

# Courses

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## A

ACCT - Accounting  
AERO - Aeronautics  
ANTH - Anthropology  
ART - Art  
ARTD - Digital Art  
ASL - American Sign Language  
ASTR - Astronomy  
ATEC - Automotive Technology  
ATHL - Athletics

## B

BIO - Biology  
BIOT - Biotechnology  
BSOT - Office Technology/  
Business Information Worker  
BUS - Business

## C

CDFS - Child Development and Family  
Studies  
CHEM - Chemistry  
CINA - Cinema  
CIS - Computer Information Science  
CJ - Criminal Justice  
COMM - Communication Studies  
COSM - Cosmetology  
COUN - Counseling  
CS - Computer Science

## D

DANC - Dance  
DRFT - Drafting

## E

ECON - Economics  
EDUC - Education  
EMT - Emergency Medical  
Technician  
ENGL - English  
ENGR - Engineering  
ESL - English as a Second Language..

## F

FIRE - Fire Technology  
FLNG - Foreign Languages  
FREN - French

## G

GEOG - Geography  
GEOL - Geology

## H

HED - Health Education  
HIST - History  
HORT - Horticulture  
HS - Human Services  
HUMN - Humanities

## I

IT - Industrial Technology

## J

JOUR - Journalism

## K

KINE - Kinesiology

## L

LR - Learning Resources

## M

MATH - Mathematics  
MGMT - Management  
MKT - Marketing  
MT - Maintenance Technology  
MUSC - Music

## N

NURS - Nursing  
NUTR - Nutrition

## O

OCED - Occupational Education  
OT - Office Technology

## P

PHIL - Philosophy  
PHOT - Photography  
PHSC - Physical Science  
PHYS - Physics  
PLSC - Political Science  
PSYC - Psychology

## Q

## R

RE - Real Estate

## S

SJS - Social Justice Studies  
SOC - Sociology  
SPAN - Spanish  
SPMD - Sports Medicine

## T

THEA - Theatre Arts  
TUTR - Tutoring  
TV- Television

## U

## V

## W

WATR - Water/Wastewater  
WELD - Welding

## X

## Y

## Z

# ACCT - Accounting

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## **ACCT 001 Principles of Accounting - Financial 4.0 Units**

*Transferable to UC/CSU*

*Hours: 64-72 lecture*

A study and analysis of accounting as an information system, its importance and use by external users such as investors, creditors, and others making decisions. The course covers the accounting cycle, application of the generally accepted accounting principles, financial reporting, and statement analysis, including issues relating to the valuation of assets, liabilities, and equity, the recognition of revenue and expenses, cash flow, internal controls, ethics, and International Financial Reporting Standards. (C-ID ACCT 110)

## **ACCT 002 Principles of Accounting - Managerial 4.0 Units**

*Prerequisite\*\*:* ACCT 001

*Course Advisory:* Working knowledge of Excel

*Transferable to UC/CSU*

*Hours: 64-72 lecture*

A study and analysis of how managers use accounting information in decision-making, planning, directing operations, and controlling, to include the following: terms and concepts; job order cost accounting; process cost accounting; departmental accounting; product analysis; pricing decisions; flexible budgeting; standard cost analysis; cost-volume-profit analysis; preparation of operational, capital and financial budgets; and analysis of financial reporting in manufacturing and service environments. (C-ID ACCT 120)

## **ACCT 050 Computer Accounting 3.0 Units**

*Prerequisite\*\*:* ACCT 001 with a minimum grade of D

*Transferable to CSU*

*Hours: 48-54 lecture*

A hands-on course covering a complete computerized accounting system. Topics include a review of basic accounting concepts, preparation of business reports and graphs, and the creation of an accounting system for a company.

## **ACCT 176 Intermediate Accounting 3.0 Units**

*Prerequisite\*\*:* ACCT 001

*Course Advisory:* Working knowledge of Excel

*Hours: 48-54 lecture*

Accounting theory as applied to common issues faced by accountants in today's businesses. Lecture, group-study, and computer-based study emphasize the conceptual framework, the four major financial statements, footnotes, and present-value concepts. The class helps prepare the student for an entry-level position in a professional accounting career.

## **ACCT 177 Cost Accounting 3.0 Units**

*Prerequisite\*\*:* ACCT 002

*Hours: 48-54 lecture*

A comprehensive study and analysis of manufacturing costs as they apply to planning, controlling, and determining unit costs, inventory valuation, and income.

## **ACCT 180 Introduction To Accounting 3.0 Units**

*Hours: 48-54 lecture*

A study and analysis of the accounting cycle for a merchandising business and professional enterprises, payroll accounting, accruals and deferrals, accounting systems, error correction, and financial reporting.

## **ACCT 183 Principles Of Income Tax 3.0 Units**

*Hours: 48-54 lecture*

A comprehensive study and analysis of the principles of federal income tax applied to individual, partnership, informational, and corporate tax returns.

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# AERO - Aeronautics

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## **AERO 055**

**10.0 Units**

### **Aviation Maintenance Technician - General Aircraft Subjects**

*Transferable to CSU*

*Hours: 80-90 lecture, 240-270 lab*

Presents the fundamentals necessary for the advanced study in Aeronautics. It will define the history of aviation and powerplant operation, and the study of flight: aircraft weight and balance, ground operation and servicing, mathematics, maintenance forms and records, basic physics, maintenance publication, and mechanic privileges and limitation. Safety is stressed throughout the course. In addition, this course is a study of the methods and processes used in the production of an aircraft, including shop safety. The course includes fundamentals in the use of hand tools and power equipment, aircraft drawings, cleaning, corrosion control; and the processes used by the manufacturers for aircraft construction.

## **AERO 102**

**10.0 Units**

### **Aviation Maintenance Technician - Airframe Structures**

*Hours: 80-90 lecture, 240-270 lab*

Presents the application of fundamental methods, techniques, and practices used in aircraft inspection, maintenance, and repair. The course includes fundamentals of shop safety, wood structures, fabric covering, finishes, composite structures, plastics, sheet-metal structures, welding, assembly and rigging, and airframe inspection.

## **AERO 103**

**10.0 Units**

### **Aviation Maintenance Technician - Basic Electricity and Hydraulics**

*Hours: 80-90 lecture, 240-270 lab*

A study of fluid control systems and components with emphasis on design, maintainability, testing and system repair. The course includes the fundamentals of hydraulic fluids, fluid carrying lines and fittings, inspection, servicing and testing of pneumatic and hydraulic systems. The course also presents theory and application of direct and alternating current as related to aircraft electrical components and systems.

## **AERO 105**

**10.0 Units**

### **Aviation Maintenance Technician - Airframe Systems**

*Hours: 80-90 lecture, 240-270 lab*

A detailed study of the fundamentals of fabrication, maintenance, and repair of aircraft airframe systems. The course includes study of all basic systems which include: landing gear, hydraulic, pneumatic, cabin atmospheric control, flight instrumentation, communication, navigation, fuel storage and delivery, ice and rain detection, prevention and removal as well as fire detection and protection systems.

## **AERO 106**

**10.0 Units**

### **Aviation Maintenance Technician - Powerplant Reciprocating Engines**

*Hours: 80-90 lecture, 240-270 lab*

Designed to acquaint the student with reciprocating engines. The course includes study in the fundamentals of basic engine design, types and materials of construction, nomenclature, repair, overhaul and servicing, maintainability and reliability concepts.

## **AERO 107**

**10.0 Units**

### **Aviation Maintenance Technician - Powerplant Turbine Engines**

*Hours: 80-90 lecture, 240-270 lab*

Presents a study of the theory, operation, maintenance and repair of the turbine engine and related systems. It gives the student practical "hands on" experience that will satisfy future employment and FAA requirements.

## **AERO 118**

**0.5 to 1.5 Units**

### **Aviation Maintenance Technician - FAA Airframe Test Preparation**

*Hours: 24-81 lab*

Taken during the final semester of a student's enrollment in the Aeronautics program. The course consists of a comprehensive oral, practical, and written examination of all material covered in the Airframe Program for the purpose of verifying the students' readiness to pass the Federal Aviation Administration Airframe Examinations. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/ Open Exit course.*

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# AERO - Aeronautics

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## **AERO 119**

**0.5 to 1.5 Units**

### **Aviation Maintenance Technician - FAA Powerplant Test Preparation**

*Hours: 24-81 lab*

Taken during the final semester of a student's enrollment in the Aeronautics program. The course consists of a comprehensive oral, practical, and written examination of all material covered in the Powerplant Program for the purpose of verifying the students readiness to pass the Federal Aviation Administration Powerplant Examinations. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/Open Exit course.*

## **AERO 150**

**0.5 to 1.5 Units**

### **Aviation Maintenance Technician - FAA Special Projects and Course Enhancement**

*Course Advisory: Any Solano College Aeronautics course (AERO 055-119); or previous training/experience in aeronautics*

*Hours: 24-81 lab*

This course gives Aeronautics students a chance to make up time lost for FAA certificate and/or to work on special projects required by FAA to bring students in line with new FAA FAR Part 66 requirements. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/Open Exit course.*

## **AERO 151**

**0.5 to 1.5 Units**

### **Aviation Maintenance Technician - FAA Special Projects - Powerplant Enhancement**

*Hours: 24-81 lab*

Gives Aeronautics students a chance to make up time lost for FAA certificate and/or to work on special projects required by FAA to bring students in line with new FAA FAR Part 66 requirements. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/Open Exit course.*

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# ANTH - Anthropology

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## **ANTH 001 Physical Anthropology**

**3.0 Units**

*Course Advisory: ENGL 001 with a minimum grade of C*  
*General Education: SCC: Area A; IGETC: Area 5B; CSU: Area B2*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

An introduction to the science of physical anthropology; covering the concepts, methods of inquiry, and scientific explanations of biological evolution and their application to the human species. Topics to be covered will include: the scientific method, genetics, principles and mechanisms of biological evolution, modern human variation and the race concept, biocultural adaptations, primate classification, comparative primate anatomy and behavior, and the fossil evidence for human evolution. (C-ID ANTH 110)

## **ANTH 001L**

**1.5 Units**

### **Physical Anthropology Laboratory**

*Prerequisite\*\*:* ANTH 001 (may enroll concurrently)  
*General Education: SCC: Area A; IGETC: Area 5C; CSU: Area B3*  
*Transferable to UC/CSU*  
*Hours: 8-9 lecture, 48-54 lab*

A laboratory introduction to familiarize students with the methods and materials of physical anthropology, and is intended to be a companion course to ANTH 001 (Physical Anthropology). This course provides hands-on experience with genetics exercises as well as the skeletal materials of modern humans, non-human primates, and fossil hominins. Other topics discussed include the scientific method, sources of biological variation (with special focus on variation in humans and non-human primates) and the forces of evolution, biological classification of the primates, and non-human primate behavior. A field trip may be required. (C-ID ANTH 115L)

## **ANTH 002 Cultural Anthropology**

**3.0 Units**

*Course Advisory: ENGL 001 with a minimum grade of C.*  
*General Education: SCC: Area B2; IGETC: Area 4; CSU: Area D*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

An introduction to the anthropological study of human culture; covering anthropological concepts such as fieldwork, holism, the comparative method, cultural relativism, the nature of culture and cultural identity, and research ethics. Topics will include: subsistence patterns, political organizations including social inequality, kinship and family, communication, supernatural belief systems, gender and sexuality, art, culture change including globalization, and applied anthropology. (C-ID ANTH 120)

## **ANTH 006 Magic, Witchcraft, and Religion**

**3.0 Units**

*Course Advisory: ENGL 001 with a minimum grade of C*  
*General Education: CSU: Area D*  
*Hours: 48-54 lecture*

A cross-cultural, multi-cultural examination of the forms and functions of supernatural belief systems and associated rituals that have developed in various societies. Basic anthropological concepts and methodologies will be introduced and applied to the assessment and analysis of selected cultural and religious traditions. This course also examines the general functions of ritual and mythology in reinforcing cultural ideals and ethics. Emphasis will be placed on understanding religious belief systems within their given social contexts.

## **ANTH 007 Archaeology**

**3.0 Units**

*Course Advisory: ENGL 001 with a minimum grade of C;*  
*General Education: SCC: Area B2; IGETC: Area 4; CSU: Area D*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

An introduction to the study of the concepts, theories, methods, and data of archaeology that contribute to our knowledge of human cultures. The course includes a discussion of the nature of scientific inquiry; the history and interdisciplinary nature of archaeological research; dating techniques; methods of survey, excavation, analysis, and interpretation; cultural resource management; professional ethics; and selected cultural sequences. Several key archaeological sites will be covered and will serve to illustrate central archaeological theories and methods. (C-ID ANTH 150)

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# ART - Art

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## **ART 001 Art History**

**3.0 Units**

*General Education: SCC: Area C; IGETC: Area 3A; CSU: Area C1*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

Explores the history of art in the Western World from the Paleolithic era through the Middle Ages. Focuses on the interrelation of art and culture, with a comparative study of select works of non-Western art. *Field trip may be required. (C-ID ARTH 110)*

## **ART 002 Art History**

**3.0 Units**

*General Education: SCC: Area C; IGETC: Area 3A; CSU: Area C1*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

Explores the history of Western Art through a critical analysis of Renaissance art through Post-Modern Art. Students will examine the connection between art and culture, and evaluate the historic, religious, and political influences on the artistic choices of diverse men and women of art history from the 15th century to today. *Field trip may be required. (C-ID ARTH 120)*

## **ART 003A Arts of Asia**

**3.0 Units**

*Course Advisory: ENGL 001*  
*General Education: SCC: Area C; IGETC: Area 3A; CSU: Area C1*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

A survey of art and architecture from India, Southeast Asia, China, Korea, and Japan from pre-history to modern times. *(C-ID ARTH 130)*

## **ART 003B**

**3.0 Units**

### **Arts of Africa, Oceania, and the Americas**

*Course Advisory: ENGL 001*  
*General Education: SCC: Area C; IGETC: Area 3A; CSU: Area C1*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

A survey of the arts and architecture of Africa, Oceania, and the Americas, with an emphasis on traditional arts and practices. This course will also address issues related to the scholarship and display of these arts in the Western world. *(C-ID ARTH 140)*

## **ART 004 Life Drawing**

**3.0 Units**

*Transferable to UC/CSU*  
*Hours: 32-36 lecture, 64-72 lab*

A study of the human figure in action and repose using a variety of drawing materials and approaches. Students work directly from the live model to develop skills using assignments which include gesture, line drawings, tone studies and the use of color. The student submits a midterm and final portfolio for evaluation. *Field trip may be required. (C-ID ARTS 200)*

## **ART 005 Life Drawing - Intermediate**

**3.0 Units**

*Prerequisite\*\*:* ART 004  
*Transferable to UC/CSU*  
*Hours: 32-36 lecture, 64-72 lab*

The continued study of the human figure with more advanced problems in drawing and composition. Following initial review, the student may choose an individual program of study with the approval of the instructor. *Field trip may be required.*

## **ART 006 Design Principles In 2-Dimensions**

**3.0 Units**

*Transferable to UC/CSU*  
*Hours: 32-36 lecture, 64-72 lab*

A fundamental study of visual elements and principles of design for production of art images in 2-Dimensions using various materials in black and white. Design formats developed from historic and aesthetic precepts are employed to investigate the relationship of form and content. *Field trip may be required. (C-ID ARTS 100)*

## **ART 007 Design-Color**

**3.0 Units**

*Transferable to UC/CSU*  
*Hours: 32-36 lecture, 64-72 lab*

A study of the principles of additive and subtractive color in two dimensions. Various theories of color will be studied including those of Albers and Ittens. Reference to the use of color in the dominant styles of art history will be made. Students will produce a portfolio of projects in applied color and the elements of design. *Field trip may be required. (C-ID ARTS 270)*

## **ART 008 Design Principles In 3-Dimensions**

**3.0 Units**

*Transferable to UC/CSU*  
*Hours: 32-36 lecture, 64-72 lab*

A fundamental study of visual elements and principles of design for production of art objects in three dimensions using various sculpture materials and methods. Design formats developed from historic and aesthetic precepts are employed to investigate the relationships of form and content. *Field trip may be required. (C-ID ARTS 101)*

## **ART 010 Art Appreciation**

**3.0 Units**

*General Education: SCC: Area C; IGETC: Area 3A; CSU: Area C1*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

An introductory examination of the cultural, universal, and personal factors influencing the making and viewing of art. Including a study of style, composition, materials and techniques used in the creation of art from disparate cultures and periods of history. *Field trip may be required. (C-ID ARTH 100)*

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# ART - Art

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## **ART 011 Survey of Modern Art**

**3.0 Units**

*Course Advisory: ENGL 001*

*General Education: SCC: Area C; IGETC: Area 3A; CSU: Area C1*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

A study of the art and architecture of the major modern movements and artists from the 19th and 20th centuries. Analysis of subject, form and content of paintings, photography and sculpture in lecture and audio visual presentation. Classes supplemented by field trips to current exhibitions. Written examinations and paper required. Modern Art is a capstone course designed for, but not limited to, Art History and Studio Art Majors. *Field trip may be required. (C-ID ARTH 150)*

## **ART 012**

**3.0 Units**

### **Inside/Outside: The Cultures and Identities of Diverse Visual Artists in the U.S.**

*Course Advisory: ENGL 001*

*General Education: SCC: Area C, Area E; IGETC: Area 3A, SCC Cross-Cultural; CSU: Area C1, SCC Cross-Cultural*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

An art survey course that examines and assesses three or more groups of culturally diverse artists, art organizations and support structures. Explores art issues related to social and historical trends in the U.S., including ways in which art may reflect and shape American attitudes towards identity (ethnic, gender, sexual, intersectional), culture and discrimination. *Field trip may be required.*

## **ART 014 Introduction To Drawing**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

A study of drawing as a means of expression with emphasis on the potential variety of forms and materials available to the artist. Students will create representational and abstract drawings from still life, the figure, nature and imagination. Observational drawing skills and technical skills will be developed. *Field trip may be required. (C-ID ARTS 110)*

## **ART 015 Intermediate Drawing**

**3.0 Units**

*Course Advisory: ART 014*

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

A basic drawing class which develops the concepts introduced in ART 014 on a more advanced level. Problems in observation and imagination and the translation of these experiences into graphic terms by exploration of line, shape, mass, space, texture, and light and shadow. Emphasis on composition and the development of a personal approach to drawing. Students will be required to submit a portfolio of assignments. *Field trip may be required. (C-ID ARTS 205)*

## **ART 015B Collage and Assemblage**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Explores the making of 2D and 3D collages and assemblages in a variety of media. Addresses the history and prevalence of collage thinking as an approach to art making while integrating traditional drawing and painting skills. *Field trip may be required.*

## **ART 015C Book Making**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Explores book making in a variety of formats. Discusses the history and development of the book. Students will make several books: Classic signature book bound between boards, side bound books and a variety of artist's books including altered books, boxed books, and 3 dimensional book structures like accordion books and pop-up books. *Field trip may be required.*

## **ART 016 Beginning Painting**

**3.0 Units**

*Course Advisory: ART 014*

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

An introduction to techniques and materials of painting in acrylic or oil. Designed for the student with limited experience in painting, this course includes color theory, composition, exposure to a variety of subject matters, and the development of skills for individual expression. *Field trip may be required. (C-ID ARTS 210)*

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# ART - Art

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## ART 017

3.0 Units

### Intermediate Painting: Acrylic and Oil

Course Advisory: ART 016

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

A study of acrylic and oil painting techniques focusing on use of color, the medium and composition. A series of painting assignments designed to develop skills in both media. *Field trip may be required.*

## ART 018

3.0 Units

### Advanced Intermediate Painting: Acrylic and Oil

Prerequisite\*\*: ART 017

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

A study of color, composition and technique in oil or acrylic painting on an intermediate level. Students may choose to build on assignments from ART 017 or develop an outline of semester assignments appropriate to their interests and skill needs. *Field trip may be required.*

## ART 019 Figure Painting

3.0 Units

Course Advisory: ART 016

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

A study of the human figure using a variety of painting techniques and approaches. Students work directly from the live model to develop skills in rendering and expression. Assignments include long and short observational paintings which will afford skill development in materials handling as well as compositional and thematic developments. *Field trip may be required.*

## ART 019B Clothed Figure

3.0 Units

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

Understanding the various properties of clothing and drapery, as used with the figure in painting and drawing. Gesture, proportion, form and color will be studied in relation to the clothed figure. Projects will include a variety of costume statements including fashion, sport, fantasy or science fiction and theatre costume. *Field trip may be required.*

## ART 020

2.0 or 3.0 Units

### Landscape Drawing And Painting - Reflections Of Nature

Transferable to UC/CSU

Hours: 16-36 lecture, 48-72 lab

A focus on the outdoors as subject matter. Frequent field trips and class exercises will introduce and expand the student's awareness and observational skills of the environment, in the tradition of Natural History as well as plein air (outdoor) art making. The student will reflect and translate these experiences into graphic terms using various media while considering line, shape, mass, space, texture, light, color and shadow. The student will focus on composition and content while developing a personal understanding of the environment. Keeping a written and visual journal will also be a component of this class. This course will examine the interrelationships of humans and their surroundings, and the aesthetic choices available with which to communicate our responses. This class will consist of regular field trips during class meetings as well as some weekend outings. Films, special lectures, various projects and assignments as well as consideration for weather conditions will make up the remaining time in the studio. Students who wish to transfer must enroll in the 3-unit section.

## ART 021 Watercolor

3.0 Units

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

An introduction to the materials and techniques of transparent watercolor. Including basic composition, color study and an exploration of materials. Lectures, demonstrations and field study will supplement class assignments. *Field trip may be required.*

## ART 022 Watercolor - Intermediate

3.0 Units

Prerequisite\*\*: ART 021

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

A continuation of the study of basic watercolor techniques with emphasis on a more individual approach to the medium. The student and instructor develop a course of study that will focus on needs in the areas of skills and self-expression. *Field trip may be required.*

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# ART - Art

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## ART 023

3.0 Units

### Introduction to Ceramics: Hand Building

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Basic construction methods of hand building and finishing pottery. Emphasis on form, craftpersonship and creativity. Building methods include pinch technique, coil building, and slab construction. Surface techniques include texture, stencil, slip, relief, stain, and glaze. Non-traditional construction and surface techniques will also be covered. *Field trip may be required.*

## ART 024

3.0 Units

### Intermediate Ceramics: Hand Building

*Prerequisite\*\*:* ART 023

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

A continuation of ART 023 with emphasis on expanding skills, experimentation, design, craftpersonship, and creativity. Application of basic techniques to create finished art forms. *Field trip may be required.*

## ART 025

3.0 Units

### Ceramic Design And Decoration: Hand Building Methods

*Prerequisite\*\*:* ART 024

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Emphasizes ceramic design problem-solving. Emphasis on creativity, design, honing skills, craftpersonship and experimentation. Ceramic art of the past as well as contemporary art is discussed. Loading and firing kilns, formulating glazes and mixing clay bodies are also covered. Builds on fundamental skills covered in Art 023 and Art 024. *Field trip may be required.*

## ART 026

3.0 Units

### Introduction to Ceramics: Wheel Throwing Techniques

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Introduction to basic wheel throwing techniques. Emphasis on form, craftpersonship, and creativity. Surface techniques include texture, stencil, slip, relief, stain, and glaze. Non-traditional construction and surface techniques will also be covered.

## ART 027

3.0 Units

### Intermediate Ceramics: Wheel Throwing Techniques

*Prerequisite\*\*:* ART 026

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

This course is a continuation of ART 026 with emphasis on expanding skills, experimentation, design, craftpersonship, and creativity. Application of basic techniques to create finished art forms. Field trip may be required.

## ART 028

3.0 Units

### Ceramic Design: Wheel Throwing Techniques

*Prerequisite\*\*:* ART 027

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Emphasizes ceramic design problem-solving. Emphasis on creativity, design, honing skills, craftpersonship and experimentation. Ceramic art of the past as well as contemporary art is discussed. Loading and firing kilns, formulating glazes and mixing clay bodies are also covered. Builds on fundamental skills covered in ART 026 and ART 027. *Field trip may be required.*

## ART 029 Raku Pottery

2.0 or 3.0 Units

*Course Advisory:* ART 023 or ART 026 (one college level ceramics course)

*Transferable to UC/CSU*

*Hours: 16-36 lecture, 48-72 lab*

Covers the ancient and contemporary art of Raku. Topics include techniques of forming clay, the formulation of clay bodies and glazes for Raku, kiln construction, firing, post firing, Eastern and Western esthetics, and the history of Raku. The course will not cover basic ceramic construction techniques. Students should already be familiar with basic hand building or wheel throwing techniques. *Field trip may be required.* Students who wish to transfer must enroll in the 3-unit section.

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# ART - Art

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## ART 030A

2.0 or 3.0 Units

### Architectural Ceramics, Murals and Tiles

Course Advisory: ART 023 or ART 026 (one college level ceramics course)

Transferable to UC/CSU

Hours: 16-36 lecture, 48-72 lab

An investigation of the history, contemporary examples, materials, techniques and the vast range of artistic expression possible in architectural ceramics, ceramic murals and tiles. The course will not cover basic ceramic construction techniques. Students should already be familiar with basic hand building or wheel throwing techniques. Students should expect to incur materials and equipment costs typical of a studio art course. *Field trips may be required.* Students who wish to transfer must enroll in the 3-unit section.

## ART 030B

3.0 Units

### Mural Painting: History, Community, Practice

General Education: SCC: Area C; IGETC: Area 3A; CSU: Area C1

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab.

An exploration of the cultural history of mural painting as well as the social and political issues related to the creation and public reception of mural paintings. Students will apply aesthetic as well as conceptual analyses to the design and creation of a full-scale mural. Through both study and practice, students will consider the importance of the community in the mural-making process. *Field trips may be required.* Students may travel to view murals in the Bay Area. Murals may be painted at an off-campus site.

## ART 030C

3.0 Units

### Ceramics: History, Culture, Practice

General Education: IGETC: Area 3A; CSU: Area C1

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

Introduction to a broad spectrum of ceramic art from diverse cultures including Western/European Art, Asian/Middle Eastern Art, Meso-American Art and African Art within a technical, historical, and cultural context. Students will utilize creative problem solving skills to produce contemporary, original works of art that reinterpret the traditions presented in the course content.

## ART 031 Sculpture

3.0 Units

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

Introduction to sculpture methods and materials. Emphasis on principles of three dimensional design and the interrelationship of form, content and context. Sculpture methods to be covered include modeling, mold making, welding, assemblage, and construction with a variety of materials. Various sculpture methods are practiced with attention to creative self-expression and historical context. *Field trip may be required.*

## ART 032 Sculpture: Human Figure

3.0 Units

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

Study of the human form in sculpture. Students will create both realistic and abstract sculpture of the human form in a variety of materials. *Field trip may be required.*

## ART 033 Intermediate Sculpture

3.0 Units

Prerequisite\*\*: ART 031, ART 032 or ART 034

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

Further development of concepts and skills presented in ART 031 and ART 032. Emphasis is placed on individual expression. A variety of materials, methods, and sculptural concepts are explored. *Field trip may be required.*

## ART 034 Ceramic Sculpture

3.0 Units

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

Introduction to basic sculpture concepts, materials, and approaches with an emphasis on ceramics. Subjects to be covered include: Historic and contemporary approaches to ceramic sculpture, slab construction, coil building, mold making, extruded fabrication, modeling from the figure, introduction to ceramic color, characteristics and limitations of ceramic materials. *Field trip may be required.*

## ART 035A

3.0 Units

### Introduction to Wood-Fired Ceramics

Transferable to UC/CSU

Hours: 32-36 lecture, 64-72 lab

Covers the ancient and contemporary art of wood-fired ceramics. Topics include techniques of forming clay, the formulating of clay bodies and glazes for wood fire, kiln construction, wood firing techniques, Eastern and Western esthetics and the history of wood-fired ceramics. The course will not cover basic ceramic construction techniques. Students should already be familiar with basic hand building or wheel throwing techniques.

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# ART - Art

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## **ART 036**

**2.0 or 3.0 Units**

### **Ceramics Surfaces - Drawing and Painting on Clay**

*Transferable to UC/CSU*

*Hours: 16-36 lecture, 48-72 lab*

A ceramic surface design exploration of the vast range of artistic expression possible with ceramic slips, stains, glazes and firing techniques at low, medium and high temperature ranges. The course will not cover basic ceramic construction techniques. Students should already be familiar with basic hand building or wheel throwing techniques. *Field trip may be required.* Students who wish to transfer must enroll in the 3-unit section.

