



Section VI

COURSE DESCRIPTIONS

COURSE DESCRIPTIONS

Moreno Valley College offers a comprehensive program of instruction for students who wish to transfer to four-year institutions, complete an associate degree, train for specific occupations, or develop skills and knowledge. The information listed on courses and transferability is accurate as of the catalog publication date, but from time-to-time this varies based on changes that occur at four-year institutions. It is always advisable to check with a counselor and the four-year transfer institution for current updates. The following section includes a description of courses which the Board of Trustees has authorized the District to offer. The complete course outlines of record including student learning outcomes can be found at www.curricunet.com/RCCD.

UC/CSU

Designated courses are transferable to the campuses of the University of California and the California State University system. Courses that are not marked UC are not transferable to a University of California college. Courses marked with an * (UC*) indicate courses that have transfer credit limitations. Copies of the UC transfer course list indicating credit unit limitations are available in the Transfer/Career Center on the three colleges. When in doubt, students are advised to confer with a counselor.

COURSE IDENTIFICATION NUMBERING SYSTEM (C-ID)

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

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

DELIVERY METHODS

A variety of delivery methods are used to offer classes a Riverside Community College District, including face-to-face classroom instruction and distance delivery methods such as hybrid classes and online classes (taught entirely online utilizing computer and Internet technology). Enrollment in online classes is limited to students who have demonstrated competency in working in the online environment. Please see the Distant Education section of the class schedule for details on meeting the limitation on enrollment for online classes.

NON-DEGREE CREDIT

Courses indicated as non-degree credit earn credit, but the credit is not counted toward the associate degree. These courses (Communication Studies 51, 85A, 85B, English 60AB, 80, 85, 90B; English as a Second Language 51, 52, 53, 65, 71, 72, 90A, 90D, 90L, 90M, 90P, 91, 92, 95; Interdisciplinary Studies 3; Mathematics 37, 52, 63, 64, 65, 81, 82, 90 A-F, 98; Nursing/Continuing Education: 81; Nursing-Registered: 11B, 11C, 12B, 12C, 18, 21B, 21C, 22B, 22C; Nursing-Vocational: 52A, 52B, 52C, 62A, 62B, 62C; Reading 81, 82, 83, 86 and 90) are intended to help students develop skills necessary to succeed in college level degree- applicable courses. Non-degree credit courses can be used toward the following: athletic eligibility, work study, financial aid, social security benefits, veteran's benefits, associated student body office, and full-time status.

NONCREDIT

Courses are numbered in the 800's, and no unit credit is earned in these courses.

REPEATING A COURSE

Students may repeat courses in which a "C" or better grade was earned only for the following types of courses: courses for which repetition is necessary to meet the major requirements of CSU or UC for completion of a bachelor's degree, intercollegiate athletics, and intercollegiate academic or vocational competition courses that are related in content. The designation of whether a course is repeatable is indicated in the course description.

LIMITATIONS ON ENROLLMENT

Please check course description carefully to see if there are any prerequisites, corequisites, advisory or other limitations on enrollment.

PREREQUISITE

When a course has a prerequisite, it means that the corresponding discipline has determined that the student must have certain knowledge to be successful in the course. The prior knowledge may be a skill (type 40 WPM), and ability (speak and write French fluently), a preparation score (placement test and prior academic background), or successful completion of a course (grade of C or better, P or CR). Completion of the prerequisite is required prior to enrolling in the class. Successful completion of a prerequisite requires a grade of "C" or better, "P" (Pass). "C-," "D," "F," "FW," "NP" (No Pass), or "I" are not acceptable. Students currently enrolled in a prerequisite course at Riverside Community College District (i.e. Math 52) will be allowed to register for the succeeding class (i.e. Math 35). However, if the prerequisite course is not passed with at least a "C" grade, the student will be dropped from the succeeding class.

COREQUISITE

When a course has a corequisite, it means that a student is required to take another course concurrent with or prior to enrollment in the course. Knowing the information presented in the corequisite course is considered necessary for a student to be successful in the course. (Completion of, or concurrent enrollment in, Math 1A is required for Physics 4A.) It is the student's responsibility to know and meet the course prerequisites and corequisites. These are stated in the course descriptions of the schedule of classes and the current college catalog. A student may be required to file proof of prerequisite and corequisite requirements.

ADVISORY

When a course has an advisory, it means that there is a recommendation to have a certain preparation before entering the course. The preparation is considered advantageous to a student's success in the course. Since the preparation is advised, but not required, the student will not be blocked from enrolling in the class.

VERIFYING PREREQUISITES/COREQUISITES

It is the student's responsibility to know and meet the course prerequisites and corequisites. These are stated in the course descriptions within the Schedule of Classes and the college catalogs. If you have met the prerequisites at another accredited college or university, you must provide verification through one of the following:

- Submit official transcript(s) and complete a Prerequisite Validation form.
- Submit unofficial transcript(s) or grade reports and complete a Matriculation Appeals petition. Petitions approved on an unofficial transcript will be approved for one semester only. This will provide time for the student to request official transcripts.
- Coursework must be listed on the original transcript. Coursework listed on a secondary transcript is not acceptable documentation.
- If you wish to challenge a prerequisite for courses other than English, ESL, math or reading on the basis of knowledge or ability or because of the unavailability of the prerequisite, submit a Matriculation Appeals petition at any of our campus's counseling offices.
- Completion of some high school course are accepted by the discipline as an appeal to existing prerequisites and/or corequisites.

Petitions to challenge a prerequisite are available in the Counseling offices on all three colleges.

CREDIT COURSES

Credit courses can be degree or non-degree applicable. Unlike noncredit courses, they do carry units based on the number of hours of lecture, lab, or both that are required in the official course outline for the course. These courses are in a wide variety of areas; each requires critical thinking, reading and writing, and assignments that are completed outside of class that require the student to study and work independently. Credit courses are



CREDIT COURSES**ACCOUNTING****ACC-1A****Principles of Accounting I****3 Units**

(C-ID:ACCT 110)

UC, CSU

*Prerequisite: None**Advisory: BUS-20*

Description: An introduction to accounting principles and practice, as a manual and/or computerized information system that provides and interprets economic data for economic units within a global society. Includes recording, analyzing, and summarizing procedures used in preparing financial statements. 54 hours lecture.

ACC-1B**Principles of Accounting II****3 Units**

(C-ID:ACCT 120)

UC, CSU

Prerequisite: ACC-1A

Description: A study of managerial accounting principles and information systems including basic concepts, limitations, tools and methods to support the internal decision-making functions of an organization. 54 hours lecture.

ACC-55**Applied Accounting/Bookkeeping****3 Units***Prerequisite: None*

Description: This is an introductory course for students who are non-accounting majors. The focus is basic bookkeeping and accounting principles for both merchandising and service oriented small business enterprises. Emphasis is on the development of skills to record business transactions for cash and accrual methods, as well as the procedures to prepare financial statements and complete an accounting cycle. Attention is given to special journals, subsidiary ledgers, and payroll and banking procedures. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ACC-62**Payroll Accounting****3 Units**

CSU

Prerequisite: ACC-1A or ACC-55

Description: Studies accounting for payroll and examines aspects of the Social Security Act, California Unemployment Insurance Act and the California Workers Compensation Insurance Act. Payroll principles applied through the use of microcomputers. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ACC-65**Computerized Accounting****3 Units**

CSU

*Prerequisite: ACC-1A or ACC-55**Advisory: CIS-1A or CIS-3*

Description: An introduction to computerized accounting, integrating the principles of accounting to an automated system in use by many accounting professionals. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ACC-66**Non-Profit and Governmental Accounting****3 Units**

CSU

*Prerequisite: ACC-1A**Advisory: BUS-20*

Description: A study of the principles and practices of non-profit and governmental entities fund accounting. Topics include accounting concepts, types and structure of funds and accounts, application of generally accepted accounting principles to non-profit and governmental organizations. 54 hours lecture.

ACC-67**U.S. and California Income Tax Preparation****4 Units**

CSU

Prerequisite: None

Description: U.S. and California income tax principles and tax return preparation as it relates to individuals, sole proprietorships, and other business entities. This course is certified by the California Tax Education Council (CTEC) as fulfilling the 60-hour qualifying education requirement imposed by the State of California for becoming a Registered Tax Preparer. 72 hours lecture.

ACC-200**Accounting Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass.)

ADMINISTRATION OF JUSTICE**ADJ-1****Introduction to the Administration of Justice****3 Units**

(C-ID:AJ 110)

UC, CSU

Prerequisite: None

Description: The history and philosophy of administration of justice in America; recapitulation of the system; identifying the various subsystems, role expectations, and their interrelationships; theories of crime, punishment, and rehabilitation; ethics, education, and training for professionalism in the system. 54 hours lecture.

ADJ-2**Principles and Procedures of the Justice System 3 Units**

(C-ID:AJ 122)

CSU

Prerequisite: None

Description: This course provides an examination and analysis of due process in criminal proceedings from pre-arrest through trial and appeal utilizing statutory law and state and constitutional precedents. 54 hours lecture.

ADJ-3**Concepts of Criminal Law 3 Units**

(C-ID:AJ 120)

UC, CSU

Prerequisite: None

Description: Historical development, philosophy of law and constitutional provisions; definitions, classification of crimes, and their application to the system of administration of justice; legal research, study of case law, methodology, and concepts of law as a social force. 54 hours lecture.

ADJ-4**Legal Aspects of Evidence 3 Units**

(C-ID:AJ 124)

CSU

Prerequisite: None

Description: Origin, development, philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search and seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies. 54 hours lecture.

ADJ-5**Community Relations 3 Units**

(C-ID:AJ 160)

UC, CSU

Prerequisite: None

Description: This course examines the complex, dynamic relationship between communities and the justice system in addressing crime and conflict with an emphasis on the challenges and prospects of administering justice within a diverse multicultural population. 54 hours lecture

ADJ-6**Patrol Procedures 3 Units**

CSU

Prerequisite: None

Description: Responsibilities, techniques and methods of police patrol. 54 hours lecture.

ADJ-8**Juvenile Law and Procedures 3 Units**

(C-ID:AJ 220)

CSU

Prerequisite: None

Description: The organization, functions and jurisdiction of juvenile agencies; the processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures. 54 hours lecture.

ADJ-9**Law In American Society 3 Units**

UC, CSU

Prerequisite: None

Description: A general survey of practical law intended as an introduction to the American legal system and to acquaint the student with elements of the law that affect everyday legal relationships: criminal and juvenile justice, consumer law, family law, housing law, and individual rights and liberties. Emphasis is placed on the philosophical and political foundations of law and on civil law. Recommended for prelaw students and for others interested in the practical application of the law. 54 hours lecture.

ADJ-13**Criminal Investigation 3 Units**

(C-ID: AJ 140)

CSU

Prerequisite: None

Description: Fundamentals of investigation; crime scene search and recording; collection and preservation of physical evidence; scientific aids; modus operandi; sources of information; interviews and interrogation; follow-up and case preparation. 54 hours lecture.

ADJ-14**Advanced Criminal Investigation 3 Units**

CSU

Prerequisite: ADJ-13 or JUS-13

Description: Advanced training and skill development in the conduct of crime scene investigation and in the recording, collection, and preservation of physical evidence. Focus in on the understanding and working knowledge of fingerprints, ballistics firearms identification, varieties of trace evidence and a basic introduction to forensic sciences. 54 hours lecture and 24 hours laboratory. (TBA Option)

ADJ-16**Interviewing and Counseling 3 Units**

CSU

Prerequisite: None

Description: Introduction to approaches of behavior modification through interviewing and counseling. An overview of the techniques available to entry level practitioners in corrections in counseling and interviewing. Creates an awareness of advanced methods utilized by professional counselors. Traces the development of positive relationships between the client and corrections personnel. 54 hours lecture.

ADJ-23**Criminal Justice Report Writing****3 Units**

CSU

Prerequisite: None

Description: This is an introductory course emphasizing the practical aspects of gathering, organizing, and preparing written reports applicable to the criminal justice system. The course will cover the techniques of communicating facts, information, and ideas effectively in a simple, clear, and logical manner. Students will gain practical experience in note taking, report writing, memoranda, letters, directives, and written administrative projects. Students will also gain practical experience in preparation for court appearances. This course has been identified by the Correctional Peace Officers Standards and Training Board of the Department of Corrections, California Youth Authority, and the California Peace Officers Association to fulfill the educational requirements of the CPOST Certificate for apprentices hired after July 1, 1995, by CDC and CYA. Total of 54 hours lecture.

ANATOMY AND PHYSIOLOGY

**ANATOMY COURSES HAVE BEEN CHANGED.
SEE BIOLOGY.**

ANTHROPOLOGY

ANT-1**Physical Anthropology****3 Units**

(C-ID:ANTH 110)

UC, CSU

Prerequisite: None

Description: An introduction to human biological evolution, physical diversity, and relationship to the animal world, using scientific and comparative methods. Incorporates the study of genetics, fossils, primates, and modern human variation within an evolutionary framework. Students may not receive credit for both ANT-1 and ANT-1H. 54 hours lecture.

ANT-1H**Honors Physical Anthropology****3 Units**

(C-ID:ANTH 110)

UC, CSU

Prerequisite: None

Limitation on enrollment: Enrollment in the RCCD Honors Program

Description: This honors course offers an enriched introduction to human biological evolution, physical diversity, and relationship to the animal world, using scientific and comparative methods. Incorporates the study of genetics, fossils, primates, and modern human variation within an evolutionary framework. Students may not receive credit for both ANT 1 and ANT 1H. 54 hours lecture.

ANT-1L**Physical Anthropology Laboratory****1 Unit**

UC, CSU

Prerequisite: None

Corequisite: Concurrent enrollment in or prior completion of ANT-1 or 1H required.

Description: Laboratory course exploring case studies and problems of human genetics, human variation, the identification of fossils through examination of fossil casts, human evolution, the study of the human skeleton, observation of primate behavior and structures utilizing the scientific method. 54 hours laboratory.

ANT-2**Cultural Anthropology****3 Units**

(C-ID:ANTH 120)

UC, CSU

Prerequisite: None

Description: An introduction to the anthropological concept of culture and to the methods and theories used in the comparative analysis of cultures. Cultural practices and institutions are examined using perspectives that enhance effective participation in a culturally diverse world. 54 hours lecture.

ANT-2H**Honors Cultural Anthropology****3 Units**

(C-ID:ANTH 120)

UC, CSU

Prerequisite: None

Limitation on enrollment: Enrollment in the Honors Program

Description: An introduction to the anthropological concept of culture and to the methods and theories used in the comparative analysis of cultures. Cultural practices and institutions are examined using perspectives that enhance effective participation in a culturally diverse world. This honors course offers an enriched experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher level critical thinking skills. Students may not receive credit for both ANT-2 and ANT-2H. 54 hours lecture.

ANT-3**Prehistoric Cultures****3 Units**

UC, CSU

Prerequisite: None

Description: The development of human society from the earliest evidence of culture to the beginnings of recorded history. The concepts, methods, and data of prehistoric archaeology are used to examine the major transitions in human prehistory, including the origins of culture, agriculture, and early civilization. 54 hours lecture.

ANT-4**Native American Cultures****3 Units**

UC, CSU

Prerequisite: None

Description: A survey of Native American cultures from the pre-Columbian period through conquest and reservation life and into the present. Incorporates evidence from archaeology, oral history, personal narratives, and other sources. Emphasis will be on the growth of Native American cultures, modern communities, including urban life, social and religious institutions, and traditional cultural elements and artistic traditions. 54 hours lecture.

ANT-5**Cultures of Ancient Mexico****3 Units**

UC, CSU

Prerequisite: None

Description: The development of civilization in ancient Mexico, integrating evidence from archaeology and the prehispanic and post-Conquest written records. Emphasizes the history, lifeways, and social and religious institutions of Mexico from the earliest cultures to the Aztec civilization, and their persistence in the modern world. 54 hours lecture.

ANT-6**Introduction to Archaeology****3 Units**

(C-ID: ANTH 150)

UC, CSU

Prerequisite: None

Description: An examination of the basic concepts, methods, and findings of modern archaeology. Covers the history of archaeology, the application of archaeological methods of recovery and interpretation, and the analysis of archaeological evidence as it is used to reconstruct ancient societies and major trends in cultural evolution. 54 hours lecture.

ANT-7**Anthropology of Religion****3 Units**

UC, CSU

Prerequisite: None

Description: Introduction to the anthropological study of religion in world cultures, using a cross-cultural approach to the analysis of beliefs, rituals, mythology, and the role of religion in society, particularly focusing on non-Western traditional societies. 54 hours lecture.

ANT-8**Language and Culture****3 Units**

(C-ID: ANTH 130)

UC, CSU

Prerequisite: None

Description: An introduction to the anthropological study of language in world cultures. Characteristics of human verbal and non-verbal communication, language diversity and change, and the relationship of language to culture and social groups. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ANT-10**Forensic Anthropology****3 Units**

UC, CSU

Prerequisite: None

Description: The application of the methods of physical anthropology, within a medicolegal framework, to the identification of human remains. Focuses on human osteology for the determination of age, sex, ancestry, stature, and unique features. 54 hours lecture.

ANT-16**Field Methods in Archaeology****3 Units**

CSU

Prerequisite: ANT-6

Description: Provides students experiential based training in archaeological survey, excavation, and laboratory processing of excavated material. Includes recognition and recordation of historic and prehistoric sites, theory and methods of archaeological processes (stratigraphy, sampling, record keeping, note taking, profiles, mapping), and basic archaeological field laboratory techniques. 36 hours lecture and 54 hours lab. (Letter Grade, or Pass/No Pass option.)

ARCHITECTURE

ARE-24**Architectural Drafting****3 Units****(Same as DFT-24)**

CSU

Prerequisite: DFT/ENE-21 and DFT/ENE-30

Description: Introduction to methods and techniques used in the development of architectural construction documents for light frame structures (Type V construction) including construction theory, notation, materials symbols, drawing format and general practice. Using Computer-Aided Drafting (CAD), this course will focus on the drawing of a set of plans to include a plot plan, foundation plan, floor plan(s), sections, exterior and interior elevations, electrical plan and structural details. Sketching techniques will also be covered. 27 hours lecture and 90 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ARE-25**Advanced Architectural Drafting****3 Units**

CSU

Prerequisite: ARE-24

Description: This course is designed for advanced study of architectural detailing and construction methods, including the preparation of working drawings. Other topics include the development of construction documents, study of the Uniform Building Code, and practice from site selection to completion. A completed portfolio is a requirement of the course. 27 hours lecture and 90 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ARE-35**History of Architecture-Beginnings through Gothic****3 Units**

UC, CSU

Prerequisite: None

Description: An examination of Western architecture form and design from antiquity through the Gothic period. Architectural monuments of the Western world will be analyzed and interpreted in terms of religious, social, and political context. Particular emphasis is given to process and sources of design, types and purposes of buildings as well as architecture and art in the built environment by considering the source and meaning of beauty. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ARE-36**History of Architecture: Renaissance to Modern 3 Units**

UC, CSU

Prerequisite: None

Description: A survey of the major movements in the form, theory and design of Western architecture and art from the Renaissance through the 20th century will be studied analyzed and interpreted in terms of religious social and political context. Particular emphasis will be placed on a comparative study of architectural monuments and architects, the sources of design, meaning of beauty, and conditions that influence the Western architectural traditions. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ARE-37**Architectural Design I 3 Units**

UC, CSU

Prerequisite: None

Description: This course is an introduction into the use of determining factors, which revolve around the design of mankind's physical and visual environment. Emphasis is placed on two- and three-dimensional representation dealing with design composition, spatial relationships and the use of various media for graphic communication. 27 hours lecture and 90 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ARE-200**Architecture Work Experience 1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade, or Pass/No Pass option.)

ART

ART-1**History of Western Art: Prehistoric, Ancient, and Medieval 3 Units**

(C-ID:ARTH 110)

UC, CSU

*Prerequisite: None**Advisory: ENG-1A*

Description: Survey of the history of Western art: painting, architecture, and sculpture, Prehistoric through the Medieval periods. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-2**History of Western Art: Renaissance through Contemporary 3 Units**

(C-ID:ARTH 120)

UC, CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: Survey of the history of Western art: painting, architecture, and sculpture, from the Renaissance through contemporary art. Student may not receive credit for both ART-2 and ART-2H. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-2H**Honors Art History of Western Art: Renaissance through Contemporary 3 Units**

(C-ID:ARTH 120)

UC, CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A**Limitation on enrollment: Enrollment in the Honors Program*

Description: Honors survey of the history of Western art: painting, architecture, and sculpture, from the Renaissance through Contemporary art. Students may not receive credit for both ART-2 and ART-2H. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-5**History of Non-Western Art 3 Units**

UC, CSU

*Prerequisite: None**Advisory: ENG-1A and college level reading recommended*

Description: An introductory survey of the arts of non-European cultures. History, form, functions, and aesthetics will be discussed in an overview of the arts of the Americas (Pre-Columbian and North American Indian), Oceania, Islamic, Sub-Saharan Africa, Southeast Asia, China, and Japan. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-6**Art Appreciation 3 Units**

UC, CSU

*Prerequisite: None**Advisory: ENG-1A*

Description: An introductory course for the non-art major. The creative process and the diversity of style, technique and media, evident in various art forms throughout history and culture. Students may not receive credit for both ART-6 and ART-6H. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-6H**Honors Art Appreciation 3 Units**

UC, CSU

*Prerequisite: None**Advisory: ENG-1A**Limitation on enrollment: Enrollment in the Honors Program*

Description: An introductory course designed for the non-art major. The creative process and the diversity of styles, technique and media evident in various art forms throughout history and culture. Honors course offers an enriched experience for accelerated students through limited class size; seminar format; focus on primary texts; and application of higher level critical thinking skills. Students may not receive credit for both ART-6 and ART-6H. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-7**Women Artists in History****3 Units**

UC, CSU

*Prerequisite: None**Advisory: ENG-1A*

Description: Survey of the contributions of women artists from the ancient era through the present. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-9**African Art History****3 Units**

UC, CSU

Prerequisite: None

Description: A survey of the traditional through contemporary arts of African peoples. Both historical and current expressions of sculpture, body adornment, dance, architecture, painting, artifacts, ceramics, and textiles will be introduced and integrated with other aspects of life and culture in sub-Saharan Africa. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-10**Modern and Contemporary Art History****3 Units**

UC, CSU

Prerequisite: None

Description: A survey of the development and history of modern art with emphasis on its major movements, leading artists, and contemporary trends. Painting, sculpture, and architecture will be discussed in terms of their historical, social, and political context. Beginning with mid-19th century movements (Realism and Impressionism), the study will continue through the current trends and new media of the day. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-11**Gallery and Exhibition Design****3 Units**

CSU

Prerequisite: None

Description: Practical experience in all aspects of design and installation of art exhibits in a gallery environment; including design theory and the evaluation and analysis of the communicative, aesthetic, managerial and technical factors involved in the production of exhibits. Students pay for their own materials. 36 hours lecture and 72 hours laboratory.

ART-12**Asian Art History****3 Units**

(C-ID:ARTH 130)

UC, CSU

Prerequisite: None

Description: A survey of the history of Asian art (China, Japan, Korea, and India) from prehistoric times to the present, including the religious and philosophical influence on the development of the art forms of architecture, sculpture, ceramics, painting, and the minor arts. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-13**Pre-Columbian Art History****3 Units**

(C-ID:ARTH 145)

UC, CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: A survey of the visual arts of ancient Mesoamerica and the Andes from 2000 BC-AD 1521 including the Maya, the Aztecs, and the Inca. 54 hours lecture. (Letter grade, or Pass/No Pass option.)

ART-14**Latin American Art: Colonial to the Present****3 Units**

UC, CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: Survey of architecture, sculpture, painting, and minor arts of Latin American countries from Colonial times through contemporary art. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ART-17**Beginning Drawing****3 Units**

(C-ID:ARTS 110)

UC, CSU

Prerequisite: None

Description: An introduction to the fundamentals of drawing in a variety of media. The exploration of the elements of art, the principles of composition, perspective and the development of observational, motor and creative skills. Emphasis will be on black and white media. Students pay for their own materials. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-18**Intermediate Drawing****3 Units**

(C-ID:ARTS 205)

UC, CSU

Prerequisite: ART-17

Description: Intermediate level and continued study of drawing with emphasis on the use of color media. Basic color theory will be explored in thoughtful compositions. Students pay for their own materials. ART-18, 26 and 27 are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repeatability and repetition. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-19**Experimental Methods and Materials****3 Units**

UC, CSU

Prerequisite: ART-17

Description: The use of experimental methods and materials in creating two dimensional artwork. Less attention will be directed toward traditional and fundamental academic concerns and more focus will be placed on the cultural, interpretive, psychological, and conceptual possibilities that result from exploration and engaging alternatives. The art elements, color, composition, mark-making, mixed-media, expression, concept, and context will be investigated. Students will be encouraged to access less conventional solutions to a variety of projects. Students pay for their own materials. ART-19 and ART-23 are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repeatability and repetition. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-20**Beginning Sculpture****3 Units**

UC, CSU

Prerequisite: None

Description: An introduction to the fundamentals of sculpture design and creation. A variety of materials, such as clay, wax and plaster, will be used. Additive, subtractive and construction methods for creating the sculptural pieces will be explored, as well as other traditional and contemporary forms and techniques. Students pay for their own materials. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)(Materials fee: \$15.00)

ART-22**Basic Design****3 Units**

(C-ID:ARTS 100)

UC, CSU

Prerequisite: None

Description: An introduction to the fundamentals of two-dimensional design. The organization of visual elements according to the principles of design. Emphasis placed on visual perception, theory, dexterity, problem solving, analysis, application, skill, and presentation. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-23**Color Theory and Design****3 Units**

(C-ID:ARTS 270)

UC, CSU

Prerequisite: ART-22 or ART-17

Description: The study of color theory and two-dimensional design. The practice of the organization of the visual elements according to the principles of design. Emphasis placed on more advanced methods of communicating ideas through color in design. ART-19 and ART-23 are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repeatability and repetition. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-24**Three Dimensional Design****3 Units**

(C-ID:ARTS 101)

UC, CSU

Prerequisite: None

Description: An introduction to the fundamentals of three-dimensional design. The use of the visual elements and the practice of the principles of design as they relate to various three-dimensional art forms (i.e., sculpture, architecture and product, commercial, stage, environmental and interior design). Students pay for their own materials. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)(Materials fee: \$15.00)

ART-25A**Watercolor - Beginning****3 Units**

UC, CSU

Prerequisite: ART-17

Description: Course work that reflects the fundamentals of painting with transparent watercolors at an introductory level. Basic techniques, tools, and materials will be explored. Composition, idea, method, color, and creativity will be examined. Students pay for their own materials. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-26**Beginning Painting****3 Units**

(C-ID:ARTS 210)

UC, CSU

Prerequisite: ART-17

Description: An introduction to the fundamentals of painting (oil or acrylic). An exploration of various considerations in painting; techniques, process, color theory, visual perception, composition, and creative skills. Students pay for their own materials. ART-18, 26 and 27 are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repeatability and repetition. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-27**Intermediate Painting****3 Units**

UC, CSU

Prerequisite: ART-23 or ART-26

Description: Intermediate level of painting (oil or acrylic). Continued exploration of various techniques and the application of color theory. Development of visual, compositional, and creative skills. Students pay for their own materials. ART-18, 26 and 27 are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repeatability and repetition. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-28A**Studio Painting-Portfolio Preparation****3 Units**

UC, CSU

Prerequisite: ART-27

Description: Independent painting studio for the self-motivated student with emphasis on individual art problems and portfolio development. Specific agreement identifying intent, ideas, goals, and media, to be arranged between instructor and student. Emphasis will be on independent concept, development, and portfolio preparation. ART-28A and 48A are courses related in content and are limited to four enrollments according to Title 5, section 55040. For further information see section VIII regarding course repeatability and repetition. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option)

ART-36A**Computer Art-Introduction****3 Units**

UC, CSU

Prerequisite: None

Description: Introduction to creating fine art and design using digital media. The exploration of the visual characteristics of electronic imagery with emphasis on the essentials of fine art, design, and creative problem solving. Artwork will be developed using the computer, related software, and/or other electronic equipment. Students pay for their own materials. 36 hours of lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-36B**Computer Art - Intermediate****3 units**

CSU

Prerequisite: ART-36A

Description: Intermediate level of creating fine art and design using digital media. The continuation of the exploration of electronic imagery with emphasis on the essentials of fine art, design, and creative problem solving. Artwork will be developed using the computer, related software, and/or other electronic equipment. Students pay for their own materials. 36 hours of lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-39**Design and Graphics****3 Units**

CSU

*Prerequisite: None**Advisory: ART-17 or ART-22 or ART-35A*

Description: Fundamental design methodology for visual communication. Exploration of design principles in advertising and layout design, type and lettering creation and techniques, corporate imagery, and portfolio preparation. Students pay for their own materials. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-40A**Figure Drawing-Introduction****3 Units**

(C-ID:ARTS 200)

UC, CSU

Prerequisite: ART-17

Description: Introduction to drawing the human figure. Students will draw from a nude model using a variety of media. Students pay for their own materials. ART-40A and 40B are courses related in content and are limited to four enrollments according to Title 5, section 55040. For further information see section VIII regarding course repeatability and repetition. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-40B**Figure Drawing-Intermediate****3 Units**

UC, CSU

Prerequisite: ART-40A

Description: Intermediate level of drawing the human figure where emphasis will be on more developed and accurate figurative work, anatomy, improved composition, and further creative exploration. Students will draw from a nude model using a variety of media. Students pay for their own materials. ART-40A and 40B are courses related in content and are limited to four enrollments according to Title 5, section 55040. For further information see section VIII regarding course repeatability and repetition. 36 hours lecture and 72 hours laboratory (Letter Grade, or Pass/No Pass option.)

