 372 MYTH AND FOLKLORE OF LA RAZA
Explore the purpose and meaning of myth and folklore within the context of the indigenous, Mexican, Mexican-American, and other mestizo cultures found in Mexico, other parts of Latin America, and the Southwest. Course work involves analyzing myths and folklore that originate from the indigenous of the Americas, the Spanish and the mestizos of Latin American culture. Students also study the effects of these myths and folklore on contemporary values. The course examines the perspectives, values, and cultures of Native American, Spanish, and mestizo people of Latin America and the United States. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)

LIT. 373 LATIN AMERICAN LITERATURE IN TRANSLATION
In this course students study Latin American literature written in English. An emphasis is placed on contemporary short stories, poems, and novels as well as films. In order to fully appreciate these texts, students learn about relevant historical, political, and social issues. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)

LIT. 375 NATIVE-AMERICAN LITERATURE
Introduction to the American Indian/Indigenous cultures and literatures of North America. Students read and discuss a wide variety of texts that fall into the categories of "traditional" Euro-American literary forms. The course also covers rhetorics, spoken word, audio/visual, material culture, blogs and websites, and media. Acquaints students with the range and variety of both American Indian communities and the texts they produce. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.

AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)

LIT. 441 SURVEY OF FILM
Survey of film masterpieces from the early 1900's to the present with emphasis on structure of film and the technique of film making. Screening of films followed by discussion and reading exercise students' abilities to think, speak and write critically about films and their historical context. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.
AA/AS Degree Requirements: Area C1, C2
Transfer Credit: CSU (CSU GE Area C1, C2), UC (IGETC Area 3A)

LIT. 442 FILM STUDY AND APPRECIATION
Film study and appreciation with a focus on one area of study: i.e., one period, genre, director, national cinema, chosen from film history. Screening of films followed by discussion, reading, and writing, with emphasis on students' abilities to think, speak and write critically about films. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.
AA/AS Degree Requirements: Area C1, C2
Transfer Credit: CSU (CSU GE Area C1, C2), UC (IGETC Area 3A)

LIT. 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Management

MGMT 100 INTRODUCTION TO BUSINESS MANAGEMENT
Introduction to the principles and functions of contemporary business management. Topics include: planning, organizing, staffing, controlling and decision-making. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Transfer Credit: CSU

Mathematics

MATH 110 ELEMENTARY ALGEBRA
This is the first course in a 2-part series covering elementary and intermediate algebra. Topics include the real number system, linear equations, linear inequalities, graphing, systems of equations, integer exponents, polynomials, factoring, proportions, rational expressions, and problem solving. Students who complete this course with a C or better are advised to enroll in MATH 120. Letter Grade Only. Units do not apply toward AA/AS degree.
Units: 5
Hours/semester: 80-90 Lecture; 160-180 Homework
Prerequisites: MATH 811 or appropriate score on the College Placement Test or other multiple measures assessment.

MATH 120 INTERMEDIATE ALGEBRA
This is the second course in a 2-part series covering elementary and intermediate algebra and is a continuation of MATH 110. Topics include a review of equations, absolute value, lines and graphs, functions, rational exponents, radical expressions and equations, quadratic equations and graphs, exponential functions, and logarithmic functions. Additional topics may include conic sections and systems of equations. Letter Grade Only. Degree Credit.
Units: 5
COURSE DESCRIPTIONS

**Hours/semester:** 80-90 Lecture; 160-180 Homework

**Prerequisites:** MATH 110 or MATH 112 (offered at CSM or Skyline) or appropriate score on the College Placement Test or other multiple measures assessment.

**AA/AS Degree Requirements:** Math Competency

**MATH 125 ELEMENTARY FINITE MATHEMATICS**
Topics include linear functions, system of linear equations, inequalities, matrices, mathematics of finance, linear programming, set theory, counting theory, and probability. 
*Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** MATH 120 or MATH 123 (offered at CSM or Skyline) or appropriate score on the College Placement Test or other multiple measures assessment.

**AA/AS Degree Requirements:** Area A3; Math Competency

**Transfer Credit:** CSU (CSU GE Area B4), UC (IGETC Area 2A)

**C-ID:** MATH 130

**MATH 130 ANALYTICAL TRIGONOMETRY**
Covers trigonometric functions of angles and real numbers, graphs of the trigonometric functions, trigonometric equations, the proof and uses of trigonometric identities, solving triangles, inverse functions, and complex numbers. 
*Letter Grade Only. Degree Credit.*

**Units:** 4

**Hours/semester:** 64-72 Lecture; 128-144 Homework

**Prerequisites:** MATH 120 or MATH 123 (offered at CSM or Skyline) or appropriate score on the College Placement Test or other multiple measures assessment.

**AA/AS Degree Requirements:** Area A3; Math Competency

**Transfer Credit:** CSU (CSU GE Area B4)

**C-ID:** MATH 851

**MATH 145 LIBERAL ARTS MATHEMATICS**
This course is designed for majors with no specific math requirement. The goal is to develop in students an appreciation for the beauty and utility of mathematics. Topics include logic, problem solving, probability, statistics, geometry, mathematics of finance, systems of numeration, mathematical modeling, and computers. 
*Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** Completion of Intermediate Algebra or equivalent, or placement by appropriate assessment.

**AA/AS Degree Requirements:** Math Competency

**Transfer Credit:** CSU, UC

**MATH 150 MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS**
Intended for future elementary school teachers. Topics covered include elementary set theory, numeration, number systems and operations, and elementary number theory, with emphasis on problem solving. This is the first of a two- or three-course math content sequence that most universities now require for teachers. 
*Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** MATH 120 or MATH 123 (offered at CSM or Skyline) or appropriate score on the College Placement Test or other multiple measures assessment.

**Recommended:** Eligibility for ENGL 110.

**AA/AS Degree Requirements:** Area A3; Math Competency

**Transfer Credit:** CSU (CSU GE Area B4), UC

**C-ID:** MATH 120

**MATH 190 PATH TO STATISTICS**
This accelerated course prepares students for transfer-level Statistics. It covers core concepts from elementary algebra, intermediate algebra, and descriptive statistics. Topics include ratios, rates, and proportional reasoning; arithmetic reasoning using fractions, decimals and percents; evaluating expressions, solving equations, analyzing algebraic forms to understand statistical measures; use of linear, quadratic, absolute value, exponential, and logarithmic functions to model bivariate data; graphical and numerical descriptive statistics for quantitative and categorical data. This course is designed for students who do not want to major in fields such as math, science, computer science, or business. 
*Letter Grade Only. Degree Credit.*

**Units:** 6

**Hours/semester:** 96-108 Lecture; 192-216 Homework

**Prerequisites:** MATH 811 or appropriate score on the College Placement Test or other multiple measures assessment.

**AA/AS Degree Requirements:** Math Competency
MATH 200 ELEMENTARY PROBABILITY AND STATISTICS
This course presents the basic concepts underlying statistical methods and covers descriptive statistics, probability, probability distributions, hypothesis testing, estimates and sample sizes, correlation and regression, chi-square tests, analysis of variance, and nonparametric statistics. Technology is integrated into the course. Applications of statistics to business, life sciences, social sciences, psychology, and other areas are included. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 64-72 Lecture; 128-144 Homework
Prerequisites: MATH 120 or MATH 123 (offered at CSM or Skyline) or, MATH 190 or appropriate score on the College Placement Test or other multiple measures assessment.
AA/AS Degree Requirements: Area A3; Math Competency
Transfer Credit: CSU (CSU GE Area B4), UC (IGETC Area 2A)
C-ID: MATH 110

MATH 225 PATH TO CALCULUS
Equivalent to MATH 130 and 222. This course combines the topics of trigonometry and pre-calculus and is designed to fulfill the requirements of both courses in a single course. Topics include a study of functions, function families, their properties and transformations, compositions, inverses and combinations, complex numbers, and vectors. Function families include linear, trigonometric, logarithmic, exponential, polynomial, power, and rational. Multiple representations of functions are emphasized. Letter Grade Only. Degree Credit.

Units: 6
Hours/semester: 96-108 Lecture; 192-216 Homework
Prerequisites: MATH 120 or MATH 123 (offered at CSM or Skyline) or appropriate score on the College Placement Test or other multiple measures assessment.
AA/AS Degree Requirements: Area A3; Math Competency
Transfer Credit: CSU (CSU GE Area B4), UC (IGETC Area 2A)
C-ID: MATH 955

MATH 241 BUSINESS CALCULUS I
The first class in a two semester calculus sequence designed for business majors. Topics include a review of functions, the derivative, applications of the derivative, and an introduction to the integral. Letter Grade Only. Degree Credit.

Units: 5
Hours/semester: 80-90 Lecture; 160-180 Homework
Prerequisites: MATH 120 or MATH 123 (offered at CSM or Skyline) or or appropriate score on the College Placement Test or other multiple measures assessment.
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A3; Math Competency
Transfer Credit: CSU (CSU GE Area B4), UC (IGETC Area 2A)
C-ID: MATH 140

MATH 243 BUSINESS CALCULUS II WITH TRIGONOMETRY
The second half of a two-semester calculus sequence designed for business majors. Topics include the integral, techniques of integration, an introduction to trigonometry, multivariable calculus, and differential equations. Equivalent to MATH 242. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 64-72 Lecture; 128-144 Homework
Prerequisites: MATH 241
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A3; Math Competency
Transfer Credit: CSU (CSU GE Area B4), UC* (IGETC Area 2A)

MATH 251 ANALYTICAL GEOMETRY AND CALCULUS I
This course is an introduction to calculus and analytic geometry including limits, continuity of functions, definition of differentiation, derivation of formulas, applications, anti-differentiation and the fundamental theorem of calculus. Letter Grade Only. Degree Credit.

Units: 5
Hours/semester: 80-90 Lecture; 160-180 Homework
Prerequisites: MATH 222 (offered at CSM or Skyline) or MATH 225 or appropriate score on the College Placement Test or other multiple measures assessment.
AA/AS Degree Requirements: Area A3; Math Competency
Transfer Credit: CSU (CSU GE Area B4), UC* (IGETC Area 2A)
C-ID: MATH 210; MATH 900S (both MATH 251 + 252)

MATH 252 ANALYTICAL GEOMETRY AND CALCULUS II
This course is the second in a series of calculus and analytic geometry. This course covers the Fundamental Theorem of Calculus, antiderivatives, integral applications and techniques, power series and infinite series topics such as series testing and analysis of Taylor and power series. Letter Grade Only. Degree Credit.
COURSE DESCRIPTIONS

MATH 253 ANALYTIC GEOMETRY AND CALCULUS III
This course is the third in a series of calculus and analytic geometry. This is the calculus of multivariable functions. The course covers topics in vectors, partial derivatives, double and triple integrals, line integrals and vector analysis theory such as Green's, Stokes', and Gauss' Theorems. **Letter Grade Only. Degree Credit.**

Units: 5
Hours/semester: 80-90 Lecture; 160-180 Homework
Prerequisites: MATH 251
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A3; Math Competency
Transfer Credit: CSU (CSU GE Area B4), UC (IGETC Area 2A)
C-ID: MATH 220; MATH 900S (both MATH 251 + 252)

MATH 270 LINEAR ALGEBRA
Application of vectors and matrices to systems of linear equations, linear transformations, eigenvectors and eigenvalues, vector spaces and inner products. **Letter Grade Only. Degree Credit.**

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: MATH 252
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A3; Math Competency
Transfer Credit: CSU (CSU GE Area B4), UC (IGETC Area 2A)
C-ID: MATH 230