## **ART 037**

**2.0 or 3.0 Units**

### **Clay and Glazes for the Ceramic Artist**

*Prerequisite\*\*:* ART 023 or ART 026

*Transferable to UC/CSU*

*Hours: 16-36 lecture, 48-72 lab*

Covers and investigates the theoretical and practical aspects of clay and glaze formulation. Topics covered include: Clay/glaze fit, glaze calculation, testing strategies, the development of color, the development of texture, kiln types, kiln temperatures and kiln atmosphere. *Field trip may be required.* Students who wish to transfer must enroll in the 3-unit section.

## **ART 038 Introduction to Printmaking**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Explores traditional and contemporary approaches to etching (Intaglio), lithography, relief (woodcut and linoleum) and screen printing. Digital and new methods of photographic printmaking are discussed and demonstrated. This course is project oriented to enable the student to develop a portfolio of completed works in various mediums. *Field trip may be required.*

## **ART 039**

**3.0 Units**

### **Etching and Engraving: Line Techniques**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

History and techniques of line etching and engraving, includes dry point, sugar lift line etching, and soft ground line variations. The student is expected to produce matted prints of completed projects. *Field trip may be required.*

## **ART 040 Etching and Engraving: Tone**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Etching and engraving techniques such as aquatint, featherbiting, spit bite, and soft ground which produce tones that have gray and black areas defining line etchings. The student will prepare a portfolio of completed projects. *Field trip may be required.*

## **ART 041 Etching and Engraving: Color**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Etching and engraving techniques and their history, including the use of multiple plates for each color used on the key plate. Some color plate methods covered include a la poupee, monotype, chine colle, color rollings, and viscosity printing. The student will prepare a portfolio of completed projects. *Field trip may be required.*

## **ART 042 Screen Printing**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Screen printing techniques from paper stencils and pochoir to photographic and digital processes. Students are expected to develop a portfolio of prints that emphasizes the exploration of personal content while employing advanced screen techniques and related digital processes. The course will consist of studio production, lectures on contemporary and historical screen printing, demonstrations and critiques. *Field trip may be required.*

## **ART 042A Commercial Screen Printing**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

An introduction to the screen-printing process. Students will participate in the various functions of a design studio: producing artwork; select mesh, frames, and stencil systems; and select inks and substrates based on printing techniques. A combination of laboratory applications and theory will provide the foundation for this course. Acquisition of technical skills through the actual production of screen-printed products is a major goal of this course. Tee shirts, reusable shopping bags and aprons will be some of the merchandise the class will design and print for the Solano College community.

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# ART - Art

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## **ART 043**

**3.0 Units**

### **Print Making: Relief Printing, Including Woodcut**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

A general introduction to printmaking - the history, development, techniques, and processes. Emphasis is on an in-depth study and application of various relief methods (embossing, collagraph, linoleum cut, woodcut, and non-traditional) along with an investigation of relevant image source and development. *Field trip may be required.*

## **ART 045A Graphic Design I**

**3.0 Units**

*Course Advisory: ARTD 044*

*Transferable to CSU*

*Hours: 32-36 lecture, 64-72 lab*

A fundamental background for terminal and transfer students planning to enter the graphic design field. Instruction in the professional use of design, lettering, and illustration through solution of visual communication problems.

## **ART 045B Graphic Design II**

**3.0 Units**

*Prerequisite\*\*:* ART 045A

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Computer design and production methods for print and digital mediums using Adobe and other software programs for layout, illustration, typography, and animation. Graphic design principles are stressed.

## **ART 045C Typography**

**3.0 Units**

*Course Advisory: ENGL 001 with a minimum grade of C*

*Transferable to CSU*

*Hours: 32-36 lecture, 64-72 lab*

Fundamentally covers the history, theory and study of letterforms and type design, using both traditional and digital media. Studies will include typographic characteristics, the relationship between type and image, principles of legibility, visual hierarchy, and grid systems. *Field trip may be required.*

## **ART 046 Illustration I**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Problems in design and rendering of illustration for print and film media. Projects may include illustrations for books, magazines, advertising and film. *Field trip may be required.*

## **ART 046C Illustration II**

**3.0 Units**

*Prerequisite\*\*:* ART 046 or equivalent as determined by portfolio review

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Studio illustration conception, production and finish. Students will execute illustration projects using professional procedures and equipment. Emphasis is on student creative and technical development. Written papers and portfolio review required.

## **ART 047 Introduction to Animation**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Introduction to the art of animation, and its history and evolution. Student projects will facilitate and require the further development of visual literacy, esthetic principles, and critical thinking skills. Interactivity, the study of motion and linear and non-linear narrative structures will be explored. Students will gain an understanding of how animation can be used as an effective tool for storytelling, and will gain experience through group and individual animation projects. Offers an in-depth study of animation and interactive work using industry standard animation software.

## **ART 049 Art Honors**

**1.0 to 3.0 Units**

*Prerequisite\*\*:* Completion of 24.0 units of college credit with a minimum GPA of 3.3; a minimum of 5.0 units in the discipline with a grade of 'B' or better; an ability to work independently and permission of the School Dean based on instructor availability.

*Transferable to CSU*

*Hours: 48-162 lab by arrangement*

An independent study course designed for sophomores or students who have taken many of the basic classes and wish to continue work with an instructor in a specialized area. The student works by arrangement with the instructor on an outlined program of study. Students may take this course up to the maximum number of units over multiple semesters.

## **ART 060 Exhibition Design**

**1.0 to 3.0 Units**

*Transferable to CSU*

*Hours: 16-54 lecture*

Fundamentals of designing exhibitions in gallery, museum, and alternative spaces. Students will gain experience developing exhibitions for the Herger Gallery (Fairfield Campus) and Centers. Topics covered include selection, design and installation of exhibitions; defining the mission of a gallery; public relations; and career opportunities. *Field trip may be required.*

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# ART - Art

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## **ART 064 Monotype/Monoprint**

**3.0 Units**

*Transferable to CSU*

*Hours: 32-36 lecture, 64-72 lab*

A focus on the unique print. Study will include history and development of this form in relation to print tradition. Development of press skills in single-drop and multi-drop printing is required as well as a portfolio of printing techniques including direct, indirect and combination prints. *Field trip may be required.*

## **ART 074 Kiln Design and Operation**      **2.0 or 3.0 Units**

*Course Advisory: ART 023 or ART 026 (one college level ceramics course)*

*Transferable to CSU*

*Hours: 16-36 lecture, 48-72 lab*

Investigate into the vast range of kiln designs, their operation and the opportunities each offers for artistic expression. Kiln designs covered will include natural gas, propane, electric, raku, salt, wood, and alternative kilns. Students will be able to determine which kilns and which firing strategies are best suited to their current artistic vision. The course will not cover basic ceramic construction techniques. Students should already be familiar with basic hand building or wheel throwing techniques. Field trips may be required. Students who wish to transfer must enroll in the 3-unit section.

## **ART 075 Art Studio Concepts**      **2.0 or 3.0 Units**

*Transferable to CSU*

*Hours: 16-36 lecture, 48-72 lab*

Intensive study in visual arts studio. Exposure to contemporary art directions, trends and selected topics. Different studio problems will be investigated each semester. Field trips may be required. Students who wish to transfer must enroll in the 3-unit section.

## **ART 076A**

### **Portfolio Development - Artistic Inquiry**

*Transferable to CSU*

*Hours: 32-36 lecture, 64-72 lab*

An advanced course designed to serve the student in the preparation of a professional fine art portfolio consisting of a body or series of work. Emphasis is placed on: individual expression of an artistic vision; idea development; artistic inquiry; and setting and meeting artistic goals and timelines for the production of a body or series of work. The student should have the necessary skills, art making experience and motivation to work independently, with expert consultation by the instructor, on developing a coherent body of work. This course is the first in a two part course offering completed by Portfolio Development-Documentation. Student should expect to incur materials and equipment costs typical of a studio art course. *Field trip may be required.*

## **ART 076B**

**3.0 Units**

### **Portfolio Development - Documentation**

*Transferable to CSU*

*Hours: 32-36 lecture, 64-72 lab*

An advanced course designed to serve the student in the preparation of a professional fine art portfolio consisting of a body or series of work. Emphasis is placed on: individual expression of an artistic vision; professional quality documentation and presentation of artwork; and capacity to communicate both verbally and in writing about artwork produced. The student should have the necessary skills, art making experience and motivation to work independently, with expert consultation by the instructor, on developing a coherent body of work. This course is the second in a two part course offering following Portfolio Development - Artistic Inquiry. Student should expect to incur materials and equipment costs typical of a studio art course. *Field trip may be required.*

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# ART - Art

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## **ART 077A Professional Practices for Artists 3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

Provides the skills and information to serve the student in developing a professional art career. Topics include: How to approach galleries, institutions, universities, art schools, and potential employers. Techniques for promoting art for employment or transfer to four year schools, portfolio preparation, resume writing, artist statement and biography composition, sales and pricing of art, business basics, entrepreneurship, public relations, art on the internet, planning and goal setting, contracts, taxes, grant getting, display, shipping, sustaining creativity. Evaluation of marketing and promotional concepts. Recommended for all art and design majors seeking to become professionals. Field trips may be required.

## **ART 077B Art on Site 3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

A movable feast. In this course students will visit artists, gallery owners, museum curators and art administrators on site, at their studios, galleries museums and offices. This will be a forum for students to hear first hand from artists, arts scholars and other art professionals discussing and contextualizing their work within the contemporary art field. Includes multiple lecturers by visitors and additional class lectures providing further context. Exposure to contemporary art directions, trends and job markets. This course requires extensive field trips to destinations in the greater Sacramento and Bay Area.

## **ART 100 2.0 or 3.0 Units**

### **Color and Mixed Media Drawing**

*Hours: 16-36 lecture, 48-72 lab*

A focus on the use of a variety of drawing materials and techniques with special attention to color theory. Lectures, demonstrations and field study will supplement class assignments. *Field trip may be required.*

## **ART 145 Portrait Drawing and Painting 2.0 or 3.0 Units**

*Course Advisory: ART 014*

*Hours: 16-36 lecture, 48-72 lab*

A multifaceted address of the representation of likeness portrait study. Includes anatomy and work with live models, self-portraits and portraits of others. Issues of gender, ethnic identity, youth and aging, stereotyping and caricature will be presented in historical and contemporary contexts. Portrait work will be explored in a variety of stylistic formats from observational likeness to expressionistic images to symbolic portraits. Work in a variety of media is required. *Field trip may be required.*

# ARTD - Digital Art

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## **ARTD 044 Introduction to Digital Design 3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Introduction to digital tools used for the theory, practice and production of graphic design. Principles of color, resolution, pixels, vectors, image enhancement, layout, visual hierarchy, and typography. Emphasis on creating content for industry standards, including compliance with print and web specifications, and professional practices for presentation and communication skills. (C-ID ARTS 250)

## **ARTD 047C Introduction to 3D Animation 3.0 Units**

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 64-72 lab*

Introduction to the theory, history and production of 3D animation using industry standard software. The traditional principles of animation are applied and translated to the computer generated 3D (CG 3D) environment.

## **ARTD 144A Design Bootcamp 1.0 Unit**

*Hours: 16-18 lecture, 8-9 lab*

An accelerated, in-depth course that covers the principles, practices and digital production of visual design. Topics covered include visual hierarchy, color, typography, composition, color theory, ideation, and professional practices within the industry.

## **ARTD 144B Adobe Illustrator Bootcamp 1.0 Unit**

*Hours: 16-18 lecture, 8-9 lab*

Bring your creative ideas to life with Adobe Illustrator, the industry-standard vector graphics software, used by designers and illustrators who want to create digital graphics, logos, illustrations, and original typography. This course is designed to get you up and running with Adobe Illustrator, using step-by-step instruction leading students through the most important tools and concepts in Illustrator.

## **ARTD 144C Adobe Photoshop Bootcamp 1.0 Unit**

*Hours: 16-18 lecture, 8-9 lab*

Take your Photoshop skills to the next level in this intensive, hands-on course. The focus will be on step-by-step instruction leading students through the most important tools and concepts in Photoshop. At the end of this intensive course, you will understand basic techniques for photo editing, as well as the use of Photoshop in graphic design.

## **ARTD 144D Deigital Illustration Bootcamp 1.0 Unit**

*Hours: 16-18 lecture, 8-9 lab*

Learn new new digital approaches to illustration in this fun, accessible class. We'll go over the basics of developing your personal style, review techniques, and learn how to conceptualize your ideas using industry-standard digital applications. Whether you're new to digital art or an experienced illustrator, you'll find new ways to make your ideas a reality.

## **ARTD 144E Portfolio and Publication Bootcamp 1.0 Unit**

*Course Advisory: ARTD 144A*

*Hours: 16-18 lecture, 8-9 lab*

Build your brand, create a portfolio and learn the skills needed to create publications and marketing materials! This course will guide you through the core features and tools of industry-standard page-layout applications. You'll learn how to create layouts for books and graphic novels, set up a portfolio, and create interactive documents and forms.

## **ARTD 144F Animation Bootcamp 1.0 Unit**

*Hours: 16-18 lecture, 8-9 lab*

Animation Bootcamp introduces you to the art of animation. In this course, you'll learn the principles behind great animation, and how to apply them to your own work.

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# ASL - American Sign Language

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## **ASL 001 American Sign Language 1**

**3.0 Units**

*Transferable to UC/CSU*

*General Education: SCC: Area C; IGETC: Area 6; CSU: Area C2*

*Hours: 48-54 lecture.*

Introduction to the culture and language of the deaf in this country. The course includes the acquisition of Fingerspelling skills and basic functional vocabulary of ASL. In addition to fluency in these two separate skills, the student will acquire basic knowledge of ASL syntax and nonverbal aspects of ASL, a history of the deaf in the country and deaf education, variations in Manual Communication, and the Culture of the Deaf. There will be both written and signed examinations, a research project, homework assignments, and individual examinations to demonstrate competency in both expressive and receptive ASL. Students will be expected to acquire a vocabulary of approximately 500 words (signs) and be proficient in Fingerspelling.

## **ASL 002 American Sign Language 2**

**3.0 Units**

*Prerequisite\*\*:* ASL 001

*General Education: SCC: Area C; IGETC: Area 6; CSU: Area C2*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Emphasis on vocabulary expansion, introduction to ASL idiomatic expressions and information regarding the ethics and process of becoming a sign language interpreter. Assessment of competency is accomplished through written and communicative examinations. Some interaction with the deaf population is required.

## **ASL 003 American Sign Language 3**

**3.0 Units**

*Prerequisite\*\*:* ASL 002

*General Education: IGETC: Area 6; CSU: Area C2*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

A focus on the grammatical structure of American Sign Language and how it has been influenced throughout history, by society, and other cultures in America. Students will develop their vocabulary, not through rote memorization, but through emphasis on receptive and expressive modes of communication; they will learn how to develop their own styles.

## **ASL 004 American Sign Language 4**

**3.0 Units**

*Prerequisite\*\*:* ASL 003

*General Education: IGETC: Area 6*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

An advanced course designed to increase vocabulary, examine the use of semantic and body classifiers, expand and develop conversational signing ability through the use of appropriate grammar structures and storytelling. Popular Deaf culture stories are learned through the development of storytelling techniques. The rich heritage of Deaf people is studied through biographies of those who are famous for their contribution.

## **ASL 005 American Deaf Culture**

**3.0 Units**

*General Education: IGETC: Area 3B; CSU: Area C2*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Exploration of American Deaf Culture with historical and cultural overview of the American Deaf community and its language, American Sign Language (ASL). Fundamental sociological and anthropological theories will be discussed. Students will be given an opportunity to study and understand the following: minority group dynamics, attitudes and behavioral characteristics of the oppressed and oppressors, and the liberation movements. Analysis of the relationship of ASL to the history of the American Deaf community will be conducted.

## **ASL 006**

**3.0 Units**

### **Linguistics of American Sign Language**

*Prerequisite\*\*:* ASL 002

*General Education: CSU: Area C2*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Applies knowledge of linguistics (e.g., phonetics, phonology, syntax, semantics) to signed languages, especially ASL. Students will learn about aspects of the language that are specific to signing, such as using three-dimensional space as grammatical tools. Students will compare ASL to other signed languages to further explore how these linguistic aspects differ between signed languages.

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# ASL - American Sign Language

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## ASL 052

3.0 Units

### Fingerspelling, Classifiers, and Numbers

*Prerequisite\*\*:* ASL 001 (may enroll concurrently)

*Transferable to CSU*

*Hours: 48-54 lecture*

Solidifies fingerspelling, numbers, and classifiers to the point where they can reliably be leveraged in an expressive and receptive manner. The focus of the course is on recognition and use of fingerspelling, numbers, and classifiers in different contexts.

## ASL 053

3.0 Units

### Introduction to American Sign Language Interpreting

*Prerequisite\*\*:* ASL 002

*Transferable to CSU*

*Hours: 48-54 lecture*

Introduction to professional conduct, variety of interpreter work settings, and interactions with the populations served.

## ASL 054 ASL Interpreting Field Work

2.0 Units

*Prerequisite\*\*:* ASL 003

*Corequisite:* OCED 090

*Transferable to CSU*

*Hours: 32-36 lecture*

Prepares students for the profession of ASL interpreting by providing field work in which students can observe different scenarios and apply skills learned in the classroom. Weekly seminars will explore how ASL interpreters learn discourse mapping, a systematic approach for analyzing texts to produce successful, effective interpretations. Through a co-requisite of OCED 090 students will work in a real world environment to practice the techniques discussed in class.

## ASL 055

3.0 Units

### Interpreting 1: Consecutive Interpreting

*Prerequisite\*\*:* ASL 053

*Transferable to CSU*

*Hours: 48-54 lecture*

Building and improving basic receptive and expressive sign language interpretation skills emphasizing the development of consecutive ASL to English and English to ASL.

## ASL 056

3.0 Units

### Interpreting 2: Simultaneous Interpreting

*Prerequisite\*\*:* ASL 053

*Transferable to CSU*

*Hours: 48-54 lecture*

Advanced simultaneous interpreting skills that can be applied in both ASL to English and English to ASL interpretation. Topics include: research and analysis of the simultaneous interpreting process, interpreting models and how to apply them in various work environments, and the basis of ethical decision making within the field of sign language interpreting.

# ASTR - Astronomy

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## **ASTR 010 General Astronomy**

**3.0 Units**

*General Education: SCC: Area A; IGETC: Area 5A; CSU: C: Area B1  
Transferable to UC/CSU  
Hours: 48-54 lecture*

An introductory study of the universe, including the properties and evolution of galaxies, stars, pulsars, black holes, quasars, the sun, planets and life in the universe. *Field trip may be required.*

## **ASTR 020 Astronomy Laboratory**

**1.0 Unit**

*Prerequisite\*\*:* A minimum grade of D in ASTR 010, ASTR 030, ASTR 040 or ASTR 045 (courses may be taken concurrently)  
*General Education: IGETC: Area 5C; CSU: Area B3  
Transferable to UC/CSU  
Hours: 48-54 lab*

A familiarization with the sky, telescopes, and other astronomical equipment. Students will conduct experiments in physics related to astronomy. Topics will cover the moon, planets, stars, galaxies, and cosmology. *Field trip may be required.*

## **ASTR 030 The Solar System**

**3.0 Units**

*General Education: SCC: Area A; IGETC: Area 5A; CSU: Area B1  
Transferable to UC/CSU  
Hours: 48-54 lecture*

An introductory study of solar system astronomy, the physics related to that astronomy, the planets and their moons, the sun, solar system debris, and the possibility of extraterrestrial life. *Field trip may be required.*

## **ASTR 040 Stars, Galaxies, and Cosmology**

**3.0 Units**

*General Education: SCC: Area A; IGETC: Area 5A; CSU: Area B1  
Transferable to UC/CSU  
Hours: 48-54 lecture*

An introductory study of stars, galaxies, the universe, and the physics related to these topics. Including an examination of the facts relating to the sun, stellar lifetimes, supernovae, black holes, and cosmology. *Field trip may be required.*

## **ASTR 045**

**3.0 Units**

### **Introduction to Astrobiology and the Search for Life in the Universe**

*General Education: IGETC: Area 5A; CSU: Area B1  
Transferable to UC/CSU  
Hours: 48-54 lecture*

An exploration of the possibility of life beyond the Earth. Topics include the origin and evolution of life on Earth, the formation of Earth and other planets in the solar system, the likelihood of life existing on other planets or moons within our solar system, attempts to locate life within our solar system and attempts to communicate with intelligent life in other parts of the galaxy.

## **ASTR 049 Astronomy Honors**

**1.0 to 3.0 Units**

*Prerequisite\*\*:* ASTR 020 or ASTR 045 and an ability to work independently; permission of the School Dean based on instructor availability.

*Transferable to CSU  
Hours: 48-144 lab*

Universities and research laboratories across the country critically depend on ordinary citizens to collect the data that they need for their research projects. These people are known as "Citizen Scientists". In this course students will contribute to a current Citizen Science research project in Astronomy. This project requires the approval of a faculty member sponsor.

## **ASTR 050 Astronomical Optics**

**1.0 Unit**

*Course Advisory: A minimum grade of B in ASTR 030 or ASTR 040; A minimum grade of C in MATH 104*

*Transferable to CSU  
Hours: 48-54 lab*

An introduction to principles of astronomical optics. The student will apply these principles to the design, fabrication, and use of a telescope, which will be tested under the night sky. Primary mirrors will be ground, smoothed, polished, and figured by hand. Optics and optical testing theories will be presented. Students will design and build a custom optical tube assembly and telescope mount. *A field trip to test the finished telescope will be required.*

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# ATEC - Automotive Technology

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## **ATEC 070 Automotive Fundamentals**

**3.0 Units**

*Transferable to CSU*

*Hours: 32-36 lecture, 48-54 lab*

Provides the knowledge and skills needed to prepare students for entry into the automotive core curriculum. The study of automotive industry fundamentals including careers, safety, fasteners, hand tool identification and usage, vehicle systems, electrical fundamentals, service information access and use, automotive chemical and fluid applications, hazardous waste handling, general shop equipment usage, and vehicle servicing. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will in part prepare the student for the ASE Maintenance and Light Repair G1 Certification Examination.

## **ATEC 130**

**4.0 Units**

### **Automotive Suspension and Steering**

*Prerequisite\*\*:* ATEC 070 (may enroll concurrently)

*Course Advisory:* ATEC 131

*Hours: 32-36 lecture, 96-108 lab*

The study of automotive suspension and steering fundamentals including: Diagnosis, inspection, repair, and adjustment of modern automotive steering, suspension, supplemental restraint, tire pressure monitoring, and alignment systems. Theory of operation, common automotive steering and suspension systems, wheel alignment principles, methods of diagnosis, adjustment and repair, and the use of suspension service equipment will be covered. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will in part prepare the student for the ASE Suspension and Steering A4 Certification Examination.

## **ATEC 131 Automotive Electrical Systems**

**4.0 Units**

*Prerequisite\*\*:* ATEC 070 (may enroll concurrently)

*Hours: 32-36 lecture, 96-108 lab*

Theory and principles of automotive electrical systems including basic electrical theory, Ohm's Law, series and parallel circuits, electrical symbols and schematics, automotive batteries, charging systems, voltage regulation, starting systems, lighting systems, and various accessory systems. Laboratory will place emphasis on diagnosis and testing techniques required to effectively determine the necessary action in an electrical system failure. Use of schematics, technical specifications, voltmeters, ohmmeters, ammeters, and circuit testers will be required. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will in part prepare the student for the ASE Electrical / Electronic A6 Certification Examination.

## **ATEC 132 Automotive Brake Systems**

**4.0 Units**

*Prerequisite\*\*:* ATEC 070 (may enroll concurrently)

*Course Advisory:* ATEC 131

*Hours: 32-36 lecture, 96-108 lab.*

The study of modern automotive braking systems. Hydraulic principles, coefficients of friction, and thermodynamics will be discussed. Diagnosis, repair, overhaul, and adjustment procedures of drum, disc/drum, and four-wheel disc systems will be emphasized. Anti-lock Braking Systems (ABS) diagnostics, servicing, and repair procedures will also be covered. The course will cover common domestic and import passenger vehicles, and light trucks only. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will prepare the student for the ASE Brakes A5 Certification Examination.

## **ATEC 133 Automotive Engine Repair**

**4.0 Units**

*Prerequisite\*\*:* ATEC 070 (may enroll concurrently)

*Course Advisory:* ATEC 131

*Hours: 32-36 lecture, 96-108 lab*

The study of four stroke combustion cycle theory, engine torque, horsepower, materials, and manufacturing processes as they relate to internal combustion powerplants used in production automobiles and light trucks. The theory, principles, and diagnosis of cooling systems, lubrication systems, and common engine mechanical failures will be emphasized. Laboratory will focus on comprehensive engine testing, in-vehicle engine servicing, engine disassembly/reassembly, precision measuring, and inspection of internal engine components. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will prepare the student for the ASE Engine Repair A1 Certification Examination.

## **ATEC 134**

**4.0 Units**

### **Automatic Transmissions/Transaxles**

*Prerequisite\*\*:* ATEC 070 (may enroll concurrently).

*Course Advisory:* ATEC 131

*Hours: 32-36 lecture, 96-108 lab.*

The study of hydraulic and electronically actuated automatic transmissions and transaxles. Topics will include positive and variable displacement pumps, torque converters, bands and clutches, hydraulic valves, electronic shift solenoids, governors, and common compound planetary gear arrangements. Laboratory will focus on diagnostic and overhaul procedures, in-vehicle testing, and bench testing of various components. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will prepare the student for the ASE Automatic Transmission A2 Certification Examination.

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# ATEC - Automotive Technology

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## **ATEC 135 Automotive Engine Performance 4.0 Units**

*Prerequisite\*\*:* ATEC 070 (may enroll concurrently)

*Course Advisory:* ATEC 131

*Hours:* 32-36 lecture, 96-108 lab

Operation, troubleshooting and repair of the ignition, fuel and emission control systems of import and domestic passenger vehicles and light trucks. Emphasis is on theoretical knowledge and the proper use of diagnostic tools and equipment. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently, will in part, prepare the student for the ASE Engine Performance A8 Certification Examination.

## **ATEC 136 Automotive Manual Drivetrain and Axles 4.0 Units**

*Prerequisite\*\*:* ATEC 070 (may enroll concurrently)

*Hours:* 32-36 lecture, 96-108 lab

Theory and principles of manual transmissions/transaxles, clutches, driveshafts, half shafts, variable and constant velocity joints, differentials, rear wheel drive axle assemblies, all wheel drives, and four wheel drives. Gear types, ratios, and noise, vibration, harshness diagnostic routines will be discussed. Diagnosis, repair, overhaul, and adjustment procedures for common domestic, import, and light truck drivetrain components will be emphasized. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will prepare the student for the ASE Manual Transmission/Transaxle & Drivetrain A3 Certification Examination.

## **ATEC 148A Special Topics-Smog Check Level I 2.5 Units**

*Hours:* 32-36 lecture, 32-36 lab

The Engine and Emission Control Training is intended to provide students with fundamental knowledge of engine and emission control theory, design and operation. Students who successfully complete this training will have met the first step of the Bureau of Automotive Repair's training requirements for inexperienced or minimally experienced candidates for the Smog Check Inspector license. The training is a minimum of 68 hours and must be completed at a Bureau of Automotive Repair (BAR) certified school. To pass Level 1 training, a student must successfully complete a series of hands-on assessments and pass a written examination. Experienced candidates may skip Level 1 training if they: Possess ASE A6, A8 and L1 certification; or possess an AA/AS Degree or Certificate in automotive technology and have 1 year experience; or have 2 years experience and have completed BAR specified diagnostic and repair training.

## **ATEC 148B**

### **Special Topics - Smog Check Level II**

*Prerequisite\*\*:* ATEC 148A

*Hours:* 16-18 lecture, 8-9 lab

Level 2 - Smog Check Procedures Training. This training provides students the procedural knowledge, skills, and abilities needed to perform Smog Check inspections. This training is a minimum of 28 hours and must be completed at a BAR-certified school. The Smog Check Procedures Training must be completed by all Inspector candidates. To pass Level 2 training, a student must successfully complete a series of hands-on assessments and pass a written examination. Students who complete and pass this training will have met the Bureau's training requirements to qualify to take the Smog Check Inspector state licensing examination.