ART-41A**Figure Painting - Introduction****3 Units**

CSU

Prerequisite: ART-26 and ART-40A

Description: Introduction to painting from the human figure. Students will paint from a nude model using a variety of methods and materials. Students pay for their own materials. 36 hours lecture and 72 hours laboratory (Letter Grade, or Pass/No Pass option.)

ART-48A**Studio Drawing-Portfolio Preparation****3 Units**

UC, CSU

Prerequisite: ART-18

Description: Continued studio drawing for the self-motivated student with emphasis on planning, independence, individualized problems, and portfolio organization and preparation. Specific agreement identifying intent, ideas, goals, and media, to be arranged between instructor and student. Students pay for their own materials. ART-28A and 48A are courses related in content and are limited to four enrollments according to Title 5, section 55040. For further information see section VIII regarding course repeatability and repetition. 36 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ART-200**1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass.)

BIOLOGY

BIOLOGY COURSE MODIFICATIONS EFFECTIVE 18-19 ACADEMIC YEAR		
PREVIOUS COURSE NUMBER	UPDATED COURSE NUMBER	UPDATED TITLE
AMY-10	BIO-45	Survey of Human Anatomy and Physiology
AMY-2A	BIO-50A	Anatomy and Physiology I
AMY-2B	BIO-50B	Anatomy and Physiology II
BIO 30	BIO-16	Human Reproduction and Sexual Behavior
BIO-11	BIO-60	Introduction to Molecular and Cellular Biology
BIO-11H	BIO-60H	Honors Introduction to Molecular and Cellular Biology
BIO-12	BIO-61	Introduction to Organismal and Population Biology
BIO-17	BIO-4	Human Biology
BIO-2A	BIO-2	Zoology
BIO-30	BIO-16	Human Reproduction
BIO-34	BIO-18	Human Genetics
BIO-36	BIO-19	Environmental Science
HES-1	BIO-35	Health Science
MIC-1	BIO-55	Microbiology

BIO-1 General Biology

4 Units

UC, CSU

Prerequisite: None

Description: Introductory course designed for non-science majors that offers an integrated study of the basic principles of biology, with emphasis on the principles of structure and function, genetics, development, evolution, and ecology. Discussions on the philosophy, concepts, and implications of modern biology will be included. Students may not receive credit for both BIO-1 and BIO-1H. 54 hours lecture and 54 hours laboratory. (Letter Grade only)

BIO-1H

Honors General Biology

4 Units

UC, CSU

Prerequisite: None

Limitation on enrollment: Enrollment in the Honors program

Description: The course is designed for the non-science major. Students will explore the basic principles of biology, with particular emphasis on the molecular and cellular basis of life as well as genetics, development, evolution and ecology. Discussions on the philosophy, unifying concepts and applications/implications of biology will be included. The Honors course offers an enriched experience for accelerated students through smaller class size; a focus on the evidentiary basis of biological models; and the application of higher level critical thinking skills. Moreover, a thematic/concept-based approach to the course material will be used rather than the traditional topic-based, survey format. The laboratory component will involve completion of directed research projects that culminate in the submission and presentation of research papers, oral presentations and/or poster presentations in the appropriate scientific format. Students may not receive credit for both BIO-1 and BIO-1H. 54 hours lecture and 54 hours laboratory.

BIO-3

Field Botany

4 Units

UC, CSU

Prerequisite: None

Description: Introduction to the classification of native and introduced plants with special emphasis on identification of species. Several field trips. 54 hours lecture and 54 hours laboratory.

BIO-4

Human Biology (Formerly BIO-17)

4 Units

UC, CSU

Prerequisite: None

Description: A non-major introductory course in biology which offers an integrated study of the basic principles of biology as revealed in the human body. Emphasis is placed on cellular and system organization in relation to specific function and common disorders affecting the body; the interaction between the human body and its environment. Controversial, thought-provoking topics related to modern biology and medical advances involving genetic engineering will be included. This course satisfies district graduation and transfer requirements for a science lecture and laboratory course. 54 hours lecture and 54 hours laboratory.

BIO-5

General Botany (C-ID:AG-PS 104)

4 Units

UC, CSU

Prerequisite: None

Description: Introduction to the plant sciences with principal emphasis on the structures, functions and ecology of common members of each of the major plant divisions. Designed for nonmajors and majors in health science, forestry, agriculture, environmental science, landscape design, horticulture and general nature studies. 54 hours lecture and 54 hours laboratory.

BIO-7**Marine Biology****4 Units**

UC, CSU

Prerequisite: None

Description: An ecological study of the marine environment. Emphasis will be placed on the local marine algae, plants, and animals and their interactions with the physical environment. Frequent field trips are combined with laboratory observations to acquaint the student with the identification and understanding of the common marine organisms of the Southern California coastline. 54 hours lecture and 54 hours laboratory

BIO-8**Principles of Ecology****4 Units**

UC, CSU

Prerequisite: None

Description: Ecology is the study of the interactions between organisms and their environment. Basic principles include evolution and natural selection, climate and other abiotic factors, population growth and genetics, community interactions, species diversity, biogeography, and biome recognition. Human impacts on the above will also be discussed. This course requires field trips. 54 hours lecture and 54 hours laboratory.

BIO-10**Life Science Principles****3 Units**

UC, CSU

Prerequisite: None

Description: For non-life science majors. An introduction to the principles of life sciences through the study of basic biological concepts of living organisms involving structure, behavior, evolutionary relationships and the social and environmental implications of life science. No credit at the University of California if taken following BIO-1 or 1H. 54 hours lecture.

BIO-16**Human Reproduction and Sexual Behavior****(Formerly BIO-30)****3 Units**

UC, CSU

Prerequisite: None

Description: Human anatomy, physiology and behavior as related to sexual reproduction, including discussion of fertilization, pregnancy, childbirth and birth control. Consideration also will be given to homosexuality, sexually transmitted disease, sex education, and sexual intercourse and response. 54 hours lecture. (Letter Grade only)

BIO-18**Human Genetics****(Formerly BIO-34)****3 Units**

UC, CSU

Prerequisite: None

Advisory: High school biology or any college life science course with laboratory.

Description: A general education course for non-biology majors and allied health students who are interested in the underlying mechanisms of human heredity. Emphasis will be given to the role of genetics and environment on cells, individuals, family and human populations. Discussion on human genetic disorders and the social implications of modern human genetics will be included. 54 hours lecture.

BIO-19**Environmental Science****(Formerly BIO-36)****3 Units**

UC, CSU

Prerequisite: None

Description: A study of humans in relation to the environment that emphasizes population ecology, nutrient cycles and energy flow, pollution, food production, and conservation of natural resources. 54 hours lecture.

BIO-35**Health Science (Same as HES-1)****3 Units**

CSU

Prerequisite: None

Description: A general education course that offers a basic study of human health and health care as revealed in the anatomy and physiology of the body, nutrition, exercise, stress management, weight management, protection from degenerative and communicable diseases, personal safety, environmental health, wellness, and professional medical care. Students will explore making responsible decisions regarding all aspects of healthy life style including getting fit, disease prevention and treatments, substances use and abuse, human sexuality, and selection of health providers. This course satisfies the California requirement in drug, alcohol, tobacco and nutrition education for teacher certification. 54 hours lecture. (Letter Grade only)

BIO-45**Survey of Human Anatomy and Physiology****(Formerly AMY-10)****3 Units**

UC, CSU

Prerequisite: None

Description: An introductory and survey course of structural and functional aspects of the human body. Emphasis is placed on cell organization, human tissues, and discussion of each of the human systems. 54 hours lecture.

BIO-50A**Anatomy and Physiology I****(Formerly AMY-2A)****4 Units****(C-ID: BIOL 115S = BIO-50A+BIO-50B)**

UC, CSU

Prerequisite: BIO-1 or BIO-1H or BIO-4 or BIO-55 or BIO-60 or BIO-60H

Description: First of a two course sequence that introduces students to the basic concepts and principles of anatomy and physiology. This course will provide a foundation for advanced study of the human body. The course covers body orientation and organization, cells and tissues, the skeletal and muscular systems, and the eye and ear. Designed to meet the prerequisites for professional programs, e.g. nursing, dental hygiene, and physical therapy. 36 hours lecture and 108 hours laboratory.

BIO-50B**Anatomy and Physiology II****(Formerly AMY-2B)****4 Units**

(C-ID: BIOL 115S = BIO-50A+BIO-50B)

UC, CSU

Prerequisite: BIO-50A

Description: First of a two course sequence that introduces students to the basic concepts and principles of anatomy and physiology. This course will provide a foundation for advanced study of the human body. The course covers body orientation and organization, cells and tissues, the skeletal and muscular systems, and the eye and ear. Designed to meet the prerequisites for professional programs, e.g. nursing, dental hygiene, and physical therapy. 36 hours lecture and 108 hours laboratory.

BIO-55**Microbiology****(Formerly MIC-1)****4 Units**

UC, CSU

Prerequisite: CHE-2A or CHE-2B, and BIO-1 or BIO-1H or BIO-50A or BIO-60 or BIO-60H

Description: General characteristics of microorganisms with emphasis on morphology, growth, control, metabolism and reproduction; their role in disease, body defenses, and application to the biomedical field. 54 hours lecture and 54 hours laboratory.

BIO-60**Introduction to Molecular and Cellular Biology****(Formerly BIO-11)****5 Units**

(C-ID: BIOL 190) (C-ID BIOL 135S = BIO-60+BIO-61)

UC, CSU

*Prerequisite: CHE-1A or CHE-1AH**Advisory: MAT-35, ENG-50, ENG-80 or qualifying placement level*

Description: An intensive course for all Life Science majors designed to prepare the student for upper division courses in molecular biology, cell biology, developmental biology, evolution, and genetics. Course material includes principles of biochemistry, prokaryotic and eukaryotic cell structure and function, metabolism including photosynthesis and respiration, cell division and its control, classical and molecular genetics, signal transduction, early animal development, evolution and the diversity of life at the cellular level. 72 hours lecture and 54 hours laboratory.

BIO-61**Introduction to Organismal and Population Biology****(Formerly BIO-12)****5 Units**

(C-ID: BIOL 140) (C-ID BIOL 135S = BIO-60+BIO-61)

UC, CSU

Prerequisite: BIO-60 or BIO-60H

Description: An intensive course designed for all Life Science majors to prepare the student for upper division courses in organismal and population biology. Course materials include plant structure and function, animal systems and behavior, ecological diversity and dynamics, and evolutionary theory, including population genetics. This course along with Biology 60 is intended to fulfill a year of transferable lower division general biology. Some field trips are required. 72 hours lecture and 54 hours laboratory.

BUSINESS ADMINISTRATION**BUS-3****Computer Applications for Business****(Same as CAT/CIS-3)****3 Units**

CSU

Prerequisite: None

Description: This course introduces a suite of computer applications to students preparing to enter business, and office professions. Individuals who are already established in these professions may also benefit from skills emphasized which include: use of basic operating system functions, file management, word processing, spreadsheets, database management, and presentation graphics. 54 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

BUS-10**Introduction to Business****3 Units**

(C-ID:BUS 110)

UC, CSU

Prerequisite: None

Description: Scope, function and organization of contemporary business; fundamentals, concepts, principles, and current practices in the major areas of business activity with an integrated global perspective. 54 hours lecture. (Letter Grade only)

BUS-10H**Honors Introduction to Business****3 Units**

(C-ID: BUS 110)

UC, CSU

Limitation on enrollment: Enrollment in the Honors Program

Description: Scope, function and organization of contemporary business; fundamentals, concepts, principles and current practices in the major areas of business activity with an integrated global perspective. This honors course offers an enriched experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher level critical thinking skills. Students may not receive credit for both BUS-10 and BUS-10H. 54 hours lecture.

BUS-12**Opportunity Analysis for Entrepreneurs****2 Units**

CSU

Prerequisite: None

Description: This course examines the entrepreneur's role in the global economy as an exploiter of opportunities. Topics include the creative search for ideas, the innovation process, and the opportunity analysis to screen for the best ideas. Learning activities cover the decisions needed to transform an idea into a business opportunity. 36 hours lecture.

BUS-13**Developing a Successful Business Plan/Model****2 Units**

CSU

Prerequisite: None

Description: This course provides a systematic process for developing a business plan or model. It establishes a clear road map for clarifying a vision for a business and the strategic, tactical, and operational plans and/or model to move ideas into action. Students further along in the planning and research process will work through the major components of writing a business plan and/or model and emerge with a completed draft of a business plan/model. 36 hours lecture.

BUS-14**Social Media and Online Marketing for Entrepreneurs****3 Units**

CSU

Prerequisite: None

Description: This course introduces social media and online marketing tools for small businesses. Topics include social networking, online marketing channels, and creating an online presence for small businesses. 54 hours lecture.

BUS-18A**Business Law I****3 Units**

(C-ID:BUS 125)

UC, CSU

Prerequisite: None

Description: The social and practical basis of the law. Covers the legal and ethical environment of business, contracts, agency and employment, and the law of sales. 54 hours lecture.

BUS-18B**Business Law II****3 Units**

UC, CSU

Prerequisite: None

Description: Commercial paper, secured transactions, bankruptcy, agency and employment, business organizations, governmental regulations, international law, real and personal property and trusts and estates. 54 hours lecture.

BUS-20**Business Mathematics****3 Units**

CSU

Prerequisite: None

Description: An introduction to quantitative approaches for solving common business problems using general mathematics and first degree equations. Includes the development and solution of problems in the areas of business stats payroll, taxes, simple interest, promissory notes, compound interest, present and future value, annuities and sinking funds, installment buying and credit cards, home ownership costs, insurance, stocks and bonds, mutual funds, financial reports, depreciation, inventory, and overhead. 54 hours lecture.

BUS-22**Management Communications****3 Units**

CSU

*Prerequisite: None**Advisory: CAT-30*

Description: Examines the dynamics of organizational communication including a cross cultural emphasis. Practical experience is attained in verbal, non-verbal and interpersonal communication. Includes business report writing, letter writing and resume writing. 54 hours lecture.

BUS-24**Business Communication****3 Units**

(C-ID:BUS 115)

CSU

Prerequisite: ENG-1A or ENG-1AH

Description: Applies the principles of ethical and effective communication to the creation of letters, memos, emails, and 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. Course is designed for students who have college-level writing skills. 54 hours lecture.

BUS-30**Entrepreneurship: Foundations and Fundamentals****3 Units**

CSU

Prerequisite: None

Description: An introductory course designed to explore, identify and evaluate business opportunities with an emphasis on starting and managing a small or existing business: investigating tools and best practices associated with identifying and creating new venture opportunities; explore ways to shape and evaluate the viability of opportunities; understanding key industry factors, market, competitive factors, and customer needs.

BUS-31**Financing Your Business****2 Units**

CSU

Prerequisite: None

Description: The importance and impact of funding sources for entrepreneurial ventures. Topics include reviewing the impact of venture capital, identifying funding sources, raising money, and writing funding agreements and proposals. 36 hours lecture.

BUS-33**Business Structure and Legal Issues****2 Units**

CSU

Prerequisite: None

Description: This course examines the primary forms of business structures, such as sole proprietorship, partnership, and corporation, and the legal elements needed to comply with regulations and guidelines of various governmental agencies. The course will help entrepreneurs recognize the legal issues before they become problems, select legal representation, and manage and grow businesses more effectively within the law. 36 hours lecture.

BUS-47**Applied Business and Management Ethics (same as MAG-47)****3 Units**

CSU

Prerequisite: None

Description: An examination of ethical concerns in business decision making. Includes corporate, personal, global, governmental, public, environmental, product, and job-related issues. Case studies and corporate ethics programs and audits also covered. 54 hours lecture. (Letter Grade, or Pass/No Pass option)

BUS-80**Principles of Logistics****3 Units**

CSU

Prerequisite: None

Description: An introduction to the management of business logistics functions including purchasing, inventory management, transportation, warehousing and their related technologies. Focus is on integration of logistics functions to improve overall supply chain customer service and cost performance. 54 hours lecture.

BUS-82**Freight Claims****1.50 Units**

CSU

Prerequisite: None

Description: A study of loss avoidance and mitigation in transit and of the preparation, filing, and resolution. 27 hours lecture. (Letter Grade, or Pass/No Pass option.)

BUS-83**Contracts****1.50 Units**

CSU

Prerequisite: None

Description: A study of the legal and regulatory requirements applicable to contracts for product transportation and logistics functions and considerations for drafting and negotiating contracts with freight carriers, warehouses and other logistics service providers. 27 hours lecture. (Letter Grade, or Pass/No Pass option.)

BUS-85**Warehouse Management****3 Units**

CSU

Prerequisite: None

Description: Introduction to an integrated logistics approach to warehouse management. Includes the role of warehousing within the supply chain, performance metrics, applicable leadership basics, how to interact with other logistics managers to optimize overall activity, as well as principles of warehouse location, design, layout, operating functions, and customer service. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

BUS-86**Transportation and Traffic Management****3 Units**

CSU

Prerequisite: None

Description: A study of the freight transportation system including the demand for freight movement, laws, regulations, pricing, and policies, traffic management and international transportation issues. Focuses on how transportation collaborates with other supply chain functions to optimize cost and customer service. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

BUS-87**Purchasing and Supply Management****3 Units**

CSU

Prerequisite: None

Description: Study of the purchasing and supply manager's responsibilities including the identification, acquisition, positioning and management of materials, services and equipment that organizations need to attain their goals. Emphasis is on decision making, integration with suppliers, critical internal relationships, and customer (end user) service. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

BUS-90**International Logistics****3 Units**

CSU

Prerequisite: None

Description: An introduction to the role of logistics in global business; including the economic and service characteristics of international transportation providers, the government's role, documentation and terms of sale used in global business, and the fundamentals of effective export and import management. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

BUS-200**Business Administration Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Student should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass)

CHEMISTRY

CHE-1A**General Chemistry, I****5 Units**(C-ID: CHEM 110) (C-ID: CHEM 120S = CHE-1A + CHE-1B)
UC, CSU*Prerequisite: CHE-2A or CHE-3 and MAT-35*

Description: The student will explore simple chemical systems, their properties and how they can be investigated and understood in terms of stoichiometry, gas laws, elementary thermodynamics, atomic structure and bonding. Laboratory techniques in the investigation of chemical systems. Students may not receive credit for both CHE-1A and CHE-1AH. 54 hours lecture and 108 hours laboratory. (Letter Grade, or Pass/No Pass option.)

CHE-1B**General Chemistry, II****5 Units**(C-ID: CHEM 120S = CHE-1A + CHE-1B)
UC, CSU*Prerequisite: CHE-1A or CHE-1AH*

Description: Continued exploration of the principles of chemistry with emphasis on kinetics, thermodynamics, acid-base theory, equilibrium and electrochemistry. Special topics from descriptive inorganic chemistry, nuclear chemistry and introductory organic chemistry. Laboratory techniques in the investigation of chemical systems. Students may not receive credit for both CHE-1B and CHE-1BH. 54 hours lecture and 108 hours laboratory. (Letter Grade, or Pass/No Pass option.)

CHE-2A**Introductory Chemistry, I****4 Units**

UC, CSU

Prerequisite: MAT-52

Description: Introduction to the nature of chemicals, their properties, chemical bonding, reactions, and mixtures. Applications to health and environmental topics. Fulfills the needs of non-science majors. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

CHE-2B**Introductory Chemistry, II****4 Units**

UC, CSU

Prerequisite: CHE-2A

Description: Introduction to organic and biochemistry including: (1) structure, nomenclature, and reactions of some organic compounds and drugs, (2) structure and metabolism of carbohydrates, lipids, proteins, and nucleic acids, and (3) enzyme activity and inhibition. Meets the chemistry requirements for nursing, physical education, paramedics, nutrition, dental hygiene, physical therapy assistants, and inhalation therapy majors. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

CHE-3**Fundamentals of Chemistry****4 Units**

UC, CSU

Prerequisite: MAT-52

Description: A systematic presentation of the chemical, mathematical, and laboratory skills underlying Chemistry. Topics will include stoichiometry, bonding, reactions and solutions. Designed primarily as preparation for Chemistry 1A. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

CHE-10**Chemistry for Everyone****3 Units**

UC, CSU

Prerequisite: None

A lecture-demonstration presentation of the basic principles of chemistry with special emphasis on how chemistry applies and contributes to society. The course is designed to provide a general overview of chemistry with emphasis on historical, industrial, environmental, organic, biological, and nuclear aspects. CHE-10 covers a wide variety of topics ranging from atoms and molecules, acids and bases, organic and biochemistry, to a look at genetics and nuclear chemistry. The chemistry of air and water pollution is also discussed. This course is designed for students desiring a general knowledge of the field and fulfills the natural science requirement for the Associate of Arts Degree. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

CHE-12A**Organic Chemistry I****5 Units**

(C-ID: CHEM 160S = CHE-12A + CHE-12B)

UC, CSU

Prerequisite: CHE-1B or CHE-1BH

Description: A discussion of aliphatic hydrocarbons that focuses on their structure, reactivity, methods of synthesis, physical properties, and reaction mechanisms. Laboratory work emphasizes techniques used to identify, separate, and purify substances. 54 hours lecture and 108 hours laboratory. (Letter Grade, or Pass/No Pass option.)

CHE-12B**Organic Chemistry, II****5 Units**

(C-ID: CHEM 160S = CHE-12A + CHE-12B)

UC, CSU

Prerequisite: CHE-12A

Description: Continues discussion based on the content of CHE-12A. Develops a detailed study of nucleophilic and elimination reactions from a mechanistic viewpoint. Aliphatic and aromatic chemistry will be fully integrated throughout CHE-12B. Considerable emphasis on synthesis. Laboratory includes techniques of syntheses, separation, and identification of several compounds, and an introduction to qualitative organic analysis. 54 hours lecture and 108 hours laboratory. (Letter Grade, or Pass/No Pass option.)

COMMUNICATION STUDIES**COM-1****Public Speaking****3 Units**

(C-ID: COMM 110)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A*

Description: Prepares students to compose (develop outlines and research) and present a minimum of four speeches, including informative and persuasive presentations in front of a live audience. Emphasis will include: different purposes of speaking, types of speeches and organizational patterns, topic choice and audience adaptation, rhetorical principles, development and support of sound reasoning and argument, theories of persuasion, application of ethics in public speaking, listening skills, and theory and principles of effective delivery. Students will speak formally for a minimum of 20 total semester minutes. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-1H**Honors Public Speaking****3 Units**

(C-ID: COMM 110)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A**Limitation on enrollment: Enrollment in the Honors Program*

Description: Prepares students to compose (develop outlines and research) and present a minimum of four speeches, including informative and persuasive presentations in front of a live audience. Emphasis will include the enhanced exploration of: different purposes of speaking, types of speeches and organizational patterns, topic choice and audience adaptation, rhetorical principles, development and support of sound reasoning and argument, theories of persuasion, application of ethics in public speaking, listening skills, and theory and principles of effective delivery. Students will speak formally for a minimum of 20 total semester minutes. This Honors course offers an enriched experience for accelerated students through limited class size; seminar format; focus on primary texts; and application of higher level critical thinking skills. Students may not receive credit for both COM-1 and COM-1H. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-2**Persuasion in Rhetorical Perspective****3 Units**

(C-ID:COMM 190)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A*

Description: Develops persuasion from a rhetorical perspective with emphasis on the Ciceronian Canons of Rhetoric and the Aristotelian forms of proof: ethos, pathos, and logos. Includes practical application of these rhetorical theories in understanding and analyzing classical, post renaissance, and contemporary public address. Also incorporates presentation on persuasive issues, rhetorical analyses, and role play. Students will deliver a minimum of three oral presentations. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-3**Argumentation and Debate****3 Units**

(C-ID:COMM 120)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A*

Description: Covers theoretical underpinnings of argumentation and debate including a systematic approach to the process of debate, theories of argumentation as related to topic analysis, research, case construction, rebuttals, cross-examination, utilization of sound reasoning, and the importance of ethical behavior in debate. Focus is on effective delivery of verbal and nonverbal communication as well as effective listening. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-6**Dynamics of Small Group Communication****3 Units**

(C-ID:COMM 140)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A*

Description: Provides an introduction to the dynamics of communication in purposeful small groups (i.e. problem-solving). Theoretical knowledge of small group communication becomes the basis for the practical application of group development, problem-solving, decision-making, discussion, interaction and presentation. Develops student competence and confidence as a group member and leader. Oral group presentations required. Students will speak formally as part of a group for a minimum of 20 semester minutes. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-7**Oral Interpretation of Literature****3 Units**

(C-ID:COMM 170)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A*

Description: Preparation and presentation of interpreting literature (prose, poetry and drama). Principles and techniques of interpreting the printed page are related to preparing and presenting an oral interpretation of literature for an audience. Provides opportunities for cultural enrichment, literary analysis, creative outlet, articulate expression and improved speaking ability. Oral presentations required. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-9**Interpersonal Communication****3 Units**

(C-ID:COMM 130)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A*

Description: Analyzes the dynamics of the two-person communication process in relationships. Students study values, communication models, listening, verbal and nonverbal communication, perception, self-concept, self-disclosure, management of emotions, relationship theories and conflict management. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-9H**Honors Interpersonal Communication****3 Units**

(C-ID:COMM 130)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A**Limitation on enrollment: Enrollment in the Honors Program*

Description: Analyzes the dynamics of the two-person communication process in relationships. Students study values, communication models, listening, verbal and nonverbal communication, perception, self-concept, self-disclosure, management of emotions, relationship theories and conflict management. This Honors course offers an enriched experience for accelerated students through limited class size; seminar format; focus on primary texts; and greater application of higher level critical thinking skills. Students may not receive credit for both COM-9 and COM-9H. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-11**Storytelling****3 Units**

CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A*

Description: A study of the history, theory, and practice of the oral art of storytelling. The historical and current practice of the oral tradition of both prose and poetry will be covered using a multicultural perspective. Students will research, prepare, and perform stories from a variety of genres and cultures. Oral presentations required. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-12**Intercultural Communication****3 Units**

(C-ID:COMM 150)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A*

Description: This course provides an introduction to the factors affecting intercultural communication. This course focuses on the communication behaviors and values common to all cultures and ethnic groups, as well as the differences that may insulate and divide people. Students will examine influences on the communication process, including aspects such as stereotyping, gender roles, values, beliefs, verbal and nonverbal communication patterns, conflict styles and much more. Students will learn to overcome the communication problems that may result when members of other cultures and/or ethnic groups communicate by evaluating their own intercultural communication patterns and learning skills to increase their effectiveness. 54 hours lecture. (Letter Grade or Pass/No Pass option.)

COM-13**Gender and Communication****3 Units**

UC, CSU

*Prerequisite: None**Advisory: COM-51 and qualification for ENG-1A*

Description: A study of theories that address communication styles including similarities and differences between masculine and feminine gender types. Integrates theories to heighten students' awareness of the importance of gender as a communication variable. Theoretical approaches to the development of gender are discussed. Gender communication issues are addressed with an emphasis on listening, perception, verbal, nonverbal communication, and conflict management in interpersonal, small group and various other contexts. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

COM-20**Introduction to Communication Theory****3 Units**

(C-ID:COMM 180)

UC, CSU

*Prerequisite: None**Advisory: COM-51 and/or qualification for ENG 1A*

Description: A survey of the discipline of communication studies with emphasis on multiple epistemological, theoretical, and methodological issues relevant to the systematic inquiry and pursuit of knowledge about human communication. This course explores the basic history, assumptions, principles, processes, variables, methods, and specializations of human communication as an academic field of study. 54 hours lecture. (Letter Grade, or Pass/No Pass Option)

COMPUTER APPLICATIONS AND OFFICE TECHNOLOGY

CAT-1A**Business Etiquette****1 Unit***Prerequisite: None*

Description: This course provides students with both the knowledge and the skills required to quickly apply business standards of acceptable behavior and etiquette to project a professional image. It addresses additional topics, such as financial planning, appropriate use of workplace technologies, and written business communications, that students need to know when transitioning from campus to the workplace. 18 hours lecture. (Letter Grade, or Pass/No Pass option.)