MATH 275 ORDINARY DIFFERENTIAL EQUATIONS
Applications involving differential equations and analytical, graphical and numerical solutions of linear differential equations and systems of linear differential equations, power-series solutions of nonlinear differential equations, and solution of linear differential equations with constant coefficients by Laplace Transforms. **Letter Grade Only. Degree Credit.**

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: MATH 252
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A3; Math Competency
Transfer Credit: CSU (CSU GE Area B4), UC (IGETC Area 2A)
C-ID: MATH 240; MATH 910S (both MATH 270 + 275)

MATH 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

MATH 800 JUST-IN-TIME SUPPORT FOR ELEMENTARY PROBABILITY AND STATISTICS
A review of the core prerequisite skills, competencies, and concepts needed in statistics. Intended for students who are concurrently enrolled in MATH 200: Elementary Probability and Statistics, at Cañada College. Topics include concepts from arithmetic, pre-algebra, elementary and intermediate algebra, and descriptive statistics that are needed to understand the basics of college-level statistics. Concepts are taught through the context of descriptive data analysis. Additional emphasis is placed on solving and graphing linear equations and modeling with linear functions. **Pass/No Pass Only. Units do not apply toward AA/AS degree.**

Units: 2
Hours/semester: 32-36 Lecture; 64-72 Homework
Prerequisites: Appropriate score on the College Placement Test or other multiple measures assessment.
Corequisites: Concurrent enrollment in MATH 200

MATH 811 PRE-ALGEBRA
Covers the fundamental processes in arithmetic: reading mathematical notation, translating words into symbols, and properties of the real number system. Introduction to
MATH 818 BASIC MATHEMATICS FOR HEALTH SCIENCE

Reviews basic mathematical skills necessary for the health science field. Topics include basic operations with real numbers, scientific notation, ratios, proportions, percentages, basic statistics, and apothecary measurement. Grade Option (Letter Grade or Pass/No Pass). Units do not apply toward AA/AS degree.

Units: 3
Hours/semester: 32-36 Lecture; 48-54 Lab; 64-72 Homework

MATH 825 JUST-IN-TIME SUPPORT FOR PATH TO CALCULUS

A review of the core prerequisite skills, competencies, and concepts needed in pre-calculus. Intended for majors in science, technology, engineering, and mathematics who are concurrently enrolled in MATH 225, Path to Calculus, at Cañada College. Topics include: a review of computational skills developed in intermediate algebra, factoring, operations on rational and radical expressions, absolute value equations and inequalities, exponential and logarithmic expressions and equations, conic sections, functions including composition and inverses, an in-depth focus on quadratic functions, and a review of topics from geometry. Pass/No Pass Only. Units do not apply toward AA/AS degree.

Units: 2
Hours/semester: 32-36 Lecture; 64-72 Homework
Prerequisites: Appropriate score on the College Placement Test or other multiple measures assessment.
Corequisites: Concurrent enrollment in MATH 225

MEDA 100 INTRODUCTION TO MEDICAL ASSISTING

Duties and responsibilities of a medical assistant, medical administrative assistant, and billing specialist in a physician’s office, clinic, hospital or other medical facility. Emphasizes desirable personality traits and human relationships as well as medical ethics, specialties in the medical field, and office maintenance. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 16-18 Lecture; 32-36 Homework
Prerequisites: Appropriate score on the College Placement Test or other multiple measures assessment.
Corequisites: Concurrent enrollment in, MATH 241

MEDA 110 MEDICAL TERMINOLOGY

Development of a medical vocabulary that includes medical abbreviations and symbols through the study of the principles of word construction and word analysis, with emphasis on spelling and pronunciation, diagnosis, disease process, pathology and their interrelationship with body systems. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.
Transfer Credit: CSU
C-ID: HIT 103 X

MEDA 115 INTRODUCTION TO ELECTRONIC HEALTH RECORD

Introduction to electronic health record and learning the skills required of medical scribes and editors. Electronic entering of medical letters, reports and forms. Letter Grade Only. Degree Credit.

Units: 3
COURSE DESCRIPTIONS

Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: CBOT 415 or equivalent skill level, and appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.
Transfer Credit: CSU

MEDA 120 CLINICAL PROCEDURES I
Patient intake, examination room techniques and patient preparation, asepsis and sterilization procedures, laboratory procedures and specimen collection, vital signs, and electrocardiograms. Letter Grade Only. Degree Credit.
Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: BIOL 130, MEDA 100, MEDA 110 and MEDA 140
Transfer Credit: CSU

MEDA 121 CLINICAL PROCEDURES II
Dosage calculation, exposure control, disposal of biohazard waste, administering medications, injections, microbiology, venipuncture, and emergency medical procedures. (Extra supplies may be required). Letter Grade Only. Degree Credit.
Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: MEDA 120 and MEDA 190
Transfer Credit: CSU

MEDA 140 IMPLEMENTATION OF ELECTRONIC HEALTH RECORD
Electronic scribing/editing of patient medical chart progress notes, history and physicals, letters, consultations, surgical and autopsy reports, and discharge summaries from different aural modes. Course includes analyzing, editing, proper documentation, and compliance requirements for medical scribes and medical editors. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: MEDA 110 and MEDA 115 or equivalent
Transfer Credit: CSU

MEDA 150 MEDICAL OFFICE PROCEDURES
Fundamental office procedures applied to the medical field. Decision-making, setting priorities, finding information, coping with interruptions, and producing under pressure in medical office simulations. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Completion of, or concurrent enrollment in, MEDA 100 and MEDA 110
Transfer Credit: CSU

MEDA 160 MEDICAL INSURANCE PROCEDURES
Covers Blue Cross, Blue Shield, Medicare, Medi-Cal, Worker’s Compensation and other insurance programs. Coding resources used in claims preparation. Billing and bookkeeping methods using the computer. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: CBOT 415 or equivalent
Transfer Credit: CSU

MEDA 164 CPT (CURRENT PROCEDURAL TERMINOLOGY) BEGINNING CODING
Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Transfer Credit: CSU

MEDA 165 CPT (CURRENT PROCEDURAL TERMINOLOGY) INTERMEDIATE CODING
Continuation of MEDA 164. Intermediate-level principles and philosophy of coding logic according to CPT (Current Procedural Terminology). Emphasizes the understanding of terms and processes. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 1
Hours/semester: 16-18 Lecture; 32-36 Homework
Prerequisites: Completion of, or current enrollment in MEDA 164
Transfer Credit: CSU

MEDA 166 CPT (CURRENT PROCEDURAL TERMINOLOGY) ADVANCED CODING
Continuation of MEDA 165. Advanced principles and philosophy of coding logic according to CPT (Current
Procedural terminology). Emphasizes the understanding of terms and process. **Grade Option (Letter Grade or Pass/No Pass).** Degree Credit.

**Units:** 1

**Hours/semester:** 16-18 Lecture; 32-36 Homework

**Prerequisites:** Completion of, or concurrent enrollment in, MEDA 165

**Transfer Credit:** CSU

**MEDA 167 ICD (INTERNATIONAL CLASSIFICATION OF DISEASES)-10-CM (CLINICAL MODIFICATION) BEGINNING CODING**

Development of nomenclature and classification of diseases. Basic coding principles of diseases and symptoms according to ICD-10-CM with emphasis on the coding of medical records. Use of indexes, sequencing of code numbers, and preparation of documents to increase competency. **Grade Option (Letter Grade or Pass/No Pass).** Degree Credit.

**Units:** 1

**Hours/semester:** 16-18 Lecture; 32-36 Homework

**Transfer Credit:** CSU

**MEDA 168 ICD (INTERNATIONAL CLASSIFICATION OF DISEASES)-10-CM (CLINICAL MODIFICATION) INTERMEDIATE CODING**

Intermediate-level principles and philosophy of coding logic according to ICD-10-CM. Emphasizes the use of UHDDS, source documents, multiple coding, sequencing, Z codes, tables, neoplasms, and mental disorders. **Grade Option (Letter Grade or Pass/No Pass).** Degree Credit.

**Units:** 1

**Hours/semester:** 16-18 Lecture; 32-36 Homework

**Prerequisites:** Completion of, or concurrent enrollment in MEDA 167

**Transfer Credit:** CSU

**MEDA 169 ICD (INTERNATIONAL CLASSIFICATION OF DISEASES)-10-CM (CLINICAL MODIFICATION) ADVANCED CODING**

Advanced-level principles and philosophy of coding logic according to ICD-10-CM. Emphasizes diseases by body systems, complications, injuries, and adverse effects of drugs. **Grade Option (Letter Grade or Pass/No Pass).** Degree Credit.

**Units:** 1

**Hours/semester:** 16-18 Lecture; 32-36 Homework

**Prerequisites:** Completion of, or concurrent enrollment in, MEDA 168

**Transfer Credit:** CSU

**MEDA 190 INTRODUCTION TO PHARMACOLOGY**

Designed for medical assistants, medical scribes and other allied health professionals. Includes general principles of drug use, knowledge of the most commonly used drugs and regulations for controlled drug usage. **Letter Grade Only.** Degree Credit.

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** MATH 811 or MATH 818 or appropriate score on the College Placement Test or other multiple measures assessment.

**Transfer Credit:** CSU

**MEDA 672 COOPERATIVE EDUCATION: INTERNSHIP**

Supervised internship in cooperation with private or public sector employers. Designed to apply knowledge and learn new skills, directly related to the student's program of study, outside of the normal classroom environment. Students must attend one orientation which is offered the first three weeks of each semester. Each unit requires 60 hours per unit for unpaid work or 75 hours per unit for paid work during the semester. May be repeated for credit up to 16 units. The unit limitation applies to any Cooperative Education Work Experience (any combination of 670, 671 and/or 672 courses) offered within the SMCCCD. **Grade Option (Letter Grade or Pass/No Pass).** Degree Credit.

**Units:** 1 - 3

**Hours/semester:** 75-225 Work Experience; 60-180 Field Experience

**Prerequisites:** A minimum of 12 completed units in the occupational discipline.

**Transfer Credit:** CSU

**MEDA 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. **Grade Option (Letter Grade or Pass/No Pass).** Degree Credit.
Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

MEDA 801 COMPUTERIZED MEDICAL BILLING/ MEDICAL ASSISTING EXAM PREPARATION
Medisoft, UB 04, or preparation for Medical Assisting certification testing offered by various organizations. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab

Meteorology

METE 100 METEOROLOGY - WEATHER AND CLIMATE
Introduction to the science of the Earth's atmosphere as a system with an emphasis on the physical processes that change our atmosphere in the short term and throughout Earth's history. Evaluation of the atmosphere using the scientific method is emphasized throughout the course. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100. Eligibility for MATH 110.
AA/AS Degree Requirements: Area B1
Transfer Credit: CSU (CSU GE Area B1), UC (IGETC Area 5A)
C-ID: GEOG 130

Multimedia, Art, and Technology
(See Digital Art & Animation)

Music

MUS. 100 FUNDAMENTALS OF MUSIC
Explore the cultural basis and historical context of diverse musical styles. Reflect on music notation as a problem solving approach in musical expression using historically significant examples. Learn the basics of music notation in the historical context of the expressive needs that drove the evolution of this system. Go from sound to symbol and symbol to sound by reading pitch and rhythm notation, sight-singing and ear training. Use music theory (scales and chords) to harmonize simple melodies. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)
C-ID: MUS 110

MUS. 120 SONGWRITING WORKSHOP I
This course combines the study of lyrics, melody, harmony and form to create songs in a collaborative workshop format. Different techniques are used to get started on lyrics, turning those lyrics into tunes, and finding the right harmonies and forms for the student's new musical creations. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 40-45 Lecture; 24-27 Lab; 80-90 Homework
Recommended: Eligibility for ENGL 100. Eligibility for MATH 110.
Transfer Credit: CSU