## **ATEC 150 Automotive Data Acquisition 2.0 Units**

*Hours:* 32-36 lecture

Provides an understanding of OASIS (Online Automotive Service Information Systems) and the skills needed to adequately retrieve and apply automotive data, service procedures, and technical service bulletins. Includes the preparation of computer based repair orders and calculating repair estimates using web based service information providers.

## **ATEC 151 Automotive Parts and Service 3.0 Units**

*Hours:* 32-36 lecture, 48-54 lab.

An introduction to the skills and knowledge utilized in the field of automotive parts and service consulting. This course offers preparation for the Automotive Service Excellence (ASE) C-1 and P-1 exam and certification. Topics include flow chart/diagnostic chart interpretation, parts removal/replacement, small group communication, and small business operations related to the automotive industry.

**1.0 Unit**

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# ATHL - Intercollegiate Athletics

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## ATHL 001

3.0 Units

### Women's Intercollegiate Volleyball (Fall)

General Education: SCC: Local District Requirement, \*A; CSU: Area E  
Transferable to UC  
Hours: 160-180 lab

A comprehensive course designed for the student-athlete covering advanced intercollegiate volleyball skills. The course includes the theories and analyses of offensive and defensive strategies, skill acquisition, development of fitness skills and mental preparation for competition. *Repeatable 3 times.*

## ATHL 001A

2.5 Units

### Off-Season Intercollegiate Volleyball Conditioning

Prerequisite\*\*: Athletic Tryout & Team Selection  
Course Advisory: High School and competitive experience  
General Education: SCC: Local District Requirement, \*A; CSU: Area E  
Transferable to UC/CSU  
Hours: 128-144 lab

A comprehensive course designed for the student-athlete covering intercollegiate volleyball skills. The course includes the theories and analyses of offensive and defensive strategies, skill acquisition, development of fitness skills and mental preparation for non-traditional competition. *Repeatable 3 times.*

## ATHL 001B

1.0 Unit

### Pre-season Intercollegiate Volleyball

General Education: SCC: Local District Requirement, \*A; CSU: Area E  
Transferable to UC/CSU  
Hours: 48-54 lab

A comprehensive course designed for the intercollegiate student-athlete. The course focus is on continued development and enhancement of physical performance and maintenance level required of each student-athlete participating in intercollegiate volleyball. The course will focus on learning and execution of fitness/conditioning parameters as well as pre and post tests on volleyball skills. *Repeatable 3 times.*

## ATHL 002A

1.0 Unit

### Women's Intercollegiate Basketball (Fall)

General Education: SCC: Local District Requirement, \*A; CSU: Area E  
Transferable to UC/CSU  
Hours: 64-72 lab

A comprehensive course designed for the student-athlete covering advanced intercollegiate basketball skills. The course includes the theories and analyses of offensive and defensive strategies, acquisition and development of physical skills, and mental preparation for competition. *Repeatable 3 times.*

## ATHL 002B

2.0 Units

### Women's Intercollegiate Basketball (Spring)

General Education: SCC: Local District Requirement, \*A; CSU: Area E  
Transferable to UC  
Hours: 96-108 lab

A comprehensive course designed for the student-athlete covering advanced intercollegiate basketball skills. The course includes the theories and analyses of offensive and defensive strategies, acquisition and development of physical skills, and mental preparation for competition. *Repeatable 3 times.*

## ATHL 002C

1.0 Unit

### Off-Season Intercollegiate Basketball Conditioning

Prerequisite\*\*: Athletic Tryout & Team Selection  
General Education: SCC: Local District Requirement, \*A; CSU: Area E  
Transferable to UC/CSU  
Hours: 48-54 lab

A comprehensive course designed for the intercollegiate basketball student-athlete. The course focus is on continued development and enhancement of physical performance and maintenance level required of basketball. The course will focus on fitness/conditioning as well as basketball specific movements. *Repeatable 3 times.*

## ATHL 002D

0.5 Unit

### Intercollegiate Basketball Conditioning

Prerequisite\*\*: Athletic Tryout & Team Selection  
General Education: SCC: Local District Requirement, \*A; CSU: Area E  
Transferable to UC/CSU  
Hours: 24-27 lab

A comprehensive course designed for the intercollegiate basketball student-athlete. The course focus is on continuing to develop fundamental basketball skills. The course includes offensive and defensive concepts, skill acquisition, and fitness development specific to basketball. *Repeatable 3 times.*

## ATHL 002E

1.5 Units

### Pre-Season Intercollegiate Basketball Conditioning

Prerequisite\*\*: Athletic Tryout & Team Selection  
General Education: SCC: Local District Requirement, \*A; CSU: Area E  
Transferable to UC/CSU  
Hours: 84-94.5 lab

A comprehensive course designed for the intercollegiate basketball student-athlete. The course focus is on developing fundamental basketball skills. The course includes the theories and analyses of offensive and defensive strategies, skill acquisition, development of fitness and mental preparation for competition. *Repeatable 3 times.*

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# ATHL - Intercollegiate Athletics

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## **ATHL 003 Intercollegiate Softball (Women) 3.0 Units**

*General Education: SCC: Local District Requirement, \*A; CSU: Area E Transferable to UC*  
*Hours: 160-180 lab*

A comprehensive course designed for the student-athlete covering advanced softball skills. The course includes the theories and analyses of offensive and defensive strategies, skill acquisition, development of fitness skills and mental preparation for competition. *Repeatable 3 times.*

## **ATHL 003A 3.0 Units**

### **Off-Season Intercollegiate Softball Conditioning**

*Prerequisite\*\*:* Athletic Tryout & Team Selection

*General Education: SCC: Local District Requirement, \*A; CSU: Area E Transferable to UC/CSU*  
*Hours: 144-162 lab*

A comprehensive course covering fundamental softball skills designed to develop the off-season student-athlete. The course includes the theories and analyses of offensive and defensive strategies, skill acquisition, development of fitness skills and mental preparation for competition. *Repeatable 3 times.*

## **ATHL 003B 0.5 Unit**

### **Pre-Season Intercollegiate Softball Conditioning**

*Prerequisite\*\*:* Athletic Tryout & Team Selection

*General Education: SCC: Local District Requirement, \*A; CSU: Area E Transferable to UC/CSU*  
*Hours: 24-27 lab*

A comprehensive course designed for the intercollegiate softball student-athlete. The course focus is on continued development and enhancement of physical performance and maintenance level required of softball. The course will focus on fitness/conditioning as well as sport-specific movements in preparation for the start of the collegiate season of competition. *Repeatable 3 times.*

## **ATHL 004 3.0 Units**

### **Women's Intercollegiate Soccer (Fall)**

*General Education: SCC: Local District Requirement, \*A; CSU: Area E Transferable to UC/CSU*  
*Hours: 160-180 lab*

A comprehensive course designed for the student-athlete covering advanced intercollegiate soccer skills. The course includes the theories and analysis of offensive and defensive strategies, skill acquisition, development of fitness skills and mental preparations for competition. *Repeatable 3 times.*

## **ATHL 004A 1.5 Units**

### **Off-Season Intercollegiate Women's Soccer**

*Course Advisory: Higher level soccer playing experience such as high school and/or club level.*

*General Education: SCC: Local District Requirement, \*A; CSU: Area E Transferable to UC/CSU*  
*Hours: 80-90 lab*

A comprehensive course designed for the student-athlete covering intercollegiate soccer skills. The course includes the theories and analyses of offensive and defensive strategies, skill acquisition, development of fitness skills and mental preparation for non-traditional competition. *Repeatable 3 times.*

## **ATHL 004B 1.5 Units**

### **Pre-season Women's Intercollegiate Soccer**

*Prerequisite\*\*:* Athletic Tryout and Team Selection

*General Education: SCC: Local District Requirement, \*A; CSU: Area E Transferable to UC/CSU*  
*Hours: 80-90 lab*

A comprehensive course designed to develop the pre-season student athlete covering fundamental soccer skills. This is a course designed for the intercollegiate student-athlete. The course focus is on continued development and enhancement of physical performance and maintenance level required of each student-athlete participating in intercollegiate soccer. The course will focus on learning and execution of fitness/conditioning parameters as well as pre and post tests on soccer skills. *Repeatable 3 times.*

## **ATHL 010 3.0 Units**

### **Men's and Women's Intercollegiate Swimming and Diving**

*General Education: SCC: Local District Requirement, \*A; CSU: Area E Transferable to UC*  
*Hours: 160-180 lab*

A comprehensive course designed for the student-athlete covering advanced intercollegiate swimming and diving skills. The course includes theories and analyses of skill acquisition, development of fitness skills and mental preparation for competition. *Repeatable 3 times.*

## **ATHL 010A Off-Season Swimming & Diving 2.0 Units**

*General Education: SCC: Local District Requirement, \*A; CSU: Area E Transferable to UC/CSU*  
*Hours: 96-108 lab*

A comprehensive course designed for the student athlete covering intercollegiate swimming and diving skills. The course includes the theories and analyses of stroke technique and racing and diving strategies, skill acquisition, development of fitness and conditioning and mental preparation for non-traditional competition. *Repeatable 3 times.*

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# ATHL - Intercollegiate Athletics

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## **ATHL 010B Pre-Season Swimming & Diving 0.5 Units**

General Education: SCC: Local District Requirement, \*A

Transferable to UC/CSU

Hours: 24-27 lab

A comprehensive course focused on the continued development and enhancement of physical performance and maintenance of the level required for competitive swimming and diving. The course includes the theories and analyses of stroke technique and racing and diving strategies, skill acquisition, development of fitness and conditioning and mental preparation for the season of competition.

Repeatable 3 times.

## **ATHL 015 Men's Intercollegiate Baseball 3.0 Units**

General Education: SCC: Local District Requirement, \*A; CSU: Area E

Transferable to UC

Hours: 160-180 lab

A comprehensive course designed for the student-athlete covering advanced intercollegiate baseball skills. The course includes the theories and analyses of offensive and defensive strategies, skill acquisition, development of fitness skills and mental preparation for competition. Repeatable 3 times.

## **ATHL 015A 3.0 Units**

### **Off-Season Intercollegiate Baseball Conditioning**

Prerequisite\*\*: Athletic Tryout & Team Selection

General Education: SCC: Local District Requirement, \*A; CSU: Area E

Transferable to UC/CSU

Hours: 144-162 lab

A comprehensive course covering fundamental baseball skills designed to develop the off-season student athlete. The course includes the theories and analyses of hitting, pitching, and defensive strategies, skill acquisition, development of fitness skills, and mental preparation for competition.

Repeatable 3 times.

## **ATHL 015B 0.5 Unit**

### **Pre-Season Intercollegiate Baseball**

Prerequisite\*\*: Athletic Tryout & Team Selection

General Education: SCC: Local District Requirement, \*A; CSU: Area E

Transferable to UC/CSU

Hours: 24-27 lab

A comprehensive course designed for the intercollegiate baseball student-athlete. The course focus is on continued development and enhancement of physical performance and maintenance level required of baseball. The course will focus on fitness/conditioning as well as sport specific movements in preparation for the start of the collegiate season of competition. Repeatable 3 times.

## **ATHL 016A 1.0 Unit**

### **Men's Intercollegiate Basketball (Fall)**

General Education: SCC: Local District Requirement, \*A; CSU: Area E

Transferable to UC/CSU

Hours: 64-72 lab

A comprehensive course designed for the student-athlete covering advanced intercollegiate basketball skills. The course includes the theories and analyses of offensive and defensive strategies, acquisition and development of physical skills, and mental preparation for competition. Repeatable 3 times.

## **ATHL 016B 2.0 Units**

### **Men's Intercollegiate Basketball (Spring)**

General Education: SCC: Local District Requirement, \*A; CSU: Area E

Transferable to UC

Hours: 96-108 lab

A comprehensive course designed for the student-athlete covering advanced intercollegiate basketball skills. The course includes the theories and analyses of offensive and defensive strategies, acquisition and development of physical skills, and mental preparation for competition. Repeatable 3 times.

## **ATHL 022 Intercollegiate Tennis 3.0 Units**

Prerequisite\*\*: Athletic Tryout & Team Selection

General Education: SCC: Local District Requirement, \*A; CSU: Area E

Transferable to UC/CSU

Hours: 160-180 lab

A comprehensive course designed for the student-athlete covering advanced intercollegiate tennis skills. The course includes the four pillars of the game: mental, physical, tactical, and technical facets. Includes a global and historical examination of the sport, rules, equipment, facilities, and etiquette. Through the intercollegiate competitive experience students will improve their individual tennis skills, increase their ability to employ advanced strategies and increase their knowledge of physical training, nutrition, and biomechanics underlying the development of force, power and accuracy. Day and/or overnight travel will be required. Repeatable 3 times.

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# ATHL - Intercollegiate Athletics

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## **ATHL 022A**

**3.0 Units**

### **Off-Season Intercollegiate Tennis Conditioning**

*Prerequisite\*\*:* Athletic Tryout & Team Selection

*Course Advisory:* Advanced tennis skills and/or competitive experience at the high school or tennis club level

*General Education:* SCC: Local District Requirement, \*A; CSU: Area E

*Transferable to UC/CSU*

*Hours:* 144-162 lab

A comprehensive pre-season course designed to help the tennis student-athlete to develop and practice skills. This course includes mental, physical, tactical and technical facets of the game of tennis. The course includes theories and analyses of offensive and defensive strategies, skill acquisition and sport specific fitness. *Repeatable 3 times.*

## **ATHL 022B**

**0.5 Unit**

### **Pre-Season Intercollegiate Tennis Conditioning**

*Prerequisite\*\*:* Athletic Tryout & Team Selection

*General Education:* SCC: Local District Requirement, \*A; CSU: Area E

*Transferable to UC/CSU*

*Hours:* 24-27 lab

A comprehensive course designed for the intercollegiate tennis student-athlete. The course focus is on continued development and enhancement of physical performance and maintenance level required of tennis. The course will focus on fitness/conditioning as well as sport specific movements in preparation for the start of the collegiate season of competition. *Repeatable 3 times.*

## **ATHL 025**

**1.0-1.5 Unit**

### **In-Season Intercollegiate Conditioning**

*Corequisite:* Course is for Intercollegiate student athletes, must enroll in

both ATHL (team course) and ATHL 020 in the same season. Each

Sport has their own ATHL \_\_\_\_ (#). Take ATHL course that is

represented with course of study

*General Education:* SCC: Local District Requirement, \*A; CSU: Area E

*Hours:* 48-54 or 72-81 lab

A comprehensive course designed for the intercollegiate student athlete. The course focus is on continued development and enhancement of physical performance and maintenance in intercollegiate sports. The course will focus on learning and execution of fitness/conditioning parameters as well as pre- and post-test. Students will analyze advanced offensive and defensive strategies. *Repeatable 3 times.*

## **ATHL 050A Beginning Peak Performance**

**1.0 Unit**

*General Education:* SCC: Local District Requirement; CSU: Area E

*Hours:* 48-54 lab

Exploration of the cognitive, social, and physiological factors influencing peak performance in sport. Students will learn and apply optimal performance techniques for optimizing sport performance through the development of mental skills and strategies for stress control, imagery, goal setting, and concentration.

## **ATHL 050B Intermediate Peak Performance**

**1.0 Unit**

*Prerequisite\*\*:* ATHL 050A

*General Education:* SCC: Local District Requirement; CSU: Area E

*Hours:* 48-54 lab

The continued exploration of the cognitive, social, and physiological factors influencing peak performance in students who have taken Beginning Peak Performance. Students will expand and apply more advanced levels of performance techniques for optimizing sport performance through the development of mental skills and strategies for stress control, imagery, goal setting, and concentration. Students will progress to more advanced levels by applying the mental skills in competitive games and customizing individual mental skills programs that apply to individual sport specific competition.



# BIO - Biology

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## **BIO 002 Cell and Molecular Biology**

**5.0 Units**

*Prerequisite\*\*:* CHEM 001

*General Education:* SCC: Area A; IGETC: Area 5B, 5C; CSU: Area B2, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 96-108 lab

This course, intended for biology majors, covers the structure and function of prokaryotic and eukaryotic cells, biological molecules, cell reproduction and its controls. Mendelian and molecular genetics, cell physiology and the metabolism including cellular respiration and photosynthesis, cellular communication, and homeostasis. An extensive laboratory component teaches the techniques used in biotechnology to manipulate DNA and to study proteins. (C-ID BIOL 190)

## **BIO 003 Evolution, Ecology & Biodiversity**

**5.0 Units**

*Prerequisite\*\*:* BIO 002

*General Education:* SCC: Area A; CSU: Area B2, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 96-108 lab

This course, intended for biology majors, covers evolution, ecology, and the diversity of life. Laboratory includes invertebrate and vertebrate dissection and several weekend and all day field trips. Students must successfully complete both the lecture and the laboratory portions of the course. Field trips may be required with some involving a fee. (C-ID BIOL 140)

## **BIO 004 Human Anatomy**

**5.0 Units**

*Course Advisory:* BIO 016 and BIO 016L strongly recommended

*General Education:* SCC: Area A; IGETC: Area 5B, 5C; CSU: Area B2, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 96-108 lab

A study of the structural organization of the human body, from cellular to organismal level. Throughout the course, various types of instruction are used, including microscopic investigation of prepared slides of tissues and organs, gross (macroscopic) anatomical dissection, and examination of prosected human material. (C-ID BIOL 110B)

## **BIO 005 Human Physiology**

**5.0 Units**

*Prerequisite\*\*:* BIO 004 and CHEM 001, CHEM 010 or CHEM 012

*General Education:* SCC: Area A; IGETC: Area 5B, 5C; CSU: Area B2, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 96-108 lab

A description of physiological and homeostatic mechanisms of the body systems in health and disease. The laboratory relates structure to function, uses instrumentation to measure physiological variables, and enables students to critically evaluate functional status. (C-ID BIOL 120B)

## **BIO 012 Environmental Science**

**3.0 Units**

*General Education:* SCC: Area A; IGETC: Area 5B; CSU: Area B2  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture

Examines environmental issues from a scientific perspective by using an understanding of the physical, chemical, and biological processes of the Earth system to examine the interaction between humans and these processes. Topics include ecological principles, biodiversity, human population growth, climate change, air and water pollution, solid waste management, and the management of renewable and non-renewable energy, water, land, soil, and mineral resources. The course utilizes knowledge of these subject to find solutions to environmental challenges. Field trips may be required.

## **BIO 012L Environmental Science Laboratory**

**1.5 Units**

*Prerequisite\*\*:* BIO 012 with a minimum grade of D (may enroll concurrently)

*General Education:* IGETC: Area 5C; CSU: Area B3  
*Transferable to UC/CSU*

*Hours:* 8-9 lecture, 48-54 lab

Examine the ecological roles of organisms, resource use, and pollution/waste by using laboratory and mandatory field trip techniques. Field trips may be required.

## **BIO 014 Principles of Microbiology**

**4.0 Units**

*Prerequisite\*\*:* CHEM 001, CHEM 010, or CHEM 012

*General Education:* SCC: Area A; IGETC: Area 5B, 5C; CSU: Area B2, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 48-54 lab

The study of the morphology, physiology, genetics, taxonomy, and ecology of microorganisms. The course also includes principles of immunology, the control of microbes, and their relationship to disease. Laboratory exercises cover microscopy, staining, aseptic techniques, identification, and microbial growth among others.

## **BIO 015 Introduction to Biology**

**4.0 Units**

*General Education:* SCC: Area A; IGETC: Area 5B, 5C; CSU: Area B2, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 48-54 lab

Intended for non-science majors, a survey of biology including biological chemistry, cell structure and function, genetics, evolution, and ecology. The laboratory component emphasizes the scientific method to reinforce lecture concepts. Off-campus field trips may be scheduled. NOTE: Not open for credit to students who have completed BIO 003.

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# BIO - Biology

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## **BIO 016 Introduction to Human Biology 3.0 Units**

*General Education: SCC: Area A; IGETC: Area 5B; CSU: Area B2*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

An introduction to general biology with emphasis on the human model. Topics include cell structure and function, human evolution, anatomy and physiology, genetics, and the human impact on the environment. This is a course for non-majors. NOTE: Not open for credit to students who have completed BIO 001, 002, 004, 005, 010 or 015.

## **BIO 016L Human Biology Laboratory 1.5 Units**

*Prerequisite\*\*:* BIO 016 (may enroll concurrently)  
*General Education: IGETC: Area 5C; CSU: Area B3*  
*Transferable to UC/CSU*  
*Hours: 8-9 lecture, 48-54 lab*

An introduction to general biology with an emphasis on the human model. Topics include microscopy, cell structure and function, human anatomy and physiology, genetics and the human impact on the environment. Off-campus field trips may be required and may involve a fee. This course is for non-majors. Note: Not open for credit to students who have completed BIO 002, 003, 004, 005 or 015.

## **BIO 018 Biology Of Sex 3.0 Units**

*General Education: SCC: Area A; IGETC: Area 5B; CSU: Area B2, E*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

The biological bases of human sex and sexuality will be discussed. Emphasis will be placed on the normal and diseased state of the male and female reproductive system. Essay and objective exams as well as written assignments will be used for student evaluations; the final exam will be comprehensive.

## **BIO 019 Marine Biology 4.0 Units**

*General Education: SCC: Area A; IGETC: Area 5B, 5C; CSU: Area B2, B3*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture, 48-54 lab*

The study of the diversity and natural history of life in the marine environment with an emphasis on the adaptations of organisms to their environment. Students must successfully complete both the lecture and laboratory portions of the course. Field trips may be required. Some field trips may involve a fee. This course is for non-majors. NOTE: This course is not open for credit to students who have completed BIO 001 or 002.

## **BIO 020 3.0 Units**

### **Infectious Disease, Plagues, and Public Health**

*General Education: SCC: Area A; IGETC: Area 5B; CSU: Area B2*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

Examine infectious disease and the changing disease landscape from the molecular to the ecological level. Topics include cell structure and function, microorganisms, immunity, epidemiology, historical plagues, emerging diseases, prevention and treatment, and conditions that promote novel disease emergence. This is a course designed for non-science majors.

## **BIO 025 Human Genetics 3.0 Units**

*General Education: SCC: Area A; IGETC: Area 5B; CSU: Area B2*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

Provides an understanding of basic principles of genetics, current developments in genetics, and the influence of genes and the environment in determining human characteristics. This course is for non-science majors.

## **BIO 047 Independent Study 0.5 to 3.0 Units**

*Prerequisite\*\*:* A minimum grade of C in 12.0 Units of credit, including 4.0 Units from within the discipline

*Course Advisory: MATH 011 may be useful for data analysis*  
*Transferable to CSU*  
*Hours: 48-162 lab by arrangement*

Designed for students who intend to major in biological sciences or pre-professional programs. Students may take this course up to the maximum number of units over multiple semesters.

## **BIO 049 Biology Honors 1.0 to 3.0 Units**

*Prerequisite\*\*:* Eligibility for Honors Program; BIO 001, BIO 002, BIO 005, BIO 014, or BIO 015 (any of these courses may be taken concurrently).

*Transferable to CSU*  
*Hours: 24-162 lab by arrangement*

Requires approval of a faculty member sponsor and the Dean of the School of Science and Mathematics. Requires students to complete an independent student project under the supervision of a member of the faculty. The project may be a laboratory or field study or a library study that leads to a thesis. In all cases, the final written product should show integration and synthesis of ideas. Students may take this course up to the maximum number of units over multiple semesters.

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# BIO - Biology

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## **BIO 099**

### **Biology Honors: Special Dissection**

*Prerequisite\*\*:* Completion of 24.0 units of college credit with a minimum GPA of 3.3; BIO 004 with a minimum grade of B; an ability to work independently; permission of the School Dean based on instructor availability.

*Transferable to CSU*

*Hours: 24-108 lab by arrangement*

An independent study project designed to increase understanding of human anatomy through detailed dissection and other projects assigned by the supervising instructor. The student will be evaluated through oral examination and evaluation of dissections. This course is an Open Entry/Open Exit course. Students may continue BIO 099 over multiple semesters not to exceed 2.0 units.

## **BIO 101 How to Study Science**

**0.5 Units**

*Hours: 8-9 lab*

A step-by-step approach for success in transferable science courses. Topics include: overcoming science anxiety; learning how science courses are organized; how best to learn and retain scientific information; how to use science textbooks, common scientific terms, and symbols; how to analyze figures; how to develop test-taking skills to prepare for lecture and laboratory tests; and more.

**0.5 to 2.0 Units**

## **BIO 160**

### **Review of Scientific Principles of Pre-Nursing**

*Prerequisite\*\*:* Current acceptance or on the waiting list of an RN Program.

*Hours: 40-45 lecture.*

A focus on science and mathematics topics that are critical to success for students entering an RN program. Providing a clinically pertinent review of select anatomy, physiology, nutrition, and microbiology topics for students entering nursing school. Especially designed for students that have had an extended time period between finishing their pre-nursing requirements and entering nursing school. This course is taught by a panel of experts in the field. Case studies are extensively used in order to contextualize the material. This is a Pass/No Pass only course.

**2.5 Units**

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# BIOT - Biotechnology

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## **BIOT 001 Principles of Biotechnology**

*Prerequisite\*\*:* BIO 014, BIO 002 or BIOT 160

*General Education:* IGETC: Area 5B; CSU: Area B2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

Covering topics important in the development, production, recovery, and analysis of products produced by biotechnology. The course traces the path of a drug or biologic from the cell through the production facility, the final processing, and into the human body. It discusses the growth characteristics of the organisms used to produce pharmaceutical proteins, the techniques used in product recovery, and the techniques used in product analysis. Formerly BIOT 051. (C-ID BIOT 101X)

**3.0 Units**

## **BIOT 003**

### **Fermentation: The Science of Beer and Brewing**

*Prerequisite\*\*:* Must be at least 18 years of age to enroll

*Transferable to UC/CSU*

*Hours:* 32-36 lecture, 48-54 lab

Beer making, the oldest biotechnology process, is used to introduce students to the concept of employing living cells to produce a value-added product. The course utilizes brewing principles to explore basic scientific, agricultural, and engineering principles: yeast cell structure and growth, cellular biochemistry including metabolism and fermentation, plant physiology and the agricultural practices used to grow different varieties of barley and hops, the biochemistry of malted barley and hops, the chemical reactions that occur during mashing and brewing, and the basic engineering of brewing equipment and processes. The course also covers business, regulatory, and cultural issues related to brewing. In the laboratory, students will brew beer using modern techniques and equipment. This class is limited to students 18 and over and no one under the age of 21 will be able to taste a fermented product.

**3.0 Units**

## **BIOT 010**

### **Introductory Biotechnology**

*Hours:* 48-54 lecture, 48-54 lab

An application of biological principles as they relate to the field of biotechnology that applies these principles to produce products, especially medicines. Topics include the fundamental chemical processes common in prokaryotic and eukaryotic organisms, the structure and function of biological molecules (proteins, enzymes, nucleic acids, and lipids), principles of cellular and molecular biology, basic immunology, and classical and molecular genetics with an emphasis on gene expression and genetic engineering. The laboratory addresses the core skills and techniques common to the biotechnology industry. This course is intended for students exploring a major in Biotechnology and as a general education option for all students.

**4.0 Units**

## **BIOT 052**

### **Business, Regulatory, and Quality Practices in Biotechnology**

*Transferable to CSU*

*Hours:* 48-54 lecture

Examine how basic business principles and sound manufacturing procedures assure the quality and safety of a biopharmaceutical as the manufacturing team moves a product down the biotechnology production pipeline. The course explores the role of governmental oversight, Quality Assurance practices, and regulation during the discovery, development, and manufacturing of new products produced by biotechnology. The course includes a discussion of current Good Manufacturing Practices, Good Laboratory Practices, Quality Assurance, Quality Control, and Validation.