CAT-3**Computer Applications for Business
(Same as BUS/CIS-3)****3 Units**

CSU

Prerequisite: None

Description: This course introduces a suite of computer applications to students preparing to enter business, and office professions. Individuals who are already established in these professions may also benefit from skills emphasized which include: use of basic operating system functions, file management, word processing, spreadsheets, database management, and presentation graphics. 54 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CAT-31**Business Communications****3 Units**

CSU

*Prerequisite: None**Advisory: CAT-30*

Description: This course is designed to teach the fundamentals of written and oral communications in business by providing specific practical applications. Emphasis will be on written and oral communications, stressing the most common forms of correspondence. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

CAT-51**Intermediate Typewriting/Document Formatting****3 Units**

CSU

*Prerequisite: None**Advisory: Beginning typing skills and CAT-50*

Description: Develops professional typing skills. Includes business letters, manuscripts, reports, and tables. 54 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CAT-78A**Introduction to Adobe Photoshop****3 Units****(Same as CIS-78A)**

CSU

Prerequisite: None

Description: Introduction to Adobe Photoshop including mastery of digital image editing, techniques for selecting, photo correction, manipulating images, and vector drawing. This course also provides instruction in retouching images, special effects, working with image color and web page illustrations. 54 hours lecture and 18 hours laboratory. (TBA option)

CAT-79**Introduction to Adobe Illustrator****3 Units****(Same as CIS-79)**

CSU

Prerequisite: None

Description: Fundamentals of Adobe Illustrator, including creating objects, drawing paths, designing with type, creating freehand drawing and illustration, importing and working with graphics. Development of a working knowledge of the processes that generate graphic images: layering, shadowing, and color use. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CAT-80**Word Processing: Microsoft Word for Windows****3 Units****(Same as CIS-80)**

CSU

*Prerequisite: None**Advisory: Typing knowledge/skills with at least 40 wpm*

Description: This course provides introductory, intermediate, and advanced skill levels necessary to produce a variety of professional documents using Microsoft Word word processing program. Students will develop skills in word processing techniques and tasks. 54 hours lecture and 18 hours laboratory. (TBA Option)

CAT-90**Microsoft Outlook****(Same as CIS-90)****3 Units***Prerequisite: None*

Description: This course utilizes Microsoft Outlook to organize and plan personal and business information. Emphasis is placed on the use of Outlook for communication and sharing information with persons within a company or small business. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CAT-93**Computers for Beginners****(Same as CIS-93)****3 Units**

CSU

Prerequisite: None

Description: This course is designed as a practical step-by-step introduction to computer literacy topics including computer hardware and software, application skills, the Internet and Internet searching, Web page creation and computer ethics. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CAT-98A**Introduction to Excel****(Same as CIS-98A)****1.50 Units**

CSU

Prerequisite: None

Description: Skill development in electronic spreadsheets using Excel for business and scientific related applications. 27 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CAT-98B**Advanced Excel****(Same as CIS-98B)****1.50 Units**

CSU

Prerequisite: CAT/CIS-98A

Description: Advanced concepts of MS-Excel including managing large spreadsheets, creating and working with databases, creating and using templates, and macro creation. Spreadsheet manipulation with advanced macro techniques, customizing Excel screen and toolbars and solving problems with goal seeker and solver. 27 hours lecture and 18 hours of laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

INTRODUCTION TO COMPUTER INFORMATION

CIS-1A**Introduction to Computer Information Systems****3 Units**

(C-ID:ITIS 120)

UC, CSU

Prerequisite: None

Description: Examination of information systems and their role in business. Focus on information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware and software components. Application of these concepts and methods through hands-on projects developing computer-based solutions to business problems. Utilizing a systems approach students will use databases, spreadsheets, word processors, presentation graphics, and the Internet to solve business problems and communicate solutions. 54 hours lecture and 18 hours laboratory. (TBA option)

CIS-2**Fundamentals of Systems Analysis****3 Units****(Same as CSC-2)**

CSU

Prerequisite: None

Description: The course presents a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the business need, articulating business requirements for the technology solution, specifying alternative approaches to acquiring the technology capabilities needed to address the business requirements, and specifying the requirements for the information systems solution in particular, in-house development, development from third-party providers, or purchased commercial-off-the-shelf packages. 54 hours lecture and 18 hours laboratory.(TBA option) (Letter Grade, or Pass/No Pass option.)

CIS-3**Computer Applications for Business****3 Units****(Same as BUS/CAT-3)**

CSU

Prerequisite: None

Description: This course introduces a suite of computer applications to students preparing to enter business, and office professions. Individuals who are already established in these professions may also benefit from skills emphasized which include: use of basic operating system functions, file management, word processing, spreadsheets, database management, and presentation graphics. 54 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CIS-5**Programming Concepts and MethodologyI: C++****4 Units****(Same as CSC-5)**

(C-ID:COMP 122)

UC, CSU

*Prerequisite: None**Advisory: CIS-1A*

Description: Introduction to the discipline of computer science incorporating problem definitions, algorithm development, and structured programming logic for business, scientific and mathematical applications. The C++ language will be used for programming problems. 54 hours lecture and 54 hours laboratory.

CIS-7**Discrete Structures****3 Units****(Same as CSC-7)**

(C-ID:COMP 152)

UC, CSU

Prerequisite: CIS/CSC-5

Description: This course is an introduction to the discrete structures used in Computer Science with an emphasis on their applications. Topics covered include: Functions, Relations and Set; Basic Logic; Proof Techniques; Basics of Counting; Graphs and Trees; and Discrete Probability. 54 hours lecture and 18 hours laboratory(TBA option).

CIS-11**Computer Architecture and Organization: Assembly****3 Units****(Same as CSC-11)**

(C-ID:COMP 142)

UC, CSU

*Prerequisite: None**Advisory: CIS/CSC-5*

Description: An introduction to microprocessor architecture and assembly language programming. The relationship between hardware and software will be examined in order to understand the interaction between a program and the total system. Mapping of statements and constructs in a high-level language onto sequences of machine instructions is studied as well as the internal representation of simple data types and structures. Numerical computation is performed, noting the various data representation errors and potential procedural errors. 54 hours lecture and 18 hours laboratory. (TBA option)

CIS-12**PHP Dynamic Web Site Programming****3 Units****(Same as CSC-12)**

CSU

*Prerequisite: None**Advisory: CIS/CSC-5 and CIS-72A and CIS/CSC-14A*

Description: Dynamic web site programming using PHP. Fundamentals of server-side web programming. Introduction to database-driven web sites, using PHP to access a database such as MySQL. Web applications such as user registration, content management, and e-commerce. This course is intended for students already familiar with the fundamentals of programming and HTML. 54 hours lecture and 18 hours laboratory. (TBA Lab)(Letter Grade, or Pass/No Pass option.)

CIS-17A**Programming Concepts and Methodology II: C++****3 Units****(Same as CSC-17A)**

(C-ID:COMP 132)

UC, CSU

Prerequisite: CIS/CSC-5

Description: The application of software engineering techniques to the design and development of large programs; data abstraction, structures, and associated algorithms. A comprehensive study of the syntax and semantics of the C++ language and the methodology of Object-Oriented program development. 54 hours lecture and 18 hours laboratory. (TBA option)

CIS-17B**C++ Programming: Advanced Objects****3 Units**

UC, CSU

*Prerequisite: None**Advisory: CIS/CSC-17A*

Description: This is an advanced C++ programming course for students familiar with object-oriented programming and utilization of basic graphical interface techniques. An emphasis will be placed on advanced concepts associated with complex business and gaming applications that utilize exception handling, multithreading, multimedia, and database connectivity. 54 hours lecture and 18 hours laboratory. (Letter Grade, or Pass/No Pass option.)

CIS-17C**C++ Programming: Data Structures****3 Units**

UC, CSU

*Prerequisite: None**Advisory: CIS/CSC-17A*

Description: This course offers a thorough presentation of the essential principles and practices of data structures using the C++ programming language. The course emphasizes abstract data types, software engineering principles, lists, stacks, queues, trees, graphs, and the comparative analysis of algorithms. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CIS-18A**Java Programming: Objects****3 Units****(Same as CSC-18A)**

UC, CSU

*Prerequisite: None**Advisory: CIS/CSC-5*

Description: An introduction to Java programming for students already experienced in the fundamentals of programming. An emphasis will be placed upon object-oriented programming. Other topics include graphical interface design and typical swing GUI components. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CIS-18B**Java Programming: Advanced Objects****3 Units**

UC, CSU

*Prerequisite: None**Advisory: CIS/CSC-18A*

Description: This is an advanced Java programming course for students familiar with object-oriented programming and utilization of basic graphical interface techniques. An emphasis will be placed on advanced concepts associated with Business, E-Commerce and Gaming applications that utilize exception handling, multithreading, multimedia, and database connectivity. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CIS-18C**Java Programming: Data Structures****3 Units**

UC, CSU

*Prerequisite: None**Advisory: CIS/CSC-18A*

Description: This course is designed to be an advanced Java programming course for students familiar with object-oriented programming and database concepts. The major emphasis will be related to concepts of storing and retrieving data efficiently, which are the essential principles, and practices of data structures. 54 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CIS-21**Introduction to Operating Systems****3 Units**

CSU

Prerequisite: CIS-1A

Description: An introduction to operating system concepts, structure, functions, performance, and management is covered. A current operating system, such as Windows, Linux, or UNIX is used as a case study. File multi-processing, system security, device management, network operating systems, and utilities are introduced. 54 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CIS-44**Portfolio Production
(Same as GAM-44)****2 Units**

CSU

Prerequisite: None

Description: Creative organization and presentation of a body of work exhibiting portfolio-quality aptitude. Covers all aspects of creation and presentation of a professional portfolio for students of multimedia majors such as 3D modeling, animation, game design, game programming, mobile applications development and graphic design. Students will edit existing work to emphasize individual strengths and areas of specialization. Compilation of a professional resume and mock interviews will be completed by each student. 18 hours lecture and 54 hours laboratory.

CIS-59**Typography and Graphic Design****3 Units**

UC, CSU

Description: This course is a study of the fundamentals of typography including type anatomy, design, hierarchy, and aesthetic expression. Emphasis is placed on the process of design development from roughs to comprehensives, layout, and the use of type for effective communication. Industry standard software is used in the development of typographic and graphic design solutions appropriate for print, web and other media. 36 hours lecture and 72 hours laboratory.

CIS-66**Web Development I****3 Units**

CSU

Prerequisite: None

Description: This course provides in depth understanding in the roles of markup and scripting languages to display text and multimedia content for basic web pages. Demonstrates the process by which the latest standard of HTML and construction of cascading style sheets frame generic content delivery. Functional extension is then applied through the use of Javascript and other relevant scripting languages, introducing dynamic functionality to web sites. Students will also become familiar with the use of web servers and file transfer protocol applications. 54 hours lecture and 18 hours laboratory.

CIS-72A**Introduction to Web Page Creation****1.5 Units**

CSU

*Prerequisite: None**Advisory: Competency in the use of a computer, familiarity with the Internet. , CIS-95A*

Description: An introduction to Web page creation using Extensible Hypertext Markup Language (XHTML). Use XHTML and CSS to design and create Web pages with formatted text, hyperlinks, lists, images, tables, frames, and forms. 27 hours lecture and 18 hours laboratory. (Letter Grade, or Pass/No Pass option.)(TBA option)

CIS-72B**Intermediate Web Page Creation Using Cascading Style Sheets (CSS)****1.5 Unit**

CSU

*Prerequisite: None**Advisory: Knowledge of HTML and the Internet and, CIS-72A and CIS-95A*

Description: Intermediate Web page creation using cascading style sheets (CSS) to format and lay out web page content. CSS works with HTML, so HTML knowledge is recommended. Inline styles, embedded styles, and external style sheets are covered. CSS is used to format text, links, set fonts, colors, margins, and position text and graphics on a page. CSS is also a component of Dynamic HTML. 27 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CIS-76B**Introduction to Dreamweaver****3 units***Prerequisite: None**Advisory: CIS-95A*

Description: Provides students with the knowledge and skills required to quickly design and implement webpages and to administer and update existing websites using Dreamweaver. The course uses Dreamweaver to streamline and automate website management on a website. 54 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CIS-77**Full Stack Web Development****8 Units**

CSU

Prerequisite: None

Description: The course teaches students how to develop web-based applications (apps) and websites to prepare for entry level web media jobs and to provide resources and techniques to assist aspiring entrepreneurs in conceiving web-based start-up companies. This course prepares a student to become a full-stack web developer. Course is subdivided into three phases. The first phase teaches web-media development fundamentals such as HTML language, Cascading Style Sheets (CSS), and Javascript, and open source software tools, etc. The next phase introduces web apps and website programming tools for rapid deployment and for expanding the functionality of a project. During the last phase the student selects and develops a special project to demonstrate and showcase the newly acquired full-stack web development skills. 36 hours lecture and 324 hours of lab.

CIS-78A**Introduction to Adobe Photoshop
(Same as CAT-78A)****3 Units**

CSU

Prerequisite: None

Description: Introduction to Adobe Photoshop including mastery of digital image editing, techniques for selecting, photo correction, manipulating images, and vector drawing. This course also provides instruction in retouching images, special effects, working with image color and web page illustrations. 54 hours lecture and 18 hours laboratory. (TBA option)

CIS-78B**Advanced Adobe Photoshop****3 Units**

CSU

Prerequisite: CIS-78A or CAT-78B

Description: Advanced techniques and methods for using Adobe PhotoShop to produce custom graphic solutions. Focus on real-world projects, workflow foundations, adjusting and optimizing images, and tips and tricks for enhanced image creation. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CIS-79**Introduction to Adobe Illustrator
(Same as CAT-79)****3 Units**

CSU

Prerequisite: None

Description: Fundamentals of Adobe Illustrator, including creating objects, drawing paths, designing with type, creating freehand drawing and illustration, importing and working with graphics. Development of a working knowledge of the processes that generate graphic images: layering, shadowing, and color use. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CIS-80**Word Processing: Microsoft Word for Windows
(Same as CAT-80)****3 Units**

CSU

*Prerequisite: None**Advisory: Typing knowledge/skills with at least 40 wpm*

Description: This course is designed to provide introductory, intermediate, and advanced skill levels necessary to produce a variety of professional documents using Microsoft Word word processing program. Students will develop skills in word processing techniques and tasks. 54 hours lecture and 18 hours laboratory.

CIS-81**Introduction to Desktop Publishing using
Adobe InDesign****3 Units**

CSU

Prerequisite: None

Description: Page design and layout techniques using Adobe InDesign. Mastery of beginning and intermediate techniques of document creation, including design skills. Successful incorporation of drawing and bit mapped files to create professional printed media. 54 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CIS-90**Microsoft Outlook
(Same as CAT-90)****3 units**

CSU

Prerequisite: None

Description: This course utilizes Microsoft Outlook to organize and plan personal and business information. Emphasis is placed on the use of Outlook for communication and sharing information with persons within a company or small business. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CIS-93**Computers for Beginners
(Same as CAT-93)****3 Units**

CSU

Prerequisite: None

Description: This course is designed as a practical step-by-step introduction to computer literacy topics including computer hardware and software, application skills, the Internet and Internet searching, Web page creation and computer ethics. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CIS-98A**Introduction to Excel
(Same as CAT-98A)****1.50 Units**

CSU

Prerequisite: None

Description: Skill development in electronic spreadsheets using Excel for business and scientific related applications. 27 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CIS-98B**Advanced Excel
(Same as CAT-98B)****1.50 Units**

CSU

Prerequisite: CAT/CIS-98A

Description: Advanced concepts of MS-Excel including managing large spreadsheets, creating and working with databases, creating and using templates, and macro creation. Spreadsheet manipulation with advanced macro techniques, customizing Excel screen and toolbars and solving problems with goal seeker and solver. 27 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

CIS-200**Computer Information Systems Work Experience** 1-4 Units

CSU

Prerequisite: None

Limitation on enrollment: Students must be enrolled in a minimum of 7 units including the work experience units and in a major related course.

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass.)

COMPUTER SCIENCE

CSC-2**Fundamentals of Systems Analysis
(Same as CIS-2)****3 Units**

CSU

Prerequisite: None

Description: The course presents a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the business need, articulating business requirements for the technology solution, specifying alternative approaches to acquiring the technology capabilities needed to address the business requirements, and specifying the requirements for the information systems solution in particular, in-house development, development from third-party providers, or purchased commercial-off-the-shelf packages. 54 hours lecture and 18 hours laboratory.(TBA option)(Letter Grade, or Pass/No Pass option.)

CSC-5**Programming Concepts and Methodology I: C++
(Same as CIS-5)****4 Units**

(C-ID:COMP 122)

UC, CSU

*Prerequisite: None**Advisory: CIS-1A*

Description: Introduction to the discipline of computer science incorporating problem definitions, algorithm development, and structured programming logic for business, scientific and mathematical applications. The C++ language will be used for programming problems. 54 hours lecture and 54 hours laboratory.

CSC-7**Discrete Structures
(Same as CIS-7)****3 Units**

(C-ID:COMP 152)

UC, CSU

Prerequisite: CIS/CSC-5

Description: This course is an introduction to the discrete structures used in Computer Science with an emphasis on their applications. Topics covered include: Functions, Relations and Set; Basic Logic; Proof Techniques; Basics of Counting; Graphs and Trees; and Discrete Probability. 54 hours lecture and 18 hours laboratory. (TBA option)

CSC-11**Computer Architecture and Organization: Assembly
(Same as CIS-11)****3 Units**

(C-ID:COMP 142)

UC, CSU

*Prerequisite: None**Advisory: CIS/CSC-5*

Description: An introduction to microprocessor architecture and assembly language programming. The relationship between hardware and software will be examined in order to understand the interaction between a program and the total system. Mapping of statements and constructs in a high-level language onto sequences of machine instructions is studied as well as the internal representation of simple data types and structures. Numerical computation is performed, noting the various data representation errors and potential procedural errors. 54 hours lecture and 18 hours laboratory. (TBA option)

CSC-12**PHP Dynamic Web Site Programming
(Same as CIS-12)****3 Units**

CSU

*Prerequisite: None**Advisory: CIS/CSC-5 and CIS-72A and CIS/CSC-14A*

Description: Dynamic web site programming using PHP. Fundamentals of server-side web programming. Introduction to database-driven web sites, using PHP to access a database such as MySQL. Web applications such as user registration, content management, and e-commerce. This course is intended for students already familiar with the fundamentals of programming and HTML. 54 hours lecture and 18 hours laboratory. (TBA Option)(Letter Grade, or Pass/No Pass option.)

CSC-14A**Web Programming: JavaScript****3 Units**

CSU

*Prerequisite: None**Advisory: Previous programming experience and knowledge of HTML, CIS/CSC-5 and CIS-72A*

Description: Fundamentals of JavaScript programming for the world wide web for students already familiar with the fundamentals of programming and HTML. Language features will include control structures, functions, arrays, JavaScript objects, browser objects and events. Web applications will include image rollovers, user interactivity, manipulating browser windows, form validation and processing, cookies, creating dynamic content, and Dynamic HTML programming. 54 hours lecture and 18 hours laboratory. (TBA Option)(Letter Grade, or Pass/No Pass option.)

CSC-17A**Programming Concepts and Methodology II: C++
(Same as CIS-17A)****3 Units**

(C-ID:COMP 132)

UC, CSU

Prerequisite: CIS-5 CSC-5

Description: The application of software engineering techniques to the design and development of large programs; data abstraction, structures, and associated algorithms. A comprehensive study of the syntax and semantics of the C++ language and the methodology of Object-Oriented program development. 54 hours lecture and 18 hours laboratory.(TBA option)

CSC-18A**Java Programming: Objects
(Same as CIS-18A)****3 Units**

UC, CSU

*Prerequisite: None**Advisory: CIS/CSC-5*

Description: An introduction to Java programming for students already experienced in the fundamentals of programming. An emphasis will be placed upon object-oriented programming. Other topics include graphical interface design and typical swing GUI components. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

CONSTRUCTION TECHNOLOGY

CON-60**Introduction to Construction****3 Units**

CSU

Prerequisite: None

Description: This course will provide an overview of the basic concepts of construction, including city and regional planning, managing, contracting, designing, engineering, estimating, bidding, inspection and production work normally associated with construction. An overview of how building codes affect the design, materials and methods of constructing buildings and other projects. Students will be expected to participate in several field trips. 54 hours lecture.

CON-61**Materials of Construction****3 Units**

CSU

Prerequisite: None

Description: An introduction to the materials used in the construction of buildings; identification of materials, their properties and uses. The characteristics and properties of such materials such as concrete, steel, timber, masonry, plaster, roofing and all other structural and ornamental materials. 54 hours lecture.

CON-62**Blueprint Reading****3 Units**

CSU

Prerequisite: None

Description: This course will provide an overview of construction blueprint and specification reading, the relationship of drawings and specifications to the contract and responsibilities of the inspector in interpreting the contract documents and in the inspection of the work. 54 hours lecture.

CON-63A**Uniform Building Code****3 Units**

CSU

Prerequisite: None

Description: Use of the Uniform Building Code and the various related state and local ordinances in plan checking various building types for compliance with the codes and ordinances. 54 hours lecture.

CON-63B**Analysis of Revisions to the Uniform Building Code****3 Units**

CSU

Prerequisite: CON-63A

Description: An analysis which discusses the changes, amendments and the intent of the code. This analysis is to provide to the building industry a concise understanding and purpose of facilitating the current code. In addition, the analysis of the revisions may be used as a plancheck and field inspection aid to ensure a better appraisal of the latest revisions. 54 hours lecture. (Letter Grade or Pass/No Pass option.)

CON-63C**Analysis of Revisions to the Uniform Building Code****3 Units**

CSU

Prerequisite: CON-63A

Description: An analysis which discusses the changes, amendments and the intent of the code. This analysis is to provide to the building industry a concise understanding and purpose of facilitating the current code. In addition, the analysis of the revisions may be used as a plancheck and field inspection aid to ensure a better appraisal of the latest revisions. 54 hours lecture. (Letter Grade or Pass/No Pass option.)

CON-63D

Analysis of Revisions to the Uniform Building Code 3 Units
CSU

Prerequisite: CON-63A

Description: An analysis which discusses the changes, amendments and the intent of the code. This analysis to provide to the building industry a concise understanding and purpose of facilitating the current code. In addition, the analysis of the revisions may be used as a plancheck and field inspection aid to ensure a better appraisal of the latest revisions. 54 hours lecture. (Letter Grade or Pass/No Pass option.).

CON-64

Office of Procedures and Field Inspection 3 Units
CSU

Prerequisite: None

Description: Office organization, procedures and necessary paper work pertinent to building and safety office management and inspection. Field inspection for completed buildings, zoning, health and safety ordinance application. Several field trips. 54 hours lecture.

CON-65

Plumbing Code 3 Units
CSU

Prerequisite: None

Description: Review of plumbing codes including discussion and analysis of the application of physical laws in development of the code requirements. 54 hours lecture.

CON-66

National Electrical Code 3 Units
CSU

Prerequisite: None

Description: Review of electrical codes including discussion and analysis of the application of physical laws in development of the code requirements. 54 hours lecture.

CON-67

Mechanical Code 3 Units
CSU

Prerequisite: None

Description: Office organization, procedures and necessary paper work pertinent to building and safety office management and inspection. Field inspection for completed buildings, zoning, health and safety ordinance application. Several field trips. 54 hours lecture.

CON-68

Simplified Engineering for Building Inspectors 3 Units
CSU

Prerequisite: None

Description: Introduction to basic engineering. Fundamental static and stress formulae. Shear and moment diagrams and their applications. Properties of sections and their uses. Design of wood joists, beams, posts and use of tables with practical composite design applications. 54 hours lecture.

CON-70

Fundamentals of Soil Technology 3 Units
CSU

Prerequisite: None

Description: Field inspection and testing of soils and rock for grading and building contractors. A systematic approach to soil classification, strength, compressibility and expansive characteristic is covered. Methods of observation and foundation types are considered in detail. A survey of engineering and analysis is made. 54 hours lecture.

CON-71

Energy Conservation Standards 1.5 Units
CSU

Prerequisite: None

Description: Administrative regulations and codes that regulate the energy conservation for new residential buildings. Energy measures and mandatory features and devices that must be installed in new residential buildings and the enforcement by local building departments. 27 hours lecture.

CON-72

California State Accessibility Standards 1.5 Units
CSU

Prerequisite: None

Description: This course examines the provisions of Title 24 accessibility standards of the California Uniform Building Code for application in the construction industry. These legal requirements establish minimum facility accessibility standards and requirements to provide or improve access to and use by people with physical disabilities. Students will gain an understanding of the legal requirements and will interpret, analyze, and apply these provisions to various construction, alteration, remodeling, repair, and use of building and related facilities. 27 hours lecture.

CON-73

Project Planning for Site Construction 3 Units
CSU

Prerequisite: None

Description: Organization, procedures and necessary paperwork pertinent to the planning and construction of site improvements. Site analysis by evaluating the needs of the property as well as the needs of those using the property and the design correlations with scope, specifications and control of local, state, and federal agencies. 54 hours lecture.

CON-74

Construction Estimating 3 Units
CSU

Prerequisite: None

Corequisite: CON-62

Description: Introduction to estimating will provide an overview of basic and advanced principles of construction estimating and bidding currently used in the construction industry from pre-bid to post-bid. This course will be taught utilizing Construction Specifications Institute format (www.csinet.org). 54 hours lecture.

CON-80**Construction Scheduling****3 Units**

CSU

Prerequisite: None

Description: Construction Scheduling will provide an overview of the uses and the types of schedules that are used in the preconstruction and construction stages of a project. 54 hours lecture.

CON-200**Construction Work Experience****1-4 units**

CSU

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills, including occupational and educational resources, career planning, resume development and interview techniques. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass option)

DANCE

DAN-6**Dance Appreciation****3 Units**

UC, CSU

Prerequisite: None

Description: A nontechnical course for the general student leading to the appreciation and understanding of dance as a medium of communication, entertainment, and as an art form. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

DRAFTING

DFT-21**Drafting****(Same as ENE-21)****3 Units**

UC, CSU

Prerequisite: None

Description: Fundamentals of mechanical drawing including lettering, instruments and their uses, geometric construction, types of projection, freehand drawing, sectioning, dimensioning, auxiliary views, and pictorial drawing. Recommended for beginners and students with up to one year of drafting in high school. 27 hours lecture and 90 hours laboratory. (Letter Grade, or Pass/No Pass option.)

DFT-22**Engineering Drawing****(Same as ENE-22)****3 Units**

UC, CSU

*Prerequisite: DFT/ENE-21**Advisory: DFT/ENE-30*

Description: Drafting fundamentals briefly reviewed, geometric construction, orthographic projections, freehand sketching, sectioning, auxiliary views, shop processes, dimensions and tolerances, fasteners, working and pictorial drawings, and as time permits, piping and electrical drawings. 27 hours lecture and 90 hours laboratory. (Letter Grade, or Pass/No Pass option.)

DFT-23**Descriptive Geometry****(Same as ENE-23)****3 Units**

UC, CSU

Prerequisite: DFT/ENE-22 and MAT-36

Description: Graphical (drafting) techniques applied to the solutions of vector problems, the development of surfaces as in sheet-metal work, the determination of lines of intersection between surfaces, and the solution of miscellaneous engineering problems involving points, lines and planes. 27 hours lecture and 81 hours laboratory. (Letter Grade, or Pass/No Pass option.)

DFT-24**Architectural Drafting****(Same as ARE-24)****3 Units**

CSU

Prerequisite: DFT/ENE-21 and DFT/ENE-30

Description: Introduction to methods and techniques used in the development of architectural construction documents for light frame structures (Type V construction) including construction theory, notation, materials symbols, drawing format and general practice. Using Computer-Aided Drafting (CAD), this course will focus on the drawing of a set of plans to include a plot plan, foundation plan, floor plan(s), sections, exterior and interior elevations, electrical plan and structural details. Sketching techniques will also be covered. 27 hours lecture and 90 hours laboratory. (Letter Grade, or Pass/No Pass option.)

DFT-27**Technical Communications****(Same as ELE/ENE-27)****3 Units**

CSU

Prerequisite: None

Description: Procedures for organizing and presenting technical data through informal and formal documents and presentations. Includes practice in writing memoranda, letter reports, and formal technical reports. Also includes discussion of personal resume and preparation of job applications. 54 hours lecture.

DFT-30**Computer Aided Drafting (CAD)****(Same as ENE-30)****3 Units**

UC, CSU

*Prerequisite: None**Advisory: CIS-1A*

Description: A two-dimensional computer aided drafting class for drafters. Students will use an AUTOCAD computer drafting system to develop computer drawn drawings, which are typical to the various fields of drafting. 27 hours lecture and 90 hours laboratory.

DFT-42**Solidworks I****(Same as ENE-42)****3 Units**

CSU

*Prerequisite: None**Advisory: PC computer experience recommended CIS-1A*

Description: This course is designed to introduce the student to three-dimensional parametric solid modeling with SolidWorks. Students will begin with basic parametric solid modeling techniques advancing into complex assemblies requiring animation. 27 hours lecture and 90 hours of laboratory.

DFT-42B**Solidworks II****(Same as ENE-42B)****3 Units**

CSU

Prerequisite: DFT/ENE-42 or prior SolidWorks experience

Description: An advanced course in using the three-dimensional parametric solid-modeler SolidWorks. This course is designed to further 3D parametric solid modeling software techniques learned in SolidWorks I. Students will delve deeper into topics that were introduced in the first SolidWorks course such as extruding, sweeping, lofting, shelling, assemblies, and animation. 27 hours lecture and 90 hours laboratory. (Letter Grade, or Pass/No Pass option.)

DFT-51**Blueprint Reading****(Same as ENE-51)****2 Units**

CSU

Prerequisite: None

Description: A beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations. This course is designed for students interested in print reading for the machine trades. 27 hours lecture and 27 hours laboratory. (Letter Grade, or Pass/No Pass option.)

DFT-52**Geometric Dimensioning and Tolerancing****(Same as ENE-52)****2 Units**

CSU

Prerequisite: None

Description: A course presenting the basics of the Standards of Geometric Dimensioning and Tolerancing. This course will help students read, interpret and use ANSI Y14.5M, the current standard for drafting. 36 hours lecture. (Letter Grade, or Pass/No Pass option.)