MUS. 202 MUSIC APPRECIATION
Learn about musical terms and ideas and apply that knowledge to many types of music such as popular, classical, jazz, and other forms of music from around the world. Consider different ways of listening to music and learn about the different meanings music can have in entertainment, history, ritual, film and other contexts. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)
C-ID: MUS 100

MUS. 210 HISTORIES OF POPULAR MUSIC AND ROCK
This course explores the various intersections of music and American culture in the blues, rock, heavy metal, jazz, soul, R&B, disco and dance music, and hip-hop. The idea of a critical canon, in tension with best-seller lists, is considered. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

MUS. 215 MUSIC, CULTURE AND HISTORY
Explores the evolution of musical styles in the context of cultural expression and social change. Includes a wide range of European music styles and genres across history as well as American jazz. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

MUS. 240 MUSIC OF THE AMERICAS
Learn about the rhythms and varieties of music in Latin America and the cultural roots that nurture this exciting form of expression. Music from the Caribbean and South, Central and North America is covered, including genres such as corridos, son, rumba, and tangos. The integral role of Latin influences in the music of the USA and ethnic identities is highlighted. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

MUS. 250 WORLD MUSIC
Survey of selected listening and readings about cultures such as India, China, Japan, Indonesia, Europe, North America, and Africa. Students learn to use basic musical terminology in describing that music, and to relate music behaviors to the cultural contexts that surround them. Equal emphasis is placed on music and culture. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

MUS. 260 MUSIC IN FILM, TELEVISION AND MULTIMEDIA
Appreciate the use of music and sound in film, television and media such as video games for expressive purposes and for the creation of virtual realities. As you analyze scenes, learn about fundamental music, sound design and film concepts. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

MUS. 271 OPERA AND MUSICAL THEATER HISTORY
Explore the highlights in the history of opera from its invention in the Baroque era to contemporary experiments with musical theater included along the way. Class lectures emphasize listening and viewing opera excerpts. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

MUS. 275 HISTORY OF JAZZ
Understanding and enjoying music by studying the historical development of jazz from a musical and sociological perspective. Topics include discussion of musical elements, vocal and instrumental ensembles, artistic values, and the role of jazz in our culture. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

MUS. 301 PIANO I
This applied music course stresses the basics of piano playing at a beginning level. Students are taught the foundations of piano technique and to read music and to play musically. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 2
Hours/semester: 24-27 Lecture; 24-27 Lab; 48-54 Homework
Transfer Credit: CSU, UC
MUS. 302 PIANO II
Continuation of MUS. 301. This course in applied music stresses basics of piano playing at an advanced beginner level. Students develop further the foundations of piano technique, the ability to play musically, and their repertoire. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 2
Hours/semester: 24-27 Lecture; 24-27 Lab; 48-54 Homework
Prerequisites: MUS. 301 or equivalent.
Transfer Credit: CSU, UC

MUS. 303 PIANO III
Continuation of MUS 302. This course in applied music emphasizes the basics of piano playing at an intermediate level of difficulty. Students develop further the foundations of piano technique and the ability to play musically, which were begun in Piano I and II, and expand their repertoire. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 2
Hours/semester: 24-27 Lecture; 24-27 Lab; 48-54 Homework
Prerequisites: MUS. 302 or equivalent.
Transfer Credit: CSU, UC

MUS. 304 PIANO IV
Continuation of MUS 303. This course in applied music emphasizes the basics of piano playing at an intermediate to advanced level. Students develop further the foundations of piano technique, the ability to play musically, and their repertoire. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 2
Hours/semester: 24-27 Lecture; 24-27 Lab; 48-54 Homework
Prerequisites: MUS. 303 or equivalent.
Transfer Credit: CSU, UC

MUS. 371 GUITAR I
Techniques of guitar performance and reading music to enable beginning students to play compositions written for the guitar. Students must supply their own instruments. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 2
Hours/semester: 24-27 Lecture; 24-27 Lab; 48-54 Homework
Transfer Credit: CSU, UC

MUS. 372 GUITAR II
Continuation of MUS. 371. This course covers the techniques of playing the guitar and making music at the intermediate level. Students must supply their own instruments. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 2
Hours/semester: 24-27 Lecture; 24-27 Lab; 48-54 Homework
Prerequisites: MUS. 371
Transfer Credit: CSU, UC

MUS. 373 GUITAR III
Continuation of MUS. 372. Further study of moveable chord and scale structure (CAGED), intermediate/advanced strumming and fingerpicking patterns, intermediate/advanced theory (scale, secondary dominants, and motif development), improvisation, arpeggios and reading music. Emphasis on American music literature. Both individual and group instruction. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 2
Hours/semester: 24-27 Lecture; 24-27 Lab; 48-54 Homework
Prerequisites: MUS. 372
Transfer Credit: CSU, UC

MUS. 374 GUITAR IV
Continuation of MUS. 373. Covers the techniques of playing the guitar at advanced levels. Group and individual attention are included. Students must supply their own instruments. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 2
Hours/semester: 24-27 Lecture; 24-27 Lab; 48-54 Homework
Prerequisites: MUS. 373
Transfer Credit: CSU, UC

MUS. 401 VOICE I
This class offers training in vocal technique, musical expression and performance skills for the beginning singer. Content includes posture, breathing, tone production, music fundamentals, English diction, and performance preparation techniques. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 2  
**MUS. 402 VOICE II**  
Continuation of MUS 401. Training in vocal technique and intermediate performance skills. Course content includes vocal technique (breathing techniques), singing anatomy (breathing musculature), song preparation and interpretation (text, emotional expression), music theory fundamentals (major scales/keys, 16th notes), and English diction (secondary vowels). Letter Grade Only. Degree Credit.

Units: 2  
**MUS. 403 VOICE III**  
Continuation of MUS 402. Refinement of vocal technique and performance skills at the intermediate/advanced levels. Course content includes vocal technique (more breathing methods), singing anatomy (larynx), song preparation and interpretation (facial expression, gesture), music theory fundamentals (intervals, triads), and English diction (diphthongs, consonants). Letter Grade Only. Degree Credit.

Units: 2  
**MUS. 404 VOICE IV**  
Continuation of MUS 403. Further refinement of vocal technique and advanced performance skills. Content includes vocal technique (resonance), singing anatomy (resonating spaces), song preparation and interpretation (style elements), music theory fundamentals (minor scales/keys, triplets), and English diction (glides, more work with consonants). Letter Grade Only. Degree Credit.

Units: 2

**Oceanography**

**OCEN 100 OCEANOGRAPHY**  
A study of the physical, chemical, geological, and biological aspects of oceans with an emphasis on the methods of scientific investigation. Topics include the origin and evolution of oceans, plate tectonics, currents, waves, tides, coastal processes and landforms, ocean life and ecology, and recent discoveries. Fieldtrips may be required. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

**OCEN 101 OCEANOGRAPHY LAB**  
Introductory laboratory exercises in plate tectonics; the geography and sediments of the seafloor; the cause and
effect of weather, waves, and currents; the physics and chemistry of seawater; marine life forms; marine resources, and the effect of humans on the sea. A field trip is required. *Letter Grade Only. Degree Credit.*

**Units:** 1  
**Hours/semester:** 48-54 Lab  
**Prerequisites:** Completion of, or concurrent enrollment in OCEN 100  
**AA/AS Degree Requirements:** Area B3 - only if OCEN 100 is successfully completed prior to or concurrently with OCEN 101  
**Transfer Credit:** CSU (CSU GE Area B3 - only if OCEN 100 is successfully completed prior to or concurrently with OCEN 101), UC (IGETC Area 5C*)

**Paralegal Studies**

**LEGL 241 LAW OFFICE MANAGEMENT**  
This course provides an overview of law firm management administration. Topics include case management, filing systems, calendaring, indexing and summarizing pleadings and discovery, timekeeping, billing, fees, intra- and inter-office communication, client interviewing, conflict checks, and office policies. *Letter Grade Only. Degree Credit.*  

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU

**LEGL 249 INTRODUCTION TO THE LEGAL SYSTEM**  
Overview of the U.S. legal system introducing the procedural and substantive areas of law taught in the paralegal program as well as constitutional law, comparative law, and methods of legal analysis. *Letter Grade Only. Degree Credit.*  

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU

**LEGL 250 LEGAL RESEARCH AND WRITING**  
Introduction to reading and briefing legal cases, legal writing, primary and secondary sources of law, and conducting legal research in state and county law libraries. *Letter Grade Only. Degree Credit.*  

**Units:** 3  

**LEGL 251 TORTS**  
Study of the substantive law of torts including tort liability, actionable torts, remedies, and procedures. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*  

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**Transfer Credit:** CSU

**LEGL 252 CIVIL LITIGATION AND TRIAL PREPARATION**  
Introduction to the basics of trial practice and civil litigation procedures. Students learn how to conduct client intake, evaluate cases, conduct informal investigation and discovery, prepare pleadings and motions, complete discovery and fact investigations, engage in pretrial alternative dispute resolution procedures, identify pretrial considerations, preserve facts and prepare for trial, and complete post-trial motions and appeals. *Letter Grade Only. Degree Credit.*  

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Transfer Credit:** CSU

**LEGL 254 FAMILY LAW**  
Lecture and project-based course in legal principles and practical matters in family law. Includes drafting family law pleadings, dissolving marital status, the court process, child and spousal support, child custody and visitation, and the characterization and division of marital property. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*  

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Transfer Credit:** CSU

**LEGL 260 ADVANCED LEGAL RESEARCH AND WRITING**  
Develop and refine legal research and writing skills by preparing a series of projects including drafting legal documents. Included is the efficient use of law libraries and legal databases. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*  

**Units:** 3
LEGL 261 LEGAL ETHICS
Paralegal regulations, ethics, and professional responsibilities, including those regarding the unauthorized practice of law, advertising, solicitation, legal advice, attorney-client relationships, conflicts of interest, legal competency, and due diligence. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 110.
Transfer Credit: CSU

LEGL 263 INTELLECTUAL PROPERTY LAW
An overview of U.S. and foreign intellectual property laws including patents, trademarks, copyrights, and trade secrets as well as an examination of the role of the paralegal in this area. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

LEGL 264 CONTRACTS
Examination of the theory and practice of contract law, including the formation and performance of contracts, the statute of frauds, third-party rights and remedies, liability for breach of contract, and the Uniform Commercial Code. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

LEGL 267 ANIMAL LAW
An introductory course covering the statutory, regulatory, and common law principles affecting non-human animals in substantive areas of law including criminal law, torts, contracts, consumer protection, First Amendment and Constitutional issues, wills and trusts, and family law. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

LEGL 269 ELDER LAW
This course covers state, federal, and administrative laws and regulations affecting older adults. Topics include client interviewing, Social Security, SSI, Medicare, Medi-Cal/Medicaid, trusts, guardianships, conservatorships, funding sources, residential long-term care, and elder abuse. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

LEGL 272 IMMIGRATION LAW
A hands-on introduction to the legal principles related to immigration law, including non-immigrant visitor, student, and business visa options, immigrant business visa options, family immigration, asylum, criminal aspects of immigration law, and employer sanctions. Students will learn how to interview clients, prepare immigration forms used in an immigration law practice, and prepare immigration cases for trial. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