**3.0 Units**

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# BIOT - Biotechnology

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## **BIOT 057**

### **Synthetic Biology and Algae Biotechnology**

*Prerequisite\*\*:* BIO 002 or BIO 014

*Transferable to CSU*

*Hours:* 32-36 lecture, 48-54 lab

Combines two emerging areas in biotechnology through exploration of advances in synthetic biology and algae biotechnology. Synthetic biology applies advanced gene editing techniques for the creation of new organisms. Topics include synthetic DNA synthesis, minimal cells, manipulation of biobricks, gene circuits, CRISPR/Cas and other gene editing tools, and cell free production. These techniques can be utilized to produce biomaterials, DNA for gene therapy, and algae bio-based production. Students isolate, identify, manipulate, grow, monitor, and harvest algae for biofuels, nutraceuticals, industrial enzymes, and therapeutic proteins in the laboratory.

**3.0 Units**

## **BIOT 060**

### **Mammalian Cell Culture**

*Prerequisite\*\*:* BIO 002 or BIO 014

*Transferable to CSU*

*Hours:* 16-18 lecture, 96-108 lab

Lab-intensive course on mammalian cell culture techniques that include working under aseptic conditions, sterile techniques in a biosafety cabinet (laminar flow hood), media preparation, quantification and passage of cells, and cryopreservation of cell lines. Laboratory experience prepares students for work in industry. Students may be required to perform laboratory tasks outside of class hours to care for cells.

**3.0 Units**

## **BIOT 061**

### **Stem Cells and Gene Therapy Vectors**

*Prerequisite\*\*:* BIO 002 or BIO 014

*Transferable to CSU*

*Hours:* 16-18 lecture, 96-108 lab

Covers the principles of stem cell biology, cell therapies (like CAR-T treatments of cancer), and the production of virus vectors for gene therapies. Topics include the technological and regulatory considerations required to generate immune cells or stem cells as therapy agents and the manufacturing techniques used to generate virus vectors for gene therapy or to transduce cells. This includes the growth of embryonic stem cells, adult stem cells, induced pluripotent stem cells, and the ethical issues involved in stem cell research. Emphasis on laboratory techniques including culture and analysis of cells, and the use of several methods of cell culture used in the production of viruses.

**3.0 Units**

## **BIOT 062 Cell Culture and Protein Recovery 4.0 Units**

*Prerequisite\*\*:* BIO 002, BIO 014 or BIOT 160

*Transferable to CSU*

*Hours:* 32-36 lecture, 96-108 lab

This laboratory course teaches the skills needed to serve as a technician in biotechnology production. Students grow and monitor bacterial, yeast, and mammalian cells on a laboratory scale that emulates the large-scale production used in industry. Students will become familiar with the cleaning, sterilization, aseptic inoculation, operation, and monitoring of fermenters and bioreactors. Students then recover and purify proteins produced by those cell cultures. They recover and purify proteins using centrifugation, ultrafiltration, and chromatography techniques. The course emphasizes the use of current Good Manufacturing Practices (cGMP), and students gain experience following Standard Operating Procedures (SOP).

## **BIOT 063**

### **Biotechnology Instrumentation: Quality Control & Genetic Engineering**

*Prerequisite\*\*:* BIO 014, BIO 002 or BIOT 160

*Transferable to CSU*

*Hours:* 32-36 lecture, 96-108 lab

Familiarizes students with small scale laboratory practices, both those used in a research laboratory and those used by a quality control department in industry, to analyze the quality of a cell culture process and the purity of protein products produced by cells in culture. The course emphasizes the use of Good Laboratory Practices (GLP) in these analyses. Students will gain experience in techniques used to analyze nucleic acids and in the genetic engineering of cells. They will also gain experience with the common assays used in Quality Control including electrophoresis, High Performance Liquid Chromatography (HPLC), Enzyme Linked Immunosorbant Assay (ELISA), and Polymerase Chain Reaction (PCR) to test products generated using cell culture.

**4.0 Units**

## **BIOT 065**

### **Biomanufacturing Fundamentals**

*Prerequisite\*\*:* BIO 002 or BIO 014

*Transferable to CSU*

*Hours:* 8-9 lecture, 24-27 lab

Explore the basic biological, chemical, engineering, and regulatory concepts utilized to manufacture products using genetically engineered cells. This course covers host strain selection, cell banking and seed train, bioreactor operation and monitoring, recovery and purification techniques, and the regulatory environment required for biomanufacturing of products at a large scale.

**1.0 Unit**

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# BIOT - Biotechnology

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## **BIOT 066**

**4.0 Units**

### **Principles and Practice of Biomanufacturing**

*Prerequisite\*\**: BIO 002 or BIO 014

*Hours*: 48-54 lecture, 96-108 lab

Provides conceptual knowledge and hands-on training related to the manufacture of biological molecules using genetically engineered cells. Students will learn cell culture techniques that include working under aseptic conditions, sterile techniques, media preparation, cell and molecule quantification, and the scale-up of cell cultures. Students will inoculate, monitor growth, and harvest cultures from bioreactors. This course also covers protein recovery, concentration, and purification techniques including sample preparation, tangential flow filtration, column chromatograph, and the use of assays for purification analysis. Students will become familiar with the regulatory environment of biomanufacturing including current Good Manufacturing Process (cGMP), Standard Operating Procedures (SOP's), and production batch records.

## **BIOT 160**

**4.0 Units**

### **Basic Concepts/Methods in Biotechnology**

*Hours*: 32-36 lecture, 96-108 lab

This course serves as a prerequisite to Solano College's biotechnology courses by giving students knowledge of the basic concepts in biology and chemistry used in biotechnology while also developing the basic laboratory skills required to succeed in the field.

## **BIOT 401**

**5.0 Units**

### **Biomanufacturing Process Sciences and Engineering Principles**

*Prerequisite\*\**: Admission into the Biomanufacturing Baccalaureate program. MATH 011

*Transferable to CSU*

*Hours*: 48-54 lecture, 96-108 lab

Builds upon the scientific knowledge underlying chemical engineering principles (for example fluid flow, mass transfer, heat transfer, and the energy relationship of fluid systems) to design, develop, and optimize key parameters in a biomanufacturing process. Process development includes the optimization of media composition, fermenter and bioreactor design, the design of downstream processes, instrumentation, engineering systems, and process control systems to maximize the yield and integrity of a protein pharmaceutical.

## **BIOT 402**

**4.0 Units**

### **Design of Experiments for Biomanufacturing**

*Prerequisite\*\**: Admission into the Biomanufacturing Baccalaureate program. MATH 011

*Transferable to CSU*

*Hours*: 48-54 lecture, 48-54 lab

Teaches the formal approach called Design of Experiments (DoE), a system that optimizes a process through the methodical varying of key parameters and a formalized approach to the analysis, interpretation, and application of the results. DoE is designed to make any process more robust and to minimize variability from external sources. The course builds upon the statistical concepts required for DoE including hypothesis testing, confidence intervals, statistical models, and analysis of variance (ANOVA). The DoE approach systematically varies the parameters of a biomanufacturing project to improve its operation.

## **BIOT 403**

**4.0 Units**

### **Design of Biomanufacturing Facilities, Critical Utilities, Processes, and Equipment**

*Prerequisite\*\**: Admission into the Biomanufacturing Baccalaureate program. Permission of faculty

*Transferable to CSU*

*Hours*: 64-72 lecture

Students analyze and evaluate how the design of a biomanufacturing facility uses one-way personnel flow and one-way material flow to maintain appropriate levels of cleanliness and sterility to promote the production of safe and effective products. Students analyze the design of the processes, equipment, and instrumentation used in biological production to generate critical utilities, aseptic systems, environmental control and monitoring, upstream production, and downstream (recovery and purification) production within a regulated environment.

## **BIOT 404 Bioprocess Monitoring and Control 5.0 Units**

*Prerequisite\*\**: BIOT 401

*Transferable to CSU*

*Hours*: 48-54 lecture, 96-108 lab

Covers the measurement, monitoring, modeling, and control of biomanufacturing processes and the statistical methodology used for measuring, analyzing, and controlling quality during the manufacturing process including control charts and the analysis of process capabilities.

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# BIOT - Biotechnology

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## **BIOT 405**

### **Emerging Biomanufacturing Technologies**

*Prerequisite\*\*:* BIOT 401

*Transferable to CSU*

*Hours: 48-54 lecture*

Focuses on biomanufacturing advances and emerging technologies in biological production and protein purification operations. In the course students compare the advantages and disadvantages of the new technology to the traditional technologies and approaches.

**3.0 Units**

## **BIOT 406**

### **Supply Chain and Enterprise Resource Planning in Biomanufacturing**

*Transferable to CSU*

*Hours: 48-54 lecture*

Students gain knowledge of how companies manage the complete flow of materials in a supply chain from suppliers to customers. This course covers the design, planning, execution, monitoring, and control of raw materials, personnel resources, inventory management, and distribution. At the end students will have the knowledge required to take the CPIM (Certified in Production and Inventory Management) certification test administered by APICS (the American Production and Inventory Control Society).

**3.0 Units**

## **BIOT 407**

### **Advanced Topics in Quality Assurance and Regulatory Affairs**

*Transferable to CSU*

*Hours: 64-72 lecture*

Builds upon previous knowledge of quality assurance and regulatory affairs to study the harmonized quality system approaches of ICH (International Committee on Harmonisation) Q8, Q9, Q10, and Q11. The course pays special attention to the topics of quality risk management, qualification, and validation. This course content has been aligned with the American Society for Quality's Body of Knowledge for a Certified Pharmaceutical Good Manufacturing Practice Professional examination.

**4.0 Units**

## **BIOT 408 Six Sigma and Lean Manufacturing 4.0 Units**

*Transferable to CSU*

*Hours: 64-72 lecture*

Covers the Six Sigma approach to the maintenance and improvement of biomanufacturing processes. It incorporates the DMAIC phases: design, measure, analyze, improve, and control. The course covers the use and implementation of lean manufacturing tools that biomanufacturing companies use to reduce waste. At the end of the course students will be prepared to take the certification test administered by the American Society for Quality for qualification with a white belt in Six Sigma.

## **BIOT 409**

### **Methods in Quality Improvements, Investigations, and Audits**

*Prerequisite\*\*:* Admission into the Biomanufacturing Baccalaureate program; Permission of faculty; BIOT 407

*Transferable to CSU*

*Hours: 48-54 lecture, 48-54 lab*

Examines the investigational methods used by quality assurance departments to analyze process deviations and make the decision about the severity of the deviation. In this course students learn to write industry-standard CAPA (Corrective Action Preventative Action) report to conclude what corrective and preventative actions result from the investigation. The course also covers how a company would perform an internal audit in anticipation of an inspection by the Food and Drug Administration or an external audit for the supplier of a key raw material. This course content has been aligned with the American Society for Quality's Body of Knowledge for a Certified Quality Technician examination.

**4.0 Units**

## **BIOT 410**

### **Emerging Trends in Biomanufacturing Quality**

*Prerequisite\*\*:* Admission into the Biomanufacturing Baccalaureate program; Permission of faculty; BIOT 407

*Transferable to CSU*

*Hours: 48-54 lecture*

Examines the process by which the quality systems of biomanufacturing evolve by examining a selected current trend in the laws and regulations governing pharmaceutical manufacturing. In this course students evaluate the effectiveness of the laws and regulations governing pharmaceutical manufacturing.

**3.0 Units**

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# BSOT - Office Technology/Business Information Worker

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## **BSOT 105 Computer Literacy**

**1.0 Unit**

*Course Advisory: Keyboarding speed of 30 wpm*

*Hours: 16-18 lecture*

An introduction to computer terminology and fundamental hardware and software applications. Topics include industry standard Microsoft Office (word processing, spreadsheet, and presentation) application programs, file management, email, instant messaging, and internet browsing and searching. (C-ID BSOT 105X)

## **BSOT 106 MS Outlook**

**1.0 Unit**

*Course Advisory: Keyboarding speed of 30 wpm and BSOT 105, CIS 001, or CIS 050*

*Hours: 16-18 lecture*

Explores personal management software and use of Microsoft Outlook functions. Topics include management of e-mail, organization of contacts, creation and scheduling of events using the calendar, and creating and managing tasks for personal and business use. Customization of Outlook features is also covered. (C-ID BSOT 106X)

## **BSOT 110 Keyboarding I**

**1.0 Unit**

*Course Advisory: BSOT 105*

*Hours: 16-18 lecture*

Covers effective keyboarding skills with an emphasis on building correct touch-typing techniques for alphanumeric, symbol, and punctuation keys. Provides a foundation for developing keyboarding speed and accuracy. Successful completion of this class results in a minimum keyboarding speed of 15 net words per minute on a two-minute timed writing. (C-ID BSOT 110X)

## **BSOT 111 MS Word I**

**1.0 Unit**

*Course Advisory: BSOT 105 and BSOT 110; and CIS 001 or CIS 050*

*Hours: 16-18 lecture*

Provides an introduction to word processing with Microsoft Word including basic document creation, formatting, and editing. Students create, edit, and format business letters, multiple-page reports, newsletters, and cover letters. This course begins preparation for the Microsoft Office User certification exam for Word. (C-ID BSOT 111X)

## **BSOT 112 MS Excel I**

**1.0 Unit**

*Course Advisory: keyboarding speed of 30 wpm and BSOT 105, CIS 001, or CIS 050*

*Hours: 16-18 lecture*

Provides a basic understanding of Microsoft Excel beginning with spreadsheet design, creation, revision, formatting, and printing a workbook. Basic formulas, functions, and syntax are introduced along with an introduction to using charts and graphs. Problem solving for Excel solutions is also emphasized. This course begins preparation for the Microsoft Office Certification exam for Excel. (C-ID BSOT 112X)

## **BSOT 113 MS Access I**

**1.0 Unit**

*Course Advisory: BSOT 105 and BSOT 110 with a minimum grade of C and CIS 001 or CIS 050*

*Hours: 16-18 lecture*

Provides a basic understanding of fundamental relational database design and management. Introduces building and editing basic tables, forms, queries, and reports. This course begins preparation for the Microsoft Office Specialist exam for MS Access. (C-ID BSOT 113X)

## **BSOT 114 MS PowerPoint I**

**1.0 Unit**

*Course Advisory: BSOT 105 and BSOT 110; and CIS 001 or CIS 050*

*Hours: 16-18 lecture*

Introduces the process of planning, creating, editing, viewing, and printing PowerPoint presentations. Topics include adding text, graphics, and multimedia elements and creating master pages and templates. Integration with other Microsoft programs is also covered. (C-ID BSOT 114X)

## **BSOT 120 Keyboarding II**

**1.0 Unit**

*Course Advisory: BSOT 105 and BSOT 110*

*Hours: 16-18 lecture*

Covers intermediate keyboarding with correct touch-typing techniques, including alphanumeric, and symbol keyboarding and 10-Key numeric keypad. Skill-building includes introductory formatting of documents using Microsoft Word. Successful completion of this class results in a minimum keyboarding speed of 30 net words per minute on a three-minute timed writing. (C-ID BSOT 120X)

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# BSOT - Office Technology/Business Information Worker

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## **BSOT 121 MS Word II**

**1.0 Unit**

*Course Advisory: Keyboarding speed of 30 wpm and BSOT 111*  
*Hours: 16-18 lecture*

Covers an intermediate level of word processing with Microsoft Word, including complex document creation, mail merge, columns, formatting, plus integration with other applications, and collaborating on documents using Microsoft Word. Themes, templates, and styles are also covered. This course continues preparation for the Microsoft Office User Exam for Microsoft Word.

(C-ID BSOT 121X)

## **BSOT 122 MS Excel II**

**1.0 Unit**

*Course Advisory: Keyboarding speed of 30 wpm and BSOT 112*  
*Hours: 16-18 lecture*

Provides an intermediate understanding of Microsoft Excel. Analyzing data, working with multiple worksheets and functions, pivot tables, resolving conflicts, tracking changes, data validation, chart formatting, templates, and macros are covered. Problem solving for Excel solutions is also emphasized. This course continues preparation for the Microsoft Office Certification exam for Excel.

(C-ID BSOT 122X)

## **BSOT 123 MS Access II**

**1.0 Unit**

*Course Advisory: Keyboarding speed of 30 wpm and BSOT 113*  
*Hours: 16-18 lecture*

Provides an intermediate understanding of database design and management. Advanced Queries, table design, custom forms and reports as well as integration of Access with the web and other programs are covered. This course continues preparation for the Microsoft Office Specialist exam for MS Access.

## **BSOT 124 MS PowerPoint II**

**1.0 Unit**

*Prerequisite\*\*:* BSOT 114

*Course Advisory: Keyboarding speed of 30 wpm*  
*Hours: 16-18 lecture*

Covers the use of PowerPoint as a tool for designing, producing, and controlling visual elements to build and deliver effective presentations. Topics include creating templates, customizing, protecting, and publishing presentations as well as inserting audio, video, and animations and integrating with other programs.

## **BSOT 125 Adobe Acrobat**

**1.0 Unit**

*Course Advisory: Keyboarding speed of 30 wpm; BSOT 105 and BSOT 110 or CIS 001 or CIS 050 with a minimum grade of C*  
*Hours: 16-18 lecture*

An introduction to the basic components of Adobe Acrobat software. Topics include creating portable document files (PDF), working with PDF files, annotation and editing of files plus interactive forms. Distribution and management of PDFs is also covered.

## **BSOT 130 Keyboarding III**

**1.0 Unit**

*Prerequisite\*\*:* Keyboarding speed of 30 wpm with 4 errors or less on a 3 minute timed writing

*Course Advisory: BSOT 120 with a minimum grade of C*  
*Hours: 16-18 lecture*

Provides advanced keyboarding techniques that build on intermediate touch-typing techniques including alphanumeric, and symbol keyboarding as well as 10-Key numeric keypad. Skill-building includes document production with advanced formatting using MS Word, and individualized remedial drills. Successful completion of this class results in a minimum net keyboarding speed of 45 words per minute on a five-minute timed writing.

## **BSOT 131 MS Word III**

**1.0 Unit**

*Prerequisite\*\*:* BSOT 121;

*Course Advisory: Keyboarding speed of 30 wpm*  
*Hours: 16-18 lecture*

An advanced level of word processing with Microsoft Word, including creation of templates, macros, advanced table formatting, and use of long documents and subdocuments. Customizing and automating work and online forms are also covered. This course completes preparation for the Microsoft Office User exam for Word.

## **BSOT 132 MS Excel II**

**1.0 Unit**

*Prerequisite\*\*:* BSOT 122

*Course Advisory: Keyboarding speed of 30 wpm*  
*Hours: 16-18 lecture*

Provides an advanced understanding of Microsoft Excel. Financial and what-if analysis, data tables, scenario management, importing and exporting data, enhancing with Visual Basic, sub-routines, modifying default settings, and problem-solving tools are covered. Problem solving for Excel solutions is also emphasized. This course completes preparation for the Microsoft Office Certification exam for Excel.

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# BSOT - Office Technology/Business Information Worker

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## **BSOT 133 MS Access II**

**1.0 Unit**

*Prerequisite\*\*:* BSOT 123

*Course Advisory:* Keyboarding speed of 30 wpm

*Hours:* 16-18 lecture

Covers advanced database design and management. Action Queries, table relationships, and automating tasks with macros are covered. Visual Basic for Applications is introduced to enhance database construction and functionality. Managing replication and synchronization is included.

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# BUS - Business

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## **BUS 005 Introduction to Business**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

A study and analysis of the principles of business by providing a multidisciplinary examination of how culture, society, economic systems, legal, international, political, financial institutions and human behavior interact. The course introduces students to contemporary business principles, practices, and terminology. Students will gain an understanding and appreciation of the private enterprise system and how the functional areas of business work, interrelate and affect a business organization's policy and practices within the U.S. and global society. Students also gain the knowledge to demonstrate how these policies and practices impact the primary areas of business such as: leadership, human resource management, organized labor practices, marketing, organizational communication, technology, entrepreneurship, legal, accounting, financial practices, the stock and securities market and how they affect a business' ability to achieve its organizational goals. The course explores business career opportunities, provides the prerequisite knowledge needed for success in other business courses, and prepares students for transfer to upper-division business degree programs.

*(C-ID BUS 110)*

## **BUS 018 Legal Environment of Business**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

An introduction to the study of law, with specific emphasis on the legal environment of business. Includes the legal process, legal institutions, ethics, jurisdiction, U.S. Constitution, contracts, agency, the Uniform Commercial Code (UCC), torts, employment law, property, bankruptcy law, forms of business organization, corporations, consumer protection, government regulation and Alternative Dispute Resolution (ADR), along with ethical concerns and current public policy issues. Written examinations required. *(C-ID BUS 120)*

## **BUS 060**

**3.0 Units**

### **Introduction to International Business**

*Transferable to CSU*

*Hours: 48-54 lecture*

An overview designed to provide a global perspective in a continuously emerging international marketplace, including topics such as foreign investing, impact of financial markets, international marketing, cultural understanding, and operation of multinational and small companies.

## **BUS 070 Introduction to Insurance**

**1.0 Unit**

*Transferable to CSU*

*Hours: 16-18 lecture*

Provides students with the background needed prior to taking the other insurance courses. Included are topics such as property/casualty insurance, distribution of insurance products and services to the consumer, how insurance company departments function, civil laws or tort and contract, basic commercial and personal Insurance Services Office (ISO) contracts, and the risk management process.

## **BUS 071**

**3.0 Units**

### **Principles of Property and Liability Insurance**

*Transferable to CSU*

*Hours: 48-54 lecture*

Prepares students for employment in the insurance industry, which consists of many different types of employment opportunities, from selling insurance to working in a variety of positions in an insurance company.

## **BUS 072 Personal Insurance**

**3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

A basic introduction to personal insurance. Includes information about automobile insurance; homeowners' insurance; other residential insurance, such as fire and earthquake insurance; marine insurance; and other personal property.

## **BUS 073 Commercial Insurance**

**3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

Prepares students for employment in the insurance industry. Emphasis for this course is on commercial insurance. The insurance industry offers many different types of employment opportunities, from selling insurance to working in an insurance office.

## **BUS 074 Insurance - Code & Ethics**

**1.0 Unit**

*Transferable to CSU*

*Hours: 16-18 lecture*

Enables students to understand and apply proper ethical business behavior and obligations, especially as they relate to those working in the field of insurance.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# BUS - Business

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## **BUS 092 Business Communication**

**3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

A study of communication theory in the planning and preparation of various types of letters, memos, emails, reports, resumes, and oral presentations along with analysis of group dynamics, symbolic communication, interview techniques and listening skills. This course applies the principles of ethical and effective communication to written and oral reports for a variety of business situations. The course emphasizes planning, organizing, composing, and revising business documents using word processing software for written documents and presentation-graphics software to create and deliver professional-level oral reports. This course is designed for students who already have college-level writing skills.

## **BUS 097 Work Readiness**

**1.5 Units**

*Hours: 24-27 lecture*

Covers the process of assessing the job market and completing a resume and application. Topics include how to be successful on the job and gain satisfaction and rewards from work. The course emphasizes soft skills needed in the workplace, including social and communication skills and personal characteristics and desirable habits of an employee. Additional emphasis on conforming to the expectations of the employer.

## **BUS 099 Business Honors**

**1.0 to 3.0 Units**

*Prerequisite\*\*:* Completion of 24.0 units of college credit with a minimum GPA of 3.3; a minimum of 5.0 units in the discipline with a minimum grade of B; an ability to work independently; permission of the School Dean based on instructor availability

*Transferable to CSU*

*Hours: 48-162 lab by arrangement*

A comprehensive study and analysis of a topic of student scholarship which is centered on important topics or issues within the business field. Students may take this course up to the maximum number of units over multiple semesters.

## **BUS 148A**

**3.0 Units**

### **Small Business Project-Based Path for Entrepreneurs**

*Hours: 48-54 lecture*

Emphasizes activities and techniques through project management that develops competencies needed to become a successful leader. Students receive instruction and project-based activities in the areas of entrepreneurship, project management, personal and workplace skill, oral and written techniques, and networking.

## **BUS 181 Business Mathematics**

**1.0 to 3.0 Units**

*Hours: 16-54 lecture*

An application of essential mathematical skills necessary for success in business. Includes a review of fractions, decimals, percents, ratios, the percentage formula, and general business applications; covers advanced business applications such as interest, discount, markup, payroll, pricing policies, cash and trade discounts, and financial statements. This is a self-paced, programmed learning class. Students may take this course up to the maximum number of units over multiple semesters. This is an Open Entry/Open Exit, Variable unit course; Online course is not Open Entry/Open Exit.

## **BUS 182 Small Business Mathematics**

**1.0 Unit**

*Hours: 16-18 lecture*

An application of essential mathematical skills necessary for persons operating a successful business. It includes asset and inventory management; ratio analysis, depreciation, taxation applied to sales, excise, and real property; investments and insurance, and basic statistics. This is a self-paced, programmed learning class. This is an Open Entry/Open Exit course; Online course is not Open Entry/Open Exit.

## **BUS 208**

**0.5 Unit**

### **Employee Relations and Personnel Policies**

*Hours: 8-9 lecture*

Good employees are made through effective training, development, and relations. This course explores techniques used in training and developing good employees. The elements that comprise a sound employee relations program are presented. This is a Pass/No Pass only course.

## **BUS 400 Project Management**

**3.0 Units**

*Prerequisite\*\*:* Admission into the Biomanufacturing Baccalaureate degree program

*Transferable to CSU*

*Hours: 48-54 lecture*

Learn the core characteristics of project management including project selection, initiation, planning, execution, monitoring and control, and closing. Students learn how the management of the project's scope, time, cost, quality, human resources, communication, procurement, stakeholders, and risk lead to the ability to deliver the project on-time and on-budget, while meeting performance specifications. This course is designed to fulfill the classroom component of a Project Management Professional credential.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# CDFS - Child Development and Family Studies

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## **CDFS 038 Child Growth and Development 3.0 Units**

General Education: SCC: Area B2; IGETC: Area 4;

CSU: Area D, E

Transferable to UC/CSU

Hours: 48-54 lecture

Examine the major physical, cognitive, and psychosocial developmental milestones (typical and atypical) and theories from conception through adolescence. Emphasis is placed on the interaction between maturational processes and environmental factors. Current research and methodologies are examined. Child observations and analysis are included. *Field trip may be required.*

(C-ID CDEV 100)

## **CDFS 040 Family Relationships 3.0 Units**

General Education: SCC: Area B2; IGETC: Area 4;

CSU: Area D, E

Transferable to UC/CSU

Hours: 48-54 lecture

A study of sociological and psychological factors influencing relationships, particularly dating, family, and marital relationships, as well as alternative lifestyles in contemporary society, including factors that affect communication and interpersonal interactions within relationships.

## **CDFS 050 Child, Family and Community 3.0 Units**

General Education: SCC: Area B2; CSU: Area D, E

Transferable to CSU

Hours: 48-54 lecture

An examination of the developing child in a societal context focusing on the interrelationships of family, school and community, including historical and socio-cultural influences. Socialization and identity development are emphasized, as are teacher strategies for building respectful, reciprocal relationships that support and empower children and families. (C-ID CDEV 110)

## **CDFS 052 Children with Special Needs 3.0 Units**

Course Advisory: CDFS 038

Transferable to CSU

Hours: 48-54 lecture

An introductory study of children with special needs, including causes of disabilities, their incidence, care, management, and general remedial procedures. Emphasis is on the child with disabilities in the home and community settings.