DFT-60**Math for Engineering Technology****(Same as ENE-60)****3 Units***Prerequisite: None*

Description: A course in mathematical problems frequently used by students enrolled in the trade and industrial and engineering programs. This course reviews basic arithmetic, linear measurement, basic algebra, basic plane geometry, trigonometry, and compound angles. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

DFT-200**Drafting Work Experience**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass.)

EARLY CHILDHOOD EDUCATION

EAR-19**Observation and Assessment in Early Childhood Education****3 Units**

(C-ID:ECE 200)

CSU

Prerequisite: None

Description: The appropriate use of a variety of assessment and observation strategies to document child development and behavior. Child observations will be conducted and analyzed. 54 hours lecture.

EAR-20**Child Growth and Development****3 Units**

(C-ID:CDEV 100)

UC, CSU

Prerequisite: None

Description: This introductory course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. There will be an emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages. Outside observations required. 54 hours lecture.

EAR-24**Introduction to Curriculum****3 Units**

(C-ID:ECE 130)

CSU

Prerequisite: None

Description: This course presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine a teacher's role in supporting development and engagement for all young children. This course provides strategies for developmentally-appropriate practice based on observation and assessments across the curriculum, including: academic content areas; play, art, and creativity; and development of social-emotional, communication, and cognitive skills. 54 hours lecture.

EAR-25**Teaching in a Diverse Society****3 Units**

(C-ID:ECE 230)

UC, CSU

Prerequisite: None

Description: Examines the development of social identities in diverse societies including theoretical and practical implications affecting young children, families, programs, teaching, education and schooling. Culturally relevant and linguistically appropriate anti-bias approaches supporting all children in becoming competent members of a diverse society. Self-reflection of one's own understanding of educational principles in integrating anti-bias goals in order to better inform teaching practices and/or program development. 54 hours lecture.

EAR-26**Health, Safety and Nutrition****3 Units**

(C-ID:ECE 220)

CSU

Prerequisite: None

Description: 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. 54 hours lecture.

EAR-28**Principles and Practices of Teaching Young Children****3 Units**

(C-ID:ECE 120)

CSU

Prerequisite: None

Description: 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. Includes a review of the historical roots of early childhood programs and the evolution of the professional practices promoting advocacy, ethics, and professional identity. 54 hours lecture.

EAR-30**Practicum in Early Childhood Education****4 Units**

(C-ID:ECE 210)

CSU

Prerequisite: EAR-20 and EAR-24 and EAR-28 and EAR-42

Description: In this course the student will practice and demonstrate developmentally appropriate early childhood program planning and teaching competencies under the supervision of ECE/CD faculty and other qualified early education professionals. Students will utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Child centered, play-oriented approaches to teaching, learning, and assessment; and knowledge of curriculum content areas will be emphasized as student teachers design, implement and evaluate experiences that promote positive development and learning for all young children. Lab hours will be completed under the direction of a qualified Master Teacher (Child Development Permit Matrix, California Commission on Teacher Credentialing) with 3 units of supervised field experience in ECE setting. 36 hours lecture and 108 hours laboratory.

EAR-33**Infant and Toddler Development****3 Units**

CSU

Prerequisite: None

A study of infants and toddlers from pre-conception to age three including physical, cognitive, language, social, and emotional growth and development. Applies theoretical frameworks to interpret behavior and interactions between heredity and environment. Emphasizes the role of family and relationships in development. 54 hours lecture.

EAR-34**Infant and Toddler Care and Education****3 Units**

CSU

Prerequisite: None

Description: Applies current theory and research to the care and education of infants and toddlers in group settings. Examines essential policies, principles and practices that lead to quality care and developmentally appropriate curriculum for children birth to 36 months. 54 hours lecture. (Letter Grade only.)

EAR-35**Practicum in Infant and Toddler Care****3 Units**

CSU

*Prerequisite: EAR-20**Advisory: EAR-33 and EAR-34*

Description: This is a supervised teaching experience in the care and education of infants and toddlers. Emphasis is on applying the principles and practices of high quality infant care programs. Students will participate in and ultimately plan and develop a comprehensive infant/toddler program consistent with Title 22 licensing regulations and the physical, emotional, social, cognitive, and creative needs of the infant/toddler. 36 hours lecture and 54 hours laboratory (TBA option) work in an approved infant/toddler program under the direction of a Master Teacher with appropriate Infant-Toddler units is required.

EAR-38**Adult Supervision and Mentoring in Early Care and Education****3 Units**

CSU

Prerequisite: None

Description: Methods and principles of supervising student teachers, volunteers, staff, and other adults in early care and education settings. Emphasis is on the roles and development of early childhood professionals as mentors and leaders. 54 hours lecture.

EAR-40**Introduction to Children With Special Needs****3 Units**

CSU

Prerequisite: None

Description: Introduces variations in development of children with special needs ages birth through eight and the resulting impact on families. Includes an overview of historical and societal influences, laws relating to children with special needs, and the identification and referral process. This course will include required observations of programs for infants and children with special needs and their families. 54 hours lecture. (Letter Grade only.)

EAR-41**Practicum in Early Intervention/Special Education 4 Units**
CSU*Prerequisite: EAR-28 EAR-24 EAR-42 EAR-20**Advisory: EAR-40 or EAR-46*

Description: This course provides students with hands-on experience working with infants, toddlers and young children with special needs in a variety of early intervention and educational settings, including natural environments, self-contained and fully-included early childhood classrooms. It integrates learned theoretical models to real-life situations and affords students opportunities for supervised practice as an assistant in an early childhood special education setting, home visiting program or as an early intervention support person in a general education classroom. 36 hours lecture and 108 hours laboratory. (TBA option)

EAR-42**Child, Family, and Community 3 Units**
(C-ID:CDEV 110)
CSU*Prerequisite: None*

Description: An examination of the developing child in a societal context which focuses on the interrelationships of family, school, and community and emphasizes historical and socio-cultural factors. The processes of socialization and identity development will be highlighted. 54 hours lecture.

EAR-43**Children with Challenging Behaviors 3 Units**
CSU*Prerequisite: EAR-19 and EAR-20*

Description: This course provides an overview of the developmental, environmental and cultural factors that impact the behavior of young children, including family stressors, child temperament, violence, attachment disorders, and special needs; and proactive intervention and prevention techniques. Topics include addressing reasons children misbehave, how to carefully observe a child, how to create a positive environment to encourage appropriate behavior, and how to effectively address many types of behaviors including those that are aggressive and antisocial, disruptive, destructive, emotional and dependent. Outside observations required. 54 hours lecture.

EAR-44**Administration I: Programs in Early Childhood Education 3 Units**
CSU*Prerequisite: EAR-20 and EAR-24 and EAR-28 and EAR-42*

Description: Introduction to the administration of early childhood programs. Covers program types, budget, management, regulations, laws, development and implementation of policies and procedures. Examines administrative tools, philosophies, and techniques needed to organize, open, and operate an early care and education program. 54 hours lecture. (Letter Grade only.)

EAR-45**Administration II: Personnel and Leadership in Early Childhood Education 3 Units**
CSU*Prerequisite: EAR-20 and EAR-24 and EAR-28 and EAR-42*

Description: Effective strategies for personnel management and leadership in early care and education settings. Includes legal and ethical responsibilities, supervision techniques, professional development, and reflective practices for a diverse and inclusive early care and education program. 54 hours lecture. (Letter Grade only.)

EAR-46**Curriculum and Strategies for Children with Special Needs 3 Units**
CSU*Prerequisite: None**Advisory: EAR-40*

Description: Covers curriculum and intervention strategies for working with children with special needs in partnership with their families. Focuses on the use of observation and assessment in meeting the individualized needs of children in inclusive and natural environments. Includes the role of the teacher as a professional working with families, collaboration with interdisciplinary teams, and cultural competence. 54 hours lecture.

EAR-47**Childhood Stress and Trauma 3 Units**
CSU*Prerequisite: None*

Description: This course is a comprehensive overview of concepts, theories, and issues related to childhood stress and trauma. Emphasis is on the short-and long-term effects that stress and trauma has on the physical, cognitive, language, social, and emotional stages of a child's development. Students will be introduced to child behavior patterns and potential responses to stress and trauma. Students will examine research and innovative methods that support the child's coping skills and healing process. This course is designed to develop an understanding of how children react and adapt to stress and trauma and what parents and early childhood practitioners can do to assist children. Outside observations required. 54 hours lecture.

EAR-200**Early Childhood Work Experience 1-4 Units**
CSU*Prerequisite: None*

Advisory: Student should have paid or voluntary employment.
Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass option.)

ECONOMICS

ECO-4

Intro Economics

3 Units

UC, CSU

Prerequisite: None

Description: An entry-level, general education course which introduces and surveys basic macroeconomic and microeconomic principles. This course emphasizes the causes and consequences of the business cycle on output, employment, and prices as well as, basic supply and demand analysis across different market structures. Analysis further includes the role of the government in the macro-economy and the micro-economy. 54 hours lecture.

ECO-7

Principles of Macroeconomics

3 Units

(C-ID:ECON 202)

UC, CSU

Prerequisite: MAT-52

Advisory: MAT-35 and qualification for ENG-1A

Description: Economic theory and analysis as applied to the U.S. economy as a whole. Emphasizes aggregative economics dealing with the macroeconomic concepts of national income and expenditure, aggregate supply and demand, fiscal policy, monetary policy, and economic stabilization and growth. Students may not receive credit for both ECO-7 and ECO-7H. 54 hours lecture.

ECO-7H

Honors Principles of Macroeconomics

3 Units

(C-ID:ECON 202)

UC, CSU

Prerequisite: MAT-52

Advisory: MAT-35 and Qualification for ENG-1A

Limitation on enrollment: Enrollment in the Honors Program

Description: Economic theory and analysis as applied to the U.S. economy as a whole. Emphasizes the enhanced exploration of aggregative economics dealing with the macroeconomic concepts of national income and expenditure, aggregate supply and demand, fiscal policy, monetary policy, and economic stabilization and growth. This honors course offers an enriched experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher order critical thinking skills. Students may not receive credit for both ECO-7 and ECO-7H. 54 hours lecture.

ECO-8

Principles of Microeconomics

3 Units

(C-ID:ECON 201)

UC, CSU

Prerequisite: MAT-52

Advisory: MAT-35 and qualification for ENG-1A

Description: Economic theory and analysis as applied to consumer and producer behavior in markets. Emphasizes the allocation of resources and the distribution of income through the price mechanism, and deals with the microeconomic concepts of equilibrium in product and factor markets, perfect and imperfect competition, government intervention in the private sector, and international trade and finance. 54 hours lecture.

ECO-8H

Honors Principles of Microeconomics

3 Units

(C-ID:ECON 201)

UC, CSU

Prerequisite: MAT-52

Advisory: MAT-35 and qualification for ENG-1A

Limitation on enrollment: Enrollment in the Honors program

Description: Economic theory and analysis as applied to consumer and producer behavior in markets. Emphasizes the allocation of resources and the distribution of income through the price mechanism, and deals with the microeconomic concepts of equilibrium in product and factor markets, perfect and imperfect competition, government intervention in the private sector, and international trade and finance. This honors course offers an enriched experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher level critical thinking skills. Students may not receive credit for both ECO-8 and ECO-8H. 54 hours lecture.

ELECTRICITY

ELC-11

DC Electronics

(Same as ELE-11)

4 Units

CSU

Prerequisite: None

Description: Basic electrical theory including Ohm's Law, the Power Law, the Current and Voltage Laws of Kirchhoff, Direct Current (DC) theory, time constants, multimeter measurements, magnetism, electromagnetism, resistors, capacitors, coils, transient analysis and DC Motors, voltage, current, resistance, power, series, parallel and complex series/parallel circuits. 63 hours lecture and 27 hours laboratory.

ELC-13

AC Electronics

(Same as ELE-13)

4 Units

CSU

Prerequisite: ELE-10 or ELC-11 or ELE-11 or ELE-23

Description: Alternating Current (AC) theory, devices, circuits and applications--will include: resistance, reactance, impedance, capacitance, inductance, Ohm's Law, Power Law, sinusoidal waveforms, Peak, Peak-to-Peak and Root-Mean-Square (RMS) measurements, using an oscilloscope, signal generator and meter; applications of series and parallel networks of resistors, capacitors, inductors, transformers and other AC components; J-Factors and phasor-vector solutions to both simple and complex AC circuits; transient reactor analysis; phase-shift, phase-angle, and power-factor calculations and measurements. 54 hours lecture and 54 hours laboratory.

ELC-66

National Electrical Code

(Same as ELE-66)

3 Units

CSU

Prerequisite: None

Description: Review of electrical codes including discussion and analysis of the application of physical laws in development of the code requirements. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ELC-68**Fundamentals of Maintenance****(Same as MAN-68)****4 Units***Prerequisite: None*

Description: Foundational skills training for maintenance technicians. Introduction to the basic maintenance and repair methods used in the facility maintenance profession. Preventative maintenance methods and strategies are explored as students receive training in the use of electronic measuring devices, meters, and scopes. Topics include activities focused upon basic electrical skills, basic pneumatics and hydraulics, basic mechanical skills, basic plumbing, basic principles of refrigeration, refrigerants, refrigeration components, preventative and corrective maintenance. Completion of this basic course will prepare students for a job as a Facility Maintenance Technician. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELC-69**Fundamentals of Tooling And Test Equipment****(Same as MAN-69)****2 Units***Prerequisite: None*

Description: An introduction to the tools and equipment used in the facility maintenance occupation, with an emphasis on the safe use, maintenance, and storage of a variety of tools and equipment. Introduces hand and power tools, test equipment, and wiring practices. 27 hours lecture and 27 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELC-71**Residential Electrical Wiring****(Same as ELE-71)****4 Units**

CSU

Prerequisite: None

Description: The course introduces students to wiring methods commonly used in residential electrical wiring. Topics include wiring of electrical switches, receptacles, code requirements for kitchen, bathroom, GFI and AFI devices, raceways, and boxes. Laboratory allows students to wire and test sample wall and ceiling sections. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELC-72**Commercial and Industrial Electrical Wiring****(Same as ELE/MAN-72)****4 Units**

CSU

Prerequisite: None

Description: Wiring of commercial and industrial buildings including equipment grounding, service grounding, power distribution, conduit types, metal, plastic, flexible, bending and supporting, light distribution and blueprint reading. Hands-on lab experiences are selected to reinforce key theories. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELC-73**Electric Motors and Transformers****(Same as ELE/MAN-73)****4 Units***Prerequisite: None*

Description: Enables electricians to understand and effectively wire most standard DC motors, servos and steppers, as well as many AC motors, including single and poly-phase units, from fractional horsepower to multi-horsepower, industrial giants. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELC-74**Industrial Wiring and Controls****(Same as ELE/MAN-74)****4 Units**

CSU

Prerequisite: None

Description: Industrial controls and electrical wiring of modern facilities, manufacturing, or warehousing. Included will be production equipment, conveyor systems, hydraulic and pneumatic controls, power distribution, blueprint reading, electrical control wiring, PLC (programmable logic controller) control wiring, VFD (variable frequency drives) wiring and programming. 54 hours lecture and 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

ELC-75**Solid State Devices and Lighting Controls****(Same as ELE-75)****3 Units**

CSU

Prerequisite: None

Description: Students will learn about solid state device (electronics), sensors, SCR (silicone control rectifier), transistors, proximity and light sensors used in most industrial and commercial installations. Included will be showing students different types of sensors used for controlling motors, conveyors, and lighting devices. 36 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELC-76**Low Voltage Wiring and Alternate Energy Generation****(Same as ELE-76)****3 Units***Prerequisite: None*

Description: Introduces electricians to the specialized needs and requirements of institutional, educational and government entities, along with overlapping demands of other specialty areas that include access-control, security/safety, flood, fire and gas detection, environmental controls and renewable energy systems, patient-monitoring, nurse-call, closed-circuit television (CCTV), Internet-Intercom and phone systems and remote-monitoring and control applications. 36 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELC-77**Electrical Theory for Electricians****(Same as ELE/MAN-77)****3 Units***Prerequisite: None*

Description: An introduction to electrical theory, Ohm's Law, magnetism, electromagnetism, voltage, resistance, current, inductance, capacitance, reactance, impedance, Watts, Volt-Amps, VARs, current control devices, sensors and actuators phase angle, power-factor, transformers, motors, power distribution systems, and proper usage of electrical test equipment (meters). Student will learn concepts of electrical power, energy, Kirchoff's Laws, along with basic math to solve fundamental electrical problems for both alternating current (A.C.) and direct current (D.C.) circuits. Student will learn basic electrical safety procedures, including the proper use and requirements for personal protective equipment (PPE). 36 hours lecture, 54 hours lab. (Letter Grade or Pass/No Pass option.)

ELC-91**Fundamentals of Solar Energy****(Same as ELE-91)****3 units**

CSU

Prerequisites: ELC/ELE-77

Description: An introduction for students interested in a career in the solar industry. The fundamental principles and functions of photovoltaic industry will be introduced along with the planning, installation and maintenance of all necessary components for a photovoltaic system. The transmission and distribution of electric power will be reviewed and basic concepts of electricity, circuit identification, functions and operations of components will be surveyed. Basic Electrical Safety will also be covered. 36 hours lecture; 54 hours lab. (Letter Grade, or Pass/No Pass option.)

ELC-400**Introduction to the Electrical Trades And Construction Safety****(Same as ELE-400)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student is a registered State indentured apprentice.*

Description: Focusing on electrical trades, students will examine safety issues surrounding construction job-sites and installation of electrical systems. Includes OSHA 10 Construction certification training, identification of job-site hazards, safe work practices and personal protective equipment for various construction site hazards. Care for breathing and cardiac emergencies along with basic first aid and automatic external defibrillator (AED) training for use on both adults and children. Substance abuse will be addressed. Basic math operations will be reviewed and reinforced. 45 hours lecture and 54 hours laboratory.

ELC-401**Introduction to Electrical Theory, Basic Math Concepts, and the National Electric****(Same as ELE-401)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Provides an introduction to algebraic and trigonometric concepts and application of their principles to solve basic electrical equations and layout conduit bends. Teaches the student to apply basic electrical theory to predict circuit behavior. Basic conduit bending techniques will be developed. The National Electrical Code will be introduced. 45 hours lecture and 54 hours laboratory.

ELC-402**Advanced Dc Circuit Concepts, Introduction to 3-PHASE Ac Circuits, Test Equipment, and National Electric Code Applications****(Same as ELE-402)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Electrician circuit analysis techniques, series, parallel, and combination DC circuits, test equipment, National Electric Code (NEC), and elementary 3-Phase AC circuits will be introduced. 45 hours lecture and 54 hours laboratory.

ELC-403**Ac Circuit Concepts, Applied Electronics, and National Electric Code Applications****(Same as ELE-403)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Electrician AC theory including an exploration of inductance and capacitance and the effect of their combined reactants on AC circuits along with the application of electronic concepts and components. 45 hours lecture and 54 hours laboratory.

ELC-404**Digital Logic Circuits, Conductor Characteristics, Applications, and National Electric Code (NEC)****(Same as ELE-404)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Digital logic concepts and their real-world application. Electrician identification, selection, and installation of electrical conductors in accordance with National Electrical Code (NEC). 45 hours lecture and 54 hours laboratory.

ELC-405**Electrician Blueprint Reading with Code Applications for National Electrical Code (NEC)****(Same as ELE-405)****3.5 Units***Prerequisite: None**Limitation on Enrollment: Student must be a registered State indentured apprentice.*

Electrician studies of blueprints and specifications. Application of the National Electric Code will cover current protection, panel-boards, and lighting systems. 45 hours lecture and 54 hours laboratory.

ELC-406**Grounding Systems, Advanced Blueprints And Specifications, Motor Design and Installation, and National Electric Code****(Same as ELE-406)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Advanced concepts for blueprints and specifications. Study of motor design and application and National Electric Code concepts. 45 hours lecture and 54 hours laboratory.

ELC-407**Motor Control Principles, Generators And Power Supplies, With National Electric Code (NEC)****(Same as ELE-407) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Techniques for controlling AC and DC motors; students examine conventional and cutting-edge technologies for power generation. 45 hours lecture and 54 hours laboratory. (Letter Grade only.)

ELC-408**Transformer Theory, Leadership, Management, and Test Equipment****(Same as ELE-408) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Explores electrician theory and field application of transformers, test equipment, including management and leadership principles for supervisors, along with special equipment for security systems for the grid. 45 hours lecture and 54 hours laboratory.

ELC-409**Electrician Specialty Systems****(Same as ELE-409) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Examines specialty electrical systems commonly found in building construction. Includes fire alarm systems, closed-circuit television (CCTV) systems, telephone systems, cable television (CATV and MATV) systems, local area networks (LANs), fiber optic data systems, heating and air conditioning control systems, and lightning protection systems. 45 hours lecture and 54 hours laboratory.

ELC-420**Introduction to Sound/Communication Trade Industry****(Same as ELE-420) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: An introduction to the sound and communication industry. Students will examine the fundamentals of wiring methods, fastening devices, electrical conductors, circuits, voltage and data communication. Basic math operations will be reviewed and reinforced. Care for breathing and cardiac emergencies along with basic first aid for use on both adults and children. Substance abuse will be addressed. 45 hours lecture and 54 hours laboratory.

ELC-421**Electrical Theory and Practices DC****(Same as ELC-421) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Study of floor and plot plans, basic blueprint reading and circuit drawing, theory of magnetism, DC and AC generators, motors and transformers, on-the-job safety, first aid, electrical code, telephony and data communications. 45 hours lecture and 54 hours laboratory.

ELC-422**Electrical Theory and Practices AC****(Same as ELE-422) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Study of apprenticeship, electrical inductance, capacitance and reactance, including grounded conductors, branch circuits, transformer principles, RCL circuits and filters. 45 hours lecture and 54 hours laboratory.

ELC-423**Semiconductor Electronics****(Same as ELE-423) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Study of solid-state electronic theory and components, diodes, transistors, SCR, triacs, diacs, IC amplifiers and op amps. 45 hours lecture and 54 hours laboratory.

ELC-424**Introduction to Digital Electronics and Signaling Devices****(Same as ELE-424) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Introduction to digital electronic technology and electronic equipment. Instruction includes basic digital systems, binary and decimal numbering systems, decision-making logic circuits, Boolean Algebra, flip-flops, counters, shift registers, encoders, decoders, ROMs, DC to AC converters and organization of these component blocks to accomplish manipulation of data. 45 hours lecture and 54 hours laboratory.

ELC-425**Management/Alarms/Codes/Circuits****(Same as ELE-425) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Introduction to management, installation of security and fire alarm systems, the National Electrical Code as it relates to alarm installation and circuits as applied to alarm systems. 45 hours lecture and 54 hours laboratory.

ELC-499**Electrician Apprenticeship Work Experience
(Same as ELE-499)****1-4 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: This course provides students the opportunity to work in the electricians apprenticeship program for the purpose of developing specific skills to meet the goals and objectives of the electricians Joint Apprenticeship and Training Committee (J.A.T.C.). Students complete work experience hours at approved training sites. Students may take up to 16 units total across all work experience course offerings. This course may be taken up to four times when there are new or expanded learning objectives. Only one work experience course may be taken per semester. 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit.

ELECTRONICS

ELE-10**Survey of Electronics****4 Units**

CSU

Prerequisite: None

Description: Basic electronic theory featuring electron-flow, Ohm's, Watt's, and Kirchoff's Laws, analog DC and AC devices, circuits, parameters and equations, diodes, transistors, thyristors, digital logic, integrated circuits, power supplies, amplifiers, oscillators, with laboratory test and measurement equipment. 63 hours lecture and 27 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELE-11**DC Electronics****(Same as ELC-11)****4 Units**

CSU

Prerequisite: None

Description: Basic electrical theory including Ohm's Law, the Power Law, the Current and Voltage Laws of Kirchoff, Direct Current (DC) theory, time constants, multimeter measurements, magnetism, electromagnetism, resistors, capacitors, coils, transient analysis and DC Motors, voltage, current, resistance, power, series, parallel and complex series/parallel circuits. 63 hours lecture and 27 hours laboratory.

ELE-13**AC Electronics****(Same as ELC-13)****4 Units**

CSU

Prerequisite: ELE-10 or ELE-11 or ELE-21 or ELE-23

Description: Alternating Current (AC) theory, devices, circuits and applications--will include: resistance, reactance, impedance, capacitance, inductance, Ohm's Law, Power Law, sinusoidal waveforms, Peak, Peak-to-Peak and Root-Mean-Square (RMS) measurements, using an oscilloscope, signal generator and meter; applications of series and parallel networks of resistors, capacitors, inductors, transformers and other AC components; J-Factors and phasor-vector solutions to both simple and complex AC circuits; transient reactor analysis; phase-shift, phase-angle, and power-factor calculations and measurements. 54 hours lecture and 54 hours laboratory.

ELE-23**Electronics Devices and Circuits****4 Units**

UC, CSU

Prerequisite: None

Description: Characteristics, construction, and circuit applications of electronic devices including diodes, bipolar transistors, thyristors, integrated circuits, and optoelectronic devices. 54 hours lecture and 54 hours laboratory.

ELE-25**Digital Techniques****4 Units**

CSU

Prerequisite: ELE-10 or ELE-11

Description: Mathematics, number systems and logic circuits as they relate to modern electronic computers and digital systems. Boolean algebra, circuit simplifications and mapping are included. Basic gate and digital circuits (MSI-LSI) will be analyzed and integrated into complete systems. Digital counters, registers, encoders/decoders, converters and timing. 54 hours lecture and 54 hours laboratory.

ELE-26**Microcontrollers****3 Units**

CSU

*Prerequisite: None**Advisory: ELE-25*

Description: Computer number systems, codes, and arithmetic functions; microcontroller functions, architecture, instruction sets, addressing modes, internal operations, PIA interfacing, and I/O operations. Introduction to operating systems. 36 hours lecture and 54 hours laboratory.

ELE-27**Technical Communications****(Same as DFT/ENE-27)****3 Units**

CSU

Prerequisite: None

Description: Procedures for organizing and presenting technical data through informal and formal documents and presentations. Includes practice in writing memoranda, letter reports, and formal technical reports. Also includes discussion of personal resume and preparation of job applications. 54 hours lecture.

ELE-28**MultiSim CAD and PCB Design/Fab****3 Units**

CSU

Prerequisite: None

Description: This course covers MultiSim schematic capture, simulation, export to UltiBoard and UltiRoute. Basic Computer Aided Design (CAD)-Drafting, block diagrams, printed circuit board design-layout. The use of Computer Aided Design tools and electronics-library component-templates will be emphasized. PCB design and fabrication with through-hole and SMT/SMD devices. 36 hours lecture and 54 hours laboratory.

ELE-55**Occupational Safety and Health Administration (OSHA) Standards for General Industry
(Same as MAN-55)****1 unit***Prerequisite: None*

Description: Covers OSHA policies, procedures, and standards, as well as safety for general industry and health principles. Topics include scope and application of the OSHA general industry standards. Special emphasis is placed on those areas that are the most hazardous, using OSHA standards as a guide. Upon successful course completion, the student will receive either an OSHA 10 hour general industry or construction industry training completion card. 18 hours lecture. (Letter Grade, or Pass/No Pass option.)

ELE-61**Robotics for Manufacturing
(Same as MAN-61)****3 Units**

CSU

*Prerequisite: None**Advisory: CIS-1A*

Description: Robotics for the Supply Chain and Manufacturing industries. This course presents the programming and control of robotic systems typically used in industry. 36 hours lecture and 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

ELE-63**LabVIEW Visual Programming for Automated Systems
(Same as MAN-63)****3 Units**

CSU

*Prerequisite: None**Advisory: CIS-1A*

Description: Prepares students to develop measurement and test systems, data acquisition, instrument control, data logging, and measurement analysis applications using LabVIEW. Students will create applications that acquire, process, display and store real world data. 36 hours lecture and 54 hours laboratory.

ELE-64**Programmable Logic Controllers
(Same as MAN-64)****3 Units**

CSU

*Prerequisite: None**Advisory: ELE-10 or ELE-21*

Description: Fundamentals of programmable logic controllers, with an emphasis on introductory programming of PLCs. Problem analysis with solutions that integrate programming formats, auxiliary commands and functions, common programming languages, and popular software programs used with PLCs. Installation, maintenance, troubleshooting and repair are inherent components. 36 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELE-71**Residential Electrical Wiring
(Same as ELC/MAN-71)****4 Units***Prerequisite: None*

Description: Introduces students to wiring methods commonly used in residential electrical wiring. Topics include wiring of electrical switches, receptacles, code requirements for kitchen, bathroom, GFI and AFI devices, raceways, and boxes. Laboratory allows students to wire and test sample wall and ceiling sections. 54 hours lecture and 54 hours laboratory.

ELE-72**Commercial and Industrial Electrical Wiring
(Same as ELC /MAN-72)****4 Units***Prerequisite: None*

Description: Wiring of commercial and industrial buildings including equipment grounding, service grounding, power distribution, conduit types, metal, plastic, flexible, bending and supporting, light distribution, and blueprint reading. Hands-on lab experiences are selected to reinforce key theories. 54 hours lecture and 54 hours laboratory.