LEGL 276 ELECTRONIC LITIGATION AND INVESTIGATION
This course is an introduction to the technology used in a law firm environment. Topics include computers, peripherals, software, backup programs, troubleshooting, e-filing, e-discovery, legal research databases, online investigation, evidence gathering and preservation, digital forensics, and the power of the Internet in litigation. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU
LEGL 672  COOPERATIVE EDUCATION:
INTERNSHIP
Supervised internship in cooperation with private or public sector employers. Designed to apply knowledge and learn new skills, directly related to the student's program of study, outside of the normal classroom environment. Students must attend one orientation which is offered the first three weeks of each semester. Each unit requires 60 hours per unit for unpaid work or 75 hours per unit for paid work during the semester. May be repeated for credit up to 16 units. The unit limitation applies to any Cooperative Education Work Experience (any combination of 670, 671 and/or 672 courses) offered within the SMCCCD. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1 - 3
Hours/semester: 75-225 Work Experience; 60-180 Field Experience
Prerequisites: A minimum of 12 completed units in the occupational discipline.
Transfer Credit: CSU

LEGL 695  INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Philosophy

PHIL 100  INTRODUCTION TO PHILOSOPHY
An introductory course that examines classic philosophical problems in the areas of metaphysics, epistemology, and ethics. Within ethics, attention is given to historical as well as contemporary social and political issues. The course surveys influential philosophers in the Western and Eastern intellectual traditions, providing a multicultural perspective on the above problem areas. The aim of the course is to think critically about these topics, using the philosophical method, and connect the issues to contemporary life. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)
C-ID: PHIL 130

PHIL 103  CRITICAL THINKING
This course is an overview of key critical reasoning skills. Students develop skills to identify types of argument and to analyze the arguments. A wide range of argumentative contexts are examined, such as political discourse, advertisements, scientific claims, and commonly-used social forums. Some formal logic is introduced to strengthen logical reasoning skills. Students also construct and refine written arguments. Specific topics include informal fallacies, the relationship between evidence and conclusions, inductive arguments, deductive arguments, validity, consistency, and soundness. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A3
Transfer Credit: CSU (CSU GE Area A3), UC

PHIL 160  HISTORY OF PHILOSOPHY: ANCIENT AND MEDIEVAL
This course covers the history of Western philosophy, from the ancient Greeks to the medieval period. Key philosophers and movements in antiquity include the Pre-Socratics, Plato, Aristotle, Skepticism, Epicureanism, and Stoicism. Key medieval philosophers include Ibn Sina, Augustine, and Maimonides. Topics include the relationship between philosophy and religion, the relationship between individual and society, human nature, and the limits of human knowledge. Special attention is given to how ancient and medieval thought continues to shape metaphysical, epistemic, and ethical views in contemporary society. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)
C-ID: PHIL 130
PHIL 175 MODERN PHILOSOPHY
This course addresses 16th through 18th century philosophy with emphasis on the broad epistemological and metaphysical developments of empiricism and rationalism in philosophical thought from Descartes to Kant. Special topics include the foundation of knowledge, the nature of the human mind, free will, and the foundation of morality. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)
C-ID: PHIL 140

PHIL 190 CONTEMPORARY PHILOSOPHY
A survey of major philosophic movements from the late 1800s until the present day. These movements include phenomenology, Marxism, pragmatism, logical positivism, existentialism, feminism, and race theory. The course explores the social, political, ethical, and religious impact the movements have had on contemporary society. Specific topics include the relationship between mind and consciousness, authenticity, socially situated knowledge, and the relationship between continental and analytic philosophy. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)
C-ID: PHIL 120

PHIL 200 INTRODUCTION TO LOGIC
This course is an introduction to formal systems of symbolizing statements, analyzing statements, and testing arguments. Main topics covered in the course include the difference between deductive and inductive arguments; how to translate English statements into propositional logic and predicate logic; how to test statements for consistency and equivalence; and how to test arguments for validity. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area A3
Transfer Credit: CSU (CSU GE Area A3), UC
C-ID: PHIL 110

PHIL 240 INTRODUCTION TO ETHICS
This course is an introduction to major ethical problems and theories. The course examines topics such as human nature, conflicting views of moral goodness, and the relationship between religion and morality, with an emphasis on better understanding sources of moral disagreement. The ethical theories reviewed in the course include deontology, consequentialism, virtue ethics, and the ethics of care. These ethical theories are applied to present-day issues. Potential issues discussed in the course include environmental ethics, biomedical ethics, animal rights, the ethics of eating, the ethics of technology, and human enhancement. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)
C-ID: PHIL 120

PHIL 300 INTRODUCTION TO WORLD RELIGIONS
A survey of major religious traditions, with an emphasis on their origins, key figures, beliefs, rituals, and art. Religions covered include Hinduism, Buddhism, Confucianism, Daoism, Judaism, Christianity, and Islam. The course explores the similarities and differences between religions, using the everyday lives of religious members as points of comparison. The course also examines philosophical questions raised by each religion's teachings and rituals. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)

PHIL 312 INTRODUCTION TO PHILOSOPHY OF RELIGION
An introduction to philosophical thinking about religion, with an emphasis on issues central to traditional monotheism. This course teaches how to critically examine arguments concerning the origin of religion, the existence of God, the historicity of miracles, the veridicality of religious and mystical experience, the existence of spirits or souls, the possibility of life after death, the equal validity of
PHI 695 INDEPENDENT STUDY
Designated for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Photography
(See courses under Art and Digital Art & Animation)

Photonics and Laser Technology

PALT 401 INTRODUCTION TO PHOTONICS AND LASER TECHNOLOGY
An introductory review of photonics and laser technology (PALT) and the mathematical skills to address engineering problems in PALT. Topics include: Review of various PALT quantities, common PALT algebraic expressions, visualization of typical linear and non-linear behaviors in PALT, geometry and trigonometry in PALT elements like lenses and prisms, description of sinusoidal and wave motion, introduction to concepts like polarization through complex notation and vectors. Pass/No Pass Only. Degree Credit.

Units: 2
Hours/semester: 32-36 Lecture; 64-72 Homework
Recommended: Eligibility for MATH 110.
Transfer Credit: CSU

PALT 402 GEOMETRICAL OPTICS
A hands-on introduction to geometrical optics that deals with image formation by considering light as rays. Topics include: concepts of reflection, refraction, transmission, and dispersion; the interaction of light rays with optical elements like mirrors, lenses, prisms, and stops; image formation characteristics, aberration, and optical design using ray tracing and matrix methods; description of common optical systems like cameras and telescopes. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: Completion of, or concurrent enrollment in, PALT 401
Transfer Credit: CSU

PALT 403 OPTICS AND PHOTONICS MODELING AND DESIGN
A hands-on introduction to modeling, analysis, and design of optical and photonics systems using matrix based computational programming (MATLAB or Octave) and commercial optical design software like ZEMAX. Topics include: plotting and data visualization; use of arrays to understand image processing; design of optical and photonic systems using the ZEMAX software (or similar commercial software software). Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 32-36 Lecture; 48-54 Lab; 64-72 Homework
Prerequisites: Completion of, or concurrent enrollment in, PALT 402
Transfer Credit: CSU

PALT 404 WAVE OPTICS
An introductory hands-on course in wave optics describing the properties of light and its interaction with objects using wave equations. Topics include: concepts of superposition, polarization, interference and diffraction; the interaction of light waves with small objects such as wires, apertures and multilayered coatings; mathematical techniques needed to quantify interactions. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: PALT 402
Transfer Credit: CSU
**PALT 405 INTRODUCTION TO LASER TECHNOLOGY**

A hands-on introduction to the principles and technology of lasers including properties of different types of lasers. Topics include: safe use and operation of lasers; principle of producing laser light; techniques to control laser light; applications of laser in various medical, non-medical, defense and entertainment industries. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 32-36 Lecture; 48-54 Lab; 64-72 Homework  
**Prerequisites:** Completion of, or concurrent enrollment in, PALT 404  
**Transfer Credit:** CSU

**PALT 406 COMPONENTS AND DEVICES IN PHOTONICS AND LASER TECHNOLOGY**

An introductory review of basic components and devices that make up optics and photonics systems. Topics include: polarizers and filters; non-laser light sources; light detectors; light modulators; selection of appropriate optical device for a desired application. *Letter Grade Only. Degree Credit.*

**Units:** 2  
**Hours/semester:** 32-36 Lecture; 64-72 Homework  
**Prerequisites:** Completion of, or concurrent enrollment in, PALT 404  
**Transfer Credit:** CSU

**PALT 407 OPTICAL COATING TECHNOLOGY**

A hands-on review to optical coating technology. Topics include: matrix methods in coating analysis and design; Thin film coatings; coatings in color applications; coating production techniques; safe use and handling of coatings; measurement and modeling of coating performance. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 32-36 Lecture; 48-54 Lab; 64-72 Homework  
**Prerequisites:** PALT 404  
**Transfer Credit:** CSU

**PALT 408 OPTICAL FIBERS**

An introductory hands-on course in optical fiber technology describing the transmission of light through optical fibers. Topics include: principles of light transmission in optical fibers; fiber optic fundamentals; fiber technology; applications of fiber optics; experiments with light behavior through fibers. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 32-36 Lecture; 48-54 Lab; 64-72 Homework  
**Prerequisites:** PALT 405  
**Transfer Credit:** CSU

**PALT 409 ADVANCED PHOTONICS TECHNOLOGY**

A hands-on introduction to advanced photonics and laser technologies. Topics include: ultrashort pulse propagation; nonlinear optics; synchrotron and other advanced light sources; photonic crystals; generation and measurements of ultrashort pulses. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 32-36 Lecture; 48-54 Lab; 64-72 Homework  
**Prerequisites:** PALT 405  
**Transfer Credit:** CSU

**Physical Education Theory**

**P.E. 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 0.5 - 3  
**Hours/semester:** 24-162 Lab  
**Transfer Credit:** CSU

**Physics**

**PHYS 114 SURVEY OF CHEMISTRY AND PHYSICS**

Equivalent to CHEM 114. A conceptual survey of physical science (physics and chemistry) intended for non-science majors at the General Education level. A general discussion of the scientific method and techniques are followed by physics, chemistry, and integrated topics. The laboratory portion covers a hands-on exploration of phenomena
discussed in lecture. The physics component of the course discusses motion, force, energy, electricity and magnetism, waves and light. The chemistry component of the course focuses on chemicals and reactions common in everyday life. Concepts relating to the nature and interactions of atoms, ions, and molecules are presented. Students also learn to use and evaluate information presented on product labels, in advertisements, and online. Letter Grade Only. Degree Credit.

**Units:** 4  
**Hours/semester:** 48-54 Lecture; 48-54 Lab; 96-108 Homework

**Prerequisites:** MATH 110 or appropriate placement based on AB 705 mandates, or equivalent.

**AA/AS Degree Requirements:** Area B1, B3

**Transfer Credit:** CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A*).

**C-ID:** PHYS 140

### PHYS 210 GENERAL PHYSICS I

Covers basic concepts of physics, including the nature of physics, mechanics, elasticity and simple harmonic motion, waves and sound, fluids, heat and temperature, and the kinetic theory of gases. This course meets general education requirements for a Physical Science. Letter Grade Only. Degree Credit.

**Units:** 4  
**Hours/semester:** 48-54 Lecture; 48-54 Lab; 96-108 Homework

**Prerequisites:** MATH 130

**AA/AS Degree Requirements:** Area B1, B3

**Transfer Credit:** CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

**C-ID:** PHYS 105; PHYS 100S (requires PHYS 210 & 220)

### PHYS 220 GENERAL PHYSICS II

Basic concepts of physics including the nature of physics, electricity and magnetism, electromagnetic waves, optics, the special theory of relativity, atomic physics, and quantum mechanics. Letter Grade Only. Degree Credit.