## **CDFS 053 Teaching in a Diverse Society 3.0 Units**

General Education: SCC: Area B2, E; Option B: SCC Cross-Cultural;

CSU: Area D; SCC Cross-Cultural

Transferable to CSU

Hours: 48-54 lecture

Examination of teaching young children in a diverse society in an effort to support optimal identity development, competency, and inclusion. Theoretical and practical implications of oppression and privilege will be explored as they apply to children, families, programs, classrooms, and teaching. Various classroom strategies will emphasize culturally and linguistically appropriate anti-bias approaches. Course includes self-examination and reflection on issues related to social identity, stereotypes and bias, social and educational access, media, and schooling. (C-ID ECE 230)

## **CDFS 054 Child Health, Safety, and Nutrition 3.0 Units**

Course Advisory: CDFS 038 and CDFS 062

General Education: SCC: Area B2; CSU: Area E

Transferable to CSU

Hours: 48-54 lecture

Introduction to the laws, regulations, standards, policies and procedures and early childhood curriculum related to child health safety and nutrition. The key components that ensure physical health, mental health and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. Focus on integrating the concepts into everyday planning and program development for all children. This course is the same course as NUTR 054. (C-ID ECE 220)

## **CDFS 062 3.0 Units**

### **Introduction to Early Childhood Education: Principles and Practices**

Prerequisite\*\*: CDFS 038 with a minimum grade of D (may enroll concurrently)

Transferable to CSU

Hours: 48-54 lecture

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

C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor

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# CDFS - Child Development and Family Studies

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## **CDFS 063 Introduction to Curriculum**

**3.0 Units**

*Prerequisite\*\*:* CDFS 038

*Course Advisory:* CDFS 062 with a minimum grade of C

*Transferable to CSU*

*Hours:* 48-54 lecture

An overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine a teacher's role in supporting development and fostering children's curiosity and learning. Through observation and assessment strategies students will develop appropriate play-based curriculum. An overview of content areas will include but not be limited to: Language and literacy, social and emotional learning, sensory learning, art and creativity, music, math, and science. *Field trip may be required. (C-ID ECE 130)*

## **CDFS 064 Observation and Assessment**

**3.0 Units**

*Course Advisory:* CDFS 038

*Transferable to CSU*

*Hours:* 48-54 lecture

A focus on the appropriate use of assessment and observation strategies to document development, growth, play and learning to join with families and professionals in promoting children's success. Recording strategies, rating systems, portfolios, and multiple assessment tools are explored. *(C-ID ECE 200)*

## **CDFS 065**

**4.0 Units**

### **Early Childhood Education Practicum I**

*Prerequisite\*\*:* CDFS 050, CDFS 062, and CDFS 063

*Transferable to CSU*

*Hours:* 16-18 lecture, 144-162 lab by arrangement

Supervised laboratory experience with infants through preschool children in the Solano College Early Learning Center. Students will spend 8 hours in practicum, 1 hour in a teacher meeting, and 1 hour in seminar for a total of 10 hours per week. Students will utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Child centered, play-oriented approaches to teaching, learning, and assessment; and knowledge of curriculum content areas will be emphasized as student teacher design, implement and evaluate experiences that promote positive development and learning for all young children. During the first week of enrollment, students will be required to be fingerprinted and cleared through Department of Justice and have a negative TB skin test at the District's expense. *(C-ID ECE 210)*

## **CDFS 066**

**4.0 Units**

### **Early Childhood Education Practicum II**

*Prerequisite\*\*:* CDFS 065

*Transferable to CSU*

*Hours:* 16-18 lecture, 144-162 lab by arrangement

Emphasizes curriculum activities, comprehensive case studies, methods of child observation, and relationships of theories to practices. Students may be placed in the Solano College Children's Programs on campus or with a Mentor teacher (selected by the SCC/ECE Mentor teacher selection committee) off campus. Students will spend 8 hours in practicum, 1 hour in a teacher meeting, and 1 hour in seminar for a total of 10 hours per week. During the first week of enrollment, students will be required to be fingerprinted and cleared through Department of Justice and have a negative TB skin test at the District's expense.

## **CDFS 070 Lifespan Human Development**

**3.0 Units**

*General Education:* SCC: Area B2; CSU: Area D, E

*Transferable to CSU*

*Hours:* 48-54 lecture

A survey of human development throughout the life cycle, including physical, social, intellectual, and emotional development from conception to death. Includes direct observation.

## **CDFS 075**

**3.0 Units**

### **Care of Infants and Toddlers: Social and Emotional Foundations**

*Transferable to CSU*

*Hours:* 48-54 lecture

Examine relationship-based infant/toddler group care, with an emphasis on social and emotional development. Theoretical foundations of quality care are addressed including the importance of home-family connections, cultural continuity, and responsive practice. Skills for individualizing care, routines, and working with children with special needs are explored.

## **CDFS 076**

**3.0 Units**

### **Care of Infants and Toddlers: Curriculum and Environments**

*Transferable to CSU*

*Hours:* 48-54 lecture

Based on theory and an holistic approach to development, this course explores quality environments and curriculum for infants and toddlers. Through observation and assessment, students develop skills for creating meaningful cognitive, physical, literacy, and social and emotional experiences in group care.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# CDFS - Child Development and Family Studies

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## **CDFS 077 Art and Scientific Inquiry for ECE 3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

An exploration of art and science curriculum appropriate to the development of young children. Emphasis is placed on children's use of art and science to foster creativity, inquiry, and knowledge about themselves and the physical world. The curriculum planning process as applied to early childhood STEAM (science, technology, engineering, art, and mathematics) experiences is emphasized. *Field trip may be required.*

## **CDFS 078 Literacy and Music for ECE 3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

An exploration of language, literacy, music, and movement in early childhood education. Emphasis is placed on understanding and creating developmentally appropriate and culturally inclusive classroom experiences that promote emergent literacy and musical expression. Students will evaluate materials for quality and engage in teaching practices that promote children's holistic learning such as singing, instrument use, movement activities, teacher-child interaction, storytelling, puppetry, and dramatic play.

## **CDFS 080 Early Childhood Administration 3.0 Units**

*Prerequisite\*\*:* CDFS 038 and CDFS 062

*Transferable to CSU*

*Hours: 48-54 lecture*

An overview of the fundamental duties and responsibilities of Early Childhood Administration, including preparation, implementation and evaluation of the program goals and budget controls. Meets requirements set by the California Commission on Teacher Credentialing for Site Supervisor and Program Director permit and State of California Community Care Licensing.

## **CDFS 081 Early Childhood Staff Supervision 3.0 Units**

*Prerequisite\*\*:* CDFS 038, CDFS 050, and CDFS 062

*Transferable to CSU*

*Hours: 48-54 lecture*

A presentation of the fundamentals involved in becoming a more effective supervisor and methods and procedures in dealing with selection, supervision and evaluation of staff in an early childhood setting. Meets the requirements set by the California Commission on Teacher Credentialing for the Site Supervisor and Program Director Permit and State of California Community Care Licensing.

## **CDFS 082 2.0 Units**

### **Adult Supervision: The Mentor Teacher**

*Prerequisite\*\*:* CDFS 038, CDFS 050, and CDFS 062

*Transferable to CSU*

*Hours: 32-36 lecture*

Methods and principles of supervising student teachers in early childhood classrooms. Emphasis on the role of experienced classroom teachers who function as mentors to new teachers while simultaneously addressing the needs of children, parents and other staff. Required for the Master Teacher, Site Supervisor, and Program Director Permits issued by the California Commission on Teaching Credentialing.

## **CDFS 099 1.0 to 3.0 Units**

### **Early Childhood Education Honors**

*Prerequisite\*\*:* Completion of 24.0 units of college credit with a minimum GPA of 3.3; a minimum of 5.0 units in the discipline with a minimum grade of B; an ability to work independently; permission of the School Dean based on instructor availability

*Transferable to CSU*

*Hours: 48-162 lab by arrangement*

An independent study and research class in the areas of infant, toddler, and preschool early education programs. The student and instructor design an outlined program of study. Students may continue CDFS 099 over multiple semesters not to exceed 3 units.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# CHEM - Chemistry

## CHEM 001 General Chemistry I

5.0 Units

*Prerequisite\*\*:* CHEM 160 (recommended for students with no previous chemistry) or CHEM 010 (recommended for students who have had an introductory level chemistry course) or a score of 3, 4, or 5 on the Chemistry AP exam; and MATH 104 or eligibility for MATH 002 based on a Multiple Measures Evaluation

*General Education:* SCC: Area A; IGETC: Area 5A, 5C; CSU: Area B1, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 96-108 lab

Presents principles of general chemistry for students in science, engineering, medical and related professions. Topics include atomic structure and theory, the periodic table, bonding, gas laws, stoichiometry, solutions, ionization, thermochemistry and equilibrium. This course requires significant math skills and previous knowledge of fundamental chemistry concepts. Field trips and online work may be required. (CHEM 001 = C-ID CHEM 110) (CHEM 001 + CHEM 002 = C-ID CHEM 120S)

## CHEM 002 General Chemistry II

5.0 Units

*Prerequisite\*\*:* CHEM 001

*General Education:* SCC: Area A; IGETC: Area 5A, 5C; CSU: Area B1, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 96-108 lab

A continuation of chemical principles and theory covered in CHEM 001 with emphasis on electrochemistry, chemical equilibrium, acid-base equilibrium, thermodynamics, descriptive chemistry and quantitative and qualitative analysis. This course requires significant math skills and previous knowledge of fundamental chemistry concepts. Field trips and online work may be required. (CHEM 001 + CHEM 002 = C-ID CHEM 120S)

## CHEM 003 Organic Chemistry I

5.0 Units

*Prerequisite\*\*:* CHEM 002

*General Education:* SCC: Area A; IGETC: Area 5A, 5C; CSU: Area B1, B3  
*Transferable to UC/CSU*

*Hours:* 64-72 lecture, 64-72 lab

First half of a two semester course sequence (CHEM 003 and CHEM 004) that begins a survey of organic chemistry for students in chemical, biological, health science, and related professions. Topics include analysis of structure and nomenclature, bonding, isomerism, and basic reaction mechanisms of organic chemicals. Functional groups considered include alkanes, alkenes, alkynes, alcohols, and alkyl halides and ethers. Basic organic laboratory procedures are introduced along with spectral analysis, simple syntheses, and reactions described in lecture. *Field trip may be required.* Online homework and quizzes may be required. (CHEM 003 = C-ID CHEM 150) (CHEM 003 + CHEM 004 = C-ID CHEM 160S)

## CHEM 004 Organic Chemistry II

5.0 Units

*Prerequisite\*\*:* CHEM 003

*General Education:* SCC: Area A; IGETC: Area 5A, 5C; CSU: Area B1, B3  
*Transferable to UC/CSU*

*Hours:* 64-72 lecture, 64-72 lab

Second half of a two semester course sequence (CHEM 003 and CHEM 004) that begins a survey of organic chemistry for students in chemical, biological, health science, and related professions. Topics include analysis of structure, nomenclature, and reaction mechanisms of conjugated systems, aromatics, organometallics, aldehydes, ketones, amines, carboxylic acids and acid derivatives, and various functional groups, carbohydrates, lipids, amino acids, proteins, and nucleic acids. The laboratory will emphasize more advanced work and the application of instrumentation in organic chemistry. *Field trip may be required.* Online homework and quizzes may be required. (CHEM 003 + CHEM 004 = C-ID CHEM 160S)

## CHEM 010 Intermediate Chemistry

4.0 Units

*Prerequisite\*\*:* Recommendation of MATH 104 based on a Multiple Measures Evaluation

*Course Advisory:* CHEM 160 strongly recommended for students who have never taken Chemistry

*General Education:* SCC: Area A; IGETC: Area 5A, 5C; CSU: Area B1, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 48-54 lab

A general chemistry course often required for nursing students and for students majoring in physical therapy, occupational therapy, industrial technology and home economics, it emphasizes the chemistry of inorganic compounds and covers selected topics such as atomic theory, bonding, equations, gas laws, solutions, acid-base theory, and oxidation-reduction. *Field trip may be required.* Online homework may be required. NOTE: Not open for credit to students who have completed CHEM 001. (C-ID CHEM 101)

## CHEM 011

4.0 Units

### Basic Organic Chemistry & Biochemistry

*Prerequisite\*\*:* CHEM 001 or CHEM 010

*General Education:* SCC: Area A; IGETC: Area 5A, 5C; CSU: Area B1, B3  
*Transferable to UC/CSU*

*Hours:* 48-54 lecture, 48-54 lab.

Presents an overview of organic chemistry and biochemistry for majors in nursing, home economics, liberal arts and technical fields. *Field trip may be required.* Online work may be required. (C-ID CHEM 102)

C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor

\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted



# CHEM - Chemistry

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## **CHEM 012 Chemistry for the Health Sciences 5.0 Units**

*Course Advisory: CHEM 160 strongly recommended for students who have never taken Chemistry before; recommendation of MATH 104 based on a Multiple Measures Evaluation*

*General Education: SCC: Area A; IGETC: Area 5A; CSU: Area B1, B3 Transferable to UC/CSU*

*Hours: 48-54 lecture, 96-108 lab*

An overview of general, organic chemistry, and biochemistry for majors in nursing and other allied health occupations. Topics covered include chemical bonding, chemical equations, gas laws, solutions, acid-base theory, oxidation-reduction, functional groups and properties of organic compounds, and the structure and function of carbohydrates, lipids, proteins, and nucleic acids. These topics are discussed in the context of cellular metabolism and human health. This course is not a prerequisite for any chemistry course. *Field trip may be required.* Online homework may be required. NOTE: Not open for credit to students who have completed CHEM 011. Formerly CHEM 051.

## **CHEM 160 Introductory Chemistry**

**4.0 Units**

*General Education: SCC: Area A*

*Hours: 48-54 lecture, 48-54 lab*

The fundamental principles of inorganic chemistry. Field trips may be required. Online work may be required. NOTE: Not open to students who have completed CHEM 001, CHEM 010, or equivalent.

## **CHEM 505**

**0.0 Units**

### **Supplemental Instruction in Chemistry**

*Hours: 16-18 lab*

An Open-Entry, open-exit course for students who seek academic support, through supplemental instruction, to fill in missing prerequisite knowledge and strengthen their problem solving skills in the following course/courses: CHEM 160, 010, 011, 012, 001, 002, 003, 004 at Solano Community College

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# CINA - Cinema

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## **CINA 010 Introduction to Cinema Studies**

**3.0 Units**

*General Education: SCC: Area C; IGETC: Area 3A; CSU: Area C1*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Introduction to the close analysis of film texts. Examines the broad questions of form and content, aesthetics and meaning, and history and culture. Explores the diverse possibilities presented by the cinematic art form through an examination of a wide variety of productions, national cinemas, and film movements. Topics include modes of production, narrative and non-narrative forms, visual design, editing, sound, genre, ideology and critical analysis. Written exams, film screenings, and film discussion are required.

## **CINA 011 American Cultures in Film**

**3.0 Units**

*Course Advisory: ENGL 001*

*General Education: SCC: Area C, E; IGETC: Area 3A; SCC Cross-Cultural; CSU: Area C1, SCC Cross-Cultural*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

A film studies approach to understanding ethnicity, culture, race, discrimination, gender, class and pluralism in America. Includes screenings of films by and/or about Asian Americans, African-Americans, European Americans, Hispanic Americans, Native Americans, and selected readings, written critical analysis and discussion.

## **CINA 015 Film Production**

**4.0 Units**

*Prerequisite\*\*:* CINA 010 (may enroll concurrently)

*Transferable to UC/CSU*

*Hours: 48-54 lecture, 48-54 lab by arrangement*

An introduction to digital film production equipment, techniques and principles. Includes applications of producing, directing, writing, cinematography, editing and sound recording. Students are required to demonstrate knowledge of the above in student-produced digital films, exercises and written work.

## **CINA 016 Film Production**

**4.0 Units**

*Prerequisite\*\*:* CINA 015

*Transferable to UC/CSU*

*Hours: 48-54 lecture, 48-54 lab*

The application of filmmaking principles and techniques in the production of student produced animated, documentary, educational and/or dramatic films. Emphasis is on developing skill and creativity as a producer/director and refining basic technical competence. A final film project is required.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# CIS - Computer Information Science

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## **CIS 001 Introduction to Computer Science 3.0 Units**

*Course Advisory: keyboarding speed 30 wpm*

*General Education: SCC: Area D3*

*Transferable to UC/CSU*

*Hours: 48-54 lecture, 16-18 lab*

An introduction to the hardware and software components of basic computer information systems. Also, an examination of information systems and their role in business. A review of historical, social and cultural implications of computer technology in today's society. Course content will include hands-on familiarization with a computer operating system and common application software. Additionally, the course includes an introduction to computer programming using an object-oriented programming language such as Java, Python, C++ or Visual Basic.Net. Students will learn to develop problem specifications, detailed analyses, design algorithms, and construct structured computer programs.

## **CIS 015 Programming in Visual Basic.NET 3.0 Units**

*Prerequisite\*\*:* CIS 001

*Transferable to UC/CSU*

*Hours: 48-54 lecture, 16-18 lab*

An introduction to Object Oriented Programming (OOP) using Visual Basic.NET, emphasizing problem-solving techniques using structured design and development. An extensive coverage of the Visual Basic computer language will be conducted using the Microsoft.Net environment. Students will construct forms and define procedures, events, properties, methods and objects to solve a variety of business-oriented problems.

## **CIS 020 Assembly Programming 3.0 Units**

*Prerequisite\*\*:* CIS 015, CIS 022 or CIS 035

*General Education: SCC: Area D3*

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 48-54 lab*

A hardware-oriented programming course dealing with programming a computer at the assembler language level. Emphasis will be on the assembly language of computers. (C-ID COMP 142)

## **CIS 021 3.0 Units**

### **Discrete Structures for Computer Science**

*Prerequisite\*\*:* CIS 023 and Math 020

*General Education: IGETC: Area 2*

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 48-54 lab*

An introduction to the discrete structures used in Computer Science with an emphasis on their applications. Topics covered include: Functions, Relations and Sets; Basic Logic; Proof Techniques; Basics of Counting; Graphs and Trees; and Discrete Probability. (C-ID COMP 152)

## **CIS 022 Introduction to Programming 3.0 Units**

*Prerequisite\*\*:* CIS 001

*General Education: SCC: Area D*

*Transferable to UC/CSU*

*Hours: 48-54 lecture, 16-18 lab*

An introduction to computer programming. The course's content will include 'hands-on' development of structured algorithms and programs through top-down design, modular and object oriented programming, and standardized control structures. Taught using an object-oriented computer programming language such as C++, C#, Java, etc. (C-ID COMP 122)

## **CIS 023 Data Structures and Algorithms 3.0 Units**

*Prerequisite\*\*:* CIS 022

*General Education: SCC: Area D3*

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 48-54 lab*

A study of the basic concepts associated with the creation and manipulation of data structures and their related processing algorithms. Topics include software engineering principles, the selection, design, and implementation of data structures including arrays, sequential and random access files, strings, stacks, queues, linked lists, and binary trees, and the development of efficient algorithms for sorting, searching, and manipulating these data structures. Taught using an object-oriented computer programming language such as C++, C#, Java, etc. (C-ID COMP 132)

## **CIS 035 Introduction to Java Programming 3.0 Units**

*Prerequisite\*\*:* CIS 015, CIS 022 or CIS 023

*Transferable to UC/CSU*

*Hours: 32-36 lecture, 48-54 lab*

Introduces Object Oriented Programming (OOP) using the Java programming language. Includes hands-on development of Java applets and Java applications using objects, classes, interfaces and Graphical User Interface (GUI) components.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# CIS - Computer Information Science

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## **CIS 049**

**1.0 to 3.0 Units**

### **Computer and Information Science Honors**

*Prerequisite\*\*:* Completion of 24.0 units of college credit with a minimum GPA of 3.3; a minimum of 5.0 units in the discipline with a minimum grade of C; an ability to work independently; permission of the School Dean based on instructor availability

*Transferable to CSU*

*Hours: 48-162 lab by arrangement*

Designed for honor students who intend to major in one of the Computer and Information Science options. Students are expected to design their own projects and must submit them to the instructor for approval. Students may take this course up to the maximum number of units over multiple semesters.

## **CIS 050 Microcomputer Applications**

**3.0 Units**

*Course Advisory:* Basic keyboarding skills at 30 wpm

*Transferable to CSU*

*Hours: 48-54 lecture*

An introduction to microcomputers and the more frequently used applications software. The course is designed for the microcomputer user who is not a computer science major. The purpose of this course is to help students to understand the concepts and fundamentals of working with: an operating system with its associated graphical user interface, word processing, spreadsheets, databases and presentation software.

## **CIS 052 UNIX Operating System**

**3.0 Units**

*Course Advisory:* CIS 055

*Transferable to CSU*

*Hours: 48-54 lecture*

An analysis of the UNIX operating system, its terminology, user utilities, file structure, file security, commands, shells, shell programming, system architecture, and system administration. Emphasis will be placed on the shell environment, shell programming and utilities. The course will include hands-on exercises for the students to complete using the UNIX operating system (Currently taught using LINUX).

## **CIS 055 MS Windows Operating Systems**

**3.0 Units**

*Course Advisory:* CIS 001; basic keyboarding skills

*Transferable to CSU*

*Hours: 48-54 lecture*

How to use the Graphical User Interface (GUI) and the command line interface in carrying out system tasks in the MS Windows operating systems. Topics include file management, hard disk management, system tools, batch files, connectivity, and the registry.

## **CIS 060 Introduction to the Internet**

**1.5 Units**

*Transferable to CSU*

*Hours: 24-27 lecture*

Prepares students to use the Internet, a world wide computer network. Emphasis is on introducing features of the Internet, including electronic mail, the World Wide Web, Gopher, FTP (file transfer protocol), Telnet, and Usenet, as well as other Internet services and utilities. Students will explore hands-on the vast resources of the Internet, learn to access information using a variety of methods, and will construct a simple Web page.

## **CIS 061 Creating Web Pages**

**3.0 Units**

*Course Advisory:* CIS 001

*Transferable to CSU*

*Hours: 48-54 lecture*

Prepares students to develop web sites that interact with databases. Emphasis is on the creation of Web sites with interactive Web pages, data access Web pages, and web pages with interactive components. Students will explore hands-on access to the Internet and an HTML editor to create and maintain Web sites.

## **CIS 062 Creating Web Interactivity**

**3.0 Units**

*Course Advisory:* A minimum grade of C in both CIS 001 and CIS 061

*Transferable to CSU*

*Hours: 48-54 lecture*

Covers the creation of vector-based graphics, animation, and interactivity within the Web environment. Emphasis will be placed on applying design principles to the elements of motion and interactivity. The basic operating principles of Adobe Animate will be applied in order to create Web content with animation, interactive buttons, and sound. Issues of optimal delivery and web accessibility will also be covered. A portfolio-quality professional level capstone project will be developed and presented.

## **CIS 066 Microsoft Word**

**3.0 Units**

*Course Advisory:* CIS 001 or CIS 050 with a minimum grade of C;

*ability to keyboard at 30 wpm*

*Transferable to CSU*

*Hours: 48-54 lecture*

An in-depth study of the functions of the word processing program. Students will learn how to use basic and advanced program features to create and design business documents.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# CIS - Computer Information Science

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## **CIS 069 Multimedia For the Web**

**3.0 Units**

*Course Advisory: CIS 061 with a minimum grade of C  
Transferable to CSU  
Hours: 48-54 lecture*

An in-depth look at designing multimedia for the Web. Topics include developing graphic elements such as buttons, background textures and images for a Web site, using Cascading Style Sheets to position graphics, using Adobe Animate CC to create web site interactivity, adding audio and/or video to a Web site, and manipulating Web multimedia file formats.

## **CIS 070 Adobe Photoshop for the Web**

**3.0 Units**

*Course Advisory: CIS 001 or CIS 050 with a minimum grade of C  
Transferable to CSU  
Hours: 48-54 lecture*

Emphasizes the use of computer technology to create and manipulate raster and vector digital images. Students use Photoshop techniques to produce digital creations for the web. Layers, filter effects, blending modes, and other editing tools will be used to produce digital images appropriate for print and electronic reproduction. The elements of Photoshop for use in industry-standard web and print production will be explored.

## **CIS 073 Microsoft Excel**

**3.0 Units**

*Course Advisory: CIS 001 with a minimum grade of C; ability to keyboard at 30wpm  
Transferable to CSU  
Hours: 48-54 lecture*

A thorough study of spreadsheet operation and enables the student to use the spreadsheet to perform mathematical computations and analysis. Students will create graphic representations of the information contained in a spreadsheet, perform list management routines, use functions, perform 'what if' analysis, customize toolbars and menus, and create macros using Visual Basic for Applications.

## **CIS 078**

### **Access - Database Management System**

**3.0 Units**

*Course Advisory: CIS 001 with a minimum grade of C  
Transferable to CSU  
Hours: 48-54 lecture*

An introduction to relational database management using microcomputers. Microsoft's Access database management program is used. Students will learn how to create and maintain relational database structures, organize and manipulate data, ask questions of the data, create custom forms for entering data and custom reports for printing the data. How to publish objects on the Internet's World Wide Web is presented. The student will learn how to construct a complete application combining previously created tables, queries, forms, and reports. Visual BASIC Applications (VBA) and Structured Query Language (SQL) are introduced. Advanced database design is explored and the student learns how to 'normalize' a database structure.

## **CIS 080 SQL Database Management Systems**

**3.0 Units**

*Course Advisory: CIS 001; CIS 078  
Transferable to CSU  
Hours: 48-54 lecture*

Provides knowledge and skills in advanced database systems that use the SQL language such as IBM's DB2, Oracle, Sybase and Microsoft's SQL Server. This course is designed for the end user, the database designer and the database administrator. Microsoft SQL Server 2008 is the database system currently used for this course.

## **CIS 081 Server-Side Web Programming**

**3.0 Units**

*Course Advisory: A minimum grade of C in both CIS 001 and CIS 061  
Transferable to CSU  
Hours: 48-54 lecture*

Emphasizes the creation of interactive web sites using a server-sided scripting language such as ASP.Net, CGI, or Perl. Topics include core features of the server-side scripting language, control structures, functions, arrays, form validations, regular expressions, environmental variables, and database-driven web applications.

## **CIS 083 Web Server Administration**

**3.0 Units**

*Course Advisory: CIS 001 and CIS 061 with a minimum grade of C  
Transferable to CSU  
Hours: 48-54 lecture*

Web server installation and administration for the internet and intranet. Topics covered include the installation, configuration, management and tuning of web services, security, online transaction processing, and FTP services.

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# CIS - Computer Information Science

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## **CIS 085 Digital Publishing with InDesign 3.0 Units**

*Course Advisory: CIS 001 or CIS 050 with a minimum grade of C*  
*Transferable to CSU*  
*Hours: 48-54 lecture*

An introduction to the graphics software program, Adobe InDesign. Students will learn to produce and publish publications, employing vector graphics, and typography as well as color and print management. This course will establish an understanding of the basic features in Adobe InDesign for use in both print and digital media.

## **CIS 087 Adobe Illustrator for the Web 3.0 Units**

*Course Advisory: CIS 001 or CIS 050 with a minimum grade of C*  
*Transferable to CSU*  
*Hours: 48-54 lecture.*

An introduction to the graphics software program, Adobe Illustrator. Students will learn to create vector shapes, import, export and modify graphics, and use Illustrator tools. This course will establish an understanding of the basic features in Adobe Illustrator for use in digital media.

## **CIS 089 Essential Networking Technologies 3.0 Units**

*Course Advisory: CIS 001 with a minimum grade of C*  
*Transferable to CSU*  
*Hours: 48-54 lecture*

A general introductory overview of networking. Network design, media, protocols, architectures, operations, and administration will be discussed. Local area networks, wide area networks, and network connectivity (including Internet) are covered. This course is the foundation of all other network classes and helps prepare the student to be successful when taking various certified examinations.

## **CIS 090 Introduction to PowerPoint 1.5 Units**

*Course Advisory: CIS 001 or CIS 050 with a minimum grade of C; ability to keyboard 30 wpm*  
*Transferable to CSU*  
*Hours: 24-27 lecture*

An introduction to features and design concepts utilized in developing powerful presentations using a package software such as Microsoft PowerPoint.

## **CIS 091 Microsoft Outlook 1.5 Units**

*Course Advisory: CIS 001 or CIS 050 with a minimum grade of C; basic keyboarding skills*  
*Transferable to CSU*  
*Hours: 24-27 lecture*

An introduction to Outlook's features. Students will work with the Contact address book; Inbox and e-mail; Journal; Notes; Tasks; use Calendar to track and schedule appointments, events and meetings; work with forms and templates; use Outlook with other applications.

## **CIS 106 Computer Literacy 1.0 Unit**

*Hours: 16-18 lecture, 8-9 lab.*

A brief introduction to information technology for novices. Including an introduction to computer components, as well as hands-on activities utilizing the Windows operating system, word processing and spreadsheet software and the internet.

## **CIS 110 Wireless LANs 1.5 Units**

*Course Advisory: CIS 001 with a minimum grade of C*  
*Hours: 24-27 lecture, 8-9 lab*

Planning, designing, installing and configuring wireless LANs. The course offers in-depth coverage of wireless networks with extensive step-by-step coverage of IEEE 802.11b/a/g/pre-n implementation, design, security, and troubleshooting.