ELE-73**Electric Motors and Transformers
(Same as ELC/MAN-73)****4 Units***Prerequisite: None*

Description: Enables electricians to understand and effectively wire most standard DC motors, servos and steppers, as well as many AC motors, including single and poly-phase units, from fractional horsepower to multi-horsepower, industrial giants. 54 hours lecture and 54 hours laboratory.

ELE-74**Industrial Wiring and Controls
(Same as ELC/MAN-74)****4 Units**

CSU

Prerequisite: None

Description: Industrial controls and electrical wiring of modern facilities, manufacturing, or warehousing. Included will be production equipment, conveyor systems, hydraulic and pneumatic controls, power distribution, blueprint reading, electrical control wiring, PLC (programmable logic controller) control wiring, VFD (variable frequency drives) wiring and programming. 54 hours lecture and 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

ELE-75**Solid State Devices Lighting Controls
(Same as ELC-75)****3 Units**

CSU

Prerequisite: None

Description: Students will learn about solid state device (electronics), sensors, SCR (silicon control rectifier), transistors, proximity and light sensors used in most industrial and commercial installations. Included will be showing students different types of sensors used for controlling motors, conveyors, and lighting devices. 36 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELE-76**Low Voltage Wiring and Alternate Energy Generation
(Same as ELC-76)****3 Units***Prerequisite: None*

Description: Introduces electricians to the specialized needs and requirements of institutional, educational and government entities, along with overlapping demands of other specialty areas that include access-control, security/safety, flood, fire and gas detection, environmental controls and renewable energy systems, patient-monitoring, nurse-call, closed-circuit television (CCTV), Internet-Intercom and phone systems and remote-monitoring and control applications. 36 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ELE-77**Electrical Theory for Electricians
(Same as ELC/MAN-77)****3 Units***Prerequisite: None*

Description: An introduction to electrical theory, Ohm's Law, magnetism, electromagnetism, voltage, resistance, current, inductance, capacitance, reactance, impedance, Watts, Volt-Amps, VARs, current control devices, sensors and actuators phase angle, power-factor, transformers, motors, power distribution systems, and proper usage of electrical test equipment (meters). Student will learn concepts of electrical power, energy, Kirchoff's Laws, along with basic math to solve fundamental electrical problems for both alternating current (A.C.) and direct current (D.C.) circuits. Student will learn basic electrical safety procedures, including the proper use and requirements for personal protective equipment (PPE). 36 hours lecture 54 hours laboratory.

ELE-91**(Same as ELC-91)
Fundamentals of Solar Energy****3 Units**

CSU

Prerequisite: None

Description: This course is for students interested in a career in the solar industry. The fundamental principles and functions of photovoltaic industry will be introduced along with the planning, installation and maintenance of all necessary components for a photovoltaic system. The transmission and distribution of electric power will be reviewed and basic concepts of electricity, identification, functions and operations of components will be surveyed. 54 hours lecture.

ELE-200**Electronics Work Experience****1-4 Units**

CSU

Prerequisite: None

Advisory: Students should have paid or voluntary employment.

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass.)

ELE-400**Introduction to the Electrical Trades And Construction Safety
(Same as ELC-400)****3.5 Units***Prerequisite: None*

Limitation on enrollment: Student is a registered State indentured apprentice

Description: Focusing on electrical trades, students will examine safety issues surrounding construction job-sites and installation of electrical systems. Includes OSHA 10 Construction certification training, identification of job-site hazards, safe work practices and personal protective equipment for various construction site hazards. Care for breathing and cardiac emergencies along with basic first aid and automatic external defibrillator (AED) training for use on both adults and children. Substance abuse will be addressed. Basic math operations will be reviewed and reinforced. 45 hours lecture and 54 hours laboratory.

ELE-401**Introduction to Electrical Theory, Basic Math Concepts,
and the National Electric Code****(Same as ELC-401)****3.5 Units***Prerequisite: None*

Limitation on enrollment: Student must be a registered State indentured apprentice

Description: Focusing on electrical trades, students will examine safety issues surrounding construction job-sites and installation of electrical systems. Includes OSHA 10 Construction certification training, identification of job-site hazards, safe work practices and personal protective equipment for various construction site hazards. Care for breathing and cardiac emergencies along with basic first aid and automatic external defibrillator (AED) training for use on both adults and children. Substance abuse will be addressed. Basic math operations will be reviewed and reinforced. 45 hours lecture and 54 hours laboratory.

ELE-402**Advanced DC Circuit Concepts, Introduction to 3-Phase
AC Circuits, Test Equipment, and National Electric
Code Applications****(Same as ELC-402)****3.5 Units***Prerequisite: None*

Limitation on enrollment: Student must be a registered State indentured apprentice

Description: Electrician circuit analysis techniques, series, parallel, and combination DC circuits, test equipment, National Electric Code (NEC), and elementary 3-Phase AC circuits will be introduced. 45 hours lecture and 54 hours laboratory.

ELE-403**AC Circuit Concepts, Applied Electronics, and National
Electric Code Applications****(Same as ELE-403)****3.5 Units***Prerequisite: None*

Limitation on enrollment: Student must be a registered State indentured apprentice

Description: Electrician AC theory including an exploration of inductance and capacitance and the effect of their combined reactants on AC circuits along with the application of electronic concepts and components. 45 hours lecture and 54 hours laboratory.

ELE-404**Digital Logic Circuits, Conductor Characteristics, Applications, and National Electric Code (NEC)
(Same as ELC-404)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Digital logic concepts and their real-world application. Electrician identification, selection, and installation of electrical conductors in accordance with National Electrical Code (NEC). 45 hours lecture and 54 hours laboratory.

ELE-405**Electrician Blueprint Reading with Code Applications for National Electrical Code (NEC)****(Same as ELC-405)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Electrician studies of blueprints and specifications. Application of the National Electric Code will cover current protection, panel-boards, and lighting systems. 45 hours lecture and 54 hours laboratory.

ELE-406**Grounding Systems, Advanced Blueprints and Specifications, Motor Design and Installation, and National Electric Code
(Same as ELC-406)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Advanced concepts for blueprints and specifications. Study of motor design and application and National Electric Code concepts. 45 hours lecture and 54 hours laboratory.

ELE-407**Motor Control Principles, Generators and Power Supplies, with National Electric Code (NEC)****(Same as ELC-407)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Techniques for controlling AC and DC motors; students examine conventional and cutting-edge technologies for power generation. 45 hours lecture and 54 hours laboratory.

ELE-408**Transformer Theory, Leadership, Management, and Test Equipment
(Same as ELC-408)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Explores electrician theory and field application of transformers, test equipment, including management and leadership principles for supervisors, along with special equipment for security systems for the grid. 45 hours lecture and 54 hours laboratory.

ELE-409**Electrician Specialty Systems
(Same as ELC-409)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Examines specialty electrical systems commonly found in building construction. Includes fire alarm systems, closed-circuit television (CCTV) systems, telephone systems, cable television (CATV & MATV) systems, local area networks (LANs), fiber optic data systems, heating and air conditioning control systems, and lightning protection systems. 45 hours lecture and 54 hours laboratory.

ELE-420**Introduction to Sound/Communication Trade Industry
(Same as ELC-420)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: An introduction to the sound and communication industry. Students will examine the fundamentals of wiring methods, fastening devices, electrical conductors, circuits, voltage and data communication. Basic math operations will be reviewed and reinforced. Care for breathing and cardiac emergencies along with basic first aid for use on both adults and children. Substance abuse will be addressed. 45 hours lecture and 54 hours laboratory.

ELE-421**Electrical Theory and Practices DC
(Same as ELC-421)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Study of floor and plot plans, basic blueprint reading and circuit drawing, theory of magnetism, DC and AC generators, motors and transformers, on-the-job safety, first aid, electrical code, telephony and data communications. 45 hours lecture and 54 hours laboratory.

ELE-422**Electrical Theory and Practices AC
(Same as ELC-422)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Study of apprenticeship, electrical inductance, capacitance and reactance, including grounded conductors, branch circuits, transformer principles, RCL circuits and filters. 45 hours lecture and 54 hours laboratory.

ELE-423**Semiconductor Electronics
(Same as ELC-423)****3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Study of solid-state electronic theory and components, diodes, transistors, SCR, triacs, diacs, IC amplifiers and op amps. 45 hours lecture and 54 hours laboratory.

ELE-424**Introduction to Digital Electronics and Signaling Devices
(Same as ELC-424) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Introduction to digital electronic technology and electronic equipment. Instruction includes basic digital systems, binary and decimal numbering systems, decision-making logic circuits, Boolean Algebra, flip-flops, counters, shift registers, encoders, decoders, ROMs, DC to AC converters and organization of these component blocks to accomplish manipulation of data. 45 hours lecture and 54 hours laboratory.

ELE-425**Management/Alarms/Codes/Circuits
(Same as ELC-425) 3.5 Units***Prerequisite: None**Limitation on enrollment: Student must be a registered State indentured apprentice*

Description: Introduction to management, installation of security and fire alarm systems, the National Electrical Code as it relates to alarm installation and circuits as applied to alarm systems. 45 hours lecture and 54 hours laboratory.

ELE-499**Electrician Apprenticeship Work Experience
(Same as ELC-499) 1-4 Units***Prerequisite: None**Limitation on enrollment: Student must be a State indentured apprentice*

Description: This course provides students the opportunity to work in the electricians apprenticeship program for the purpose of developing specific skills to meet the goals and objectives of the electricians Joint Apprenticeship and Training Committee (J.A.T.C.). Students complete work experience hours at approved training sites. Students may take up to 16 units total across all work experience course offerings. This course may be taken up to four times when there are new or expanded learning objectives. Only one work experience course may be taken per semester. 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit.

ENGINEERING

ENE-10**Introduction to Engineering 2 Units**

UC, CSU

Prerequisite: None

Description: The course explores the branches of engineering, the functions of an engineer, and the industries in which engineers work. Explains the engineering education pathways and explores effective strategies for students to reach their full academic potential. Presents an introduction to the methods and tools of engineering problem solving and design including the interface of the engineer with society and engineering ethics. Develops communication skills pertinent to the engineering profession. 36 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENE-21**Drafting
(Same as DFT-21) 3 Units**

UC, CSU

Prerequisite: None

Description: Fundamentals of mechanical drawing including lettering, instruments and their uses, geometric construction, types of projection, freehand drawing, sectioning, dimensioning, auxiliary views, and pictorial drawing. Recommended for beginners and students with up to one year of drafting in high school. 27 hours lecture and 81 hours laboratory. (Letter Grade, or Pass/No Pass option)

ENE-22**Engineering Drawing
(Same as DFT-22) 3 Units**

UC, CSU

*Prerequisite: DFT/ ENE-21**Advisory: DFT/ ENE-30*

Description: Drafting fundamentals briefly reviewed, geometric construction, orthographic projections, freehand sketching, sectioning, auxiliary views, shop processes, dimensions and tolerances, fasteners, working and pictorial drawings, and as time permits, piping and electrical drawings. 27 hours lecture and 90 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ENE-23**Descriptive Geometry
(Same as DFT-23) 3 Units***Prerequisite: DFT/ENE-22 and MAT-36*

Description: Graphical (drafting) techniques applied to the solutions of vector problems, the development of surfaces as in sheet-metal work, the determination of lines of intersection between surfaces, and the solution of miscellaneous engineering problems involving points, lines and planes. 27 hours lecture and 90 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ENE-27**Technical Communications
(Same as DFT-27 and ELE-27) 3 Units**

CSU

Prerequisite: None

Description: Procedures for organizing and presenting technical data through informal and formal documents and presentations. Includes practice in writing memoranda, letter reports, and formal technical reports. Also includes discussion of personal resume and preparation of job applications. 54 hours lecture.

ENE-28**Technical Design 3 Units**

CSU

*Prerequisite: ENE-22**Advisory: ENE-42 and ENE-30 and ENE-52*

Description: A study of industrial design and drafting procedures relating to the basic elements of mechanisms, including drawing of machine parts in various stages of manufacturing. Studies will include terminology, power transmission, bearings, fixtures, dies, ASME-Y-14.5 standards of drawing, geometric dimensioning and Tolerancing, and manufacturing processes. Related problems include design layouts, detail and assembly drawings. A portfolio of completed drawings is a project requirement for this course (drawings may be drawn using the Computer-aided Design system or the drawing board). 27 hours lecture and 81 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ENE-30**Computer Aided Drafting (CAD)
(Same as DFT-30)****3 Units**

UC, CSU

*Prerequisite: None**Advisory: CIS-1A*

Description: A two-dimensional computer aided drafting class for drafters. Students will use an AUTOCAD computer drafting system to develop computer drawn drawings, which are typical to the various fields of drafting. 27 hours lecture and 81 hours laboratory.

ENE-35**Statics****3 Units**

UC, CSU

Prerequisite: PHY-4A

Description: A study of force and equilibrium problems; free body diagram techniques, friction problems, second moments and moments of inertia, and their application to engineering. Algebraic, vector and classical, and graphical methods of calculation. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENE-38**Introduction to Programming Concepts and Methodologies for Engineers****3 Units**

UC, CSU

Prerequisite: MAT-10

Description: The purpose of this course is to expose students to the fundamental concepts of procedure-oriented programming, associated abstraction mechanisms and design processes, data structures and handling, along with interfacing software with the physical world (e.g., the use of sensors), and the application of numerical techniques. 36 hours lecture and 54 hours laboratory.

ENE-39**Engineering Circuit Analysis****4 Units**

UC, CSU

*Prerequisite: PHY-4B**Corequisite: MAT-2*

Description: An introduction to the analysis of electrical circuits. Use of analytical techniques based on the application of circuit laws and network theorems. Analysis of DC and AC circuits containing resistors, capacitors, inductors, dependent sources, operational amplifiers, and/or switches. Natural and forced responses of first and second order RLC circuits; the use of phasors; AC power calculations; power transfer; and energy concepts. 54 hours lecture and 54 hours laboratory.

ENE-40**Material Science and Engineering****4 Units**

CSU

Prerequisite: CHE-1A and PHY-4A

Description: An introduction to the internal structure and resulting behaviors of materials used in engineering applications, including metals, ceramics, polymers, composites, and semi-conductors. Emphasis on developing the ability both to select appropriate materials to meet engineering design criteria and to understand the effects of heat, stress, imperfections, and chemical environments upon material properties and performance. Laboratories provide opportunities to directly observe the structures and behaviors discussed in the course, to operate testing equipment, to analyze experimental data, and to prepare reports. 54 hours lecture and 54 hours laboratory.

ENE-41**Engineering Graphics****3 Units**

CSU

Prerequisite: MAT-36 Course Credit Recommendation: Degree Credit

Description: An introduction to principles of engineering drawings in visually communicating engineering designs and an introduction to computer aided design (CAD). Topics include the development of visualization skills, orthographic projections, mechanical dimensioning and tolerancing practices, and the engineering design process. Assignments develop sketching and 2-D and 3-D skills. The use of CAD software is an integral part of this course. 36 hours lecture and 54 hours laboratory.

ENE-42**SolidWorks I****(Same as DFT-42)****3 Units**

CSU

*Prerequisite: None**Advisory: PC computer experience recommended CIS-1A*

Description: This course is designed to introduce the student to three-dimensional parametric solid modeling with SolidWorks. Students will begin with basic parametric solid modeling techniques advancing into complex assemblies requiring animation. 27 hours lecture and 81 hours of laboratory.

ENE-42B**SolidWorks II****(Same as DFT-42B)****3 Units**

CSU

Prerequisite: DFT/ ENE-42 or prior SolidWorks experience

Description: An advanced course in using the three-dimensional parametric solid-modeler SolidWorks. This course is designed to further 3D parametric solid modeling software techniques learned in SolidWorks I. Students will delve deeper into topics that were introduced in the first SolidWorks course such as extruding, sweeping, lofting, shelling, assemblies, and animation. 27 hours lecture and 81 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ENE-51**Blueprint Reading****(Same as DFT-51)****2 Units**

CSU

Prerequisite: None

Description: A beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations. This course is designed for students interested in print reading for the machine trades. 27 hours lecture and 27 hours laboratory. (Letter Grade, or Pass/No Pass option.)

ENE-52**Geometric Dimensioning and Tolerancing****(Same as DFT-52)****2 Units**

CSU

Prerequisite: None

Description: A course presenting the basics of the Standards of Geometric Dimensioning and Tolerancing. This course will help students read, interpret and use ANSI Y14.5M, the current standard for drafting. 36 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENE-60**Math for Engineering Technology 3 Units**
(Same as DFT-60)*Prerequisite: None*

Description: A course in mathematical problems frequently used by students enrolled in the trade and industrial and engineering programs. This course reviews basic arithmetic, linear measurement, basic algebra, basic plane geometry, trigonometry, and compound angles. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENE-62**Math for Automated Systems 3 Units***Prerequisite: None*

Description: Course concepts from arithmetic, algebra, geometry and scientific notation, extended and applied to problems in automation technology from electrical and mechanical engineering, including metal work, welding, and building energy systems. 54 hours lecture.

ENE-200**Engineering Work Experience 1-4 Units**
UC, CSU*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass.)

ENGINEERING TECHNOLOGY

New courses to follow

ENGLISH

Most four-year colleges and universities will require transfer students to have eight units (two semesters) of composition. English 1A or 1H and 1B or 1BH at Riverside Community College District will meet this requirement.

ENG-1A**English Composition 4 Units**
(C-ID:ENGL 100)

UC, CSU

Prerequisite: ENG-50 or ENG-80 or qualifying placement level

Description: Emphasizes and develops skills in critical reading and academic writing. Reading and writing assignments include exposition, argumentation, and academic research. Students will produce a minimum of 10,000 words of instructor-evaluated writing. Classroom instruction integrates writing lab activities. Students may not receive credit for both ENG-1A and ENG-1AH. 72 hours lecture and 18 hours laboratory. (TBA option)

ENG-1AH**Honors English Composition 4 Units**

(C-ID:ENGL 100)

UC, CSU

*Prerequisite: ENG-50 or ENG-80 or qualifying placement level**Limitation on enrollment: Enrollment in the Honors Program*

Description: Emphasizes and develops skills in critical reading and academic writing. Reading and writing assignments include exposition, argumentation, and academic research. Students will produce a minimum of 10,000 words of instructor-evaluated writing. This Honors course offers an enriched experience for accelerated students through limited class size; seminar format; focus on primary texts; and application of higher level critical thinking skills. Students may not receive credit for both ENG-1A and ENG-1AH. Classroom instruction integrates writing lab activities. 72 hours lecture and 18 hours laboratory. (TBA option)

ENG-1B**Critical Thinking and Writing 4 Units**

(C-ID: ENGL 105, 110 and 120)

UC, CSU

Prerequisite: ENG-1A or ENG-1AH

Description: Building on the rhetorical skills learned in ENG 1A, students will analyze, interpret, and synthesize diverse texts in order to construct well-supported academic arguments and literary analyses. Composition totaling a minimum of 10,000 words serves to correlate writing and reading activities. Classroom activities integrate with writing lab activities. Student may not receive credit for both ENG-1B and 1BH. 72 hours lecture and 18 hours laboratory. (TBA option)

ENG-1BH**Honors Critical Thinking and Writing 4 Units**

(C-ID:ENGL 105, 110 and 120)

UC, CSU

*Prerequisite: ENG-1A or ENG-1AH**Limitation on enrollment: Enrollment in the Honors Program*

Description: Building on the rhetorical skills learned in ENG 1A or 1AH, students will analyze, interpret, and synthesize diverse texts in order to construct well-supported academic arguments and literary analyses. Composition totaling a minimum of 10,000 words serves to correlate writing and reading activities. Classroom activities integrate with writing lab activities. This honors course offers an enriched experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher level critical thinking skills. Students may not receive credit for both ENG-1B and ENG-1BH. 72 hours lecture and 18 hours laboratory. (TBA option)

ENG-4**Writing Tutor Training 2 Units**

CSU

Prerequisite: ENG-1A or ENG-1AH

Description: Designed to prepare students to become peer tutors in the Writing Center. Participants learn specific tutoring techniques and discuss problems, questions, and challenges in tutoring writing. Tutors develop student-centered, non-intrusive tutoring skills that avoid appropriating the text (i.e., becoming a proofreader, editor, or co-author). Topics include theory and practice of tutoring writing, including writing as a process, interpersonal communication techniques, cross-cultural tutoring, group learning, and computer programs applicable to writing instruction. 27 hours lecture and 27 hours laboratory. (TBA option)

ENG-6

British Literature I: Anglo-Saxon through Eighteenth Century 3 Units
(C-ID:ENGL 160)

UC, CSU

Prerequisite: ENG-50 or ENG-80 or eligibility for ENG-1A

Advisory: ENG-1B or ENG-1BH

Description: A survey of British literature from the eighth century AD to 1800, including a comprehensive exposure to the poetry, drama, and fiction of this era as well as a basic understanding of the cultural, intellectual, and artistic trends it embodies. 54 hours lecture. (Letter Grade, or Pass/No Pass Option.)

ENG-7

British Literature II: Romanticism through Modernism/Post-Modernism 3 Units
(C-ID:ENGL 165)

UC, CSU

Prerequisite: ENG-50 or ENG-80 or eligibility for ENG-1A

Advisory: ENG-1B or ENG-1BH

Description: A survey of British literature from 1800 to the present, including a comprehensive exposure to the poetry, drama, and fiction of this era as well as a basic understanding of the cultural, intellectual, and artistic trends it embodies. 54 hours lecture. (Letter Grade, or Pass/No Pass Option.)

ENG-8

Introduction to Mythology 3 Units
(Same as HUM-8)

UC, CSU

Prerequisite: None

Advisory: ENG-1B or ENG-1BH and REA-83

Description: A study of Greco-Roman and other mythological traditions. Emphasizes the historical sources and cultural functions of myths and legends in ancient societies and their continuing relevance to modern thought and culture. 54 hours lecture.

ENG-9

Introduction to Shakespeare 3 Units

UC, CSU

Prerequisite: None

Advisory: ENG-1B or ENG-1BH

Description: A survey of Shakespeares plays and poetry, with the primary emphasis on exposing students to a representative sampling of his dramatic works and to the cultural, intellectual, and artistic contexts for his work. Both students who have read Shakespeare before and students who have no experience with Shakespeare are encouraged to take this class. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENG-10

Special Studies in Literature 3 Units

CSU

Prerequisite: None

Advisory: ENG-1B or ENG-1BH

Description: Designed to provide students with opportunities to focus on specialized areas of literature and/or specific authors, genres, or literary themes. Topics are selected according to student and instructor interest and needs. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENG-11

Creative Writing 3 Units
(C-ID:ENGL 200)

UC, CSU

Prerequisite: ENG-1A or ENG-1AH

Description: Studies in fundamental principles and practice of writing fiction and poetry. Lectures and discussions emphasize analysis of professional examples of creative writing and study of creative writing theory. In-class workshops provide practice in creative writing techniques. In-class and out-of-class class writing assignments provide practice in writing techniques and in peer- and self-analysis. 54 hours lecture. (Letter Grade, or Pass/No Pass Option.)

ENG-14

American Literature I: Pre-Contact through Civil War 3 Units
(C-ID:ENGL 130)

UC, CSU

Prerequisite: ENG-50 or ENG-80 or eligibility for ENG-1A

Advisory: ENG-1B or ENG-1BH

Description: A survey of American literature from the pre-contact period to the Civil War, including a comprehensive exposure to the prose, poetry and fiction of this era as well as a basic understanding of the cultural, intellectual and artistic trends it embodies. 54 hours lecture. (Letter Grade, or Pass/No Pass option)

ENG-15

American Literature II: 1860 to the Present 3 Units
(C-ID:ENGL 135)

UC, CSU

Prerequisite: ENG-50 or ENG-80 or eligibility for ENG-1A

Advisory: ENG-1B or ENG-1BH

Description: A survey of American literature from 1860 to the present, including a comprehensive exposure to the prose, poetry, fiction, and drama of this era as well as a basic understanding of the cultural, intellectual, and artistic trends it embodies. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENG-16

Introduction to Linguistics 3 Units

UC, CSU

Prerequisite: None

Advisory: Qualification for English 1A

Description: A survey of language structure, theory and development, including a study of phonetics, phonology, morphology, semantics and syntax, language variation and change, language acquisition, and the psychological and social issues involved in language learning. 54 hours lecture. (Letter Grade, or Pass/No Pass Option.)

ENG-17A

Literary Magazine Production: Beginning 3 Units

CSU

Prerequisite: None

Advisory: ENG-1A or ENG-1AH

Description: Beginning-level literary magazine production with an emphasis on both theory and practice. Qualified students may serve in various capacities, though all will be involved in editorial work. 36 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option)

ENG-17B

Literary Magazine Production: Intermediate 3 Units
 CSU

Prerequisite: ENG-17A

Advisory: ENG-1A or ENG-1AH

Description: Intermediate-level literary magazine production with an emphasis on both theory and practice. Qualified students may serve in various capacities, though all will be involved in editorial work. 36 hours lecture and 54 hours of laboratory. (Letter Grade, or Pass/No Pass Option)

ENG-17C

Literary Magazine Production: Advanced 3 Units
 CSU

Prerequisite: ENG-17B

Advisory: ENG-1A or ENG-1AH

Description: Advanced-level literary magazine production with an emphasis on both theory and practice. Qualified students may serve in various capacities, though all will be involved in editorial work. 36 hours lecture and 54 hours of laboratory. (Letter Grade or Pass/No Pass option.)

ENG-20

Survey of African American Literature 3 Units
 UC, CSU

Prerequisite: None

Advisory: ENG-1B or ENG-1BH

Description: A survey of African American literature from the early oral tradition to the present, including a comprehensive exposure to African American prose, poetry, and fiction as well as a basic understanding of the cultural, intellectual, and artistic trends of African American culture and the relationship to contemporary literature. Students who have taken both ENG-21 and ENG-22 may not receive credit for ENG-20. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENG-23

The Bible As Literature 3 Units
(Same as HUM-23)
 UC, CSU

Prerequisite: None

Advisory: ENG-1B or ENG-1BH and REA-83

Description: A survey of the Hebrew Bible and New Testament with emphasis on literary form, styles, and themes. 54 hours lecture. (Letter Grade, or Pass/No Pass Option.)

ENG-30

Children's Literature 3 Units
 (C-ID:ENGL 180)
 UC, CSU

Prerequisite: ENG-50 or ENG-80 or eligibility for ENG-1A

Description: A general survey of children's literature from early times, with emphasis on contemporary works, including fantasy/science fiction, realistic, multicultural, and historical fiction. Both oral and written assignments are required. 54 hours lecture. (Letter Grade, or Pass/No pass option)

ENG-35

Images of Women in Literature 3 Units
 UC, CSU

Prerequisite: None

Advisory: ENG-1B or ENG-1BH

Description: A study of images of women in literature which includes male and female authors and explores the cultural, sociological, political, and economic bases for historical and contemporary literary images of women. 54 hours lecture. (Letter Grade, or Pass/No Pass Option.)

ENG-40

World Literature I: From Ancient Literatures to the Seventeenth Century 3 Units
 (C-ID:ENGL 140)

UC, CSU

Prerequisite: ENG-50 or ENG-80 or eligibility for ENG-1A

Advisory: ENG-1B or ENG-1BH

Description: Significant works of world literature from Ancient literatures to the Seventeenth Century, including a comprehensive exposure to the poetic, dramatic, and prose forms of early cultures as well as a basic understanding of the cultural, intellectual, and artistic trends these works embody. Primary emphasis is on literature in translation. 54 hours lecture. (Letter Grade, or Pass/No Pass Option.)

ENG-41

World Literature II: Seventeenth Century Through the Present 3 Units
 (C-ID:ENGL 145)

UC, CSU

Prerequisite: ENG-50 or ENG-80 or eligibility for ENG-1A

Advisory: ENG-1B or ENG-1BH

Description: Significant works of world literature from the Seventeenth Century through the present, including a comprehensive exposure to the poetry, drama, and fiction of these periods as well as a basic understanding of the cultural, intellectual, and artistic trends these works embody. Emphasis on literature in translation. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENG-44

Poetry from the Twentieth Century to the Present 3 Units
 UC, CSU

Prerequisite: None

Advisory: ENG-1B or ENG-1BH

Description: The study of major voices and trends in poetry of the twentieth and twenty-first century, examining the cultural and artistic contexts from which this poetry emerged. Topics include poetic structure and development and thematic elements. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENG-45

Modern Drama 3 Units
 UC, CSU

Prerequisite: None

Advisory: ENG-1B or ENG-1BH

Description: A survey of drama from (roughly) 1870 to the present, including appraisal of modern theatrical movements, examination of dramas function as a form of creative expression, exploration of ideas, societal factors and technology that have influenced modern drama, and investigation into the practice of the playwright and dramaturge. (Letter Grade, or Pass/No Pass option.)