**Units:** 4  
**Hours/semester:** 48-54 Lecture; 48-54 Lab; 96-108 Homework

**Prerequisites:** PHYS 210

**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** Area B1, B3

**Transfer Credit:** CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

**C-ID:** PHYS 205; PHYS 200S (requires PHYS 250, 260 & 270)

### PHYS 250 PHYSICS WITH CALCULUS I

This course is the first in a three-semester series designed to provide a thorough foundation in the fundamentals of physics to students majoring in engineering or the physical sciences. Topics include classical mechanics, fluids, and wave motion. Letter Grade Only. Degree Credit.

**Units:** 4  
**Hours/semester:** 48-54 Lecture; 48-54 Lab; 96-108 Homework

**Prerequisites:** Completion of, or concurrent enrollment in, MATH 252

**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** Area B1, B3

**Transfer Credit:** CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

**C-ID:** PHYS 205; PHYS 200S (requires PHYS 250, 260 & 270)

### PHYS 260 PHYSICS WITH CALCULUS II

This course is the second in a three-semester series designed to provide a thorough foundation in the fundamentals of physics to students majoring in engineering or the physical sciences. Topics include electricity, magnetism and electro-magnetic waves. Letter Grade Only. Degree Credit.

**Units:** 4  
**Hours/semester:** 48-54 Lecture; 48-54 Lab; 96-108 Homework

**Prerequisites:** PHYS 250 and Completion of, or concurrent enrollment in, MATH 253

**Recommended:** Eligibility for ENGL 100.

**AA/AS Degree Requirements:** Area B1, B3

**Transfer Credit:** CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

**C-ID:** PHYS 2010; PHYS 200S (requires PHYS 250, 260 & 270)

### PHYS 270 PHYSICS WITH CALCULUS III

This course is the third in a three-semester series designed to provide a thorough foundation in the fundamentals of physics to students majoring in engineering or the physical sciences. Topics include thermodynamics, geometrical and physical optics, and modern physics. Letter Grade Only. Degree Credit.

**Units:** 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework

Prerequisites: PHYS 250 and completion of, or concurrent enrollment in MATH 253

Recommended: Eligibility for ENGL 100.

AA/AS Degree Requirements: Area B1, B3

Transfer Credit: CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

C-ID: PHYS 215; PHYS 200S (requires PHYS 250, 260 & 270)

PHYS 405 APPLIED RADIOGRAPHIC PHYSICS

Introduction to the basic ideas about matter, energy, electricity, magnetism, and electromagnetic radiation, with emphasis on X-ray phenomena. Applications to the interaction of radiation with matter and X-ray circuits are included. This course is required for students pursuing careers as Radiologic Technologists. Letter Grade Only. Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Prerequisites: MATH 110 or equivalent and CHEM 192 or CHEM 410 or equivalent.

Recommended: Eligibility for ENGL 100.

AA/AS Degree Requirements: Area A3

Transfer Credit: CSU (CSU GE Area A3), UC (IGETC Area 4)

C-ID: POLS 140

PLSC 103 CRITICAL THINKING ABOUT WORLD POLITICS

This introductory course is designed to improve the student’s ability to think clearly about problems in world politics and their social, political, and economic implications. Reasoning skills will be applied when evaluating and constructing convincing arguments about current world political controversies. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

AA/AS Degree Requirements: Area A3

Transfer Credit: CSU (CSU GE Area A3), UC

PLSC 130 INTRODUCTION TO INTERNATIONAL RELATIONS

This course examines the major theories of international politics as well as the practical issues that affect world politics today. Students explore the inter-relationship between theory and practice as it relates to the international arena, especially in regards to religion and ethnic conflict. And in the light of the international environment today, students address issues surrounding the continuing "War on Terrorism" and its relationship to past major wars (i.e. Peloponnesian War, World Wars and Cold War). Letter Grade Only. Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

AA/AS Degree Requirements: DSI

Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)

C-ID: POLS 120

PLSC 150 INTRODUCTION TO POLITICAL THEORY

This class provides the foundation for the study of political science, politics and the nature of government. Examination of various fundamental theoretical approaches to politics and of basic political problems, as well as proposed solutions found in an evolving liberal social contract and other proposed solutions. Analysis of selected political theories and of the relevance of theory to contemporary problems. Critically thinking about the role of morality, power leadership, religion, government, civic culture and class are the framework. Letter Grade Only. Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Recommended: Eligibility for ENGL 100.

AA/AS Degree Requirements: DSI

Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)

C-ID: POLS 120

PLSC 170 INTRODUCTION TO COMPARATIVE POLITICS

This course introduces students to the technique of comparing nation-states using different approaches to study multiple government types including their history, political institutions, processes and policies, the environments in which they occur as well as their consequences. Political cultures are compared in order to critically analyze the viability of particular governments on a global scale. Topics include: regime change, civic culture, group politics, functionalism, dependency, legitimacy and leadership. Letter Grade Only. Degree Credit.

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

AA/AS Degree Requirements: DSI

Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
COURSE DESCRIPTIONS

C-ID: POLS 130

PLSC 210 AMERICAN POLITICS
An introduction to United States and California government and politics, including their constitutions, political institutions and processes as well as political actors with foci on the political philosophies of its framers and the inter-related functions of the three branches of the federal government. Examination of political behavior, political issues and public policy, as well as contemporary relationships between federal, state and local governments are consistently explored. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: D US-2, D US-3; DSI
Transfer Credit: CSU (CSU GE DSI, D US-2, D US-3), UC (IGETC Area 4)
C-ID: POLS 110

PLSC 310 CALIFORNIA STATE AND LOCAL GOVERNMENT
California State and Local Government with special emphasis on the US and California Constitutions as providing the basic framework for our political institutions and processes of Federal, State and Local Government. Relationships between Federal, State and Local Governments are explored, especially as it relates to political issues that directly affect the greater good as well as individuals. Additionally, this course provides the opportunity to better understand and appreciate the political, social and economic quiltwork that can be contributed to the diverse ethnicities and cultures of America, in general, and the State of California, in particular. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: D US-3; DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: PSY 110

PSYC 106 PSYCHOLOGY OF PREJUDICE AND DISCRIMINATION
This course focuses on psychological theories and research studies of prejudice and discrimination. The nature of discrimination is examined in relation to prejudice behavior and the variables which influence the psychological development, adjustment and coping strategies of ethnic minority groups in the United States. The development of prejudice in children is examined. Economic, educational, political, and legal issues are analyzed for their psychological impact specifically on Americans of African, Asian, Hispanic, and Native American descent. However, other ethnic minority groups are included. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)

Psychology

PSYC 100 GENERAL PSYCHOLOGY
Introduction to major topics, theories, and research methods of psychology. Topics covered include the biological basis of behavior, human development, learning, memory, intelligence, perception, motivation, cognition and consciousness, emotion, personality, social behavior, abnormal behavior and methods of therapy. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)

PSYC 200 DEVELOPMENTAL PSYCHOLOGY
This course examines human development across the lifespan, from conception through death by focusing on theories and methods of psychological research; including physical, cognitive, social, and emotional changes throughout the lifespan. Emphasis on development as an on-going process understanding the interaction of development issues: nature vs. nurture, continuity vs. discontinuity, and stability vs. instability. This course is designed as a foundation for careers in educational, social, psychological, and medical fields as well as providing a better understanding of one's own development process. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: PSYC 100
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI; Area E1
Transfer Credit: CSU (CSU GE DSI; Area E1), UC (IGETC Area 4)
### PSYC 205 SOCIAL SCIENCE RESEARCH METHODS

Equivalent to SOCI 205. This course is designed to introduce students to the basic principles of social science research. Various sociological and psychological research methods are examined that include experimental research, survey research, field research, and comparative-historical research. Procedures to evaluate the soundness of research designs are examined. Ethical issues related to research techniques are also considered. **Letter Grade Only. Degree Credit.**

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Prerequisites:** MATH 200 and PSYC 100  
**Recommended:** Eligibility for ENGL 110.  
**AA/AS Degree Requirements:** DSI; Math Competency  
**Transfer Credit:** CSU (CSU GE DSI), UC (IGETC Area 4)  
**C-ID:** PSY 200

### PSYC 300 SOCIAL PSYCHOLOGY

Study of human interaction, with emphasis on how thoughts, feelings, and behavior of individuals are influenced by actual, imagined, or implied presence of others. Focus of course is on social factors that influence human behavior; ourselves and other people, institutions and social and physical structures people create. A review of various perspectives unique to social psychologists including attitude formation, interpersonal attraction, and aggression is examined. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**AA/AS Degree Requirements:** DSI  
**Transfer Credit:** CSU (CSU GE DSI), UC (IGETC Area 4)  
**C-ID:** PSY 170

### PSYC 340 INTRODUCTION TO HUMAN SEXUALITY

Human Sexuality is a broad field in which many cultural, psychological and physiological variables interact in relation to sexual development, attitudes and behaviors. Methods of scientific psychology are utilized to improve understanding of a broad range of behaviors ranging from healthy to dysfunctional within mainstream modern American culture as well as other cultures. Discussion of differing cultural and moral perspectives is utilized to assist students in making a critical assessment of the nature of the sexual self as well as intimate human relationships within their own community and the world. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**AA/AS Degree Requirements:** DSI; Area E1  
**Transfer Credit:** CSU (CSU GE DSI; Area E1), UC (IGETC Area 4)  
**C-ID:** PSY 130

### PSYC 410 ABNORMAL PSYCHOLOGY

Introduces the scientific study of psychopathology and atypical behaviors, broadly defined. Students investigate abnormal behavior from a variety of perspectives including biological, psychological, and sociocultural approaches. An integrative survey of theory and research in abnormal behavior, and intervention and prevention strategies for psychological disorders are also introduced. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 100.  
**AA/AS Degree Requirements:** DSI  
**Transfer Credit:** CSU (CSU GE DSI), UC (IGETC Area 4)  
**C-ID:** PSY 120

### PSYC 695 INDEPENDENT STUDY

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 0.5 - 3  
**Hours/semester:** 24-162 Lab  
**Transfer Credit:** CSU
Radiologic Technology

RADT 400 ORIENTATION TO RADIOLOGIC TECHNOLOGY
This course is an orientation to Radiologic Technology including organization of medical practice, the socioeconomic, ethical, political and legal aspects of healthcare with special emphasis on radiology. Included will be an introduction to radiation protection and the provisions of the California Administrative Code, Title XVII, Radiation Control Regulations. Letter Grade Only. Degree Credit.
Units: 2
Hours/semester: 32-36 Lecture; 64-72 Homework
Prerequisites: ENGL 100 or ENGL 105
Transfer Credit: CSU

RADT 408 PERSPECTIVES IN RADIOLOGY
This course is designed for the student who has been accepted to the Radiologic Technology Program. The course provides an introduction to various hospital policies, including code of conduct, radiation protection policies, ethics, medical asepsis, patient care and confidentiality issues. Letter Grade Only. Degree Credit.
Units: 1.5
Hours/semester: 24-27 Lecture; 48-54 Homework
Prerequisites: Acceptance to the Radiologic Technology Program.
Transfer Credit: CSU

RADT 410 RADIOGRAPHIC POSITIONING
Students learn concepts and terminology in radiographic positioning, anatomy and selected pathology of the chest, abdomen, pelvis, upper and lower extremities. Laboratory experience with ionizing and non-ionizing equipment is included. Letter Grade Only. Degree Credit.
Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: Acceptance in the Radiologic Technology Program.
Transfer Credit: CSU

RADT 415 RADIATION PROTECTION AND BIOLOGY
A study of the effects and methods of measurements of radiation in the human body. Discussion of historic and current concepts in governmental regulations and protection requirement. This course provides the student with background to understand the methods for protecting patients and medical personnel from unnecessary radiation exposure. Letter Grade Only. Degree Credit.
Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: PHYS 405
Transfer Credit: CSU

RADT 418 CLINICAL EDUCATION I
Designed for the beginning radiologic technology student assigned to a clinical education facility. It consists of orientation to clerical, image processing, patient transportation, supplies and equipment, and radiographic equipment operation. Students observe, assist and perform radiographic examinations appropriate to the student's level of education following accepted radiation protection standards. Letter Grade Only. Degree Credit.
Units: 4.5
Hours/semester: 224-243 Field Experience
Prerequisites: Acceptance into the Radiologic Technology Program.
Corequisites: Concurrent enrollment in RADT 410.
Transfer Credit: CSU

RADT 420 RADIOGRAPHIC POSITIONING II
Positioning the human body for radiographic purposes with emphasis on the vertebral column, bony thorax, bony cranium, genitourinary and gastrointestinal systems and mobile radiography. Patient care and pathological conditions appropriate to procedures and proper equipment manipulation and operation are also covered. Students perform related projects in the affiliated clinical education sites to which they are assigned. Letter Grade Only. Degree Credit.
Units: 4
Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework
Prerequisites: RADT 410
Corequisites: Concurrent enrollment in RADT 428
Recommended: Eligibility for ENGL 110.
Transfer Credit: CSU

RADT 428 CLINICAL EDUCATION II
Second semester clinical education course for the radiologic technology student. Based on skills mastered
and maintained in RADT 418, the student continues to build knowledge and clinical application of radiographic positioning and related anatomy. Students assist and perform radiographic examinations appropriate to the student's level of knowledge following accepted radiation protection standards. Letter Grade Only. Degree Credit.