## **CIS 162 A+ Computer Hardware Technology 4.0 Units**

*Hours: 48-54 lecture, 48-54 lab*

Presents the structure of modern personal computer architecture including the names, purpose, and characteristics of components such as motherboards, CPUs, RAM, disk drive storage, printers and networks. This course also addresses upgrading computer components, optimizing computer performance, preventative maintenance, safety, and computer hardware troubleshooting. Prepares the student for CompTIA A+ Hardware Service Technician Certification.

## **CIS 164 4.0 Units**

### **A+ Computer Operating Systems Technology**

*Course Advisory: CIS 162*  
*Hours: 48-54 lecture, 48-54 lab*

Presents the purpose and capabilities of computer operating systems, operating system components and utilities. The course emphasizes initial investigation of personal computer operating systems and demonstrates the uses of the operating system and other software for isolating troubles and completing the repair of personal computers. Prepares the student for CompTIA A+ Operating Systems Technologies certification.

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*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# CIS - Computer Information Science

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## **CIS 166 Computer Network+ Technology 4.0 Units**

*Hours: 48-54 lecture, 48-54 lab*

Presents the architecture of computer networks, including the names, purpose, and characteristics of network components such as network interface card (NIC), hubs, routers, cabling and connectors; as well as topologies, protocols and standards. This course also addresses network implementation, network support and troubleshooting. Prepares the student for CompTIA Network+ Computer Network Certification. As a team, in a laboratory environment, the class will assemble and implement a complete network, with a server running a Microsoft server network operation system (NOS) and several computers running the Microsoft Windows XP Professional Operating System. All of the required cabling will be assembled in the lab by the students under the supervision of the instructor.

## **CIS 168 Computer Security+ Technology 4.0 Units**

*Prerequisite\*\*:* CIS 166

*Hours: 48-54 lecture, 48-54 lab*

Presents the vulnerability, threats, and risks to data and other computer assets from spyware, Trojan horses, viruses, worms, and other security attacks. This course also addresses the fundamental policies and procedures for maintaining the security of a computer network. Prepares the student for the Computing Technology Industry Association's (CompTIA) Security+ Certification.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# CJ - Criminal Justice

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## **CJ 001 Introduction to Criminal Justice**

**3.0 Units**

*Course Advisory: ENGL 001 with a minimum grade of C*  
*General Education: SCC: Area B2; IGETC: Area 4;*  
*CSU: Area D*

*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

Introduction to the characteristics of the criminal justice system in the United States. Focus is placed on examining crime measurement, theoretical explanations of crime, responses to crime, components of the system, and current challenges to the system. The course examines the evolution of the principles and approaches utilized by the justice system and the evolving forces which have shaped those principles and approaches. Although justice structure and process is examined in a cross cultural context, emphasis is placed on the US justice system, particularly the structure and function of US police, courts, and corrections. Students are introduced to the origins and development of criminal law, legal process, and sentencing and incarceration policies. (C-ID AJ 110)

## **CJ 002 Concepts of Criminal Law**

**3.0 Units**

*Course Advisory: ENGL 001 with a minimum grade of C*  
*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

A study of the history, philosophy and development of law and various legal systems; case law and legal research; corpus delicti, mental elements, capacity to commit crimes, and defenses; classification of crimes and penalties; elements of major crimes. (C-ID AJ 120)

## **CJ 011 Community Relations**

**3.0 Units**

*Transferable to UC/CSU*  
*Hours: 48-54 lecture*

Examines the complex, dynamic relationship between the justice system and the community in addressing crime and conflict. The emphasis is on the challenges and prospects of administering justice within a diverse multicultural population. Topics covered may include crime prevention, restorative justice, conflict resolution and ethics. (C-ID AJ 160)

## **CJ 051 Criminal Investigation**

**3.0 Units**

*Course Advisory: CJ 001*  
*Transferable to CSU*  
*Hours: 48-54 lecture*

Addresses the techniques, procedures, and ethical issues in the investigation of crime, including organization of the investigative process, crime scene searches, interviewing and interrogating, surveillance, source of information, utility of evidence, scientific analysis of evidence and the role of the investigator in the trial process. Introduces the fundamentals of investigation, crime scene search and recording, collection and preservation of evidence, scientific aid, interviews and interrogation, follow-up and case preparation. (C-ID AJ 140)

## **CJ 052 Investigative Report Writing**

**3.0 Units**

*Course Advisory: CJ 001; CJ 002; CJ 051*  
*Transferable to CSU*  
*Hours: 48-54 lecture*

Presents investigative report writing in criminal justice relative to police, probation, institutional and parole activities. Includes practical experience in preparing field notes, statements, and reports.

## **CJ 053 Legal Aspects of Evidence**

**3.0 Units**

*Course Advisory: CJ 001*  
*Transferable to CSU*  
*Hours: 48-54 lecture*

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

## **CJ 056 Juvenile Procedures**

**3.0 Units**

*Transferable to CSU*  
*Hours: 48-54 lecture*

Presents the organization, function, and jurisdiction of juvenile agencies; the processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures. (C-ID AJ 220)

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# CJ - Criminal Justice

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## **CJ 057 Criminal Justice Career Development 3.0 Units**

*Course Advisory: CJ 001*

*Transferable to CSU*

*Hours: 48-54 lecture*

Examines criminal justice career positions, employment standards and current occupational opportunities in the field. Includes practical aspects of various jobs and provides information and practice in entrance examination taking, oral interviews, and general preparation for various occupations within the criminal justice field.

## **CJ 058 Fundamentals of Crime and Delinquency 3.0 Units**

*Course Advisory: CJ 001*

*Transferable to CSU*

*Hours: 48-54 lecture*

Introduction to major types of criminal behavior, patterns of career offenders, factors which contribute to the production of criminality of delinquency. Includes methods used in dealing with violators in the justice system; the changing roles of police courts and after-care process of sentence, probation, prisons, and parole; changes of the law in crime control and treatment processes.

## **CJ 059 Interviewing and Counseling 3.0 Units**

*Course Advisory: CJ 001*

*Transferable to CSU*

*Hours: 48-54 lecture*

Overview of the interviewing and counseling techniques available to practitioners in law enforcement, the courts, and corrections emphasizing communication and practical skills.

## **CJ 060 Probation and Parole 3.0 Units**

*Course Advisory: CJ 001; CJ 058*

*Transferable to CSU*

*Hours: 48-54 lecture*

Presents the philosophy and history of correctional services. A survey of the correctional sub-systems of institutions by type and function, probation concepts and parole operations. A discussion of correctional employee responsibilities as applied to offender behavior modifications through supervisory control techniques. Covers rehabilitation goals as they affect individual and intimate cultural groups in both confined and field settings.

## **CJ 062 Legal Aspects of Correction 3.0 Units**

*Course Advisory: CJ 058*

*Transferable to CSU*

*Hours: 48-54 lecture*

Presents the legal aspects of corrections and code provisions relative to all phases of the correctional system.

## **CJ 064 Principles and Procedures of the Criminal Justice System 3.0 Units**

*Course Advisory: CJ 001*

*Transferable to CSU*

*Hours: 48-54 lecture*

A detailed study of the role and responsibility of each sub-system within the criminal justice system; an examination of the philosophy, history, structure, operation and interrelation of each sub-system component; a description of procedure from initial entry of the individual into the system to the final disposition.

## **CJ 070A Forensic Crime Scene Investigation - Basic 3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

An introduction to the basic methods and processes used during a forensic examination of a crime scene. This course includes topics such as crime scene and evidence photography, methods of searching for and determining items of evidentiary value, scene sketching and measuring techniques, best practices for evidence collection and packaging, establishing chain of custody, scene integrity, field processing techniques for developing forensic evidence, and crime scene report writing. This course is intended for students seeking a career in forensic science, crime scene investigation, or law enforcement. Field trips may be offered to labs at local or regional forensic labs, coroner's office, or related law enforcement venues.

## **CJ 070B Forensic Crime Scene Investigation - Advanced 3.0 Units**

*Prerequisite\*\*:* CJ 070A

*Transferable to CSU*

*Hours: 48-54 lecture*

Advanced forensic examination techniques for crime scene and evidence examination. This course includes topics such as blood spatter reconstruction, shooting trajectory and reconstruction, forensic vehicle examinations, collection of forensic evidence at autopsies, nighttime photography, and crime scene court testimony. This course is intended for students seeking a career in forensic science, crime scene investigation, or law enforcement.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

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# CJ - Criminal Justice

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**CJ 080**

**3.0 Units**

**The Criminal Justice System Viewed Through a Multi-Cultural Lens**

*Hours: 48-54 lab*

Examines the interaction of law enforcement with various cultures in their respective communities with emphasis on intercultural communications and historical interactions with diverse cultures, races, ethnicities, genders and sexual orientations.

**CJ 082**

**3.0 Units**

**Victimology: Victims and The Criminal Justice System**

*Hours: 48-54 lab*

A study of crime victims and their interaction with various components of the criminal justice system focusing on the victim's experience within the system. Students will examine data research, various methodologies and victim precipitation theories. The tangible and intangible costs of victimization will also be examined as well as victim services and current trends in the field of victimology.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# COMM - Communication Studies

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## **COMM 001 Introduction to Public Speaking 3.0 Units**

*General Education: SCC: Area D3; IGETC: Area 1C; CSU: Area A1*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

A public speaking course which includes instruction and practice in the various forms of public address and the techniques for orally presenting ideas clearly, concisely, and coherently. Students are required to outline speeches frequently and/or complete a detailed manuscript of the speech; to read a college-level public speaking textbook and apply its principles in the preparation of their speeches; to critically analyze public speeches of various types. (C-ID COMM 110)

## **COMM 002 3.0 Units**

### **Fundamentals of Persuasive Speaking**

*General Education: SCC: Area D3; IGETC: Area 1C; CSU: Area A1, A3*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Instruction and practice in the various forms of persuasive speaking including, but not limited to, sales presentations, speeches of praise/blame, propaganda, and opposing viewpoints. Students are required to outline persuasive speeches frequently; to read a college-level persuasive speaking textbook and apply its principles in the preparation of their persuasive speeches; to critically analyze persuasive speeches; and to deliver persuasive speeches of various types. These speeches will be presented in class, in person, to an audience of peers. Faculty evaluation will be done in the classroom in person. (C-ID COMM 190)

## **COMM 006 Argumentation and Debate 3.0 Units**

*General Education: SCC: Area D3; IGETC: Area 1C; CSU: Area A1, A3*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Instruction and practice in the principles of argumentation and in the various forms of debate including the analysis of propositions, research, evidence and reasoning. Students are required to practice various forensic debating techniques through the presentation of their outlined advocate/government and opposition cases after investigating major contemporary issues; to read a college level argumentation and debate textbook and apply its principles in the preparation of their cases, and to critically analyze debate cases. These debates will be presented in class, in person, to an audience of peers. Faculty evaluation will be done in the classroom in person. (C-ID COMM 120)

## **COMM 008 Group Communication 3.0 Units**

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Increases students' understanding of group communication behaviors related to problem-solving, decision-making, leadership, group roles, norms and conformity and to prepare students to function more effectively in groups. This course is for students majoring in speech communication, business, international business, education, nursing, and all fields of study and certifications that require group and team-building skills. (C-ID COMM 140)

## **COMM 010 Interpersonal Communication 3.0 Units**

*General Education: SCC: Area D3*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Communication principles as applied to different interpersonal communication situations including verbal and non-verbal communication, listening, overcoming barriers to communication, and conflict resolution. (C-ID COMM 130)

## **COMM 012 Intercultural Communication 3.0 Units**

*General Education: SCC: Area E; IGETC: Area 4, SCC Cross-Cultural;*

*CSU: Area D, SCC Cross-Cultural*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

An introduction to the challenges and promises of intercultural communication with application to American culture, subcultures, and different cultures of the world. Specific focus will be development of the ability to acknowledge and understand the unique voice of people from the African, Asian, Latina, Middle Eastern, and Pacific Island cultures as well as co-cultures within the United States. Through lectures, readings, films, group discussions, written and oral assignments, students will learn the skills necessary to achieve positive outcomes when communicating with others that are perceived as different. (C-ID COMM 150)

## **COMM 015 Oral Interpretation of Literature 3.0 Units**

*General Education: SCC: Area C*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Study of literature through oral performance that includes development of skills in the analysis and interpretation of prose, poetry, and dramatic literature. Emphasis on vocal and physical techniques to orally communicate understanding of the literature performed. (C-ID COMM 170)

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# COMM - Communication Studies

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## **COMM 049 Speech Honors**

**1.0 to 3.0 Units**

*Prerequisite\*\*:* Completion of 30 or more units of transferable college credit including 6 units of transferable COMM; ENGL 001 with a minimum grade of B; an ability to work independently; and permission of the School Dean based on instructor availability

*Transferable to CSU*

*Hours: 48-162 lab by arrangement*

An independent study program designed for students who have completed the available Communication Studies offerings and wish to continue work in one of these areas, or work with an instructor in a specialized area of oral communication. The student and instructor design an outlined program of study. Students may take this course up to the maximum number of units over multiple semesters.

## **COMM 050**

**1.0 to 4.0 Units**

### **Forensics/Speech Workshop**

*Transferable to CSU*

*Hours: 16-18 lecture, 0-162 lab*

Provides training in the principles of all forms of competitive speaking, oral interpretation and debate, including participation in intercollegiate competitions and appearances before campus and community groups. Students attend intercollegiate forensic tournaments and festivals or speak before campus or community audiences. Participation may include weekends and off campus travel. This is an Open entry/Open exit course. (C-ID COMM 160)

## **COMM 060**

**3.0 Units**

### **Business and Professional Communication**

*General Education: SCC: Area D3*

*Transferable to CSU*

*Hours: 48-54 lecture*

Presents practical communication skills to allow students to achieve effective verbal communication in business situations, community activities and other areas of daily life. Areas of discussion include basic practical communication skills. Assignments and exercises are employed to allow students to achieve effective verbal communication in business situations, community activities, and other areas of daily life, including giving and receiving instructions, interviewing, verbal and non-verbal communication.

## **COMM 075A**

**3.0 Units**

### **Sports Broadcasting - Fall Sports**

*Transferable to CSU*

*Hours: 24-27 lecture, 72-81 lab*

A professional approach to the basics of on-air and internet sports broadcasting of football, soccer, volleyball and tennis. Areas of concentration include performance training for play-by-play description, color commentary, compiling and organizing statistical data for football, soccer, volleyball and tennis broadcasts. The course includes an in-depth approach to careers in broadcast communication with concentration on all aspects of research preparation and delivery presentation to establish and sustain a career in sports broadcasting in one or more of the following sports: football, soccer, volleyball and/or tennis. Students will be required to attend weekly athletic events to fulfill activity hours. Events typically on TWRF.

## **COMM 075B**

**3.0 Units**

### **Sports Broadcasting - Spring Sports**

*Transferable to CSU*

*Hours: 24-27 lecture, 72-81 lab*

A professional approach to the basics of on-air and internet sports broadcasting of baseball, softball, basketball, hockey and swimming. Areas of concentration include performance training for play-by-play description, color commentary, compiling and organizing statistical data for baseball, softball, basketball, swimming and hockey broadcasts. The course includes an in-depth approach to careers in broadcast communication with concentration on all aspects of research preparation and delivery presentation to adequately and effectively establish and sustain a career in sports broadcasting in one or more of the following sports: baseball, softball, basketball, hockey and/or swimming. Students will be required to attend weekly athletic events to fulfill activity hours. Events typically on TWRFS.

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# COMM - Communication Studies

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## COMM 080A

3.0 Units

### TV Sports Production - Fall Sports

*Transferable to CSU*

*Hours: 24-27 lecture, 72-81 lab*

Instruction and training in the fundamentals of televised sports productions, both in the studio and on location. The course focuses on all aspects of production: directing, board operation, computer graphics, videography, instant replay and pre- and post-production editing as it pertains to football, soccer, tennis and volleyball. Students required to attend weekly athletic events to fulfill activity hours. Events typically on TWRF afternoons and/or evenings.

## COMM 080B

3.0 Units

### TV Sports Production - Spring Sports

*Transferable to CSU*

*Hours: 24-27 lecture, 72-81 lab*

Instruction and training in the fundamentals of televised sports productions, both in the studio and on location. The course focuses on all aspects of production: directing, board operation, computer graphics, videography, instant replay and pre- and post-production editing as it pertains to basketball, baseball, softball, basketball, hockey and swimming. Students required to attend weekly athletic events to fulfill activity hours. Events typically on TWRFS afternoons and/or evenings.

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# COSM - Cosmetology

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## **COSM 100 Cosmetology I**

**17.5 Units**

*Hours: 80-90 lecture, 600-675 lab*

The first course in a series that provides the fundamental training towards the state mandated minimum hours designed to prepare the student for the California State Board of Cosmetology examination for licensure. A combination of both lecture and laboratory activities introduces the student to theoretical concepts, principles and practice in the beauty industry. Critical thinking skills are developed in the areas of communication, hair care, nail care, record keeping, and business decorum. Students enrolling in this course must attend the Mandatory Information Sessions. See the schedule of classes for location, dates and times. The cost of start-up materials, uniforms, textbooks, and equipment kit is approximately \$1,000.00. To qualify for the State Board of Cosmetology examination for a cosmetology license, students must have completed all state mandated clocked time including the following: designated subject areas of technical instruction, designated subject areas of practical operations, completed the 10th grade or the equivalent, be at least 17 years of age, and current state or federally issued photographic identification. For more information; [www.barbercosmo.ca.gov](http://www.barbercosmo.ca.gov).

## **COSM 101 Cosmetology II**

**17.5 Units**

*Prerequisite\*\*:* COSM 100

*Hours: 80-90 lecture, 600-675 lab*

The second in a series of courses in Cosmetology to provide the training towards the state mandated hours of intensive training and study designed to prepare the student for the California State Board of Cosmetology examination for cosmetology licensing. Focus is on the continued study of the beauty industry. This course provides the students with the opportunity to synthesize and utilize cosmetology knowledge and skills in providing more advanced services for multiple clients.

## **COSM 102 Cosmetology III**

**8.5 Units**

*Prerequisite\*\*:* COSM 101

*General Education: Cosmetology*

*Hours: 40-45 lecture, 288-324 lab*

The third in a series of courses in Cosmetology designed to provide the training towards the state mandated hours and prepare the student for the California State Board of Cosmetology examination for license. Topics include the principles and practices of cosmetology with emphasis on the essential knowledge and skills for license and working within the cosmetology industry. Students are able to increase practical application skills and processes by providing multiple clients with hair care, skin care and nail care services in the client laboratory.

## **COSM 106 Cosmetology IV**

**0.5 to 3.0 Units**

*Prerequisite\*\*:* COSM 100

*Hours: 24-162 lab*

Meets the needs of students who are preparing to take the state examination for cosmetology licensure or have not completed state mandates to qualify for the cosmetology state examination. This course reviews basic skills and mandates required by the state board. Reinforcement of entry level industry skills is emphasis of this course. This course is designed to give Cosmetology students a chance to make up hours for Board of Cosmetology certification requirements. Open entry/Open exit.

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# COUN - Counseling

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## **COUN 005 Career/Life Planning**

**3.0 Units**

*General Education: SCC: Area B2; CSU: Area E*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Helps students demonstrate an understanding and appreciation of the impact and significance of career choices on their social, psychological and physiological experiences throughout the life span. This course is also designed to help students identify their interests, skills, values and personality traits (self-assessment profile), conduct career research and exploration, and learn current job seeking skills. Students will analyze the relationship between themselves, their life choices and the ongoing process of career planning and self-development throughout the life span. UC limitation of credit: 3 units Counseling courses numbered 001-009.

## **COUN 006 University Transfer Success**

**1.0 Unit**

*Transferable to UC/CSU*

*Hours: 16-18 lecture*

Provides students with a concrete plan for understanding and succeeding in transferring to a four-year college or university. Topics include the following: Major selection; college options; application processes; academic preparation and student education plans. UC limitation of credit: 3 units Counseling courses numbered 001-009.

## **COUN 007 Student Life Success**

**3.0 Units**

*General Education: CSU: Area E*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

An exploration of the sociological, physiological, psychological, and intellectual factors that impact student's academic and personal success over a lifetime. Topics include: accepting personal responsibility, discovering self-motivation, mastering self-management, employing interdependence, increasing self-awareness, adopting life-long learning, developing emotional intelligence, and believing in one's self. UC limitation of credit: 3 units Counseling courses numbered 001-009.

## **COUN 008**

### **Math, Engineering and Science Achievement (MESA) Enrichment**

*Transferable to UC/CSU*

*Hours: 16-18 lecture*

Assists students in acquiring the knowledge and skills necessary to reach their educational goals in mathematics, engineering and science-related fields. Topics to be covered include: strengths assessment; math and science study skills; transfer preparation and career strategies. Students will synthesize and compare and contrast information to draw conclusions on course topics. UC limitation of credit: 3 units Counseling courses numbered 001-009.

## **COUN 015 Valuing Diversity**

**3.0 Units**

*General Education: SCC: Area B2, E; IGETC: Area 4;*

*CSU: Area D, SCC Cross-Cultural*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

An examination of the complexities of interpersonal relationships among several cultures in our society including self-concept, values, beliefs, communication and lifestyle. This course will invite exploration of individual cultural perception in order to promote respect for differences and to develop a sense of community. Examination requirements include written essays that demonstrate critical thinking.

## **COUN 023 Psychology for Modern Life**

**3.0 Units**

*General Education: SCC: Area B2; IGETC: Area 4; CSU: Area D*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Examines the fundamental concepts of psychology as they relate to daily life. Topics include methods of psychology, stages of personality development, personal relationships, values, communication, motivation, emotions, lifestyle and attitudes. Concepts will be introduced to foster the student's understanding of his/her own personal development. Theories and research will be applied across a diversity of settings.

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# COUN - Counseling

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## **COUN 058 Life Management**

General Education: SCC: Area B2; CSU: Area E

Transferable to CSU

Hours: 48-54 lecture

A survey of the areas of life which influence decision-making. Students are introduced to areas of human development (emotional, intellectual, physical, and social) which influence decision making. They will analyze and evaluate differences in values, motivation, and goals. Includes introduction to financial, time and stress management, and communication skills. Requires written papers and problem-solving exercises.

**3.0 Units**

## **COUN 062**

### **Helping Skills: Creating Alliances & Facilitating Change**

Transferable to CSU

Hours: 48-54 lecture

An introduction to the basic helping skills that enable the student to build an alliance, effect change and empower others within a multicultural society. A helping model is introduced and helping skills such as attending, active listening, demonstrating empathy, assessment and referral are discussed, role played and applied in an experiential manner to a number of common challenges. In addition, the pertinent legal and ethical guidelines of the professional helping relationship are presented, discussed and applied throughout the course.

**3.0 Units**

## **COUN 064A Practicum I**

Prerequisite\*\*\*: A minimum grade of D in COUN 062, HS 051, and HS 053

Transferable to CSU

Hours: 32-36 lecture, 96-108 lab by arrangement

The first of a two-course sequence in a supervised Human Services practicum experience at an approved agency or educational setting. In order to develop and apply culturally sensitive and ethically sound helping skills, students will work a minimum of 100 hours and participate actively in a two hour weekly seminar. Placement at most sites will involve a criminal background check.

**4.0 Units**

## **COUN 064B Practicum II**

Prerequisite\*\*\*: COUN 064A with a minimum grade of D

Course Advisory: HS 055

Transferable to CSU

Hours: 32-36 lecture, 96-108 lab by arrangement

The second semester of a two-course sequence in a supervised Human Services Practicum, required for Human Services majors. Students will further develop culturally and ethically competent helping skills as they continue to work in their approved site or work in a new approved site. Students will continue to hone and apply more advanced and educationally informed helping skills. This additional 100 hours in an approved site and its supporting 2 hour weekly seminar will meet the Human Services certificate and Associate degree requirement and will help students further clarify their potential for a longer range educational and career path in Human Services, Social Work or Counseling. Practicum Sites often require students to pass a criminal background check.

**4.0 Units**

## **COUN 091 Foundations for College Success 0.5 Unit**

Course Advisory: Possession of all relevant academic records and other test results and transcripts including SAT, ACT, AP and IB

Transferable to CSU

Hours: 8-9 lecture

Provides an in-depth introduction to college and the required initial student education plan. It seeks to maximize the new student's successful experience by introducing Solano College's student support services; certificate, associate degree and transfer preparation requirements; and the essential personal motivators for college success. Students will provide their academic records, e.g. high school and college transcripts, assessments and tests such as SAT/ACT/AP/IB which will assist them in creation of the initial student education plan.

**0.5 Unit**

## **COUN 098 Performance Psychology**

General Education: CSU: Area E

Transferable to CSU

Hours: 48-54 lecture

Explores the psychological, social and physiological factors influencing optimal performance in life's endeavors including academics, performing arts, sport, and in interpersonal and business relationships. Topics include student evaluation of self care, life balance, confidence, arousal management, motivation, goal attainment, concentration, positive self talk, commitment, uses of imagery and visualization, active listening and demonstrating empathy. Briefly listed as 009 for 2016-2017 catalog.

**3.0 Units**

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# COUN - Counseling

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## **COUN 102A**

**0.5 Unit**

### **Time Management & Goal Setting**

*Hours: 8-9 lecture*

Introduces goal setting and time management techniques such as analyzing time usage, prioritizing and developing a schedule to assist students to achieve their educational and career goals. Other COUN 102 series courses may be taken concurrently. NOTE: Not open for credit to students who have completed COUN 007 with a minimum grade of C.

## **COUN 102B**

**0.5 Unit**

### **Test Taking, Test Anxiety & Memory**

*Hours: 8-9 lecture*

Introduces test taking, test anxiety and memory concepts and techniques to assist students in achieving their educational and career goals. Other COUN 102 series courses may be taken concurrently. Note: Not open for credit to students who have completed COUN 007 with a minimum grade of C.

## **COUN 102C Study Systems**

**0.5 Unit**

*Hours: 8-9 lecture*

Introduces note-taking, reading and study environment concepts/strategies and identifies attitudes and learning styles to assist students in achieving their educational and career goals. Other COUN 102 series courses may be taken concurrently. Note: Not open for credit to students who have completed COUN 007 with a minimum grade of C.

## **COUN 103 Disability and Success**

**3.0 Units**

*Hours: 48-54 lecture*

College, career, and life preparation course to assist students with disabilities in accessing services and completing their community college and career goals. It includes the SCC Disability Service Program, the College community, community agencies serving people with disabilities, laws and disabilities, coping with a disability, self advocacy, success in the classroom, and a final "Plan for Personal Disability Management." Student will receive a letter grade.

## **COUN 310**

**1.0 Unit**

### **Transition to College for Students with Disabilities**

*Hours: 16-18 lecture*

Transition course for high school seniors who are planning on entering the Community College system and receiving Disability Services. It includes the Student Support and Success Program process of entering into college, the difference between college and high school for students with disabilities. Students will obtain a beginning understanding of how to navigate successfully through the Community College system and Disability Services. Pass/No-Pass Only.

## **COUN 510 Assessment/Orientation/Planning 0.0 Units**

*Hours: 1 lecture, 2 lab*

Mandatory new student assessment, orientation and initial counseling. Includes reading, writing and mathematics assessments; overview of the programs and services that support student retention and success, time management practices, policies and procedures of Solano College and a preliminary Student Education Plan (SEP).

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# CS - Computer Science

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## **CS 104 Programming in Linux**

**0.5 Unit**

*Hours: 24-27 lab*

An initial lab to prepare the student for the intense programming language classes using the Linux operating system. The student will learn how to navigate the Linux operating system as a programmer, install a development environment and utility programs, compile and execute programs, and submit completed assignments for grading.

## **CS 105 Programming in Windows**

**0.5 Unit**

*Hours: 24-27 lab*

An initial lab to prepare the student for the intense programming language classes using the Windows operating system. The student will learn how to navigate Windows as a programmer, install a development environment and utility programs, compile and execute programs, and submit completed assignments for grading.

## **CS 110 C++ 1: Fundamentals**

**3.0 Units**

*Prerequisite\*\*:* CS 104 or CS 105 (may enroll concurrently)

*Hours: 32-36 lecture, 48-54 lab*

An introduction to programming using the C++ language using modern tools in a modern operating system. Course includes hands-on programming of structured algorithms, the study of C++ syntax, and an introduction to structured programming with data definitions and use.