ENG-47**Inlandia: Regional Writing about the Inland Empire 3 Units**

UC, CSU

*Prerequisite: None**Advisory: ENG-1A or ENG-1AH*

Description: Studies in creative writing (fiction, poetry, creative nonfiction, and/or playwriting) focusing on regional writing about the Inland Empire. Includes study in techniques of creative writing as well as discussion and practice of various aspects of writing from, and about, specific locations, cultures, and environments. Lectures and discussions involve analysis of professional examples and techniques of regional writing. In-class workshops along with in-class and out-of-class writing assignments provide writing practice and application of writing techniques through peer-analysis and self-analysis. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENG-48**Short Story and Novel from the Twentieth Century to the Present 3 Units**

UC, CSU

*Prerequisite: None**Advisory: ENG-1B or ENG-1BH*

Description: A study of prose fiction from the twentieth century to the present, with an emphasis on writers of international standing whose work embodies significant formal developments and thematic concerns of prose narrative in the last century. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

ENG-50**Basic English Composition 4 Units***Prerequisite: ENG-70 or ENG-60B or ESL-55**Advisory: REA-82 or qualifying placement level*

Description: Emphasizes and develops skills in critical reading and academic writing as preparation for college-level composition. Students will produce a minimum of 5,000 words of instructor-evaluated writing. Classroom instruction integrates lab activities. 72 hours lecture and 18 hours laboratory. (Letter Grade only.)

ENG-60A**English Fundamentals: Sentence to Paragraph 4 Units***Prerequisite: None*

Description: Develops students' writing, active-reading, and grammar skills to basic-level performance. Emphasis is on correct writing at the sentence and paragraph level. 72 hours lecture and 18 hours laboratory. (TBA option) (Non-degree credit course. Pass/No-Pass only)

ENG-60B**English Fundamentals: Paragraph to Essay 4 Units***Prerequisite: ENG-60A or qualifying placement level*

Description: Develops the students basic-level writing, active reading, and grammar skills to intermediate-level performance. Emphasis is on correct writing at the paragraph and short-essay level. 72 hours lecture and 18 hours laboratory. (TBA option) (Non-degree credit course. Pass/No Pass only.)

ENG-70**Composition Fundamentals 4 Units***Prerequisite: None*

Description: Prepares students by developing skills in grammar, usage, composition, and the writing process. This course serves students who desire more practice with pre-collegiate level reading and writing before taking ENG-50. Students will write a minimum of 5,000 words. 72 hours lecture and 18 hours laboratory. (Non-degree credit course. Pass/No pass only)

ENG-80**Preparatory Composition 6 Units***Prerequisite: None*

Description: Accelerated preparation for English Composition (ENG 1A), this course offers intensive instruction in the academic reading, reasoning, and writing expected in transfer and associate-degree courses. Students will read college-level texts and write a minimum of 10,000 words. Classroom instruction is supplemented by writing lab activities. 108 hours lecture and 18 hours laboratory. (TBA option) (Non-degree credit course.)

ENG-85**Writing Clinic (English) 0.50 Units***Prerequisite: None*

Description: Intended for students who need concentrated attention in various areas of grammar, punctuation, and composition. Self-paced, open-entry/open-exit, with no traditional lecture-based component. Instead, it requires students to do the majority of their coursework independently. Each student follows a sequential series of modules based on his or her diagnosis. Students meet with their instructor in the Writing and Reading Center for the pre-and post-test and as needed for one-on-one instruction or small group study for the duration of the students' enrollment in the course. 27 hours laboratory. (TBA option) (Non-degree credit course. Pass/No Pass only.)

ENG-91**Academic Support for English 1A 2 units***Prerequisite: None**Corequisite: ENG-1A*

Description: Limited to students concurrently enrolled in the co-requisite English 1A class, English 91 provides students with additional support for college-level English. This 2-unit class offers additional instruction and practice in reading strategies, writing process, sentence craft, metacognitive reflection, and college success skills. 36 hours lecture. (Non-degree credit course. Pass/No Pass only.)

ENGLISH AS A SECOND LANGUAGE

ESL-51**Basic Writing and Grammar 4 Units***Prerequisite: None*

Description: Emphasizes elementary competency in standard written English with a focus on basic writing and grammar skills. Instruction will also include vocabulary and reading skills necessary for success in basic English as a Second Language courses. 72 hours lecture and 18 hours laboratory. (Non-degree credit course. Pass/No Pass only.)

ESL-52**Low-intermediate Writing and Grammar 4 Units**

Prerequisite: ESL-51 or Qualifying placement level on a state-approved placement instrument

Description: Develops competency in standard written English with a continued focus on basic writing and grammar skills. Instruction includes vocabulary and reading skills necessary for success in low-intermediate English as a Second Language courses. 72 hours lecture and 18 hours laboratory. (Non-degree credit course. Pass/No Pass only.)

ESL-53**Intermediate Writing and Grammar 4 Units**

Prerequisite: Qualifying placement level on a state-approved placement instrument or ESL-52

Description: Increases competency in standard written English with a focus on intermediate and writing grammar skills. Instruction includes vocabulary and reading skills necessary for success in intermediate English as a Second Language courses. 72 hours lecture and 18 hours laboratory. (Non-degree credit course. Pass/No Pass only.)

ESL-54**High-intermediate Writing and Grammar 5 Units**

UC, CSU

Prerequisite: Qualifying placement level on a state-approved placement instrument or ESL-53

Description: Emphasizes competency in standard written English with a focus on high-intermediate grammar and writing skills. Instruction includes an intensive review of vocabulary and reading skills necessary for success in high-intermediate English as a Second Language courses. 90 hours lecture and 18 hours laboratory. (Degree credit course. Letter Grade, or Pass/No Pass Option.)

ESL-55**Advanced Writing and Grammar 5 Units**

UC, CSU

Prerequisite: Qualifying placement level on a state-approved placement instrument or ESL-54

Description: Emphasizes competency in standard written English with a focus on developing paragraphs and essays in preparation for English composition classes. Instruction includes continued development of vocabulary, reading and academic skills necessary for success in college classes. 90 hours lecture and 18 hours laboratory. (Degree credit course. Letter Grade, or Pass/No Pass Option.)

ESL-71**Basic Reading and Vocabulary 4 Units**

Prerequisite: None

Advisory: ESL-51 or ESL-52 or qualifying placement level on a state-approved placement instrument

Description: Emphasizes the acquisition of simple reading skills, expansion of receptive and productive vocabulary, developing dictionary skills, and comprehension of short, adapted reading selections. 72 hours lecture and 18 hours laboratory. (Non-degree credit course. Pass/No Pass only.)

ESL-72**Intermediate Reading and Vocabulary 4 Units**

Prerequisite: None

Advisory: ESL-71 and ESL-53 or ESL-54

Description: Emphasizes the continued acquisition of reading skills needed for college level courses, expansion of receptive and productive vocabulary, and comprehension of medium-length adapted reading selections. 72 hours lecture and 18 hours laboratory. (Non-degree credit course. Pass/No Pass only.)

ESL-73**High Intermediate Reading and Vocabulary 4 Units**

Prerequisite: None

Advisory: ESL-72 and ESL-53 or ESL-54 or ESL-55 or qualifying placement level on a state-approved placement instrument

Description: Emphasizes the acquisition of higher level reading skills needed for college level courses, expansion of receptive and productive vocabulary, further development of library skills, and comprehension of both adapted and authentic reading selections of varying lengths. 72 hours lecture and 18 hours laboratory. (Degree credit course. Letter grade, or Pass/No Pass option.)

ESL-90D**Special Topics in ESL: Verb Tense Review 2 Units**

Prerequisite: None

Advisory: Qualification for or enrollment in ESL 54 or higher

Description: Provides students with intensive review, practice, and use of all the basic English verb tenses. 36 hours lecture. (Non-degree credit course. Pass/No Pass only.)

ESL-90L**Special Topics in English as a Second Language: Punctuation of Phrases and Clauses 2 Units**

Prerequisite: None

Advisory: Qualification for or enrollment in ESL 53 or higher

Description: Provides students with the conventions of punctuation use in American English. Enhances the students competence in identifying types of phrases and clauses in English and in using proper punctuation in compound and complex sentence structures. 36 hours lecture. (Non-degree credit course. Pass/No Pass only.)

ESL-90M**Special Topics in English as a Second Language: Articles and Prepositions 2 Units**

Prerequisite: None

Advisory: Qualification for or enrollment in ESL-53 or higher

Description: Provides students with basic instruction and practice in the use of prepositions and articles. Attention will focus on prepositional phrases, verbal and adverbial idioms, and the use of definite and indefinite articles. 36 hours lecture. (Non-degree credit course. Pass/No Pass only.)

ESL-90P**Special Topics in ESL: Mastering Academic Vocabulary****2 Units***Prerequisite: None**Advisory: ESL-53 or higher*

Description: Instruction and practice aimed at understanding and using high-frequency academic vocabulary. Vocabulary study is approached on three levels: the word, the sentence, and the context level. Provide students with the rules of spelling in American English. Enhance the students' competence in identifying roots and affixes in borrowed words and using proper spelling in written discourse. 36 hours lecture. (Non-degree credit course. Pass/No Pass)

ESL-91**Oral Skills I: Beginning Oral Communication****3 Units***Prerequisite: None**Advisory: Concurrent enrollment in ESL-51 or 52*

Description: This course emphasizes beginning conversation, pronunciation, and idiomatic skills along with basic listening comprehension. Conversational and idiomatic skills focus on fluent and appropriate use of common words and functional expressions in life skills areas--shopping, food, clothing, money/banking, car/license, travel, medicine. Pronunciation focuses on the articulation of English vowels and consonants and on the development of basic English patterns of stress and intonation. Listening stresses understanding verbal instructions and questions, common vocabulary and daily functions in an aural context, main ideas and details in monologues and dialogues. 54 hours lecture and 18 hours laboratory. (Non-degree credit course. Pass/No Pass only.)

ESL-92**Oral Skills II: Intermediate Oral Communication****3 Units***Prerequisite: None**Advisory: ESL-91 and concurrent enrollment in ESL-53 or 54*

Description: This course develops intermediate conversation, pronunciation, idiomatic and aural comprehension skills. It is intended for non-native speakers of English who can make themselves understood but are not yet proficient in self-expression. Conversational and idiomatic skills focus on fluent and appropriate use of oral communication skills in a variety of social, business and/or academic situations. Pronunciation focuses on clearer articulation of English vowels and consonants and on increased control of the stress, intonation and rhythm of English. Listening comprehension stresses understanding verbal instructions and questions on campus and in the workplace. Students continue to learn appropriate verbal and non-verbal behavior as well as conversation management techniques to exchange ideas in small and large group communication. 54 hours lecture and 18 hours laboratory. (Non-degree credit course. Pass/No Pass only.)

ESL-93**Oral Skills III: Advanced Oral Communication****3 Units***Prerequisite: None**Advisory: ESL-92 and concurrent enrollment in ESL-54, 55 or ENG-50*

Description: This course develops advanced conversation, pronunciation, idiomatic and aural comprehension skills. Conversational and idiomatic skills focus on increasingly fluent communication and interaction skills in complex speaking situations and comfortable use of English in a variety of situations, both academic and professional. Pronunciation focuses on improved clarity of speech and on increased control of the stress, intonation and rhythm of English. Listening comprehension stresses understanding complex syntax, register, nuance and tone in conversations on campus and in the workplace. Students will learn how to speak at length on a given topic, both prepared and extemporaneous, and to understand the subtleties of conversational English. 54 hours lecture and 18 hours laboratory. (Degree credit course. Letter grade, or Pass/No Pass option.)

ESL-95**Pronunciation and Accent Reduction****3 Units***Prerequisite: None**Advisory: Qualification for ESL-52 or higher recommended*

Description: Provides students with basic instruction and practice in the oral production of English. Listening activities focus on comprehension of sentences, dialogs and paragraphs at normal speed and on discrimination of sound patterns in American English. Pronunciation focuses on stress, intonation, rhythm, phrasing, reduction, and linking as well as consonants, vowels, and digraphs. The course emphasizes overall pronunciation improvement to make spoken communication more intelligible and to approximate more closely native rhythms and intonation. 54 hours lecture and 18 hours laboratory. (Non-degree credit course. Pass/No Pass only.)

ENTREPRENEURSHIP

New courses to follow

FRENCH

FRE-1**French 1****5 Units**

UC, CSU

Prerequisite: None

Description: This course concentrates on developing basic skills in listening, reading, speaking and writing. Emphasis is placed on acquisition of vocabulary, structures and grammatical patterns necessary for comprehension of native spoken and written French at the beginning level. This course includes discussion of French culture and daily life. 90 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

FRE-2**French 2****5 Units**

UC, CSU

Prerequisite: FRE-1

Description: Further development of basic skills in listening, reading, speaking and writing. A continued emphasis on the acquisition of vocabulary, structures and grammatical patterns necessary for comprehension of standard spoken and written French at the beginning level. This course includes an expanded discussion of French culture and daily life. 90 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

FRE-8**Intermediate Conversation****3 Units**

UC, CSU

Prerequisite: FRE-2

Description: Intermediate-level vocabulary building and improvement of speaking proficiency in the context of French culture, daily life, and topics of current interest. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

GAME DEVELOPMENT

GAM-21**History of Video Games****3 Units**

UC, CSU

Prerequisite: None

Description: A comprehensive study of the evolution of video games, including their technological and artistic antecedents, with analysis of how video games reflect the beliefs, aspirations and values of the cultures where they flourish. Study includes game-play experience and analysis of notable game genres, identifying significant artistic and technological innovations. 54 hours lecture. (Letter grade).

GAM-22**Game Design Principles****4 Units**

UC, CSU

Prerequisite: None

Description: An introduction to the fundamental techniques, concepts, and vocabulary of game design. Students will design original non-digital prototypes and games, using iteration and play-testing best practices. Topics include formal elements of games, mechanics and dynamics, decision-making, flow states and player psychology, the MDA Framework, the iterative process, and rapid prototyping. 54 hours lecture and 54 hours laboratory.

GAM-23**Digital Game Design****4 Units**

UC, CSU

Prerequisite: GAM-22

Description: An introduction to digital game design, including planning, designing and developing an original digital game. Topics include analyzing the target audience, pitching an original game concept, design documentation, the iterative process, and rapid digital prototyping. 54 hours lecture and 54 hours laboratory.

GAM-24**Video Game Prototyping****4 Units**

CSU

Prerequisite: CIS/CSC-5 or GAM-50 or CIS-50

Description: An introduction to the fundamentals of computer game prototyping with an emphasis on scripting. Students will create mockup environments and objects of interest using placeholder assets, apply game rules and interactivity, and demonstrate previsualized game concepts. Topics include layout, possibility space, content integration, scripting, team collaboration, and workflow. Students will create 3D computer game levels using one or more modern game engines. 54 hours lecture and 54 hours laboratory.

GAM-32**Designing Game Characters****3 Units**

CSU

Prerequisite: GAM-81

Description: This course provides continued study of the application of 3D modeling techniques within a computer animation environment. Students will learn the production work flow of Maya to ZBrush and complete game ready character models. The focus will be on character design principles, low poly modeling and the creation of both bipedal and quadruped characters. 54 hours lecture and 18 hours laboratory. (TBA option)

GAM-33**Advanced Digital Sculpting****3 Units**

CSU

Prerequisite: GAM-32

Description: Continued study to perfect character modeling techniques with advanced sculpting methods. This course concentrates on the production work flow of ZBrush to Maya and complete high end cinematic quality 3D models. The focus will be on high level detail and animation models. 54 hours lecture and 18 hours laboratory. (TBA option)

GAM-35**Introduction to Simulation and Game Development****3 Units**

CSU

Prerequisite: None

Description: An introduction to the field of simulation and computer gaming. Course provides an introductory look at the fundamentals of simulation and computer games used in various industries—entertainment, military, finance, medical, education, and law enforcement. Topics include licensing and franchising, marketing, business development, game design, storytelling, and development life cycle. 54 hours lecture.

GAM-39**Current Techniques in Game Art****4 Units**

CSU

Prerequisite: None

Advisory: Ability to manipulate graphics including layers and textures with PhotoShop or Concurrent enrollment in CIS-78A or ADM-71

Description: Introduction to the fundamental techniques, concepts, and vocabulary of advanced sculpting for Game Art, Animation, Concept Art, and Digital Illustration. Students will modify 3D models, and create textured compositions as applied to video games, animation and concept art. 54 hours lecture and 54 hours laboratory.

GAM-41**Game Asset and Engine Integration****3 Units**

CSU

Prerequisite: GAM-81

Description: An intermediate 3D modeling class with a strong focus in low poly modeling, texture mapping and importing art assets into an industry standard game engine. Topics also include the basics of lighting an object, creating custom textures and presentation skills. 54 hours lecture and 18 hours laboratory (TBA option).

GAM-44**Portfolio Production****2 Units****(Same as CIS-44)**

CSU

Prerequisite: GAM-23 or GAM-32 or GAM-46 or GAM-48 or GAM-52 or MUC-6 or [ART-22, ART-39, CIS-59, CIS-66, CIS-78B, CIS-79 and CIS-81] or [CIS-68 and CIS-75]

Description: Creative organization and presentation of a body of work exhibiting portfolio-quality aptitude. Covers all aspects of creation and presentation of a professional portfolio for students of multimedia majors such as 3D modeling, animation, game design, game programming, mobile applications development and graphic design. Students will edit existing work to emphasize individual strengths and areas of specialization. Compilation of a professional resume and mock interviews will be completed by each student. 18 hours lecture and 54 hours laboratory.

GAM-46**Environment and Vehicle Modeling****3 Units**

CSU

Prerequisite: GAM-81

Description: A comprehensive study of game industry modeling techniques for both hard surface and organic models. Advanced 3D modeling techniques in creating environment and vehicle models with specific limitations on tri/poly count. Topics include Polygonal modeling tools, Subdivision Surface tools, and NURBS (Non Uniform Rational B Splines) modeling tool sets. An introduction to background design and layout as well as shot planning and composition as it applies to storytelling in a game/simulation environment with a focus on creating architectural interiors and exteriors representing houses, buildings and entire worlds contained under a roof. 54 hours lecture and 18 hours laboratory.(TBA option)

GAM-50**Introduction to Game Programming****3 Units**

UC, CSU

Prerequisite: None

Description: A first course in programming for games stressing fundamental programming principles. Students are introduced to computer programming logic with hands on game development projects using an industry standard game engine. This course will cover the logic structures and design paradigms that allow for fundamental interactions in a visual and object oriented environment. No previous computer programming experience is required. 54 hours lecture and 18 hours laboratory.

GAM-51**Game Mechanics and Simulation****3 Units**

CSU

Prerequisite: GAM-50 and MAT-35

Description: Introduction to practical applications of mathematics and physics techniques related to various areas of game programming. This course provides a specialized focus on core fundamentals in game engine programming and gameplay scripting. 54 hours lecture and 18 hours laboratory. (TBA option)

GAM-52**Game Engine Scripting I****(Same as CSC-52)****3 Units**

CSU

Prerequisite: GAM-50

Description: Introduction to core programming concepts related to game engine scripting. Scripted languages are used in the context of industry standard game development tools to implement game functionality. 54 hours lecture and 18 hours laboratory. (TBA option)

GAM-53**Game Engine Scripting II****(Same as CSC-53)****3 Units**

CSU

Prerequisite: GAM-52

Description: Extended concepts in core programming as it pertains to game engine scripting. Advanced concepts in scripted languages are explored to allow for more complex simulations to further drive industry standard game engines. 54 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade only.)

GAM-70**Game Development Basics****2 Units**

CSU

Prerequisite: None

Description: Introduction to fundamental computer concepts related to typical functions required of a game artist. Understanding computer navigation and peripherals used to input information which is unique to Game Design and Digital Media will be the focus. Standard file management, navigation, storage, and multiple backup techniques for files are taught as well as basic scanning techniques, appropriate use of internet resources, copyright issues and an introduction to graphic file formats. 18 hours lecture and 6 hours laboratory. (TBA option)

GAM-71**Perspective for Game and Animation****3 Units**

CSU

Prerequisite: GAM-80

Description: This is a perspective drawing class which focuses on creating believable environments, both interior and exterior, through the proper implementation of correct one point, two point and three point perspective while setting up a dynamic composition. Students learn to draw three-dimensional forms through observation and application of perspective principles. Students learn to conceptualize, create quick sketches and then focus on developing complete perspective drawings. 36 hours lecture and 54 hours laboratory.

GAM-72**Anatomy for Game Art****3 Units**

CSU

Prerequisite: GAM-80

Description: An intensive study of the human figure and animal anatomy in preparation for construction of 3D models for the Game Industry. Students draw using live clothed and nude models. 36 hours lecture and 54 hours laboratory.

GAM-73**Storyboarding for Games****3 Units**

CSU

Prerequisite: GAM-80

Description: Application of strong composition, posing, and camera techniques to tell an engaging story in a video game environment. Students plan interactive scripted events and cut-scenes using beginning level drawing skills and storyboard software. 36 hours lecture and 54 hours laboratory. (TBA option)

GAM-79B**Game Studio: Character Modeling****4 Units**

CSU

*Prerequisite: GAM-41 and GAM-82**Corequisite: GAM-33*

Description: This is the culminating class in the area of character modeling for game art. Students work in interdisciplinary teams to develop and complete an original digital game. The classroom production environment utilizes game industry production practices and constructs including milestones and deliverables. Upon completion of the course students will have an original working digital game demo, that is feature and content complete and portfolio ready. 54 hours lecture and 54 hours laboratory. (TBA option)

GAM-79C**Game Studio: Environments and Vehicles****4 Units**

CSU

Prerequisite: GAM-46

Description: This is the culminating class in the area of developing environments and vehicles for games. Students work in interdisciplinary teams to develop and complete an original digital game. The classroom production environment utilizes game industry production practices and constructs including milestones and deliverables. Upon completion of the course students will have an original working digital game demo, that is feature and content complete and portfolio ready. 54 hours lecture and 54 hours laboratory. (TBA option)

GAM-79D**Game Studio Production: Audio****4 Units**

CSU

Prerequisite: MUC-6

Description: This is the culminating class in the area of game audio. Students work in interdisciplinary teams to develop and complete an original digital game. The classroom production environment utilizes game industry production practices and constructs including milestones and deliverables. Upon completion of the course students will have an original working digital game demo, that is feature and content complete and portfolio ready. 54 hours lecture and 54 hours laboratory.

GAM-79E**Game Studio: Game Design Capstone****4 Units**

CSU

Prerequisite: GAM-24

Description: This is the culminating class in the game design track of game development. Students work in interdisciplinary teams to develop and complete an original digital game. The classroom production environment utilizes game industry production practices and constructs including milestones and deliverables. Upon completion of the course students will have an original working digital game demo, that is feature and content complete and portfolio ready. 54 hours lecture and 54 hours laboratory. (TBA option)

GAM-79F**Game Studio Production: Game Programming****4 Units**

CSU

Prerequisite: GAM-52

Description: This is the culminating class in the game programming track. Students work in interdisciplinary teams to develop and complete an original digital game. The classroom production environment utilizes game industry production practices and constructs including milestones and deliverables. Upon completion of the course students will have an original working digital game demo, that is feature and content complete and portfolio ready. 54 hours lecture and 54 hours laboratory. (TBA option)

GAM-80**Digital Drawing for Game Art****4 Units**

CSU

Prerequisite: None

Description: Introduction to digital drawing techniques using industry standard software. Topics include usage of digital drawing hardware, digital image manipulation, techniques for digitally painting custom textures, exploration of the elements of art as they apply to games, composition, and perspective, layout design, character design, and concept development. Includes development of observational, motor, and creative skills. Use of layers, layer styles, adjustment layers and blending modes. 54 hours lecture and 54 hours laboratory. (TBA option)

GAM-81**3D Modeling and Texturing****4 Units**

CSU

Prerequisite: GAM-80

Description: This course introduces the concepts of 3D Modeling in a virtual environment. Emphasis is on the introduction of three-dimensional concepts, the use of modeling tools, and menu structures within applications of 3D design systems. This course also covers the process by which 3D models are unwrapped and textured using industry standard techniques and software. Skills taught in this course will give students the ability to create original three-dimensional computer generated models of organic or mechanical design, as well as apply suitable textures to these assets. 54 hours lecture and 54 hours laboratory. (TBA option)

GAM-82**Game Rigging and Animation****4 Units**

CSU

Prerequisite: GAM-81

Description: A course that teaches students how to prepare an animation rig accurately and anatomically in a 3D simulation environment. Prepare previously created humanoid and creature 3D models for an animation-ready state using professional production techniques. Applies classic animation principles to objects in a 3D environment. Introduces tools used for 3D animation as well as the best working practices for animating objects and characters. Applies real-life action sequences to characters. Topics include game cycle animation, weight, actions and personality for the character including advanced techniques with key frame animation including incorporating audio as well as dynamic animation to assist the character driven animation. 54 hours lecture and 54 hours laboratory. (TBA option)

GAM-200**Simulation and Game Development Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass).

GEOGRAPHY

GEG-1**Physical Geography****3 Units**

(C-ID:GEOG 110)

UC, CSU

Prerequisite: None

Description: The interacting physical processes of air, water, land, and life that impact Earth's surface. Topics include weather and climate, the water cycle, landforms and plate tectonics, and the characteristics of plant and animal life. Emphasis is on interrelationships among systems and processes and their resulting patterns and distributions. There is a heavy emphasis on maps as descriptive and analytical tools. Students may not receive credit for both GEG-1 and GEG-1H. 54 hours lecture.

GEG-1H**Honors Physical Geography****3 Units**

(C-ID:GEOG 110)

UC, CSU

*Prerequisite: None**Limitation on enrollment: Enrollment in the Honors Program.*

Description: The interacting physical processes of air, water, land, and life which impact Earth's surface. Topics include weather and climate, the water cycle, landforms and plate tectonics, and the characteristics of plant and animal life. Emphasis is on interrelationships among systems and processes and their resulting patterns and distributions. There is a heavy emphasis on maps as descriptive and analytical tools. The honors course offers an enriched experience for accelerated students by limited class size, seminar format, student generated and led discussions and projects, the application of higher level thinking, reading, and writing skills analysis, synthesis, and evaluation. Students may not receive credit for both GEG-1 and GEG-1H. 54 hours lecture.

GEG-1L**Physical Geography Laboratory****1 Unit**

(C-ID:GEOG 111)

UC, CSU

*Prerequisite: None**Corequisite: GEG-1 or GEG-1H*

Description: Practical application of scientific principles through geographically based in-class exercises using a variety of tools, such as maps, photos, and data in various forms. 54 hours laboratory.

GEG-2**Human Geography****3 Units**

(C-ID:GEOG 120)

UC, CSU

Prerequisite: None

Description: The geographic analysis of the human imprint on the planet. A study of diverse human populations, their cultural origins, diffusion and contemporary spatial expressions emphasizing demography, languages, religions, urbanization, landscape modification, political units and nationalism, economic systems and development. Emphasis is given to interrelationships between human activities and the biophysical environment. 54 hours lecture.

GEG-3**World Regional Geography****3 Units**

(C-ID:GEOG 125)

UC, CSU

Prerequisite: None

Description: A study of major world regions, emphasizing current characteristics and issues including cultural, economic, political and environmental conditions. Topics may include the natural environment, population distribution, cultural practices, political institutions, economic development, agricultural practices, and urbanization. 54 hours lecture.

GEG-4**Geography of California****3 Units**

(C-ID:GEOG 140)

UC, CSU

Prerequisite: None

Description: An introduction to California's physical and cultural diversity as well as the issues facing individual regions. The course emphasizes ethnic diversity, human alteration of the landscape, and contemporary social, economic, and environmental issues using maps and other geographic tools. Topics include regions, demographic trends, politics, climate, landforms, natural vegetation, water resources, the cultural landscape, our Native American past, urbanization, agriculture, and the challenges of the future. 54 hours lecture.

GEG-5**Weather and Climate****3 Units**

(C-ID:GEOG 130)

UC, CSU

Prerequisite: None

Description: The nature and causes of common meteorological phenomena, severe weather occurrences, and climatic patterns. Topics include: atmospheric structure, solar radiation and energy balances, atmospheric moisture, clouds and fog, air pressure, wind, air masses and fronts, cyclones, tornadoes, hurricanes, weather forecasting, climate classification, and climate change. 54 hours lecture.)

GEG-6**Geography of the United States and Canada****3 Units**

UC, CSU

Prerequisite: None

Description: An overview of the regions of the United States and Canada. Topics include regional interactions and current political, economic, demographic, and cultural issues. 54 hours lecture.

GUIDANCE

GUI-45**Introduction to College****1 Unit**

UC, CSU

Prerequisite: None

Description: Guidance 45 is designed to introduce academic and occupational programs, college resources and personal factors that contribute to success as a college student. This course includes an extensive exploration of Riverside Community College District resources and policies, orientation to college life, student rights and responsibilities, as well as certificates, graduation and transfer requirements. Students will prepare a Student Educational Plan (S.E.P.). Outcomes of higher education will be discussed through the exploration and application of sociological and psychological principles that lead to success in college and in accomplishing goals. As a result of class activities and exploration of factors influencing educational decisions, class members will be able to utilize the information obtained in class to contribute to their college success. 18 hours lecture. (Pass/No Pass.)

GUI-46**Introduction Transfer Process****1 Unit**

UC, CSU

Prerequisite: None

Description: Provides an introduction to the transfer process. This course includes an in-depth exploration of transfer requirements, admission procedures, requirements for majors and financial aid opportunities. The information learned will enable students to make informed choices on majors, four-year institutions and in academic planning. 18 hours lecture. (Letter Grade, or Pass/No Pass option.)

GUI-47**Career Exploration and Life Planning****3 Units**

UC, CSU

Prerequisite: None

Description: In depth career and life planning: topics include extensive exploration of one's values, interests and abilities; life problem-solving and self-management skills; adult development theory and the changes that occur over the life span; self-assessment including identifying one's skills and matching personality with work. An intensive career investigation; decision making, goal setting and job search strategies, as well as resume writing and interviewing skills will also be addressed. This course is designed to assist those students considering the transition of a career change or undecided about the selection of a college major. 54 hours lecture.