Units: 6.5
Hours/semester: 320-351 Field Experience
Prerequisites: RADT 418
Corequisites: Concurrent enrollment in, RADT 420
Transfer Credit: CSU

RADT 430 PRINCIPLES OF RADIOGRAPHIC IMAGE PRODUCTION
Application of the theoretical physics principles of the production of x-rays to the practical job of producing quality radiographs with the least possible exposure dose to the patient. Included is a thorough exploration of the major and minor technical factors and their use and effects, analysis of image quality, and methods for correcting improperly exposed radiographs. Letter Grade Only. Degree Credit.

Units: 3.5
Hours/semester: 48-54 Lecture; 24-27 Lab; 96-108 Homework
Prerequisites: PHYS 405
Transfer Credit: CSU

RADT 435 IMAGING EQUIPMENT AND QUALITY CONTROL
This course provides the student with an introduction to the various types of equipment and tests required to organize and implement a program of quality control in diagnostic imaging. It includes topics such as: radiation output measurements, filtration, linearity, reproducibility, automatic exposure control (AEC) analysis, alignment, kilovolt peak (kVp) and milliampere-seconds (mAs) and accuracy. Letter Grade Only. Degree Credit.

Units: 1.5
Hours/semester: 16-18 Lecture; 24-27 Lab; 32-36 Homework
Prerequisites: RADT 430 or licensed radiologic technologist
Transfer Credit: CSU

RADT 438 CLINICAL EDUCATION III
Designed for the third semester radiologic technology student. It is the third segment of the first rotation. Students continue to build their skills. Letter Grade Only. Degree Credit.

Units: 4.5
Hours/semester: 224-243 Field Experience
Prerequisites: RADT 428
Transfer Credit: CSU

RADT 440 ADVANCED IMAGING MODALITIES & SPECIALIZED PROCEDURES
Students apply basic technical and positioning knowledge to specialize procedures. Appropriate pathology encountered in special procedures is discussed. Principles of CT, MRI, U/S, nuclear medicine, mammography, interventional radiography, mobile and surgical radiography, pediatrics, geriatrics, PET, and radiation oncology are also introduced. Letter Grade Only. Degree Credit.

Units: 4
Hours/semester: 64-72 Lecture; 128-144 Homework
Prerequisites: RADT 415, RADT 420 and RADT 430 or certification as a Radiologic Technologist.
Transfer Credit: CSU

RADT 441 SECTIONAL ANATOMY
The course provides an introduction to the basic principles of sectional anatomy as related to imaging modalities such as Computerized Tomography (CT) and Magnetic Resonance Imaging (MRI). This information is required for Radiologic Technology students. Letter Grade Only. Degree Credit.

Units: 1.5
Hours/semester: 24-27 Lecture; 48-54 Homework
Transfer Credit: CSU

RADT 442 RADIOGRAPHIC PATHOLOGY
Disease processes commonly encountered by the Radiographer are presented in this course. Students will study Radiographic CT and MRI images of skeletal, neurologic, gastro intestinal, respiratory, circulatory and reproductive systems. Required for R.T. students. Letter Grade Only. Degree Credit.

Units: 1.5
Hours/semester: 24-27 Lecture; 48-54 Homework
Prerequisites: BIOL 260 and RADT 441
Transfer Credit: CSU

RADT 448 CLINICAL EDUCATION IV
Designed for the fourth semester radiologic technology student. Students continue to build the skills obtained in
previous clinical education experiences. Letter Grade Only. Degree Credit.

Units: 9.5
Hours/semester: 464-513 Field Experience
Prerequisites: RADT 438
Transfer Credit: CSU

RADT 450 REGISTRY REVIEW
This course is designed to prepare the student for board examination through comprehensive review of Radiologic Technology topics and preparatory testing. This course is required for the graduating Radiologic Technology student. Letter Grade Only. Degree Credit.

Units: 1.5
Hours/semester: 24-27 Lecture; 48-54 Homework
Prerequisites: RADT 435 and completion of, or concurrent enrollment in, RADT 458

RADT 458 CLINICAL EDUCATION V
This course is the second segment of the second year of Radiologic Technology clinical education. Students continue to build the skills obtained in the previous four clinical experiences and obtain skills in more complex procedures. Letter Grade Only. Degree Credit.

Units: 9
Hours/semester: 448-486 Field Experience
Prerequisites: RADT 448
Transfer Credit: CSU

RADT 468 CLINICAL EDUCATION VI
This final phase of clinical education allows the student to perform radiographic procedures on patients in affiliated hospitals with minimal or indirect assistance in preparation for entry into employment. The final four weeks of training are dedicated to a specialized area of radiography and require full-time attendance in the clinical setting. Letter Grade Only. Degree Credit.

Units: 4.5
Hours/semester: 232-243 Field Experience
Prerequisites: RADT 458
Transfer Credit: CSU

RADT 470 SPECIALIZED TECHNIQUES: MAMMOGRAPHY
This course covers the curriculum mandated by the California Department of Public Health, Radiologic Health Branch, which includes: breast anatomy, physiology, instrumentation, technical factors, mammography positioning, pathology, risk factors, and detection techniques. It satisfies the requirements of California's qualifications for the mammography examination. Letter Grade Only. Degree Credit.

Units: 1
Hours/semester: 8-9 Lecture; 24-27 Lab; 16-18 Homework
Prerequisites: California full certification as a radiologic technologist or enrollment as a second-year student in a two-year radiologic technology program. Current CPR and Basic Life Support for health care provider approved by the American Heart Association (AHA).
Transfer Credit: CSU
RADT 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Secretarial-Office Skills-Word Processing
(See Computer Business Office Technology - CBOT)

Social Sciences

SOC 650 STUDY ABROAD LIFE AND CULTURE, A SOCIAL SCIENCES PERSPECTIVE
This course introduces students to the daily life, history, economy, politics, social structures and culture of a foreign country as part of the Study Abroad Program. Students gain skills in cross-cultural competency as well as specific knowledge and understanding of a wide range of topics in the social sciences as they attend lectures, interact with local experts, and participate in field trips and hands-on activities. Students must be accepted into the Semester Abroad Program. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
Transfer Credit: CSU

Sociology

SOC 100 INTRODUCTION TO SOCIOLOGY
An introductory study of the basic concepts, theoretical approaches, and methods of sociology. Topics typically include the analysis of social structure, socialization and the self, culture and diversity, group dynamics, social stratification, social change, and globalization. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: SOCI 110

SOC 105 SOCIAL PROBLEMS
An overview of selected social problems in the United States viewed from a sociological perspective. Emphasis is placed on the socially constructed nature of social problems and the role of power and ideology in their formation. Various social problems are identified, an analysis of the causes and consequences examined, and an array of proposed solutions and methods of intervention evaluated. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: SOCI 115

SOC 141 ETHNICITY AND RACE IN SOCIETY
Examines sociological theories of race, ethnicity, and racism as well as explores cultural, political, and economic factors shaping the social construction of identities, reproduction of inequalities, and development of social relations in the areas of race and ethnicity. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: DSI
Transfer Credit: CSU (CSU GE DSI), UC (IGETC Area 4)
C-ID: SOCI 150

SOC 205 SOCIAL SCIENCE RESEARCH METHODS
Equivalent to PSYC 205. Designed to introduce students to the basic principles of social science research. Various sociological and psychological research methods are examined that include experimental research, survey research, field research, and comparative-historical research. Procedures to evaluate the soundness of research designs are examined. Ethical issues related to research...
techniques are also considered. **Letter Grade Only. Degree Credit.**

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** MATH 200 and SOCI 100

**Recommended:** Eligibility for ENGL 110.

**AA/AS Degree Requirements:** DSI; Math Competency

**Transfer Credit:** CSU (CSU GE DSI), UC (IGETC Area 4)

**C-ID:** SOCI 120

**SOCI 325 HONORS COLLOQUIUM: SOCIOLOGY OF HUMAN PERSONHOOD**

Study of how human personhood -understood as an emergent property of social life- shapes and is shaped by social structures with implications for how human flourishing and failure is understood in the social sciences. 

**NOTE:** This section is designed primarily for students in the Honors Transfer Program, but is open to all students. All students enrolling in this section are required to do Honors level work. Honors credit is earned for SOCI 325 upon completion of the course. Honors credit is also earned for the approved, completed or concurrent companion course, upon completion of both SOCI 325 and the companion course with a grade of A or B (only if completed at Cañada College). **Letter Grade Only. Degree Credit.**

**Units:** 1

**Hours/semester:** 16-18 Lecture; 32-36 Homework

**Prerequisites:** ENGL 100 or ENGL 105

**Corequisites:** Completion of, or concurrent enrollment in one of the following: ANTH 110 or COMM 180 or PHIL 100 or PLSC 150 or PSYC 100 or SOCI 100

**Transfer Credit:** CSU, UC

**SOCI 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 0.5 - 3

**Hours/semester:** 24-162 Lab

**Transfer Credit:** CSU

**Spanish**

**SPAN 110 ELEMENTARY SPANISH**

Provides students with no prior knowledge of Spanish the opportunity to develop basic oral communication skills that allows them to use the language to talk about themselves, families, studies, occupations, surroundings, etc. Basic reading comprehension and writing skills are also developed. Cultural aspects of the Spanish-speaking world are highlighted, in order to raise cultural awareness and to use the language in a culturally appropriate manner. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 5

**Hours/semester:** 80-90 Lecture; 160-180 Homework

**AA/AS Degree Requirements:** Area C2

**Transfer Credit:** CSU (CSU GE Area C2), UC (IGETC Area 6A)

**C-ID:** SPAN 100

**SPAN 111 ELEMENTARY SPANISH I**

Equivalent to the first half of SPAN 110. Provides students with no prior knowledge of Spanish the opportunity to develop basic oral communication skills that allows them to use the language to talk about themselves, their families, their studies, other occupations, their surroundings, etc. Basic reading comprehension and writing skills are also developed. Cultural aspects of the Spanish-speaking world are highlighted, in order to raise cultural awareness and to use the language in a culturally appropriate manner. **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Transfer Credit:** CSU, UC*