## **CS 112**

**3.0 Units**

### **C++ 2: Program Design and Data Structures**

*Prerequisite\*\*:* CS 110

*Hours: 32-36 lecture, 48-54 lab*

A further study of the C++ programming language with design principles of object oriented programming and data structures used in process algorithms. Topics include class and pointer instantiation, virtual functions and templates, overloading, linked lists and vectors, stacks and queues, searching and sorting, binary trees, and quality assurance using exception handling.

## **CS 114 C++ 3: Project Management**

**3.0 Units**

*Prerequisite\*\*:* CS 112

*Hours: 32-36 lecture, 48-54 lab*

The application of the C++ programming language in the business, scientific, and entertainment industries. Topics include problem analysis and project design, data and code security, group projects, and project completion and publication. Students will delve deeper into industry specific programming techniques that involve code logic, financial modelling, database interaction, encryption, graphs and trees, and interactive graphics.

## **CS 120 Python 1: Fundamentals**

**3.0 Units**

*Prerequisite\*\*:* CS 104 or CS 105 (may enroll concurrently)

*Hours: 32-36 lecture, 48-54 lab*

An introduction to Python programming using modern tools in a modern operating system. Course includes hands-on programming of structured algorithms, the study of Python++ syntax, and an introduction to object-oriented programming with class definitions and instantiation.

## **CS 122**

**3.0 Units**

### **Python 2: Program Design and Data Structures**

*Prerequisite\*\*:* CS 120

*Hours: 32-36 lecture, 48-54 lab*

A further study of the Python programming language with design principles of object oriented programming and data structures used in process algorithms. Topics include class and pointer instantiation, virtual functions and templates, overloading, linked lists and vectors, stacks and queues, searching and sorting, binary trees, and quality assurance using exception handling.

## **CS 124 Python 3: Project Management**

**3.0 Units**

*Prerequisite\*\*:* CS 122

*Hours: 32-36 lecture, 48-54 lab*

The application of the Python programming language in the business, scientific, and entertainment industries. Topics include problem analysis and project design, data and code security, group projects, and project completion and publication. Students will delve deeper into industry specific programming techniques that involve code logic, financial modelling, database interaction, encryption, graphs and trees, and interactive graphics.

## **CS 130 Java 1: Fundamentals**

**3.0 Units**

*Prerequisite\*\*:* CS 104 or CS 105 (may enroll concurrently)

*Hours: 32-36 lecture, 48-54 lab*

An introduction to programming using the Java programming language using modern tools in a modern operating system. Course introduces the student to object oriented programming, Java language syntax, data definitions and use, language components and libraries, and interface and Graphical User Interface (GUI) components.

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# CS - Computer Science

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## CS 132

### Java 2: Program Design and Data Structures

*Prerequisite\*\**: CS 130

*Hours*: 32-36 lecture, 48-54 lab

A further study of the Java programming language with design principles of object oriented programming and data structures used in process algorithms. Topics include class and pointer instantiation, virtual functions and templates, overloading, linked lists and vectors, stacks and queues, searching and sorting, binary trees, and quality assurance using exception handling.

3.0 Units

## CS 134 Java 3: Project Management

3.0 Units

*Prerequisite\*\**: CS 132

*Hours*: 32-36 lecture, 48-54 lab

The application of the Java programming language in the business, scientific, and entertainment industries. Topics include problem analysis and project design, data and code security, group projects, and project completion and publication. Students will delve deeper into industry specific programming techniques that involve code logic, financial modelling, database interaction, encryption, graphs and trees, and interactive graphics.

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# DANC - Dance

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## **DANC 004 Dance Appreciation**

**3.0 Units**

*General Education: IGETC: Area 3A, 3B; CSU: Area C1*

*Transferable to UC/CSU*

*Hours: 48-54 lab*

Explores the development of dance in Western Europe and the United States from ancient times to the present. Explores dance as an emerging art form from the Renaissance to the 20th century. Emphasizes the contemporary dance heritage of the United States. Field Trip may be requested. (Formerly KINE 004)

## **DANC 004A**

**1.0 Unit**

### **Beginning Contemporary Modern Dance**

*General Education: SCC: Local District Requirements, \*A; CSU: Area E*

*Transferable to UC/CSU*

*Hours: 48-54 lab*

Introduction to basic contemporary modern dance techniques. This class will focus on proper contemporary modern dance alignment, terminology, center work, movement across the floor, composition and self-expression through movement. Students will study posture and alignment for dance, alignment reference points and basic postural muscles. Students will develop physical strength, flexibility, coordination, and an increase in movement memory. Students will study the basic components of fitness as they relate to dance training and basic health guidelines for nutrition and injury care and prevention. Students will explore a variety of common accompaniments for contemporary modern dance. Basic music notation will be presented in preparation for future dance composition. The history of Modern Dance is included. Interval skills exams and written exams serve to measure student achievement. (Formerly KINE 004A)

## **DANC 004B Beginning Tap Dance**

**1.0 Unit**

*General Education: SCC: Local District Requirements, \*A; CSU: Area E*

*Transferable to UC/CSU*

*Hours: 48-54 lab*

Introduction to body placement, body balance, rhythm, coordination, musicality, and a repertoire of the traditional tap (foot) techniques. This course presents lecture information on music, music analysis, understanding basic components of fitness as related to dance, nutrition and basic first aid and injury prevention. History of tap dance as an indigenous American dance form is included. Skills exams and written exams are used to evaluate student achievement. (Formerly KINE 004B)

## **DANC 004C Intermediate Tap Dance**

**1.0 Unit**

*Prerequisite\*\*:* DANC 004B

*General Education: SCC: Local District Requirements, \*A; CSU: Area E*

*Transferable to UC/CSU*

*Hours: 48-54 lab*

Explore intermediate tap dance step, patterns, combinations, and choreography. Music theory concepts as they apply to the syncopated rhythms of tap dance are included. The history of tap dance as an indigenous American dance form is discussed. Interval performance exams are used to evaluate student achievement. Written exams are used to evaluate the student's knowledge of technique, music theory, rhythmic patterns, and the historical and cultural significance of tap dance in America. Students will learn to appreciate this dance form via attendance at a dance concert or musical theater performance. (Formerly KINE 004C)

## **DANC 004D Advanced Jazz Dance**

**1.0 Unit**

*Prerequisite\*\*:* DANC 004P

*General Education: SCC: Local District Requirements, \*A; CSU: Area E*

*Transferable to UC/CSU*

*Hours: 48-54 lab*

For students who have vocational or avocational interests in dance. Course emphasis is on the skill development and analysis of intermediate-level and advanced-level techniques and patterns. Selected technique syllabi of various dance artists will be presented and studied. Jazz idioms, styles, and the historical and cultural development are included. Participation in the annual dance concert is encouraged. Interval skills exams and written exams serve to evaluate student achievement. Recommended for Kinesiology and Theatre Arts majors.

## **DANC 004E Dance Production**

**3.0 Units**

*General Education: SCC: Local District Requirements, \*A*

*Transferable to UC/CSU*

*Hours: 16-18 lecture, 96-108 lab by arrangement*

Designed for dance students interested in public performance. Experiences in student choreography are included in addition to participation in the annual college dance concert. Interval skills exams and written exams serve to evaluate student achievement. Recommended for Theatre Arts Majors. (Formerly KINE 004E)

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# DANC - Dance

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## **DANC 004F Beginning Hip-Hop Dance** **1.0 Unit**

*General Education: SCC: Local District Requirements, \*A; CSU: Area E*  
*Transferable to UC/CSU*  
*Hours: 48-54 lab*

Introduction to the fundamentals of beginning hip-hop dance style. Students will learn general patterns as well as the basics of creating their own style and routines. Information describing the history and cultural development of hip-hop as a dance form will be presented. (Formerly KINE 004F)

## **DANC 004G Dance Choreography** **2.0 Units**

*General Education: SCC: Local District Requirements, \*A*  
*Transferable to UC/CSU*  
*Hours: 16-18 lecture, 48-54 lab*

An overview of the field of choreography and a study of the elements of dance composition as related to a specific form of dance, such as Jazz, Modern, Ballet, Hip-Hop, Ballroom, and Tap, based on individual student need. Students will choreograph dance studies applying a variety of choreographic approaches and techniques. Students will participate in a class, community and/or college performance. Recommended for Kinesiology, Dance/Theatre, or related arts majors. Dance experience recommended. (Formerly KINE 004G)

## **DANC 004H Beginning Jazz Dance** **1.0 Unit**

*General Education: SCC: Local District Requirements, \*A; CSU: Area E*  
*Transferable to UC/CSU*  
*Hours: 48-54 lab*

Introduces basic jazz techniques, styles, terminology, and history. This course presents lecture information on posture for the dancer, music analysis, understanding basic components of fitness as related to dance, nutrition and injury prevention, and choreography dance notation. The course focuses on sequential development of basic jazz patterns in preparation for future dance composition. Interval skills exams and written exams serve to evaluate student achievement. (Formerly KINE 004H)

## **DANC 004J Beginning Ballroom Dance** **1.0 Unit**

*General Education: SCC: Local District Requirements, \*A; CSU: Area E*  
*Transferable to UC/CSU*  
*Hours: 48-54 lab*

Introduction to the basic skills and techniques of ballroom dance. This course will also provide a short history, demonstration, and instruction of popular ballroom dances. Following good practice of exercise in dance execution, the students benefit from the activity and the cultural experiences. Dances selected from the following: Cha-Cha, Rumba, Nightclub Two-Step, East & West Coast Swing, Lindy-Hop, Salsa, Tango, Waltz, Samba, Rumba and Merengue. Attention on proper techniques in both lead and follow dance positions, including proper form, footwork, alignment, and correct posture. Music is varied to broaden the experience with different tempo and styles. No prior experience in dance required; partner not required. (Formerly KINE 004J)

## **DANC 004K Beginning Ballet** **1.0 Unit**

*General Education: SCC: Local District Requirements, \*A; CSU: Area E*  
*Transferable to UC/CSU*  
*Hours: 48-54 lab*

An introduction to beginning classical ballet dance forms, positions, body alignment, patterns, and barre work. The lesson is conducted with the associated French terminology for all movements and steps. The history of ballet is presented and significant choreographers and ballets are discussed. Students will study proper dance posture, the muscular system as it relates to ballet movement and proper nutritional guidelines for the dancer. Basic first aid and injury prevention and treatment for self-care injuries will also be included in lectures. Performance exams and written exams are given to evaluate student achievement. Students will be required to submit a term project on the history of Ballet. (Formerly KINE 004K)

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# DANC - Dance

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## **DANC 004M Intermediate Ballet**

**1.0 Unit**

*Prerequisite\*\*:* DANC 004K

*General Education: SCC: Local District Requirements, \*A; CSU: Area E Transferable to UC/CSU*

*Hours: 48-54 lab*

Exposes students to intermediate ballet skills and will expand technical development for artistic growth. Emphasis is on style and the aspects of interpretation of movement needed for development of the classical dancer. Skills exams and written exams are given to evaluate student achievement leading to studio recital or performance. (Formerly KINE 004M)

## **DANC 004N Beginning Swing Dance**

**1.0 Unit**

*General Education: SCC: Local District Requirements, \*A;*

*CSU: Area C1, E*

*Transferable to UC/CSU*

*Hours: 48-54 lab*

An introductory experience of the popular American social dances known as "Swing" and an exploration of the cultural scene that created them. The course surveys historical dance varieties and East Coast/West Coast regional differences as well as the latest trends and styles. Instruction, history, and open dancing will be included in class. Attention is paid to proper technique in both lead and follow dance positions, footwork alignment and posture. (Formerly KINE 004N)

## **DANC 004P Intermediate Jazz Dance**

**1.0 Unit**

*Prerequisite\*\*:* DANC 004H

*General Education: SCC: Local District Requirements, \*A; CSU: Area E Transferable to UC/CSU*

*Hours: 48-54 lab*

Intermediate-level jazz techniques, styles, and terminology. Students will gain increased knowledge of dance posture and of the muscular functions of the major muscles that affect basic dance movements. Intermediate musical analysis will include 8 count phrasing. The course focuses on sequential development of intermediate jazz dance patterns in preparation for dance composition. Interval skills exams and written exams serve to evaluate student achievement. (Formerly KINE 004P)

## **DANC 004S Intermediate Swing Dance**

**1.0 Unit**

*Prerequisite\*\*:* DANC 004N

*General Education: SCC: Local District Requirements, \*A; CSU: Area E Transferable to UC/CSU*

*Hours: 48-54 lab*

Gain a higher level of understanding of terminology, music, and history of swing dance and improve their technique around steps, lifts, patterns, and rhythms. A partner is not required. (Formerly KINE 004S)

## **DANC 004T Intermediate Ballroom Dance**

**1.0 Unit**

*Prerequisite\*\*:* DANC 004J

*General Education: SCC: Local District Requirements, \*A; CSU: Area E Transferable to UC/CSU*

*Hours: 48-54 lab*

Intermediate techniques and styles of ballroom dance. Students will gain improved rhythm, skills, and an increased knowledge of patterns and variations of popular ballroom dances: American Style Waltz, Tango, Cha-Cha, Nightclub Two-Step, Rumba, East Coast Swing, West Coast Swing, Salsa, and Merengue. Increased attention on proper techniques in both lead and follow dance positions including proper form, footwork, alignment, and correct posture. Music is varied to broaden the experience with different tempo and styles. (Formerly KINE 004T)

# DRFT - Drafting

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## **DRFT 045**

**4.0 Units**

### **Introduction to Computer-Aided Drafting (CAD)**

*Transferable to UC/CSU*

*Hours: 48-54 lecture, 48-54 lab*

Introduces the drafting student to CAD (AutoCAD) technology and terminology. The student shall complete a series of related drawing problems using a CAD work station. Fundamentals of creating and modifying engineering and architectural related drawings. This course also introduces students to blocks and advanced layering concepts.

## **DRFT 055 Mechanical Drafting - Level I**

**3.0 Units**

*Prerequisite\*\*:* DRFT 058 or DRFT 151 (which student may enroll concurrently) and DRFT 045

*Transferable to CSU*

*Hours: 32-36 lecture, 48-54 lab*

Techniques and standards of mechanical drafting. Main topics include orthographic drawings, sections, pictorials, threads, fasteners, basic tolerance concepts, ANSI standards and working drawings. Basic mechanical design principles, with a special emphasis on electro-mechanical packaging, are introduced.

## **DRFT 058 Solid Modeling with Solidworks**

**3.0 Units**

*Course Advisory:* knowledge of drafting concepts

*Transferable to CSU*

*Hours: 32-36 lecture, 48-54 lab*

Teaches the basic concepts and skills necessary to create, view, and manipulate objects and engineering drawings in three dimensional space using Solidworks software. Student will create models in 3D printer, output support documentation and drawings, and incorporate design process concepts in designs.

## **DRFT 060 Architectural Drafting I**

**3.0 Units**

*Prerequisite\*\*:* DRFT 045

*Transferable to CSU*

*Hours: 32-36 lecture, 48-54 lab*

Basic methods and practices of architectural drafting and design. Students will design a complete set of plans for a single family dwelling in accordance with local building regulations. Course includes an introduction to the Title 24 energy requirements and standards. Recommended for non-majors and drafting majors.

## **DRFT 075 Electronic Drafting**

**3.0 Units**

*Prerequisite\*\*:* DRFT 045

*Transferable to CSU*

*Hours: 32-36 lecture, 48-54 lab*

Designed for drafters to develop skill in reading and drawing plans related to electronics. Topics include terminology, component identification, schematic symbols, cable drawings, electro-mechanical design from the electronic perspective. Special emphasis is placed on basic printed circuit board design. Students will design through-hole and surface mount printed circuit boards.

## **DRFT 079 Blueprint Reading**

**3.0 Units**

*Transferable to CSU*

*Hours: 40-45 lecture, 24-27 lab*

Provides an understanding and interpretation of a variety of blueprints. Emphasizes the ability to recognize and identify features of mechanical blueprints and architectural blueprints. Also includes basic development of freehand sketching abilities.

## **DRFT 080 Civil Drafting I**

**3.0 Units**

*Prerequisite\*\*:* DRFT 045

*Course Advisory:* IT 151 with a minimum grade of C

*Transferable to CSU*

*Hours: 32-36 lecture, 48-54 lab*

An introduction to civil drawing with emphasis on land division, breakdown of survey notes, office procedures and related math computations. Includes instruction in a variety of industry standard maps, including subdivision maps, assessors parcel maps and topographic maps.

## **DRFT 140 Surveying**

**3.0 Units**

*Prerequisite\*\*:* DRFT 080

*Course Advisory:* IT 151 with a minimum grade of C

*Hours: 32-36 lecture, 48-54 lab*

Presents the principles and practices of surveying. Topics include measurement of directions, distances and elevations. Students will learn the use and care of electronic survey equipment, transits, tapes and levels and be introduced to topics that include transverse calculations, horizontal and vertical curves, measuring standards and mapping.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# DRFT - Drafting

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## **DRFT 145 AutoCAD Basics**

**1.0 Unit**

*Hours: 16-18 lecture, 8-9 lab*

Introduction to AutoCAD (ACAD) software including basic draw and edit commands, file standards, and file printing. Other commands covered include basic layering tools and manager, drawing scales, entity properties and printing. A basic course for anyone wanting to complete simple drawings for work or 2D applications such as a laser cutter. The course is also beneficial to individuals that are required to make minor edits to engineering drawings.

## **DRFT 151 3D Modeling with Fusion 360**

**1.5 Units**

*Hours: 16-18 lecture, 24-27 lab*

Covers the use of Fusion 360's 3-Dimensional modeling and editing capabilities. Students will learn to develop 3D objects and assemblies through sketching, modeling and editing tools, before creating drawings and outputting models for 3D printing. This course is especially designed for students interested in Maker Technology. Fusion 360 is a web based program that is free to students and home based inventors. Companies who use Fusion 360 purchase licenses.

## **DRFT 161**

**3.0 Units**

### **Introduction to REVIT Architectural Software**

*Course Advisory: DRFT 060*

*Course Advisory: Understand architectural concepts and terminology as it relates to a single story house*

*Hours: 32-36 lecture, 48-54 lab*

Introduction to REVIT architectural software, basic commands and software workflow. Students will learn to design architectural structures in 3-Dimensions. Students will create building models using 3D design concepts, incorporate schedules, details and sections, add dimensions and produce working drawings and documentation.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

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# ECON - Economics

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## **ECON 001**

**3.0 Units**

### **Principles of Economics (Macroeconomics)**

*Prerequisite\*\*:* MATH 330 or recommendation based on a Multiple Measures Evaluation

*General Education:* SCC: Area B2; IGETC: Area 4; CSU: Area D

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

An introductory course focusing on aggregate economic analysis. Topics include: market systems, aggregate measures of economic activity, macroeconomic equilibrium, money and financial institutions, monetary and fiscal policy, international economics, and economic growth. Online work may be required. (C-ID ECON 202)

## **ECON 002**

**3.0 Units**

### **Principles of Economics (Microeconomics)**

*Prerequisite\*\*:* MATH 330 or recommendation based on a Multiple Measures Evaluation

*General Education:* SCC: Area B2; IGETC: Area 4; CSU: Area D

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

An introductory course focusing on choices of individual economic decision-makers. Topics include scarcity, specialization and trade, market equilibrium, elasticity, production and cost theory, market structures, factor markets, and market failure. Online work may be required. (C-ID ECON 201)

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# EDUC - Education

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## **EDUC 001 Elementary Teacher Education**

**2.0 Units**

*Corequisite: One unit of OCED 090*

*Course Advisory: ENGL 001 with a minimum grade of C*

*Transferable to UC/CSU*

*Hours: 32-36 lecture*

Introduction to careers in elementary teacher education. Students will study education from historical, philosophical, and ethical perspectives in K-12. Students will examine pedagogy; California content standards and frameworks; professional performance standards for elementary education; and approaches to teaching diverse learners in contemporary and complex learning environments. Concurrent enrollment in a one-unit OCED 090 class required, with 60 hours fieldwork in an approved elementary education setting.

*(EDUC 001 + OCED 090 = C-ID EDUC 200)*

## **EDUC 050 Introduction to Education**

**3.0 Units**

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

Survey of American education as a social institution. The course is designed for, but not limited to, students who are considering entering the teaching profession.

# EMT - Emergency Medical Technician

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## EMT 112

7.0 Units

### Emergency Medical Technician (Basic)

*Prerequisite\*\**: EMT 128

*Hours*: 80-90 lecture, 96-108 lab

Based on state Emergency Medical Services Association regulations, the goal of the EMT (Basic) course is to acquire essential assessment and treatment skills for the delivery of prompt, efficient and safe pre-hospital emergency patient care. Application of these emergency care skills can minimize the risk of permanent disability to an individual. The course has lecture/discussion sessions and skills practice time. Students will attend a combined minimum of twenty-four (24) hours of observation time with an emergency department and an ambulance service. This clinical experience must include a minimum of ten (10) documented patient contacts wherein a patient assessment and other EMT skills are performed. Students successfully completing the course are eligible to take the National Registry Emergency Medical Technician (Basic) Exam as required by the state of California for certification. Certification enables students to qualify for employment with ambulance services, fire or rescue services, search and rescue crews, ski patrol or related pre-hospital emergency care positions. NOTE: By law, applicants for certification must be at least 18 years of age. Students must present current Basic Life Support for Healthcare Providers course completion card at the mandatory information session in order to enroll in the course. Can be repeated every 2 years.

## EMT 128 Emergency Medical Responder

3.0 Units

*Hours*: 40-45 lecture, 24-27 lab

Provides the student with the basic emergency care procedures for sick and injured victims as a first responder including but not limited to: cuts, abrasions, broken bones, trauma injuries, burns and respiratory/cardiovascular emergencies.

## EMT 213

1.0 Unit

### Emergency Medical Technician (Basic) Refresher

*Prerequisite\*\**: A minimum grade of D in EMT 112 or previous EMT 213

*Hours*: 13.5-15.17 lecture, 13.5-15.17 lab

A review and update of EMT 112 course content and focuses on hands-on practice of all pre-hospital emergency skills, meeting the education requirements for EMT renewal. Topics and skills include: legal issues (including HIPAA), trauma, triage, use of airway/ventilation equipment with CPR, automated external defibrillation (AED), patient exam (medical & trauma), assessments and treatments for breathing, cardiovascular, neurologic, musculoskeletal, soft tissue injury, childbirth and environmental emergencies. Students apply assessments and treatments during pre-planned patient care skills scenarios to meet EMSA requirements for skills verification. May repeat every 1-2 years, *ad infinitum* (as stipulated by EMSA regulations for EMT I refresher and renewal).

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# ENGL - English

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## **ENGL 001 College Composition**

**4.0 Units**

*Corequisite: LR 010*

*Prerequisite\*\*:* Multiple measure criteria based on the recommendation of the English department; or a minimum grade of C+ in AP English; or a minimum score of 90 on the sentence skills section of the assessment test; or a minimum SAT verbal score of 500; or a minimum ACT score of 23; or a grade of Pass in ENGL 370 or 348E or 380 or 348G; or a minimum grade of B in English 360; or concurrent enrollment in English 310D or ESL 094 with a minimum grade of B

*General Education: SCC: Area D; IGETC: Area 1A; CSU: Area A2*

*Transferable to UC/CSU*

*Hours: 64-72 lecture*

A writing course which emphasizes critical reading, expository and argumentative writing, and mastery of library research techniques. It includes instruction and practice in critical thinking, in analytical reading and evaluation of written work, and in the methods of clearly communicating and supporting ideas in organized, coherent essays (min 750 words each). Students are required to write an average of 7500 formal words, including a research paper, based on essays, literature read in class, personal experience, and college-level research. (C-ID ENGL 100)

## **ENGL 002**

**4.0 Units**

### **Critical Thinking and Writing About Literature**

*Prerequisite\*\*:* ENGL 001

*General Education: SCC: Area C; IGETC: Area 1B; CSU: Area A3*

*Transferable to UC/CSU*

*Hours: 64-72 lecture*

The development of critical thinking, reading, and writing skills as they apply to the analysis of fiction, poetry and drama, literary criticism, and related non-fiction from diverse cultural sources and perspectives. Emphasis is on the techniques and principles of effective written argument as they apply to literature. (C-ID ENGL 110)(C-ID ENGL 120)

## **ENGL 004**

**4.0 Units**

### **Critical Thinking and Composition: Language in Context**

*Prerequisite\*\*:* ENGL 001

*General Education: SCC: Area D; IGETC: Area 1B; CSU: Area A3*

*Transferable to UC/CSU*

*Hours: 64-72 lecture*

A study of the process of thought and its representation in writing, focusing on the formation of responsible opinions and their presentation in written argument. This course offers practice in the intellectual skills necessary for critical thinking, including observation, analysis, and research; it provides instruction in the organization, arrangement, and stylistic presentation of informative and argumentative writing; it examines the informative and argumentative writing of others and requires students to write their own analytical and argumentative essays. (C-ID ENGL 105)

## **ENGL 006 Creative Writing I**

**3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education: CSU: Area C2*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

An introductory study of creative writing techniques in multiple genres. Students develop self-expression through writing and through individual and class criticism of student work. (C-ID ENGL 200)

## **ENGL 007 Creative Writing II**

**3.0 Units**

*Prerequisite\*\*:* ENGL 006

*General Education: CSU: Area C2*

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

An intermediate study of creative writing techniques. Students refine skills of self-expression through individual and class criticism of student work. Frequent writing and intense individual and class criticism of student work are requirements.

## **ENGL 010 Creative Writing III**

**3.0 Units**

*Prerequisite\*\*:* ENGL 007

*Transferable to UC/CSU*

*Hours: 48-54 lecture*

An advanced study of creative writing skills. Students will be expected to show proficiency in at least one genre (poetry, short story, drama, and novel). Frequent writing, intense individual and class criticism, and the compilation of an individual portfolio of genre-specific creative work are requirements.

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# ENGL - English

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## **ENGL 018 Introduction to Mythology 3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education:* SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A survey of the major elements of mythology, its history and development as part of the human experience with a central focus on Western mythology, its origins and development as well as its appearance in and influence on literature.

## **ENGL 021 Introduction to Poetry 3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education:* SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A study of poetry as a form of literature and art. This course examines the elements of poetry, the historical development of the genre, and the major themes treated by poetry.

## **ENGL 023 Introduction to the Modern Novel 3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education:* SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A study of selected novels written during the 20th Century, including the development of the modern novel as a form of literature and the specific techniques and themes employed by novelists.

## **ENGL 024 Introduction to the Short Story 3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education:* SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A study of the short story as a form of literature, examining the historical development of the short story, the literary elements of the genre, and the major themes treated by the short story.

## **ENGL 030 Survey of American Literature I 3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education:* SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A survey of literature written in the United States from the time of early settlement to the end of the Civil War. Through focus on significant works of diverse writers, attention is given to major literary movements and to understanding, comparing, and contrasting the diverse political, religious, social, and cultural elements of literature in the United States. (C-ID ENGL 130)

## **ENGL 031 Survey of American Literature II 3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education:* SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A survey of literature written in the United States from the end of the Civil War to the present. Through focus on significant works of diverse writers, attention is given to significant literary movements and to understanding, comparing and contrasting the diverse political, religious, social and cultural elements of literature in the United States. (C-ID ENGL 135)

## **ENGL 036 Multi-Ethnic Literature in America 3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education:* SCC: Area E; IGETC: Area 3B, SCC Cross-Cultural;

*CSU: Area C2, SCC Cross-Cultural*

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A study of representative literature by various American multicultural writers: Asian American, African American, European American, Latina/o, and Native American.

## **ENGL 040 Survey of English Literature I 3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education:* SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A study of major works of British authors from the Anglo-Saxon period through the Eighteenth Century, in poetry, prose, and drama. The course focuses on the development of a literature in English and explores how this literature responds to and shapes its historical and cultural context. It introduces students to the use of critical theory in the analysis of literature. (C-ID ENGL 160)

## **ENGL 041 Survey of English Literature II 3.0 Units**

*Prerequisite\*\*:* ENGL 001

*General Education:* SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A study of major works in poetry, prose, and drama from approximately 1798 to the present. The course focuses on the Romantic Movement, the Victorian Age, early 20th Century, modernism, postwar literature, post-colonial literature, and late 20th Century post-modernism. It examines the shifting relationship between literature and its historical and cultural contexts. It introduces students to questions of canon formation and the use of critical theory in the analysis of literature. (C-ID ENGL 165)

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*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# ENGL - English

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## **ENGL 044 Introduction to Shakespeare 3.0 Units**

*Prerequisite\*\**: ENGL 001

*General Education*: SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Hours*: 48-54 lecture

An introduction to Shakespearean drama and poetry through a study of representative comedies, histories, tragedies, and sonnets. Students will be concerned with dramatic and poetic principles as well as with an understanding of the historical context into which Shakespearean drama fits.