GUI-48**College Success Strategies****2 Units**

UC, CSU

Prerequisite: None

Description: This comprehensive course integrates personal growth and values, academic study strategies and critical thinking techniques. Students will obtain skills and personal/interpersonal awareness necessary to succeed in college. 36 hours lecture. (Letter grade only)

HEALTH SCIENCE

HES-1**Health Science (Same as BIO-35)****3 Units**

UC, CSU

Prerequisite: None

Description: This course is a general education course that offers a basic study of human health and health care as revealed in the anatomy and physiology of the body, nutrition, exercise, stress management, weight management, protection from degenerative and communicable diseases, personal safety, environmental health, and professional medical care. The scientifically discussed dimensions of wellness include body, mind and spirit. Students will explore making responsible decisions regarding all aspects of healthy life style including getting fit, disease prevention and treatments, substances use and abuse, human sexuality, and selection of health providers. This course satisfies the California requirement in drug, alcohol, tobacco and nutrition education for teacher certification. 54 hours lecture.

HISTORY

HIS-1

History of World Civilizations I

3 Units

(C-ID:HIST 150)

UC, CSU

Prerequisite: None

Advisory: REA-83 and qualification for ENG-1A

Description: A survey of the historical development of global societies, major social, political, and economic ideas and institutions from their origins until the 16th century. Principal areas to be covered are: African civilizations of the Nile and sub-Saharan areas, Mesopotamian civilizations, Greek and Roman Civilizations, Medieval and Reformation Europe, the Indus River, China and Japan. 54 hours lecture.

HIS-2

History of World Civilizations II

3 Units

(C-ID:HIST 160)

UC, CSU

Prerequisite: None

Advisory: REA-83 and qualification for ENG-1A

Description: A survey of the evolution of modern world civilizations from the 16th century emergence of new global political, economic, social, and intellectual patterns, through the era of industrialization and imperialism, to the world wars of the 20th century and the present. 54 hours lecture.

HIS-6

Political and Social History of the United States

3 Units

(C-ID:HIST 130)

UC, CSU

Prerequisite: None

Advisory: REA-83 and qualification for ENG-1A

Description: Political, social, and economic development of the United States from precolonial background and colonial foundations to 1877; the evolution of American thought and institutions; principles of national, state, and local government. Students may not receive credit for both HIS-6 and and HIS-6H. 54 hours lecture.

HIS-6H

Honors Political and Social History of the United States

3 Units

(C-ID:HIST 130)

UC, CSU

Prerequisite: None

Advisory: REA-83 and qualification for ENG-1A

Limitation on enrollment: Enrollment in Honors Program

Description: Political, social, and economic development of the United States from precolonial background and colonial foundations to 1877; the evolution of American thought and institutions; principles of national, state, and local government. This honors course offers an enriched experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher level critical thinking skills. Students may not receive credit for both HIS-6 and and HIS-6H. 54 hours lecture.

HIS-7

Political and Social History of the United States

3 Units

(C-ID:HIST 140)

UC, CSU

Prerequisite: None

Advisory: REA-83 and qualification for ENG-1A

Description: Political, social and economic development of the United States from 1877 to the present; the evolution of American thought and institution; principles of national, state, and local government. Students may not receive credit for both HIS-7 and HIS-7H. 54 hours lecture.

HIS-7H

Honors Political and Social History of the United States

3 Units

(C-ID:HIST 140)

UC, CSU

Prerequisite: None

Advisory: REA-83 and qualification for ENG-1A

Limitation on enrollment: Enrollment in the Honors Program

Description: Political, social and economic development of the United States from 1877 to the present; the evolution of American thought and institution; principles of national, state, and local government. This honors course offers an enriched experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher level critical thinking skills. Students may not receive credit for both HIS-7 and HIS-7H. 54 hours lecture.

HIS-14

African American History I

3 Units

UC, CSU

Prerequisite: None

Advisory: REA-83 and qualification for ENG-1A

Description: A selected study of the complex continent from which African Americans came with special emphasis on the historical, political and socio-cultural aspects of African civilizations in Ancient Egypt and the western Sudan; the transformation of the continent and of Africans through the transatlantic slave trade; and a study of the African American experience during their confinement as slaves in British North America and the early national and ante-bellum periods through the Civil War and Emancipation. 54 hours lecture.

HIS-25

History of Mexico

3 Units

UC, CSU

Prerequisite: None

Advisory: REA-83 and qualification for ENG-1A

Description: Mexico's social political, economic, and cultural evolution with a consideration of its place in world affairs. This introductory survey will stress the mosaic cultural influences from the pre-Columbian period to the present with an emphasis on the native cultures, wars and independence, the Mexican Revolution, and Mexico in the twentieth century. 54 hours lecture.

HIS-26**History of California****3 Units**

UC, CSU

Prerequisite: None

Description: A survey of the history of California from the pre-Columbian period to the present, with emphasis on the period since statehood in 1850. 54 hours lecture.

HIS-31**Introduction to Chicano/a Studies****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A*

Description: This course is a survey of regional Chicano/a population historical and cultural roots, and social problems from the Spanish and Mexican colonial period to the present. Included is an examination of the principles of state and local government as well as political, economic and social forces as they relate to contemporary Chicano/a problems. Considers the Constitution of the United States and its relevance to Chicanos as Americas second largest minority group. 54 hours lecture.

HIS-34**History of Women in America****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A*

Description: A survey of the political social and cultural institutions which have shaped the role and character of women in America. The historical role of women in the development of the nation, and the ongoing struggle to achieve political, economic, and social equality will be examined. 54 hours lecture.

HUMANITIES

HUM-4**Arts and Ideas: Ancient World Through the Late Medieval Period****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A*

Description: An interdisciplinary study of the cultural movements in art, architecture, literature, music, philosophy, and religion of Western Civilization. The cultural achievements of the ancient world and the middle ages are studied to develop an understanding of their philosophical ideas, values, cultural meaning, artistic form, and contributions to modern thought. Students may not receive credit for both HUM-4 and HUM-4H. 54 hours lecture.

HUM-4H**Honors Arts and Ideas: Ancient World Through the Late Medieval Period****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A**Limitation on enrollment: Enrollment in Honors Program*

Description: An interdisciplinary study of the cultural movements in art, architecture, literature, music, philosophy, and religion of Western Civilization. The cultural achievements of the ancient world and the middle ages are studied to develop an understanding of their philosophical ideas, values, cultural meaning, artistic form, and contributions to modern thought. This honors course offers an enriched experience for accelerated students by means of limited class size, seminar format, discussions and projects generated and led by students, a focus on primary texts in translation, and the applications of higher-level thinking and writing skillsanalysis, synthesis, and evaluation. Students may not receive credit for both HUM-4 and HUM-4H. 54 hours lecture.

HUM-5**Arts and Ideas: Renaissance through the Modern Era****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for English 1A*

Description: An interdisciplinary study of the cultural movements in art, architecture, literature, music, philosophy, photography, cinema, media, and religion of Western civilization. The cultural achievements of the Renaissance, Enlightenment, Romantic, Modern and post-modern periods are studied to develop an understanding of their philosophical ideas, values, cultural meaning, artistic form, and contributions to contemporary thought Students may not receive credit for both HUM-5 and HUM-5H. 54 hours lecture.

HUM-5H**Honors Arts and Ideas: The Renaissance through the Modern Era****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for English 1A**Limitation on enrollment: Enrollment in Honors Program*

Description: An interdisciplinary study of the cultural movements in art, architecture, literature, music, philosophy, photography, cinema, media, and religion of Western civilization. The cultural achievements of the Renaissance, Enlightenment, Romantic, Modern and post-Modern periods are studied to develop an understanding of their philosophical ideas, values, cultural meaning, artistic form, and contributions to modern thought. This Honors course offers an enriched experience for accelerated students by means of limited class size, seminar format, discussions and projects generated and led by students, a focus on primary texts in translation, and the applications of higher-level thinking and writing skillsanalysis, synthesis, and evaluation. Students may not receive credit for both HUM-5 and HUM-5H. 54 hours lecture.

HUM-8**Introduction to Mythology
(Same as ENG-8)****3 Units**

UC, CSU

*Prerequisite: None**Advisory: ENG-1B or ENG-1BH and REA-83*

Description: A study of Greco-Roman and other mythological traditions. Emphasizes the historical sources and cultural functions of myths and legends in ancient societies and their continuing relevance to modern thought and culture. 54 hours lecture.

HUM-9**American Voices****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A*

Description: An interdisciplinary study of American voices across class, racial, ethnic, religious, and other boundaries. Close reading of American biographies and autobiographies of writers, artists, musicians, and other artists to analyze the evolving character of American identity. 54 hours lecture.

HUM-10**World Religions****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for English 1A*

Description: Thought and concepts of the major religious systems, including primal religions, extinct religions, Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Taoism, Shintoism, Zoroastrianism, Judaism, Christianity, and Islam. Students may not receive credit for both HUM-10 and HUM-10H. 54 hours lecture.

HUM-10H**Honors World Religions****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for English 1A**Limitation on enrollment: Enrollment in Honors Program*

Description: Thought and concepts of the major religious systems, including primal religions, extinct religions, Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Taoism, Shintoism, Zoroastrianism, Judaism, Christianity, and Islam. This Honors course offers an enriched experience for students through limited class size, seminar format, discussions and projects generated and led by students, a focus on primary texts in translation and the application of higher level thinking and writing skills analysis, synthesis and evaluation. Students may not receive credit for both HUM-10 and HUM-10H. 54 hours lecture.

HUM-11**Religion in America****3 Units**

UC, CSU

*Prerequisite: None**Advisory: HUM-10, REA-83 and qualification for ENG-1A*

Description: Thought and practice of American religious traditions, including Native American practices, Protestantism, American religious sects (Mormons, Seventh-Day Adventists), Catholicism, Judaism, and Asian religions. Attention is also directed to the relationship between religion and politics, and religion and the different ethnic and racial groups of American culture. Course requires participant observation in different religious settings. 54 hours lecture.

HUM-18**Death: an Interdisciplinary Perspective****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for English 1A*

Description: An interdisciplinary study of death from historical, mythological, religious, philosophical, and biological perspectives. The evolving way in which world cultures have understood the problem of death is studied through works of literature, art, and philosophy. 54 hours lecture.

HUM-20C**Arts and Ideas: Special Studies in Humanities****3 Units**

CSU

*Prerequisite: None**Advisory: Qualification for English 1A*

Description: An interdisciplinary study of the cultural movements in art, architecture, literature, music, philosophy, or religion organized around first-hand observation of relevant works and/or lectures. Topics vary and take advantage of resources in study abroad programs, available museum and performance resources, and needs and interests of students and faculty. 54 hours lecture.

HUM-23**The Bible As Literature****3 Units**

UC, CSU

*Prerequisite: None**Advisory: ENG-1B or ENG-1BH and REA-83*

Description: A survey of the Hebrew Bible and New Testament with emphasis on literary form, styles, and themes. 54 hours lecture. (Letter Grade, or Pass/No Pass Option.)

HUM-35**Philosophy of Religion****3 Units****(Same as PHI-35)**

UC, CSU

*Prerequisite: None**Advisory: PHI-10 or PHI-11 and REA-83 and qualification for ENG-1A*

Description: An introduction to the examination of religious claims from a philosophical perspective. Emphasis will be placed upon examining the rational justification for various traditional faith claims, and upon examining the relationship between rationality and faith. The course presumes a basic knowledge of philosophical argumentation. 54 hours lecture.

INTERDISCIPLINARY STUDIES

ILA-1**Introduction to Tutor Training****1 Unit***Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: Introduction to tutoring, with an emphasis on tutoring strategies, learning styles, problem solving, and working with diverse student populations. Designed to prepare students to become peer tutors in a variety of subject areas. Tutors develop student-centered, non-intrusive tutoring skills to meet a wide variety of student needs. Topics include theory, practice and ethics of tutoring, interpersonal communications techniques, tutoring diverse student populations, and group tutorial methods and practical field work. 18 hours lecture. (Letter Grade, or Pass/No Pass option.)

ILA-3**Student Resiliency****1 unit***Prerequisite: None*

Description: A survey of dramatic literature in a variety of genres and styles including appraisal of modern theatrical movements and the fundamental techniques of script analysis, including structure, genre, style, theme, character, and language. Emphasis on cultural significance and historic perspective and how dramatic literature conveys meaning to the theatre artist and audience as a distinctive art form. 54 hours lecture.

ILA-800**Supervised Tutoring****0 units***Prerequisite: None*

Corequisite: Student must be enrolled in at least one other non-tutoring course.

Description: This self-paced, open-entry/open-exit non-credit course provides supervised tutoring, assistance with study skills, and guidance in completing basic skills or college-level course assignments. Students receive individualized tutoring and/or small group instruction outside of class time in a discipline-specific lab. Designed to help students achieve outcomes related to specific courses and/or to improve learning and study skills in specific related subjects. Content varies according to the course for which tutoring is sought. Up to 216 hours laboratory. (TBA option) (Non-degree, non-credit course.)

JPN-1**Japanese 1****5 units***Prerequisite: None*

Description: This course concentrates on developing basic skills in listening, reading, speaking and writing. Emphasis is placed on acquisition of vocabulary, structures and grammatical patterns necessary for comprehension of native spoken and written Japanese at the beginning level. This course includes discussion of Japanese culture and daily life. 90 hours lecture and 18 hours laboratory. (TBA Option)(Letter Grade, or Pass/No Pass option.)

JPN-2**Japanese 2****5 units***Prerequisite: JPN-1*

Description: Further development of basic skills in listening, reading, speaking, and writing. A continued emphasis on the acquisition of vocabulary, structures, and grammatical patterns necessary for comprehension of standard spoken and written Japanese at the beginning level. This course includes an expanded discussion of Japanese culture and daily life. 90 hours lecture and 18 hours laboratory. (TBA Option)(Letter Grade, or Pass/No Pass option.)

JOURNALISM

JOU-7**Mass Communications****3 Units**

(C-ID:JOUR 100)

UC, CSU

Prerequisite: None

Description: Survey of mass communication and the interrelationships of media with society including history, structure, and trends in a digital age. Discussion of theories and effects, economics, technology, law and ethics, global media, media literacy, and social issues, including gender and cultural diversity. 54 hours lecture.

JOU-20A**Newspaper: Beginning****3 Units**

(C-ID:JOUR 130)

CSU

*Prerequisite: None**Advisory: ENG-1A or ENG-1AH and JOU-1 and PHO-8*

Description: Beginning-level college newspaper production with an emphasis on both theory and practice. Qualified students may serve in various capacities, ranging from writing to photography to art. Students may not take JOU-20 and/or JOU-20A/B/C/D for more than a combined total of four times. 27 hours lecture and 81 hours laboratory. (TBA option)

JOU-20B**Newspaper: Intermediate****3 Units**

CSU

Prerequisite: JOU-20A

Description: Intermediate-level college newspaper production with an emphasis on both theory and practice. Qualified students may serve in various capacities, ranging from writing to photography to art. Students may not take JOU-20 and/or JOU-20A/B/C/D for more than a combined total of four times. 27 hours lecture and 81 hours laboratory. (TBA option)

JOU-20C**Newspaper: Advanced****3 Units**

CSU

Prerequisite: JOU-20B

Description: Advanced-level college newspaper production with an emphasis on both theory and practice. Qualified students may serve in various capacities, ranging from writing to photography to art. Students may not take JOU-20 and/or JOU-20A/B/C/D for more than a combined total of four times. 27 hours lecture and 81 hours laboratory. (TBA option)

JOU-20D**Newspaper: Professional****3 Units**

CSU

Prerequisite: JOU-20C

Description: Professional-level college newspaper production with an emphasis on both theory and practice. Qualified students may serve in various capacities, ranging from writing to photography to art. Students may not take JOU-20 and/or JOU-20A/B/C/D for more than a combined total of four times. 27 hours lecture and 81 hours laboratory. (TBA option)

KINESIOLOGY

(formerly Physical Education-PHP)

It is recommended that students enroll in kinesiology activity courses or academic kinesiology courses (that satisfy the Self Development requirement of the Associate of Arts Degree) during the first two semesters of full-time enrollment until the two or three unit requirement is completed. For further information, students should read the Associate of Arts Degree requirements in this catalog.

UNIFORMS

Students are requested to wear attire appropriate to the activity as requested by the instructor.

LOCKERS

A lock and locker for which the student is responsible will be issued to each student. A \$5.00 charge will be assessed for a lost lock.

KIN-4

Nutrition

3 Units

UC, CSU

Prerequisite: None

Description: The principles of modern nutrition and its application. The importance of a scientific knowledge of nutrition, specific food nutrients and nutritional controversies. A study of modern convenience foods and their impact on present day diets. 54 hours lecture.

KIN-10

Introduction to Kinesiology

3 Units

(C-ID:KIN 100)

UC, CSU

Prerequisite: None

Description: This course is an introduction to the interdisciplinary approach to the study of human movement. An overview of the importance of the sub-disciplines in Kinesiology will be discussed along with career opportunities in the areas of teaching, coaching, allied health and fitness professions. 54 hours lecture.

KIN-16

Introduction to Athletic Training

3 Units

UC, CSU

Prerequisite: None

Description: This course will teach the basic concepts of athletic training with emphasis in the prevention and care of athletic injuries. Basic taping techniques will be presented and practiced. 45 hours lecture and 27 hours laboratory.

KIN-30

First Aid and CPR

3 Units

(C-ID:KIN 101)

UC, CSU

Prerequisite: None

Description: This course involves the theory and detailed demonstration of first aid care of the injured by the citizen responder. Students will learn how to assess a victim's condition and incorporate proper treatment. Students who successfully pass all National Safety Council requirements will receive a National Safety Council Advanced First Aid certificate. Students who successfully pass all American Heart Association requirements will receive a Healthcare Professional CPR certificate. 54 hours lecture. A fee of \$20.00 for required certificates will be charged to the student and is not covered by BOGW.

KIN-35

Foundation for Fitness and Wellness

3 Units

UC, CSU

Prerequisite: None

Description: This course will provide students with the ability to make informed choices and to take responsibility for those choices in the areas of fitness, nutrition, and stress management. Emphasis is on the application of health and physical fitness principles. Each student will develop a personalized plan for the overall maintenance of their own wellness. 36 hours lecture and 54 hours laboratory.

KIN-36

Wellness: Lifestyle Choices

3 Units

UC, CSU

Prerequisite: None

Description: The course content focuses upon the dynamic and inter-related dimensions of wellness and how choices made by the individual may encourage an enhanced quality of life. The dimensions of wellness include the social, physical, emotional, occupational, intellectual, and spiritual. Potential student benefits include learning positive life skills through expanding self-awareness and the opportunity to enhance one's personal, family and community wellness. 54 hours lecture.

KIN-38

Stress Management

3 Units

UC, CSU

Prerequisite: None

Description: The nature, physiology, and psychology of stress. Students will explore perceptions, attitudes, beliefs, and lifestyle factors that may be pre-cursors and contributors to distress. Students will also explore a variety of coping strategies and relaxation techniques. The lab portion of this class provides the opportunity for students to practice techniques and develop a personalized stress management program. 45 hours lecture and 27 hours laboratory.

KIN-A03**Adaptive Physical Fitness****1 Unit**

UC, CSU

*Prerequisite: None**Limitation on enrollment: Medical approval and verification of a physical disability*

Description: Provides physical education for students with a physical disability to promote total growth including better self-awareness, physical development and fitness. This course facilitates the student's participation in his/her environment. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A20**Golf, Beginning****1 Unit**

UC, CSU

Prerequisite: None

Description: Designed to serve as an opportunity for the students to develop fundamental skills such as grip, stance, address and swing. Class competitive play and skill contests are conducted to further develop the students' interest in the game. Subsequent enrollment in additional semesters will provide the student an opportunity for added skill and competency development within each activity. KIN-A20 and A21 are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repetition. 54 hours laboratory.

KIN-A21**Golf, Intermediate****1 Unit**

UC, CSU

*Prerequisite: None**Advisory: KIN-A20*

Description: This course is designed to serve as an opportunity for students to develop golf skills at the intermediate level. The mental approach to golf as well as intermediate drills and practice techniques will be employed to further enhance the students skill level. Subsequent enrollment in additional semesters will provide the student added skill and competency development within each activity area. KIN-A20 and A21 are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repetition. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A40**Karate, Beginning****1 Unit**

UC, CSU

Prerequisite: None

Description: This course in beginning karate will develop the basic skills needed for the art of unarmed self-defense. This includes the use of blocking, shifting, punching, striking, and kicking. Karate will also develop speed, grace of movement, self-confidence, poise, mental alertness, strength, endurance, and muscular control. Karate is a physical art and a sport that anyone, irrespective of size, age, or sex, can practice according to his or her own capabilities. KIN-A40, and A41 are courses related in content and are limited in enrollment according to Title 5, section 55040. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A41**Karate, Intermediate****1 Unit**

UC, CSU

*Prerequisite: None**Advisory: KIN-A40*

Description: This course in intermediate karate is designed for the student wishing to review basic self defense skills and begin work on higher skills, develop intermediate level skills in unarmed self defense, and learn basic skills in kumite (free fighting). KIN-A40, and A41 are courses related in content and are limited in enrollment according to Title 5, section 55040. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A46**Hatha Yoga, Beginning****1 Unit**

UC, CSU

Prerequisite: None

Description: This course offers beginning Hatha yoga exercises to improve students' physical and mental wellness. The yoga exercises will be taught to promote improvement in yoga breathing techniques, concentration, muscular flexibility, strength and endurance, balance and meditation techniques. KIN-A46 and A47 are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repetition. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A47**Hatha Yoga, Intermediate****1 Unit**

UC, CSU

*Prerequisite: None**Advisory: KIN-A46*

Description: This course offers intermediate Hatha yoga exercises to improve students physical and mental wellness. The yoga exercises will be taught to promote improvement in yoga breathing techniques, concentration, muscular flexibility, strength and endurance, balance and meditation techniques. KIN-A46 and A47 are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repetition. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A55**Slow Pitch Softball****1 Unit**

UC, CSU

Prerequisite: None

Description: Designed to give students the basic skills, rules and strategies for team play in the sport of slow pitch softball. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A64**Soccer****1 Unit**

UC, CSU

Prerequisite: None

Description: This course is designed to introduce students to the rules, basic skills, and offensive/defensive strategy in soccer. Emphasis will be placed on improving individual skills and applying these skills to game situations. KIN-A40, and A41 are courses related in content and are limited in enrollment according to Title 5, section 55040. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A71**Woman's Sand Volleyball Intermediate/Advanced***Prerequisite: None**Advisory: KIN-A67 or proficient skills in sand volleyball.*

Course provides intermediate and advanced instruction and strategies in sand volleyball. Designed to develop advanced skills, knowledge of rules, team strategies and desire for future participation during leisure times. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A75A**Walking for Fitness: Beginning****1 Unit**

UC, CSU

Prerequisite: None

Description: This course is designed for all students with an emphasis on cardiovascular fitness, setting personal fitness goals and understanding the physiological benefits of a walking program. Walking programs will be established to improve cardiorespiratory endurance. KIN-A75A and A75B are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repetition. 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

KIN-A75B**Walking for Fitness: Intermediate****1 Unit**

UC, CSU

*Prerequisite: None**Advisory: KIN-A75A*

Description: This course is designed for students of intermediate fitness levels who would like to enhance and improve their cardiovascular fitness, basic strength and flexibility with more advanced walking strategies. Intermediate walking techniques will be utilized in establishing walking programs designed to promote improvements in cardiorespiratory endurance and body composition. KIN-A75A and A75B are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information, see section VIII regarding course repetition. 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

KIN-A77A**Jogging for Fitness, Beginning****1 Unit**

UC, CSU

Prerequisite: None

Description: This course is designed to introduce basic fitness concepts to improve each individual's physical health and general well being. The course is geared to all ages and is concerned with aspects of cardiovascular health and weight control. Emphasis will be on building endurance and strength through jogging. KIN-A77A, A77B, and A77C are courses related in content and are limited in enrollment according to Title 5, section 55040. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A77B**Jogging for Fitness, Intermediate****1 Unit**

UC, CSU

*Prerequisite: None**Advisory: KIN-A77A*

Description: This course is designed for students of intermediate fitness levels who would like to enhance and improve their cardiovascular fitness and flexibility with jogging strategies. Jogging techniques will be utilized in establishing programs designed to promote improvements in cardiorespiratory endurance and body composition. The course is geared to all ages and is concerned with aspects of cardiovascular health and weight control. Emphasis will be on building endurance and strength by using stretching and jogging techniques for conditioning. KIN-A77A, A77B, and A77C are courses related in content and are limited in enrollment according to Title 5, section 55040. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A77C**Jogging for Fitness, Advanced****1 Unit**

UC, CSU

*Prerequisite: None**Advisory: KIN-A77B*

Description: This course is designed for students of advanced fitness levels who would like to enhance and improve their cardiovascular fitness, overall strength and flexibility with more advanced jogging strategies. Progressive jogging techniques will be utilized in establishing jogging programs designed to promote improvements in cardiovascular endurance and body composition. The course is geared to all ages and is concerned with aspects of cardiovascular health and weight control. Emphasis will be on building endurance and strength by using advanced stretching, muscle strengthening and jogging techniques for conditioning. KIN-A77A, A77B, and A77C are courses related in content and are limited in enrollment according to Title 5, section 55040. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A81A**Physical Fitness, Beginning****1 Unit**

UC, CSU

Prerequisite: None

Description: This course is designed to give the student an overview of the basic concepts that affect total fitness. Personalized exercise programs in cardiovascular endurance, muscular strength, muscular endurance, and flexibility will be developed. KIN-A81A and A81B are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repetition. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-A81B**Physical Fitness, Intermediate****1 Unit**

UC, CSU

Prerequisite: None

Description: Provides concepts for total fitness and develops personalized exercise programs for cardiovascular endurance, strength and flexibility.

KIN-A83**Kickboxing Aerobics****1 unit***Prerequisite: None**Advisory: KIN-A67 or proficient skills in sand volleyball.*

Description: Basic fitness concepts as well as basic movement skills and exercises with the use of kickboxing in an aerobic format. Students will develop strength, flexibility, endurance, movement memory, balance, coordination and cardiovascular fitness.

KIN-A90A**Weight Training - Beginning****1 unit**

UC, CSU

Prerequisite: None

Description: Weight training course designed to teach students the basic exercises for the development of the major muscles. Emphasis is placed on muscular strength, endurance and flexibility. KIN-A90A, A90B and A90C are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repetition. 54 hours laboratory. (Letter Grade, Pass/No pass option)

KIN-A90B**Weight Training - Intermediate****1 unit***Prerequisite: KIN-A90A*

UC, CSU

Weight training course for students who have a basic background in weight lifting. Emphasis is placed on furthering strength development, cardiovascular endurance and flexibility. KIN-A90A, A90B and A90C are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repetition. 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

KIN-A90C**Weight Training - Advanced****1 Unit**

UC, CSU

Prerequisite: KIN-A90B

Description: Weight training course for students who have an extensive background in weight lifting. Emphasis is placed on strength development, cardiovascular endurance and flexibility. KIN-A90A, A90B and A90C are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII regarding course repetition. 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

VARSITY SPORTS

Students intending to participate in a varsity sport should contact the coach of that sport before enrolling. Students are limited to 350 hours of attendance in each fiscal year for each sport for which no more than 175 hours is dedicated to the sport and no more than 175 hours is for conditioning or skill development in the sport. The varsity sports are:

KIN-V01**Cross Country, Varsity, Men****3 Units**

UC, CSU

*Prerequisite: None**Limitation on Enrollment: Retention based on successful tryout.*

Description: This course is designed to serve as an opportunity for cross country runners to improve skills, knowledge and strategy of the sport of cross country. The program will consist of a highly organized program of lecture, and individual and group practice sessions to prepare students for intercollegiate competition in cross country. Repeating the course provides the student an opportunity for additional skill and competency development. May be taken a total of four times. 175 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-V10**Soccer, Varsity Men****3 Units**

UC, CSU

*Prerequisite: None**Limitation on enrollment: Retention based on successful tryout.*

Description: This course prepares the student athletes to practice and compete at the intercollegiate level in soccer. Athletes will demonstrate proficiency and knowledge of advanced principles of offensive and defensive team concepts. Student athletes will participate in a physical conditioning program designed to prepare them for intercollegiate competition in soccer. Repeating this course provides the student an opportunity for additional skill and competency development. May be taken a total of four times. 175 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-V12**Cross Country, Varsity, Women****3 Units**

UC/CSU

*Prerequisite: None**Limitation on Enrollment: Retention based on successful tryout.*

This course is designed to serve as an opportunity for cross country runners to improve skills, knowledge and strategy of the sport of cross country. The program will consist of a highly organized program of lecture, and individual and group practice sessions to prepare students for intercollegiate competition in cross country. Repeating the course provides the student an opportunity for additional skill and competency development. May be taken a total of four times. 175 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-V25**Soccer, Varsity, Women****3 Units**

UC, CSU

*Prerequisite: None**Limitation on enrollment (e.g. Performance tryout or audition):
Retention based on successful tryout.*

Description: Prepares student athletes to practice and compete at the intercollegiate level in soccer. Athletes will demonstrate proficiency and knowledge of advanced principles of offensive and defensive team concepts. Student athletes will participate in a physical conditioning program designed to prepare them for intercollegiate competition in soccer. Repeating this course provides the student an opportunity for additional skill and competency development. May be taken a total of three times. 175 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-V71**Woman's Sand Volleyball****3 Units***Prerequisite: None**Limitation on Enrollment: Retention based on successful tryout.*

Description: This course prepares student athletes to practice and compete at the intercollegiate level in sand volleyball. May be taken a total of four times. 175 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-V78**Long Distance Running****1 Unit**

UC/CSU

*Prerequisite: None**Limitation on Enrollment: Retention based on successful tryout.*

Description: This course will provide general and specific long distance running principles, conditioning methods, and race tactics involved in competitive long distance running. Subsequent enrollment in additional semesters will provide the student an opportunity for added skill and competency development. This course may be taken a total of four times. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-V94**In-Season Sport Conditioning****1 Unit**

UC/CSU

*Prerequisite: None**Limitation on Enrollment (e.g. Performance tryout or audition):
Retention based on successful tryout.*

Description: This course is designed to teach advanced conditioning principles for the design and implementation of an in-season training program during varsity sport competition. Subsequent enrollment in additional semesters will provide the student an opportunity for added skill competency development. May be taken a total of four times. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

KIN-V95**Out-Of-Season Sport Conditioning****1 Unit**

UC, CSU

*Prerequisite: None**Limitation on enrollment: Retention based on successful tryout*

Description: This course is designed to teach advanced conditioning principles for the design and implementation of our out-of-season training programs in preparation for varsity sport competition. Subsequent enrollment in additional semesters will provide the student an opportunity for added skill competency development. May be taken a total of four times. 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

LIBRARY

LIB-1**Introduction to Information Literacy****1 Unit**

UC, CSU

Prerequisite: None

Description: Presents the fundamentals of the effective use of libraries to find, evaluate, interpret, and organize information from a variety of formats, both online and in print, to answer research questions and develop new ones. Through the use of information retrieval systems students will develop an understanding of and practices for the legal access to and ethical use of information. 18 hours lecture. (Letter Grade, or Pass/No Pass option.)