**C-ID:** SPAN 100: both SPAN 111 + 112

**SPAN 112 ELEMENTARY SPANISH II**

Continuation of SPAN 111. Equivalent to the second half of SPAN 110. Provides students with minimum prior knowledge of Spanish the opportunity to develop basic oral communication skills that allows them to use the language to talk about themselves, their families, their studies, other occupations, their surroundings, etc. Basic reading comprehension and writing skills are also developed. Cultural aspects of the Spanish-speaking world are highlighted, in order to raise cultural awareness and to use the language in a culturally appropriate manner. (SPAN 111 and 112 are equivalent to SPAN 110.) **Grade Option (Letter Grade or Pass/No Pass). Degree Credit.**

**Units:** 3
SPAN 120 ADVANCED ELEMENTARY SPANISH

Continuation of SPAN 110 or 112, for students who can use Spanish to talk about the “here and now” and narrate a simple story in the past. Students further develop and practice oral and written communication skills in many contexts (health, pressures and conveniences of modern life, the arts, the environment, social life, the workplace, government and civic responsibilities and travel). Cultural aspects of the Spanish-speaking world are emphasized. The class is conducted primarily in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 5
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: SPAN 111
Transfer Credit: CSU, UC*
C-ID: SPAN 100: both SPAN 111 + 112

SPAN 121 ADVANCED ELEMENTARY SPANISH I

Equivalent to the first half of SPAN 120. Continuation of SPAN 110 or 112, for students who can use Spanish to talk about the “here and now” and narrate a simple story in the past. Students further develop and practice oral and written communication skills in many contexts (health, pressures and conveniences of modern life, the arts, free-time activities). Cultural aspects of the Spanish-speaking world are emphasized. The class is conducted primarily in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: SPAN 110 or SPAN 112 or equivalent.
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 6A)
C-ID: SPAN 110

SPAN 122 ADVANCED ELEMENTARY SPANISH II

Continuation of SPAN 121. Designed for students who can use Spanish to talk about the “here and now”, narrate stories in the past, and express feelings and opinions. Students further develop and practice oral and written communication skills in many contexts (environmental issues, social life, the workplace, government and civic responsibilities and travel). Cultural aspects of the Spanish-speaking world are emphasized. The class is conducted primarily in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: SPAN 121 or equivalent.
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC* (IGETC Area 6A)
C-ID: SPAN 110: both SPAN 121 + 122

SPAN 131 INTERMEDIATE SPANISH I

Vocabulary development in topics include the environment, inventions and innovations, human and civil rights. Grammatical topics include preterit and imperfect, present indicative and subjunctive, and plans and preferences. Cultural aspects of the Spanish-speaking world are presented through literature, songs, art, videos, newspapers, and websites. The class is conducted primarily in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: SPAN 120 or SPAN 122 or equivalent
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC* (IGETC Area 3B; Area 6A)
C-ID: SPAN 200: both SPAN 131 + 132

SPAN 132 INTERMEDIATE SPANISH II

Vocabulary development in topics include diversity and discrimination, relationships, show business, food and nutrition. Grammatical topics include indicative and subjunctive (present and past), perfect tenses, conditional sentences. Cultural aspects of the Spanish-speaking world are presented through literature, art, songs, videos, newspapers, and websites. The class is conducted primarily in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: SPAN 131
COURSE DESCRIPTIONS

AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC* (IGETC Area 3B; Area 6A)
C-ID: SPAN 210: both SPAN 132 + 140; SPAN 200: both 131 + 132

SPAN 140 ADVANCED INTERMEDIATE SPANISH
Vocabulary development and composition topics include social and economic issues, work-related and spare-time activities, breakthroughs in technology and medicine. Cultural aspects of the Spanish-speaking world related to these topics are presented through literature, art, songs, videos, newspapers, internet. Grammar topics include pluperfect subjunctive, relative pronouns, indirect speech, and passive voice. The class is conducted primarily in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: SPAN 132 or equivalent.
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B; Area 6A)
C-ID: SPAN 210: both SPAN 132 + 140

SPAN 145 SPANISH CONVERSATION THROUGH FILM
Thought-provoking films expose students to authentic Spanish language as well as the culture and history of different regions in the Spanish-speaking world. Analysis and discussion of films with the goal of improving accuracy and fluency in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: SPAN 132
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B; Area 6A)
C-ID: SPAN 230

SPAN 150 SPANISH FOR HERITAGE SPEAKERS I
Designed primarily for Spanish speaking students who are comfortable with oral communication. This course includes vocabulary development, spelling and accents, registers, dialectal variation, cultural readings and introduction to Spanish language literature of South America, Spain, and Spanish-speaking cultures in the United States. Students expand on their own experience and values, and develop an appreciation of the diversity of the various Latino cultures and their influence in the US. Class is conducted entirely in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 4
Hours/semester: 64-72 Lecture; 128-144 Homework
Prerequisites: SPAN 140 or SPAN 150 or SPAN 152 or equivalent.
Recommended: Eligibility for ENGL 110.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B; Area 6A)
C-ID: SPAN 220

SPAN 152 SPANISH FOR HERITAGE SPEAKERS II
Designed primarily for Spanish speaking students who are comfortable with oral communication. This course includes vocabulary development, spelling and accents, registers, dialectal variation, cultural readings and introduction to Spanish language literature of Central America and the Caribbean. Students expand on their own experience and values, and develop an appreciation of the diversity of the various Latino cultures and their influence in the US. Class is conducted entirely in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 4
Hours/semester: 64-72 Lecture; 128-144 Homework
Prerequisites: SPAN 150
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B; Area 6A)
C-ID: SPAN 230

SPAN 162 LATINO LITERATURE II
Literary survey of the best novels, poetry, and short stories in Latin American literature of the 20th century, contextualized in cultural, sociological, and political framework. Through the works of literary greats, students develop an appreciation of the diversity of experience and values of the various Latino cultures and their influence in the U.S. Course is conducted entirely in Spanish. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: SPAN 140 or SPAN 150 or SPAN 152 or equivalent.
Recommended: Eligibility for ENGL 110.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B; Area 6A)
SPAN 695 INDEPENDENT STUDY
Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 0.5 - 3
Hours/semester: 24-162 Lab
Transfer Credit: CSU

Speech Communication
(See Communication Studies)

Team Sports

TEAM 105 ADVANCED BASEBALL
Focuses on mastering individual skills and team concepts. This course is designed to improve the individual technique of students wishing to play intercollegiate community college baseball. Students also participate in numerous competitive drills and baseball conditioning. Demonstrated ability is required. May be repeated for credit up to 3 times. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 2
Hours/semester: 96-108 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 111.1 BASKETBALL I
Instruction at a beginning level in the rules, strategies and skills of basketball. Includes round-robin play during the last half of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 111.2 BASKETBALL II
Instruction at an intermediate level in the rules, strategies and skills of basketball. Includes round-robin play during the last half of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: TEAM 111.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 111.3 BASKETBALL III
Instruction at an advanced intermediate level in the rules, strategies and skills of basketball. Includes round-robin play during the last half of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: TEAM 111.2
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 111.4 BASKETBALL IV
Instruction at an advanced level in the rules, strategies and skills of basketball. Includes round-robin play during the last half of the semester. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: TEAM 111.3
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 132.1 FLAG FOOTBALL I
This course provides beginning skills in flag football, including catching, running with the ball, strategies, blocking, and rules of the game. Drills and competitions are used. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*
COURSE DESCRIPTIONS

TEAM 132.2 FLAG FOOTBALL II
Continuation of TEAM 132.1. Provides intermediate skills in flag football, including catching, running with the ball, strategies, blocking, and rules of the game. Drills and competitions are used. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: TEAM 132.1
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 132.3 FLAG FOOTBALL III
Continuation of TEAM 132.2. This course provides advanced intermediate skills in flag football, including catching, running with the ball, strategies, blocking, and rules of the game. Drills and competitions are used. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: TEAM 132.2
AA/AS Degree Requirements: Area E1; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 141.1 SOCCER I
Covers instruction in and practice of the basic fundamentals essential for team play including dribbling, passing, trapping, throw-ins and defending. The rules and game etiquette are taught for an understanding of team play. Tournament play is included. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: TEAM 141.1 or demonstrated ability.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 141.2 SOCCER II
Continuation of TEAM 141.1. Provides the intermediate student the opportunity to refine and perfect the basic soccer skills essential to team play. Topics include ball possession in small sided group exercises, defending and tournament play. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: TEAM 141.1 or demonstrated ability.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 141.3 SOCCER III
Continuation of TEAM 141.2. Intermediate/advanced skills are combined with group tactics essential for team play. Topics include intermediate/advanced passing and receiving, combination play, group defending and ball possession. Introduction to the 4-4-2 system of play. Round robin team play is involved. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: TEAM 141.2 or demonstrated ability.
AA/AS Degree Requirements: Area E2
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 141.4 SOCCER IV
Continuation of TEAM 141.3. Competitive team play with emphasis on advanced skills and tactics. Topics include speed of play, group defending and systems of play. Tournament play is involved. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
Prerequisites: TEAM 141.3 or demonstrated ability.
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 148.1 INDOOR SOCCER I
A course designed to provide instruction and practice in the fundamentals of indoor soccer and Futsal, team competition, specialized tactics and beginning systems of play. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 1
Hours/semester: 48-54 Lab
AA/AS Degree Requirements: Area E2; Physical Education
Transfer Credit: CSU (CSU GE Area E2), UC*

TEAM 148.2 INDOOR SOCCER II
Continuation of TEAM 148.1. Provides the intermediate student the opportunity to refine and perfect the basic indoor soccer skills essential to team play. Topics include indoor soccer and Futsal, team competition, specialized
tactics and beginning systems of play. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Team 148.1 Indoor Soccer III**  
Continuation of TEAM 148.2. Provides the intermediate student the opportunity to refine and perfect the indoor soccer skills essential for team play. Topics include indoor soccer and Futsal, team competition, specialized tactics, and systems of play. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Team 148.2 Indoor Soccer IV**  
Continuation of TEAM 148.3. Provides the expert student the opportunity to perfect the indoor soccer skills essential for team play. Topics include indoor soccer and Futsal, team competition, specialized tactics, and systems of play. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

**Team 171.1 Volleyball I**  
Instruction and practice of the fundamentals of the game including serving, passing, setting, spiking, and the basic defensive and offensive strategies. Emphasis is placed on the rules and etiquette of the game. Round robin play is included. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

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**Team 171.2 Volleyball II**  
Continuation of TEAM 171.1. Provides the intermediate student with the opportunity to refine and perfect the basic volleyball skills and to master individual positions when using the 6-2 volleyball system. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

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**Team 171.3 Volleyball III**  
Continuation of TEAM 171.2. Emphasis is placed on refinement of the basic fundamentals of the game as well as the more advanced aspects of setting, hitting, and serving. The 6-2 and 5-1 offensive and defensive systems of play are emphasized. Round robin team play is involved. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

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**Team 171.4 Volleyball IV**  
Continuation of TEAM 171.3. Designed to teach advanced skills, principles and techniques necessary and fundamental to understanding and playing at an advanced level. Emphasis is placed on the 6-2 and 5-1 team offensive/defensive systems and strategies. Includes participation in organized round-robin competition preceded by a brief period of appropriate warm-up activities. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

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**Team 183 Golf: Skill Development**  
Focuses on mastering individual golf skills and concepts. It is designed to improve the individual technique of students wishing to play intercollegiate community college golf. A minimum skill level must be demonstrated to remain in the course. Major emphasis is placed on actual competition played on local golf courses. Included are both on and off
course drills and discussion for skills and strategy. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 2  
**Hours/semester:** 96-108 Lab  
**Recommended:** Demonstrated ability is required.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC*