## **ENGL 049 English Honors 1.0 to 3.0 Units**

*Prerequisite\*\**: Completion of 24.0 units of college credit with a minimum GPA of 3.3; a minimum of 5.0 units in the discipline with a minimum grade of B; an ability to work independently; permission of the School Dean based on instructor availability

*Transferable to CSU*

*Hours*: 48-162 lab by arrangement

An independent study project which generally results in a critical examination of literature of significant creative and/or analytical writing. Students may take this course up to the maximum number of units over multiple semesters. Three to nine hours by arrangement with instructor and School Dean.

## **ENGL 058 3.0 Units**

### **Creative Writing: The Literary Magazine I**

*Prerequisite\*\**: ENGL 001

*General Education*: SCC: Area C; CSU: Area C2

*Transferable to CSU*

*Hours*: 48-54 lecture

A study of the contemporary American literary magazine and the practice of producing its own literary magazine, *The Suisun Valley Review*: requesting submissions, reviewing them, selecting material, arranging contents and determining the format. Students may write creatively and make their work available for class commentary, as well as for possible inclusion in the magazine.

## **ENGL 059 3.0 Units**

### **Creative Writing: The Literary Magazine II**

*Prerequisite\*\**: ENGL 058.

*Transferable to CSU*

*Hours*: 48-54 lecture.

An advanced study of the contemporary American literary magazine and the practice of publishing its own literary magazine, *The Suisun Valley Review*, where the student is expected to assume a lead editorial role. Students may write creatively and make their work available for class commentary, as well as for possible inclusion in the magazine.

## **ENGL 062 Analytical Reading 3.0 Units**

*Prerequisite\*\**: Eligibility for ENGL 370

*Course Advisory*: ENGL 353

*Transferable to CSU*

*Hours*: 48-54 lecture

A college-level reading course designed to improve and enhance the student's ability to understand inferential reading passages. Emphasis is on the development of critical reading skills, including the ability to understand the author's point of view and to engage in textual analysis. In addition, the student should develop the ability to successfully critique college-level reading material by analyzing a variety of prose structures.

## **ENGL 310 Writing Skills Lab 0.5 to 1.5 Units**

*Hours*: 16-54 lab by arrangement

Upon registration, each student's writing sample will be used to identify his/her individual writing problems, and an individualized program will be designed to provide instruction in those problem areas. Credit will be earned upon successful completion and mastery of the student's course of study and an appropriate number of hours as specified in each student's contract. Students may take this course up to the maximum number of units over multiple semesters. This is an Open Entry/Open Exit, Pass/No Pass only course.

## **ENGL 310A 1.5 Units**

### **Introductory Reading and Writing Skills**

*Hours*: 32-36 lab, 40-45 lab by arrangement

Intensive instruction in developmental language processing skills, reading and writing skills, and general college survival skills. Success in this lab will be based on attendance, satisfactory completion of in-class reading and writing assignments. This is a Pass/No Pass only course.

## **ENGL 310D Advanced English Skills Lab 1.0 Unit**

*Corequisite*: ENGL 001

*Hours*: 48-54 lab.

Intensive instruction in advanced reading and writing skills for students who are currently taking ENGL 001 or other transfer-level content courses. This class is designed to help students further hone their craft as writers and readers. Success in this lab will be based on attendance and satisfactory completion of in-class reading and writing assignments. This is a pass/no pass course.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# ENGL - English

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## **ENGL 360 Focused English Fundamentals 5.0 Units**

*Prerequisite\*\*:* A score of 0-89 on the sentence skills section of the assessment test; OR recommendation of a counselor or English instructor based on a Multiple Measures Evaluation (decided upon by the English department)

*Hours:* 80-90 lecture

An intensive English course which gives students the tools to read and write the sort of sophisticated texts required of them in transfer level courses.

## **ENGL 400 5.0 Units**

### **Advanced Technical Writing: Writing in the Scientific Professions**

*Prerequisite\*\*:* Admission into the Biomanufacturing Baccalaureate degree program. ENGL 001

Advanced study in technical writing with a focus on writing for the sciences, including memos, forms, resumés, proposals, formal and informal reports, and peer review strategies. Emphasis is on understanding the differences between academic and technical writing, including techniques for organizing, evaluating, and presenting information in the objective style required in modern technical communications, as well as current trends in technology and scientific discourse. Instruction includes writing as a process, from researching a problem to organizing and drafting a document, to testing, revising and editing that document. Students will learn to employ rhetorical strategies for effective visual and document design as well as how to address ethical, cultural, and political issues related to writing in the sciences. Currency in scientific writing and electronic publishing, including peer review, will also be emphasized. This course trains scientists to become more effective, efficient, and confident writers.

# ENGR - Engineering

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## **ENGR 001 Introduction to Engineering**

**2.0 Units**

*Course Advisory: ENGL 001 with a minimum grade of C*  
*Transferable to UC/CSU*  
*Hours: 16-18 lecture*

A first, non-technical course for engineering students and students considering majoring in engineering. Introduction to different engineering fields, the campus life of engineering students, schedule guidelines, opportunities in engineering, engineers' roles in society, ethics in engineering, and strategies and approaches required to survive math, science, and engineering courses. Develops communication skills pertinent to the engineering profession. Possible field trips. (C-ID ENGR 110)

## **ENGR 003**

**3.0 Units**

### **Introduction to Ethics in Engineering**

*General Education: IGETC: Area 3B*

*Transferable to UC/CSU*

*Hours: 16-18 lecture*

Development of techniques of moral analysis and their application to ethical problems encountered by engineers, such as professional employee rights and whistle blowing; environmental issues; ethical aspects of safety, risk and liability; conflicts of interest. Emphasis on developing the capacity for independent ethical analysis of real and hypothetical cases.

## **ENGR 014 Introduction to Statistical**

**4.0 Units**

### **Programming in R for Scientists and Engineers**

*Course Advisory: A minimum grade of C in MATH 011 (may enroll concurrently) and A minimum grade of C in CIS 001*

*Hours: 48-54 lecture, 48-54 lab*

Advances in computing power have enabled scientists to amass huge amounts of data on everything from genetics to climate science, but there is a need for someone to make sense of this data. In this class we will learn how to perform basic statistical analysis such as writing data frames, creating functions, using variables, statements, and loops and employing statistical concepts such as exploratory data analysis, probabilities, hypothesis tests, regression modeling and data visualization, using the statistical software R.

## **ENGR 017**

**5.0 Units**

### **Introduction to Electrical Engineering**

*Prerequisite\*\*:* MATH 023 (may enroll concurrently) and PHYS 007

*Transferable to UC/CSU*

*Hours: 64-72 lecture, 48-54 lab*

A study of basic DC circuit analysis techniques including Kirchhoff's laws, mesh-currents, node-voltages, Thevenin and Norton equivalent circuits, transient and steady-state response of AC passive circuits, power calculations, active circuit elements including operational amplifiers and semiconductor devices. Construction and measurement of electrical circuits using multimeters, oscilloscopes, power supplies, and function generators. Introduction to circuit simulation software.

## **ENGR 026**

**4.0 Units**

### **Mathematics and Engineering Problem Solving Using Matlab**

*Prerequisite\*\*:* MATH 021 (may enroll concurrently)

*Transferable to UC/CSU*

*Hours: 48-54 lecture, 48-54 lab*

Covers methodologies for solving mathematics and engineering problems. Students will learn to perform mathematics and engineering computation and visualization using the MATLAB language. Students will write a variety of programs in the MATLAB language. Same as MATH 026. (C-ID ENGR 220)

## **ENGR 030 Engineering Mechanics: Statics**

**4.0 Units**

*Prerequisite\*\*:* MATH 021 and PHYS 006

*General Education: SCC: Area A; IGETC: Area 5A*

*Transferable to UC/CSU*

*Hours: 64-72 lecture*

A study of the principles of statics of particles and rigid bodies as applied to equilibrium problems of two and three-dimensional structures, and the principles of friction, virtual work, and stability of equilibrium. (C-ID ENGR 130)

## **ENGR 045 Properties of Materials**

**4.0 Units**

*Prerequisite\*\*:* PHYS 006 and CHEM 001

*General Education: IGETC: Area 5A, 5C; CSU: Area B1, B3*

*Transferable to UC/CSU*

*Hours: 48-54 lecture, 48-54 lab*

Covers the application of basic principles of physics and chemistry to the structure and properties of engineering materials. Special emphasis is devoted to the relationship between microstructure and the mechanical properties of metals, polymers and ceramics, and the electrical, magnetic, and optical properties of materials. Possible field trips. (C-ID ENGR 140 B)

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*



# ESL - English as a Second Language

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## ESL 074

6.0 Units

### Intermediate Integrated ESL Skills

*Course Advisory\*\*:* ESL 334 or recommendation to "level 2" according to the ESL guided placement process

*Transferable to CSU*

*Hours: 96-108 lecture*

Brings together reading, composition, and grammar skills for intermediate-level ESL students. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph-length compositions, and develop control of a range of sentence structures and verb forms. Not available to students who have completed both ESL 078 and ESL 079. Not available to students who have completed ESL 074A and/or ESL 074B.

## ESL 074A

3.0 Units

### Intermediate Integrated ESL Skills: Part 1

*Prerequisite\*\*:* ESL 372 and ESL 374; or ESL 334; or ESL 334B; or LOEP

*Score: 2/3 scores in the range of 50 - 85*

*Transferable to CSU*

*Hours: 48-54 lecture*

The first half of a two-part intermediate integrated skills course which brings together reading, composition, and grammar skills for intermediate-level ESL students. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph-length compositions, and develop control of a range of sentence structures and verb forms. Not available to students who have completed ESL 074. Not available to students who have completed both ESL 078 and 079.

## ESL 074B

3.0 Units

### Intermediate Integrated ESL Skills Part 2

*Prerequisite\*\*:* ESL 372 and ESL 374; or ESL 334; or ESL 334B; or LOEP

*Score: 2/3 scores 50-85; or instructor approval*

*Course Advisory:* ESL 074A with a minimum grade of C.

*Transferable to CSU*

*Hours: 48-54 lecture*

The second half of a two-part intermediate integrated skills course which brings together reading, composition, and grammar skills for intermediate-level ESL students. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph-length compositions, and develop control of a range of sentence structures and verb forms. Not available to students who have completed ESL 074. Not available to students who have completed ESL 078 and ESL 079.

## ESL 077 Conversation/Pronunciation Skills 3.0 Units

*Corequisite:* ESL 077L

*Course Advisory:* ESL 373 or recommendation to "level 2" according to the ESL guided placement process

*Transferable to CSU*

*Hours: 48-54 lecture*

Offers practice in acquiring patterns of American English grammar and pronunciation for the purpose of conversing clearly and completely. Includes practice in critically evaluating semantic and syntactic contrasts among various languages represented by students.

## ESL 077L ESL 077 Lab

0.5 Units

*Corequisite:* ESL 077

*Course Advisory:* Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions.

*Transferable to CSU*

*Hours: 24-27 lab*

Structured listening comprehension and pronunciation practice, basic grammar practice, and elementary word processing practice for students new to the English language who wish to improve their ability to speak and understand clearly. Instruction is individualized. Materials for the lab may be purchased in the bookstore. This is an Open Entry/Open Exit, Pass/No Pass only course.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# ESL - English as a Second Language

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## **ESL 094 Advanced ESL Integrated Skills 6.0 Units**

*Course Advisory: ESL 074 or recommendation to "level 3" according to the ESL guided placement process*

*Hours: 96-108 lecture*

Brings together the reading, composition, and grammar skills offered in the advanced, discrete-skills courses ESL 055, ESL 006, and ESL 087. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph- and essay-length compositions, and practice the grammatical structures necessary to performing a variety of rhetorical tasks. Prepares ESL students for the reading and writing demands of 300-level English courses.

## **ESL 094A 3.0 Units**

### **Advanced ESL Integrated Skills Part 1**

*Prerequisite\*\*:* ESL 078, ESL 079, ESL 074, ESL 074B, or LEOP scores: at least 2/3 scores over 85, or instructor approval

*Transferable to CSU*

*Hours: 48-54 lecture*

The first half of a two-semester advanced integrated skills course, bringing together the reading, composition, and grammar skills to prepare non-native English speakers for the reading and writing demands of 300-level English courses. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph- and essay-length compositions, and practice the grammatical structures necessary to performing a variety of rhetorical tasks. Not available to students who have already taken ESL 094. Not available to students who have already taken ESL 055 and ESL 006.

## **ESL 094B 3.0 Units**

### **Advanced ESL Integrated Skills Part 2**

*Prerequisite\*\*:* ESL 074 or both ESL 078 and ESL 079, or both ESL 074A and ESL 074B, or LEOP scores: 2/3 above 85, or instructor approval

*Course Advisory: ESL 094A with a minimum grade of C*

*Transferable to CSU*

*Hours: 48-54 lecture*

The second half of a two-semester advanced integrated skills course, bringing together the reading, composition, and grammar skills to prepare non-native English speakers for the reading and writing demands of 300-level English courses. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph- and essay-length compositions, and practice the grammatical structures necessary to performing a variety of rhetorical tasks. Not available to students who have already completed ESL 094. Not available to students who have already taken ESL 055 and ESL 006.

## **ESL 330 ESL Lab 0.5 to 1.5 Units**

*Course Advisory: Familiarity with basic reading and writing skills: English alphabet letter names, numbers, and ability to follow directions*

*Hours: 24-81 lab*

Provides structured listening comprehension and pronunciation practice, basic grammar practice, and elementary word processing practice for students new to the English language who wish to improve their own ability to speak and understand clearly. Students may take this course up to the maximum number of units over multiple semesters. This is an Open Entry/Open Exit, Pass/No Pass only course.

## **ESL 334 6.0 Units**

### **Introductory Integrated ESL Skills: Reading, Writing, and Grammar**

*Course Advisory: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions, and ESL recommendation for "Level 1" according to the ESL guided placement process.*

*Hours: 96-108 lecture.*

Introduces reading, writing, and grammar skills for low-intermediate-level ESL students. Students will study vocabulary and comprehension strategies, read for fluency, compose paragraphs, and develop familiarity with basic English sentence patterns and verb forms. Not available to students who have completed ESL 334A or 334B.

## **ESL 334A 3.0 Units**

### **Introductory Integrated ESL Skills: Reading, Writing, and Grammar Part 1**

*Prerequisite\*\*:* LOEP Assessment test score up to 30.

*Hours: 48-54 lecture.*

The first half of a two-semester introductory integrated skills course, introducing the reading, writing and grammar skills for low-intermediate level non-native English speakers. Students will study vocabulary and comprehension strategies, compose paragraphs and develop familiarity with basic English sentence patterns and verb forms. Not available to students who have completed ESL 334.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# ESL - English as a Second Language

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## **ESL 334B**

**3.0 Units**

### **Introductory Integrated ESL Skills: Reading, Writing, and Grammar Part 2**

*Prerequisite\*\**: LOEP Assessment test scores up to 30.  
*Course Advisory*: ESL 334A with a minimum grade of C.  
*Hours*: 48-54 lecture

The second half of a two-semester introductory integrated skills course, introducing the reading, writing and grammar skills for low-intermediate level non-native English speakers. Students will study vocabulary and comprehension strategies, compose paragraphs and develop familiarity with basic English sentence patterns and verb forms. Not available to students who have completed ESL 334.

## **ESL 373 ESL Basic Oral Communication Skills 3.0 Units**

*Corequisite*: ESL 373L

*Course Advisory*: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions and recommendation to "level 1" according to the ESL guided placement process

*Hours*: 48-54 lecture

For students still developing fluency in spoken English, this course offers practice in mastering the patterns of spoken American English through study of the English sound system (pronunciation), conversation strategies, related grammar, writing, and spelling at a high-beginning level of proficiency with oral communication and listening as the focus.

## **ESL 373L ESL 373 Lab**

**0.5 Unit**

*Corequisite*: ESL 373

*Hours*: 24-27 lab

Provides structured listening comprehension and pronunciation practice, basic grammar practice, note taking practice and elementary word processing practice for students new to the English language who wish to improve their ability to speak and understand clearly. Instruction is individualized. Materials for the Lab may be purchased in the Solano College Bookstore.

## **ESL 374 Fundamentals of ESL Grammar 3.0 Units**

*Course Advisory*: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions and  
*ESL Assessment Test Score*: Level 3

*Hours*: 48-54 lecture

Increase fluency and comprehension in speaking, listening, reading and writing English through the careful, guided study of grammar: Present, future and past verb tenses, singular and plural nouns, constructing simple sentences, special verbs and patterns, idioms to facilitate communication, spelling and study skills for learning a language.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

## **ESL 534**

**0.0 Units**

### **Introductory Integrated ESL Skills: Reading, Writing, and Grammar**

*Course Advisory*: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions, and intake assessment results indicating readiness

*Hours*: 96-108 lecture

Introduction to reading, writing, and grammar skills for low-intermediate-level ESL students. Students will study vocabulary and comprehension strategies, read for fluency, compose paragraphs, and develop familiarity with basic English sentence patterns and verb forms.

## **ESL 534A**

**0.0 Unit**

### **Introductory Integrated ESL Skills: Reading, Writing and Grammar Part 1**

*Course Advisory*: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions, and  
*ESL test score for "Level 1."*

*Hours*: 48-54 lecture

The first half of a non-credit, two-semester introductory integrated skills course. This course introduces reading, writing and grammar skills for low-intermediate level English learners. Students will study vocabulary and comprehension strategies, compose paragraphs and develop familiarity with basic English sentence patterns and verb forms.

## **ESL 573 Oral Communication Skills**

**0.0 Units**

*Hours*: 48-54 lecture

For students developing fluency in spoken English, this course offers practice in mastering the patterns of spoken American English through study of the English sound system (pronunciation); conversation strategies; and related grammar, writing, and spelling at a high-beginning level of proficiency with oral communication and listening as the focus.

# FIRE - Fire Technology

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## **FIRE 050 Principles of Emergency Services 3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

An overview of fire protection; career opportunities in the fire service and related fields; history of fire service and fire protection; fire organization and management; function of public and private protection services; fire departments as part of local government; fire prevention and investigation; building construction; specific fire protection functions; fire and emergency service apparatus and facilities; and introduction to fire protection systems. This is a Fire Technology core course and must be completed with a minimum grade of C in order to receive an Associate Degree or Certificate of Achievement in Fire Technology.

## **FIRE 051 Fire Behavior & Combustion 3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

Provides the student with fundamental information and knowledge of the physical and chemical characteristics of matter, fire, hazardous materials, weapons of mass destruction identification and basic extinguishment theory. This is a Fire Technology core course and must be completed with a minimum grade of C in order to receive an Associate Degree or Certificate of Achievement in Fire Technology. *Field trip may be required.*

## **FIRE 053 Fire Prevention Applications 3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

Fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau. It will also discuss the use of fire codes, identification and correction of fire hazards, and the relationship of fire prevention to fire safety education and detection and suppression systems. This is a Fire Technology core course and must be completed with a minimum grade of C in order to receive an Associate Degree or Certificate of Achievement in Fire Technology.

## **FIRE 054 Fire Protection Systems 3.0 Units**

*Transferable to CSU*

*Hours: 48-54 lecture*

Provides information relating to the features of design and operation of fire detection and alarm systems and heat and smoke control systems. It will discuss special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers. This is a Fire Technology core course and must be completed with a minimum grade of C in order to receive an Associate Degree or Certificate of Achievement in Fire Technology.

## **FIRE 056 3.0 Units**

### **Building Construction as it Relates to the Fire Service**

*Transferable to CSU*

*Hours: 48-54 lecture*

Intended to provide basic information about how buildings are designed and constructed. Through a basic understanding of building construction, the student will acquire an understanding of how buildings will behave under fire conditions. This course will aid in decision making related to fire prevention and fire control with the goal of successful fire ground operations. This course must be completed with a minimum grade of C in order to receive an Associate Degree or Certificate of Achievement in Fire Technology.

## **FIRE 101 3.0 Units**

### **Principles of Fire and Emergency Services Safety and Survival**

*Course Advisory: ENGL 001*

*Hours: 48-54 lecture*

Introduction to basic principles and history related to the firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# FIRE - Fire Technology

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## **FIRE 103 Introduction to the Fire Services 1.0 Unit**

*Hours: 48-54 lab*

An activity course for students who are considering a career as a firefighter or first responder. This course includes instruction on various positions and opportunities that are available in the fire service. Students will become familiar with basic facilities, equipment, tools and tasks that are performed by firefighters.

## **FIRE 104 Introduction to Emergency Medical Services (EMS) 1.0 Unit**

*Hours: 48-54 lab*

An activity course for students who are considering a career as a firefighter or first responder. The course will include skills in basic first aid, Cardiopulmonary Resuscitation (CPR), bleeding control, and splinting fractures.

## **FIRE 105 Introduction to Earthquake and Disaster Preparedness 1.0 Unit**

*Hours: 48-54 lab*

This course will provide information about how students should prepare for, and respond appropriately to earthquakes and other disasters.

## **FIRE 140 Fire Technology Academy 24.0 Units**

*Prerequisite\*\*:* FIRE 050, FIRE 101, EMT 128 and a passing grade on the CPAT or PACK test as evidenced by a certificate of completion

*Hours: 224-252 lecture, 480-540 lab*

A course containing the contents of State Fire Marshal FF1 (2019) curriculum, I-200, IS-700, IS-800, Fire Control I, Fire Control 3A or 3B, Confined Space Awareness, Low Angle Rope Rescue Operational, Hazardous Materials for the First Responder, Auto Extrication, FF1 certification psychomotor and cognitive testing, State Fire Marshal Certified Wildland courses of S-190, S-130, and CALFIRE 56 Hour Basic Course. Successful students who maintained at least an 80% score on each unit and subject covered in this course may become eligible for certification by the State Fire Marshal as a Firefighter I. Additional fees are associated with this course. Fees may include and are not limited to purchase of uniforms, physical fitness attire, State Fire Marshal certificates, and other related costs.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

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## *Foreign Languages*

### **FLNG 101 Cross Age Teaching**

**2.0 Units**

*Corequisite: 1 unit of OCED 090*

*Prerequisite\*\*:* FREN 002 or SPAN 002

*Hours: 32-36 lecture*

Weekly seminars will explore how children learn and develop understanding in French and Spanish. Working with a peer partner or partners, students will prepare lesson plans and develop curriculum. Through co-requisite OCED 090, students will work in elementary school classes in Solano County to provide language instruction based on the lesson plans developed.

## *French*

### **FREN 001 First Semester French**

**5.0 Units**

*General Education: SCC: Area C; IGETC: Area 6; CSU: Area C2*

*Transferable to UC/CSU*

*Hours: 80-90 lecture*

An introduction to the fundamental elements of the language (listening, speaking, reading, writing and culture) with emphasis on language production, grammar, syntax, acquisition of a practical vocabulary, and exposure to the Francophone culture. Exams, quizzes, written and oral assignments and completion of the activities manual will be used to evaluate student progress. NOTE: Not open for credit to students who have had two or more years of high school French with a minimum grade of B within the last three years or to students who have completed FREN 031 and/or 032.

### **FREN 002 Second Semester French**

**5.0 Units**

*Prerequisite\*\*:* FREN 001; FREN 032; or two years of high school French

*General Education: SCC: Area C; IGETC: Area 3B, 6; CSU: Area C2*

*Transferable to UC/CSU*

*Hours: 80-90 lecture*

A continuation of FREN 001 introducing the fundamentals of French (listening, speaking, reading, writing and culture) with increased emphasis on writing and continued stress on language production, pronunciation, grammar, syntax, acquisition of a practical vocabulary, and exposure to the Francophone culture. Exams, quizzes, written assignments and completion of the activities manual will be used to evaluate student progress.

### **FREN 003 Third Semester French**

**5.0 Units**

*Prerequisite\*\*:* FREN 002; or three years of high school French

*General Education: SCC: Area C; IGETC: Area 3B, 6; CSU: Area C2*

*Transferable to UC/CSU*

*Hours: 80-90 lecture*

A continuation of FREN 002. This course teaches culture and facilitates language acquisition through listening, speaking, reading and writing. Students will continue to interact with authentic language in context and express personal meaning, using different strategies and techniques that go beyond casual conversations, in order to express opinions, make suggestions on familiar topics, discuss some abstract issues, and make plans. Students will demonstrate the ability to think critically by analyzing linguistic structures and reflecting on and making cross-cultural comparisons. Students will demonstrate an increased awareness of cultural norms, values, and culturally relevant appropriate customs and events. This course will be taught in French.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*

# FREN - French

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## **FREN 004 Fourth Semester French**

**5.0 Units**

*Prerequisite\*\*:* FREN 003

*General Education:* SCC: Area C; IGETC: Area 3B, 6; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 80-90 lecture

A continuation of French 003. Reviews and expands knowledge of elements previously learned, while introducing new material. Exposure to the culture and thinking of the French-speaking world. Extensive work is done in reading, writing and conversing in French. Regular quizzes, exams, written and oral assignments required.

## **FREN 011 Conversational French**

**3.0 Units**

*Prerequisite\*\*:* FREN 002 or FREN 034

*General Education:* SCC: Area C; IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

Designed to promote competency in the oral use of the language and to increase fluency by reinforcing previously learned materials and by expanding vocabulary and patterns of speech. This course emphasizes the practical application of the language, not grammar acquisition or review.

## **FREN 012 Intermediate French Conversation**

**3.0 Units**

*Prerequisite\*\*:* FREN 011

*General Education:* IGETC: Area 3B; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A continuation of FREN 011 designed to promote competency in the oral use of the language and to increase fluency by expanding beyond previously learned materials, vocabulary and patterns of speech. The course emphasizes the practical application of the language, not grammar acquisition or review, exposing students to global awareness through a rich variety of Francophone cultural sources.

## **FREN 031 First Semester French, Part I**

**3.0 Units**

*General Education:* SCC: Area C; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

An introduction to the basic elements of the language (listening, speaking, reading, writing and culture) with emphasis on language production, grammar, syntax, vocabulary building, and exposure to the Francophone culture. Exams, quizzes, written and oral assignments and completion of the activities manual will be used to evaluate student progress. NOTE: In order to fulfill the one semester of FREN 001 requirement of some universities, transfer students must complete the sequence of FREN 031-032. NOTE: Not open for credit to students who have received credit for FREN 001 or to students who have had two or more years of high school French with a minimum grade of B within the past three years.

## **FREN 032 First Semester French, Part II**

**3.0 Units**

*Prerequisite\*\*:* FREN 031 or one year of high school French

*General Education:* SCC: Area C; IGETC: Area 6; CSU: Area C2

*Transferable to UC/CSU*

*Hours:* 48-54 lecture

A continuation of FREN 031 introducing the fundamental elements of the language (listening, speaking, reading, writing and culture) with continued emphasis on language production, grammar, syntax, vocabulary building, and exposure to the French culture. Exams, quizzes, written assignments and completion of the activities manual will be used to evaluate student progress. NOTE: In order to fulfill the one-semester FREN 001 requirement of some universities, transfer students must complete the sequence of FREN 031 and FREN 032. NOTE: Not open for credit to students who have completed FREN 001 or who have had two or more years of high school French with a minimum grade of B within the last three years.

## **FREN 049 French Honors**

**1.0 to 3.0 Units**

*Prerequisite\*\*:* Completion of 24.0 units of college credit with a

*minimum GPA of 3.3; a minimum of 5.0 units in the discipline with a minimum grade of B; an ability to work independently; permission of the School Dean based on instructor availability*

*Transferable to CSU*

*Hours:* 48-162 lab by arrangement

Independent study and research, by arrangement with the instructor, in specified fields of study in French or creative writing in French. Students may take this course up to the maximum number of units over multiple semesters.

*C-ID Designation may change periodically visit [c-id.net/courses/search](http://c-id.net/courses/search) for current designation or consult with your counselor*

*\*\*All Prerequisite courses must be completed with a minimum grade of C, or a P if taken on a Pass/No Pass basis, unless otherwise noted*