### TEAM 184 SOCCER: SKILL DEVELOPMENT AND CONDITIONING

Focuses on mastering individual skills and team concepts. It is designed to improve the individual technique of students wishing to play intercollegiate community college soccer. Students also participate in numerous competitive drills and soccer conditioning. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 2  
**Hours/semester:** 96-108 Lab  
**Recommended:** Demonstrated ability is required.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC*

### TEAM 185 EXPERT VOLLEYBALL TRAINING

Focuses on mastering individual skills and team concepts. It is designed to improve the individual techniques of students wishing to play intercollegiate community college volleyball. Students also participate in numerous competitive drills and volleyball conditioning. Demonstration of appropriate skill level is required, and monitored by instructor. May be repeated for credit up to 3 times. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 2  
**Hours/semester:** 96-108 Lab  
**Recommended:** Demonstrated ability is required.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC*

### TEAM 186 BASKETBALL: INDIVIDUAL SKILL DEVELOPMENT

This course focuses on mastering individual skills rather than team concepts. It is designed to improve the individual skills of students wishing to play intercollegiate community college basketball. Students spend considerable time working on the fundamentals of the game: ball handling, passing and shooting. Students also participate in numerous competitive drills and basketball conditioning. May be repeated once for credit. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 1  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 110.  
**AA/AS Degree Requirements:** Area C1  
**Transfer Credit:** CSU (CSU GE Area C1), UC (IGETC Area 3A)  
**C-ID:** THTR 113

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**Theatre Arts**

### DRAM 101 HISTORY OF THEATRE

Discover theatre throughout the ages: Ancient Greek, Medieval, Renaissance, Neoclassical, Modern, and Contemporary. Discover major developments in theatre from centuries past, and how they related to the cultural, political and social conditions of their time. Read & analyze plays from the canon, recognizing their historic relevance while encountering famous characters and discovering the structure of their stories. Study theatre architecture & stage design, learn about major historical figures, and explore theatre’s dynamic role in both historic and contemporary society. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 48-54 Lecture; 96-108 Homework  
**Recommended:** Eligibility for ENGL 110.  
**AA/AS Degree Requirements:** Area C1  
**Transfer Credit:** CSU (CSU GE Area C1), UC (IGETC Area 3A)  
**C-ID:** THTR 113
DRAM 140 INTRODUCTION TO THE THEATRE
Discover the world of theatre - its process, people, performances, audiences, and its dynamic relationship with society. Engage in creative and research projects in acting, playwriting, directing, and design. Experience theatre's diversity, from edgy dramas to splashy Broadway musicals. Read plays, see film adaptations of stage scripts, examine dramatic criticism. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)
C-ID: THTR 111

DRAM 150 SCRIPT ANALYSIS
An introduction to the reading and analysis of scripts, and the different ways in which critics, directors, actors, and designers approach them. Read classic and contemporary plays, discover the creative mechanisms behind effective drama, and explore realistic and non-realistic work. Research playwrights and their process. Interpret, explore, and analyze some of the most influential and exciting work in theatre history. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 110.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)
C-ID: THTR 114

DRAM 151 INTRODUCTION TO SHAKESPEARE I
Equivalent to LIT. 151. Study of a chronological sequence of Shakespeare's plays, including works in different genres, and a selection of his sonnets and longer poetry. Reading, discussion, critical papers. The course also covers Shakespeare's role in the development of English language and literature, and his connection to contemporary political and social issues. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: Appropriate skill level as demonstrated by eligibility for ENGL 100 or 105, or other measures as applicable.
AA/AS Degree Requirements: Area C2
Transfer Credit: CSU (CSU GE Area C2), UC (IGETC Area 3B)

DRAM 160 LATIN AMERICAN THEATRE
Discover the rich history of Latino Theatre in the United States. Explore the Spanish and indigenous roots of Latin American theatre. Learn about El Teatro Campesino’s powerful role in organizing the farm workers of the 1960’s. Read and analyze plays written by contemporary Latino, Cuban, and Puerto Rican playwrights, and study the relationship between those plays and the societies from which they emerge. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 100.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)
C-ID: THTR 114

DRAM 200 ACTING I: ACTING FOR THE STAGE AND THE CAMERA
Explore the theory of the fundamentals of acting. Discover the history of Method Acting, and the sometimes complementary, sometimes competing theories of its founders. Test theories in practice through theatre games, acting exercises, improvisation, and movement for both stage and screen. Learn and apply fundamental acting vocabulary. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Recommended: Eligibility for ENGL 110.
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)
C-ID: THTR 151

DRAM 201 ACTING II
Continue developing performance skills through methods and techniques explored in DRAM 200. Take on longer and more challenging monologues and scenes, including non-realistic and classical texts, and ten-minute plays. Deepen emotional authenticity and refine creative expression. Develop more thorough text-based critical analysis. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 48-54 Lecture; 96-108 Homework
Prerequisites: DRAM 200
Transfer Credit: CSU, UC
C-ID: THTR 152
DRAM 233 INTRODUCTION TO NEW PLAY DEVELOPMENT

Learn about ensemble-based theatre: its history, how it's done, and what makes it so unique and exciting. Engage in the theatrical disciplines of playwriting, acting, and directing. Analyze, improvise, and experiment with new play scripts. Write, direct and perform student-written plays in the end-of-semester Student One Act Festival or online as a radio drama. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 40-45 Lecture; 24-27 Lab; 80-90 Homework
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC (IGETC Area 3A)

DRAM 300.1 REHEARSAL AND PERFORMANCE I

Perform in a departmental production of either a live show or a radio play. Develop your skills as an actor, and as a member of an ensemble that pools its talents, energies, and resources together in a collective effort to build, develop, market, and manage the production. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Transfer Credit: CSU, UC
C-ID: THTR 191

DRAM 300.2 REHEARSAL AND PERFORMANCE II

Continuation of DRAM 300.1. Perform in a departmental production of a live show or a radio play. Develop your skills as an actor, and as a member of an ensemble that pools its talents, energies, and resources together in a collective effort to build, develop, market, and manage the production. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Prerequisites: DRAM 300.1
Transfer Credit: CSU, UC
C-ID: THTR 171; THTR 192

DRAM 300.3 REHEARSAL AND PERFORMANCE III

Continuation of DRAM 300.2. Perform in a departmental production of a live show or a radio play. Develop your skills as an actor at an intermediate-advanced level, and as a member of an ensemble that pools its talents, energies, and resources together in a collective effort to build, develop, market, and manage the production. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Prerequisites: DRAM 300.2
Transfer Credit: CSU, UC

DRAM 300.4 REHEARSAL AND PERFORMANCE IV

Continuation of DRAM 300.3. Perform in a departmental production of a live show or a radio play. Develop your skills as an actor at an advanced level, and as a member of an ensemble that pools its talents, energies, and resources together in a collective effort to build, develop, market, and manage the production. Grade Option (Letter Grade or Pass/No Pass). Degree Credit.

Units: 3
Hours/semester: 24-27 Lecture; 72-81 Lab; 48-54 Homework
Prerequisites: DRAM 300.3
AA/AS Degree Requirements: Area C1
Transfer Credit: CSU (CSU GE Area C1), UC

DRAM 305 TECHNICAL PRODUCTION I

Introduces students to play production techniques, procedures, and crafts. Topics include set design and construction, lighting design and implementation, building props, shop procedures, stage management, light and sound board programming and operation, and backstage operations. Student assignments support the DRAM 300 and DRAM 233 productions. Letter Grade Only. Degree Credit.

Units: 3
Hours/semester: 32-36 Lecture; 48-54 Lab; 64-72 Homework
Transfer Credit: CSU, UC
C-ID: THTR 171; THTR 192

DRAM 695 INDEPENDENT STUDY

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students
may take only one Independent Study course within a given discipline. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 0.5 - 3  
**Hours/semester:** 24-162 Lab  
**Transfer Credit:** CSU

## Varsity Sports

### VARS 104 VARSITY BASEBALL

Consists of intercollegiate competition in the Coast Conference. The team also participates in regional tournaments, the Northern California playoffs and the state championships when qualified. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 144-162 Lab  
**Prerequisites:** Demonstrated ability. Student-athletes must be enrolled in 12 units.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC*

### VARS 114 VARSITY BASKETBALL

Consists of intercollegiate competition in the Coast Conference. The team also participates in regional tournaments, the Northern California playoffs and the state championships when qualified. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 1.5  
**Hours/semester:** 72-81 Lab  
**Prerequisites:** Demonstrated ability. Student-athletes must be enrolled in 12 units.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC*

### VARS 140 VARSITY GOLF

Consists of intercollegiate competition in the Coast Conference and participation in dual matches, invitationals, and the conference championships. Team members also participate in the Northern California and state championships when qualified. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 144-162 Lab  
**Prerequisites:** Demonstrated ability. Student-athletes must be enrolled in 12 units.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC*

### VARS 154 VARSITY SOCCER

Consists of intercollegiate competition in the Coast Conference. The team will also participate in regional tournaments, the Northern California playoffs and the state championships when qualified. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 144-162 Lab  
**Prerequisites:** Demonstrated ability. Student-athletes must be enrolled in 12 units.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC*

### VARS 160 WOMEN’S VARSITY SWIMMING

Consists of Intercollegiate Women’s Swimming competition in the Coast Conference. The team also participates in regional invitationals, the Northern California Championship, and the CCCAA State Championship. Employs advanced training including conditioning and swim stroke mechanics at an intercollegiate level. May be repeated for credit up to 3 times. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 3  
**Hours/semester:** 144-162 Lab  
**Prerequisites:** Demonstrated ability. Student-athletes must be enrolled in 12 units.  
**AA/AS Degree Requirements:** Physical Education  
**Transfer Credit:** CSU, UC*  
**C-ID:** CCC000631509

### VARS 170 VARSITY TENNIS

Consists of intercollegiate competition in the Coast Conference. The team also participates in dual matches, invitationals, the Northern California playoffs and the state championships when qualified. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 3  
**Hours/semester:** 144-162 Lab  
**Prerequisites:** Demonstrated ability. Student-athletes must be enrolled in 12 units.  
**AA/AS Degree Requirements:** Area E2; Physical Education  
**Transfer Credit:** CSU (CSU GE Area E2), UC*
VARS 300 VARSITY BASKETBALL: WOMEN
Consists of Intercollegiate Women's Basketball competition in the Coast Conference. The team also participates in regional tournaments, the Northern California playoffs and the state championships when qualified. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 1.5

**Hours/semester:** 72-81 Lab

**Prerequisites:** Demonstrated ability. Student-athletes must be enrolled in 12 units.

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC*

**Word Processing**
(See *Computer Business Office Technology*)

VARS 340 VARSITY WOMEN'S VOLLEYBALL
Consists of intercollegiate competition in the Coast Conference. The team also participates in regional tournaments, Northern California playoffs and state championships when qualified. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 144-162 Lab

**Prerequisites:** Demonstrated ability. Athlete must be enrolled in 12 units.

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC*

VARS 350 WOMEN'S VARSITY BADMINTON
Consists of Intercollegiate Women's Badminton competition in the Coast Conference. The team also participates in regional tournaments, the Northern California playoffs and the state championships when qualified. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 144-162 Lab

**Prerequisites:** Demonstrated ability. Student-athletes must be enrolled in 12 units.

**AA/AS Degree Requirements:** Area E2; Physical Education

**Transfer Credit:** CSU (CSU GE Area E2), UC*

VARS 400 WOMEN'S VARSITY WATER POLO
Consists of Intercollegiate Women's Water Polo competition in the Coast Conference. The team also participates in regional tournaments, the Northern California playoffs and the state championships when qualified. May be repeated for credit up to 3 times. *Letter Grade Only. Degree Credit.*

**Units:** 3