MANAGEMENT

MAG-44**Principles of Management****3 Units**

CSU

Prerequisite: None

Description: For those who are in management, preparing for a potential promotion or interested in the management process. Includes the primary functions of planning, organizing, controlling, and leading as well as related skills such as team development, motivation and communication techniques, and quality management. Also, social responsibility and a global perspective are emphasized. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAG-47**Applied Business, Management Ethics
(Same as BUS-47)****3 Units**

CSU

Prerequisite: None

Description: An examination of ethical concerns in business decision making. Includes corporate, personal, global, governmental, public, environmental, product, and job-related issues. Case studies and corporate ethics programs and audits also covered. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAG-51**Elements of Supervision****3 Units***Prerequisite: None*

Description: Gives an overview of responsibilities of a supervisor in industry including organizational structure, training, work assignments, productivity, quality control, evaluations, and management-employee relations. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAG-53**Human Relations****3 Units***Prerequisite: None*

Description: A practical application of basic psychology in building better employer-employee relationships. Examines effective human relation techniques. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAG-54**Employee Labor Relations****3 Units**

Description: This course provides a framework for studying labor relations, the objective of employee relationships, industrial relations, right of labor and management, labor law, bargaining, unions, employment contracts, grievances, developing effective new processes, history of labor relations, and ethics. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAG-56**HRM: Human Resources Management****3 Units**

CSU

Prerequisite: None

Description: Examines the manager's responsibility for implementing human resources applications involving the selection, training, evaluation, motivation and promotion of personnel. Compares and contrasts alternatives leading to innovative and socially responsible solutions to current employee relations issues with the workplace. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAG-200**Management Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass.)

MANUFACTURING TECHNOLOGY

MAN-35**Computer Aided Manufacturing-Mastercam****5 Units***Prerequisite: None**Advisory: CIS-1A*

Description: A course in computer-aided manufacture of parts and assemblies using MasterCam software. Applications of Numerical Control (NC) programming in machine processes with a focus on turning centers and milling operations. This course includes beginning and advanced programming. 63 hours lecture and 81 hours laboratory. (Letter Grade, or Pass/No Pass option.)

MAN-38**General Machine Shop****3 Units***Prerequisite: None*

Description: This introductory course instructs students in the basic setup and operating of the lathe, mill, saw, drill press and grinder. Safety, blueprint reading, measurement, shop math, tool grinding, and speed and feed calculations also included. 36 hours lecture and 54 hours laboratory.

MAN-39**Machine Shop Theory****2 Units***Prerequisite: None*

Description: The basic cutting concepts of machine tools are described and applied emphasizing safe work practices and rules related to machine tool operations. Emphasis will be on the fundamentals of bench work and layout related to the National Institute for Metalworking Skills (NIMS) Standards. 36 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAN-55**Occupational Safety and Health Administration (OSHA) Standards for General Industry****(Same as ELE-55)****1 Unit***Prerequisite: None*

Description: Covers OSHA policies, procedures, and standards, as well as safety for general industry and health principles. Topics include scope and application of the OSHA general industry standards. Special emphasis is placed on those areas that are the most hazardous, using OSHA standards as a guide. Upon successful course completion, the student will receive either an OSHA 10 or 18 hour general industry or construction industry training completion card. 18 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAN-56**CNC Machine Set-Up and Operation****4 Units***Prerequisite: None*

Description: Fundamental skills related to the setup and operation of CNC (Computer Numerically Control) machine tools. Students will set up and operate CNC machine tools exposing them to CNC controllers and some CNC manual programming. Students will gain hands-on experience with CNC machine tools. 54 hours lecture and 54 hours laboratory.

MAN-57**CNC Program Writing****3 Units***Prerequisite: None*

Description: Introduction to manual CNC program writing. This course includes the Cartesian coordinate system, absolute/incremental programming, circular interpolation, cutter radius compensation, canned cycles, and other programming techniques related to CNC machine tools. Students will gain hands-on experience with CNC machine tools. 36 hours lecture and 54 hours laboratory.

MAN-60**Hydraulic and Pneumatic Systems****3 Units***Prerequisite: None**Advisory: DFT/ENE-60 or MAT-52*

Description: Basics of hydraulic and pneumatic systems including physical properties of liquids under pressure. Pumps, motors, accumulators, valves and drive cylinders are studied. The design and assembly of both high and low pressure fluid control systems from standard components is experienced. Applications of fluids in robotic and industrial equipment systems are presented. 40 hours lecture and 72 hours laboratory. (Letter Grade, or Pass/No Pass option.)

MAN-61**Robotics for Manufacturing
(Same as ELE-61)****3 Units**

CSU

*Prerequisite: None**Advisory: CIS-1A*

Description: Robotics for the Supply Chain and Manufacturing industries. This course presents the programming and control of robotic systems typically used in industry. 36 hours lecture and 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

MAN-63**LabVIEW Visual Programming for
Automated Systems
(Same as ELE-63)****3 Units**

CSU

*Prerequisite: None**Advisory: CIS-1A*

Description: Prepares students to develop measurement and test systems, data acquisition, instrument control, data logging, and measurement analysis applications using LabVIEW. Students will create applications that acquire, process, display and store real world data. 36 hours lecture and 54 hours laboratory.

MAN-64**Programmable Logic Controllers
(Same as ELE-64)****3 Units**

CSU

*Prerequisite: None**Advisory: ELE-10*

Description: Fundamentals of programmable logic controllers, with an emphasis on introductory programming of PLCs. Problem analysis with solutions that integrate programming formats, auxiliary commands and functions, common programming languages, and popular software programs used with PLCs. Installation, maintenance, troubleshooting and repair are inherent components. 36 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

MAN-68**Fundamentals of Maintenance
(Same as ELC-68)****4 Units***Prerequisite: None*

Description: Foundational skills training for maintenance technicians. Introduction to the basic maintenance and repair methods used in the facility maintenance profession. Preventative maintenance methods and strategies are explored as students receive training in the use of electronic measuring devices, meters, and scopes. Topics include activities focused upon basic electrical skills, basic pneumatics and hydraulics, basic mechanical skills, basic plumbing, basic principles of refrigeration, refrigerants, refrigeration components, preventative and corrective maintenance. Completion of this basic course will prepare students for a job as a Facility Maintenance Technician. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

MAN-69**Fundamentals of Tooling and Test Equipment
(Same as ELC-69)****2 Units***Prerequisite: None*

Description: An introduction to the tools and equipment used in the facility maintenance occupation, with an emphasis on the safe use, maintenance, and storage of a variety of tools and equipment. Introduces hand and power tools, test equipment, and wiring practices. 27 hours lecture and 27 hours laboratory. (Letter Grade, or Pass/No Pass option.)

MAN-72**Commercial and Industrial Electrical Wiring
(Same as ELC/ ELE-72)****4 Units***Prerequisite: None*

Description: Wiring of commercial and industrial buildings including equipment grounding, service grounding, power distribution, conduit types, metal, plastic, flexible, bending and supporting, light distribution and blueprint reading. Hands-on lab experiences are selected to reinforce key theories. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option)

MAN-73**Electric Motors and Transformers
(Same as ELC/ ELE-73)****4 Units***Prerequisite: None*

Description: Enables electricians to understand and effectively wire most standard DC motors, servos and steppers, as well as many AC motors, including single and poly-phase units, from fractional horsepower to multi-horsepower, industrial giants. 54 hours lecture and 54 hours laboratory. (Letter Grade, or Pass/No Pass option.)

MAN-74**Industrial Wiring and Controls
(Same as ELC/ELE-74)****4 Units**

CSU

Prerequisite: None

Description: Industrial controls and electrical wiring of modern facilities, manufacturing, or warehousing. Included will be production equipment, conveyor systems, hydraulic and pneumatic controls, power distribution, blueprint reading, electrical control wiring, PLC (programmable logic controller) control wiring, VFD (variable frequency drives) wiring and programming. 54 hours lecture and 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

MAN-77**Electrical Theory****3 Units****(Same as ELC/ ELE-77)***Prerequisite: None*

Description: This course introduces students to electrical theory, Ohm's Law, magnetism, voltage inductance, capacitance, units of electric measurement, and proper usage of electrical test equipment (meters). Student will learn concepts of electrical energy, Kirchoff's law, Norton's and Thevenin's theorems, algebraic and trigonometric requirements to solve electrical problems for both (A/C) alternating current and (D/C) direct current circuits. Student will learn basic electrical safety procedures, including the proper usage and requirement of (PPE) personal protection equipment. 54 hours lecture. (Letter Grade or Pass/No Pass option.)

MAN-200**Manufacturing Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass.)

MARKETING

MKT-20**Principles of Marketing****3 Units**

CSU

*Prerequisite: None**Advisory: BUS-10*

Description: Examines the role of marketing as it relates to society and economic development. The course will analyze products, consumer, marketing research and strategic market planning. The course will survey with a global perspective, the selection of target markets as well as the development of the marketing mix place, product, price and promotion. 54 hours lecture.

MKT-40**Advertising****3 Units**

CSU

Prerequisite: None

Description: Economic, professional, persuasive and technical aspects of advertising, publicity and propaganda, and their relation to sociology and psychology. Campaign organization, research and media of communication. Analysis and discussion of situation problems, mass motivation, consumer action and legal restraints. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MKT-41**Techniques of Selling****3 Units**

CSU

Prerequisite: None

Description: Examines the key topics of how to locate, qualify and approach prospects; how to deliver the sales presentation, how to meet objections and how to close the sale. The analysis of behavioral, ethical and philosophical factors as applied to the selling function globally. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MKT-42**Retail Management****3 Units**

CSU

Prerequisite: None

Description: Merchandising analysis of the changing concepts and business objectives of retailing. Management philosophies, strategies, and functions (from individual to multi-unit firms). Social and economic forces on decisions concerning location and operational policies. Analysis of forms of retailing, such as foods, motels, service stations, and direct channels. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MATHEMATICS

MAT-1A**Calculus I****4 Units**

(C-ID:MATH 210)(C-ID: MATH 900S = MAT-1A + MAT-1B)

UC, CSU

Prerequisite: MAT-10 or qualifying placement level

Description: Functions, limits, continuity, differentiation, applications of the derivative and integration, the fundamental theorem of calculus and basic integration. 72 hours lecture and 18 hours laboratory. (Letter Grade or Pass/No Pass option.)

MAT-1B**Calculus II****4 Units**

(C-ID:MATH 220)(C-ID: MATH 900S = MAT-1A + MAT-1B)

UC, CSU

Prerequisite: MAT-1A

Description: Techniques of integration, applications of integration, improper integrals, infinite sequences and series, parametric equations, and polar coordinates. 72 hours lecture and 18 hours laboratory. (Letter Grade, or Pass/No Pass option.)

MAT-1C**Calculus III****4 Units**

(C-ID:MATH 230)

UC, CSU

Prerequisite: MAT-1B

Description: Vectors in a plane and in space, vector functions, calculus on functions of multiple variables, partial derivatives, multiple integrals, line and surface integrals, Green's theorem, Stokes' theorem, Divergence theorem, and elementary applications to the physical and life sciences. 72 hours lecture.

MAT-2**Differential Equations****4 Units**

(C-ID:MATH 240)

UC, CSU

Prerequisite: MAT-1B

Description: This is a course in differential equations including both quantitative and qualitative methods as well as applications from a variety of disciplines. Introduces the theoretical aspects of differential equations, including establishing when solution(s) exists, and techniques for obtaining solutions, including linear first and second order differential equations, series solutions, Laplace transforms, linear systems, and elementary applications to the physical and biological sciences. 72 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAT-3**Linear Algebra****3 Units**

(C-ID:MATH 250)

UC, CSU

Prerequisite: MAT-1B

Description: This course examines elementary vector space concepts and geometric interpretations and develops the techniques and theory to solve and classify systems of linear equations. Solution techniques include Gaussian and Gauss-Jordan elimination, Cramer's rule and inverse matrices. Investigates the properties of vectors in two, three and finite dimensions, leading to the notion of an abstract vector space. Vector space and matrix theory are presented including topics such as determinants, linear independence, bases and dimension of a vector space, linear transformation and their matrix representations, inner products, norms, orthogonality, eigenvalues, eigenvectors, and eigenspaces. Selected applications of linear algebra are included. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAT-5**Calculus for Business and Life Science****4 Units**

(C-ID:MATH 140)

UC, CSU

Prerequisite: MAT-35

Description: A study of the techniques of calculus for majors in business, business administration, life and social sciences. Emphasis on problem solving and applications. Topics include: functions, graphs, limits, derivatives, integrals, exponential and logarithmic functions. 72 hours lecture. (Letter Grade or Pass/No Pass option.)

MAT-10**Precalculus****4 Units**

(C-ID:MATH 155)

UC, CSU

Prerequisite: MAT-36 or qualifying placement level

Description: Preparation for calculus: polynomial, absolute value, radical, rational, exponential, logarithmic, and trigonometric functions and their graphs; analytic geometry, polar coordinates, sequences and series. 72 hours lecture. (Letter Grade or Pass/No Pass option.)

MAT-11**College Algebra****4 Units**

(C-ID: MATH-110) (C-ID:MATH 150)

UC, CSU

Prerequisite: MAT-35 or qualifying placement level

Description: This course is intended for students majoring in Liberal Arts and Humanities. The topics covered in this course include polynomial, radical, rational, absolute value, exponential and logarithmic functions; systems of equations; polynomial equations; permutations and combinations; analytic geometry; and linear programming. 72 hours lecture. (Letter Grade or Pass/No Pass option.)

MAT-12**Statistics****4 Units**

(C-ID: MATH 110) (C-ID: SOCI 125)

UC, CSU

Prerequisite: MAT-35

Description: A comprehensive study of measures of central tendency and variation, correlation and linear regression, probability, the normal distribution, the t-distribution, the chi-square distribution, estimation, testing of hypotheses, analysis of variance, and the application of statistical software to data, including the interpretation of the relevance of the statistical findings. Applications using data from business, education, health science, life science, psychology, and the social sciences will be included. 72 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAT-12H**Honors Statistics****4 Units**

(C-ID:MATH 110)(C-ID: SOCI 125)

UC, CSU

Prerequisite: MAT-35

Description: A comprehensive study of measures of central tendency and variation, correlation and linear regression, probability, the normal distribution, the t-distribution, the chi-square distribution, estimation, testing of hypotheses, analysis of variance, and the application of statistical software to data, including the interpretation of the relevance of the statistical findings. Applications using data from business, education, health science, life science, psychology, and the social sciences will be included. Honors course offers an enriched experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher-level critical thinking skills. Students may not receive credit for both MAT-12 and MAT-12H. 72 hours lecture. (Letter Grade or Pass / No Pass option.)

MAT-25**Mathematics for the Liberal Arts Student****3 Units**

UC, CSU

Prerequisite: MAT-35

Description: A college level survey course of selected topics from the history and development of mathematics, patterns and inductive reasoning, set theory and deductive reasoning, the real number system, algebra, geometry, probability, statistics, and problem solving. It is designed for students majoring in liberal arts, education, or communication. Calculators or computers may be used for selected topics. 54 hours of lecture.

MAT-32**Introduction to Symbolic Logic****3 Units**

(C-ID:PHIL 210)

UC, CSU

*Prerequisite: None**Limitation on enrollment: May not be taken if credit for Philosophy 32 has been granted*

Description: Introduces the principles of deductive reasoning, including the practical application of modern symbolic techniques. 54 hours lecture.

MAT-35**Intermediate Algebra****5 Units***Prerequisite: MAT-52*

Description: The concepts introduced in elementary algebra are presented again, but in greater depth. In addition to basic algebraic operations and graphing, students are introduced to functions, inverse functions, exponential and logarithmic functions, complex numbers, conic sections, nonlinear systems of equations, and sequences and series. 90 hours lecture. (Letter Grade or Pass/No Pass option.)

MAT-36**Trigonometry****4 Units**

(C-ID:MATH 851)

CSU

Prerequisite: MAT-35 and MAT-53

Description: The study of trigonometric functions, their inverses and their graphs; identities and proofs related to trigonometric expressions; solving trigonometric equations; solving right triangles; solving oblique triangles using the Law of Cosines and the Law of Sines; elements of geometry important to the foundation of trigonometry; polar coordinates; and introduction to vectors. 72 hours lecture. (Letter Grade or Pass/No Pass option.)

MAT-42**Algebra for Statistics and Liberal Arts****6 Units***Prerequisite: MAT-64 or MAT-65 or MAT-90F*

Description: An Algebra for Statistics and Liberal Arts course designed to enable students to develop conceptual understanding and problem solving competence as preparation for college level statistical reasoning and liberal arts level math. This course integrates numeracy; proportional, algebraic and statistical reasoning; functions and modeling and focuses on developing mathematical maturity through problem solving, critical thinking, data analysis, and the writing and communications of mathematics. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Emphasis is placed on modeling and problem solving, with techniques and manipulations covered in context. Throughout the course, Math success content will be integrated with mathematical topics. Credit earned does not count toward any degree, nor does it transfer. 108 hours lecture. (Non-degree credit course. Letter grade, or Pass/No Pass option.)

MAT-52**Elementary Algebra****4 Units***Prerequisite: MAT-64, 65, 90F or qualifying placement level*

Description: Examines real numbers and variables as they are involved in polynomials, fractions, linear equations, quadratic equations, systems of equations, inequalities, exponential and radical expressions, and absolute value. Factoring, graphing, and word problem applications will also be included. 72 hours lecture. (Non-degree credit course. Letter grade, or Pass/No Pass option.)

MAT-53**College Geometry****3 Units***Prerequisite: MAT-52*

Description: A course covering the study of plane geometry and three dimensional figures. These topics include angles, triangles, quadrilaterals, circles and solids, their formulas for measuring such figures, including perimeter, area and volume. Students create proofs of geometric concepts using postulates and theorems associated with geometric objects and their characteristics. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

MAT-64**Pre-Algebra****3 Units***Prerequisite: MAT-63 or MAT-90C*

Description: An introduction to the notion of algebra and its uses. Includes integers, equations, and polynomials as well as topics from arithmetic. Designed as a transition from arithmetic to elementary algebra. 54 hours lecture. (Non-degree credit course. Letter Grade, or Pass/No Pass option.)

MAT-65**Arithmetic and Pre-Algebra****5 Units***Prerequisite: None*

Description: A combination course covering the decimal system of numeration and the four basic mathematical operations as they apply to whole numbers, fractions, mixed numbers, and decimals without the use of any calculating device. Integers, factoring, geometric figures, and measurements are included. Emphasis is placed on applications to real world problems. An introduction to the notion of algebra and its uses. Includes equations and polynomials. 90 hours lecture. (Non-degree credit course. Letter Grade, or Pass/No Pass option.)

MICROBIOLOGY

MIC-1 MICROBIOLOGY.
COURSE HAS CHANGED. SEE BIO-55.

MUSIC

MUS-3

Fundamentals of Music

4 Units

(C-ID:MUS 110 MUS 125)

UC, CSU

Prerequisite: None

Advisory: Concurrent enrollment in an appropriate level piano class

Description: Basic course in music theory designed to develop an understanding of notation, rhythm, pitch, keys, modes, scales, intervals, chords and music terminology. Basic sight singing, dictation and music reading at the piano. 54 hours lecture and 54 hours laboratory. (TBA option)

MUS-4

Music Theory I

4 Units

(C-ID:MUS 130 MUS 135)

UC, CSU

Prerequisite: MUS-3 or the equivalent

Advisory: Concurrent enrollment in an appropriate level piano class

Description: Through guided composition and analysis this course incorporates the following concepts: Rhythm and meter; basic properties of sound; intervals; diatonic scales, triads and seventh chords; basic cadential formulas and phrase structures; figured bass; non-harmonic tones; first-species counterpoint; and voice leading involving 4-part chorale writing. Development of skills in handwritten notation is expected. Lab includes diatonic sight singing and ear training including melodic, harmonic and rhythmic dictation. Keyboard requirements include playing chord progressions, modes, and scales in all major and minor keys. 54 hours lecture and 54 hours laboratory. (TBA option)

MUS-5

Music Theory II

4 Units

(C-ID:MUS 140 MUS 145)

UC, CSU

Prerequisite: MUS-4 or the equivalent

Advisory: Concurrent enrollment in an appropriate level piano class

Description: This course incorporates the concepts from Music Theory I. In addition, through guided composition and analysis, the course will include: Common Practice period voice leading involving four-part chorale writing; diatonic harmony; chromatic harmony; secondary/applied chords; modulation; borrowed chords; the Neapolitan chord; augmented sixth chords; and an introduction to binary and ternary forms. Lab includes chromatic sight singing and ear training including melodic, harmonic and rhythmic dictation. Keyboard requirements include playing chromatic chord progressions. 54 hours lecture and 54 hours laboratory. (TBA option)

MUS-6

Music Theory III

4 Units

(C-ID:MUS 150 MUS 155)

UC, CSU

Prerequisite: MUS-5 or the equivalent

Advisory: Concurrent enrollment in an appropriate level piano class

Description: This course incorporates the concepts from Music Theory II. In addition, through writing and analysis, the course will include Common Practice period and 20th Century techniques such as: Borrowed chords and modal mixture; chromatic mediants; Neapolitan and augmented sixth chords; 9th, 11th and 13th chords; extended tertian harmony; polyharmony; quartal and secundal harmony; pandiatonicism; serialism; and aleatoric music. Lab includes post-Romantic and post-tonal sight singing and ear training including melodic, harmonic and rhythmic dictation. Keyboard requirements include playing post-Romantic and post-tonal materials. 54 hours lecture and 54 hours laboratory. (TBA option) The following is a list of the classes that qualify for the "two unit performance class" corequisite requirement for MUS-12, 39, 79 and P12:

MIS-10A Norco Choir I

MIS-10B Norco Choir II

MIS-11A Studio Arts Ensemble I

MIS-11B Studio Arts Ensemble II

MUS-33 Vocal Jazz Ensemble

MUS-41 Chamber Singers

MUS-19

Music Appreciation

3 Units

(C-ID:MUS 100)

UC, CSU

Prerequisite: None

Description: A broad survey of music in the Western world, including terminology for describing musical elements, forms, and styles. Organized to acquaint students with the roles of music and musicians in society and with representative musical selections through listening. Students may not receive credit for both MUS-19 and MUS-19H. 54 hours lecture.

MUS-19H

Honors Music Appreciation

3 Units

(C-ID:MUS 100)

UC, CSU

Prerequisite: None

Limitation on enrollment: Enrollment in the Honors program

Description: A broad survey of music in the Western world, including terminology for describing musical elements, forms, and styles. This Honors course is organized to acquaint students with the roles of music and musicians in society and with representative musical selections. It offers an enriched experience for accelerated students by means of limited class size, seminar format, discussions and projects generated and led by students, a focus on primary texts in translation, and the applications of higher-level thinking and writing skills--analysis, synthesis, and evaluation. Students may not receive credit for both MUS-19 and MUS-19H. 54 hours lecture.

- MUS-23**
History of Rock and Roll **3 Units**
UC, CSU
Prerequisite: None
Description: A comprehensive study of rock and roll music from its origins to the present with emphasis on the historical, musical, and sociological influences. Study includes listening to music and identifying stylistic trends and influential artists. 54 hours lecture.
- MUS-25**
Jazz Appreciation **3 Units**
UC, CSU
Prerequisite: None
Description: A comprehensive study of jazz from its origins to the present day. Study will be centered on influential composers, instrumentalists, vocalists and arrangers. There will also be an introduction to, and study of, musical elements such as instrumentation, lyrics, form, rhythm and harmony. 54 hours lecture.
- MUS-30**
Class Voice **1 Unit**
UC, CSU
Prerequisite: None
Description: Group study of vocal production, voice techniques, diction and interpretation. Opportunity provided for individual attention and performance. 54 hours laboratory.
- MUS-31**
College Choir **1 Unit**
(C-ID:MUS 180)
UC, CSU
Prerequisite: None
Description: A vocal ensemble of mixed voices dedicated to the study, rehearsal, and performance of a variety of choral literature. May be taken a total of four times. 54 hours laboratory. MUS-32A, B, C, and D are courses related in content and are limited in enrollment according to Title 5, section 55040. For further information see section VIII of the catalog regarding course repeatability and repetition.
- MUS-32A**
Class Piano I **1 Unit**
UC, CSU
Prerequisite: None
Description: This beginning course focuses on developing the skills needed for performing on piano, including reading from music notation, rhythm study, technique, expression, improvisation, harmonization, transposition, repertoire and style study. 54 hours laboratory.
- MUS-32B**
Class Piano II **1 Unit**
UC, CSU
Prerequisite: MUS-32A or the equivalent
Description: Continuation of the skills studied in MUS 32A focusing on techniques needed for performing on piano, including playing select major and parallel minor scales, reading music on the grand staff, tapping rhythms, harmonizing melodies using simple accompaniments, transposing, and simple score reading. 54 hours laboratory.
- MUS-32C**
Class Piano III **1 Unit**
UC, CSU
Prerequisite: MUS-32B or the equivalent
Description: Continuation of the skills studied in MUS 32B focusing on keyboard techniques required for playing major and minor scales, diatonic chord progressions, harmonizing melodies, transposing, accompanying, score reading, reading chord symbols, sight reading and performance of intermediate-level piano learning pieces. 54 hours laboratory.
- MUS-32D**
Class Piano IV **1 Unit**
UC, CSU
Prerequisite: MUS-32C or the equivalent
Description: Culmination of keyboard skills previously studied focusing on increasing keyboard facility for playing major and minor scales and arpeggios, diatonic chord progressions, harmonizing melodies, modulating, transposing, accompanying, simple score reading, sight reading and performance of piano pieces from the standard classical piano teaching literature. 54 hours laboratory.
- MUS-33**
Vocal Jazz Ensemble **2 Units**
(C-ID:MUS 180)
UC, CSU
Prerequisite: None
Limitation on enrollment: Audition on or before the first class meeting
Description: This course is for the study, rehearsal, and public performance of vocal jazz literature, with an emphasis on the development of skills needed to perform within an ensemble. Different literature will be studied each semester. Participation in public performances is required. May be taken a total of four times. 108 hours laboratory. (TBA option)
- MUS-37**
Class Guitar **1 Unit**
UC, CSU
Prerequisite: None
Description: Development of basic guitar playing skills, including reading from music notation, reading chord symbols, transposition, and playing open chords, barre chords, scales, and simple melodies. 54 hours laboratory.
- MUS-38**
Beginning Applied Music I **2 Units**
(C-ID:MUS 160)
UC, CSU
Prerequisite: None
Limitation on enrollment: Audition on or before the first class meeting
Description: Vocal or instrumental instruction for students who are proficient performers and could benefit from individualized instruction as determined by audition. Each student must complete a minimum of 6.75 hours a week in a combination of individualized practice, lessons and concert attendance. Not designed for beginning students. May be taken a total of four times. 108 hours laboratory.

- MUS-39**
Applied Music I **3 Units**
(C-ID:MUS 160)
UC, CSU
Prerequisite: None
Limitation on enrollment: Audition on or before the first class meeting
Corequisite: Enrollment in a two- or three-unit performance class.
Description: Vocal or instrumental instruction for students who are proficient performers and could benefit from individualized instruction as determined by audition. Each student must complete 10.125 hours per week in a combination of individualized practice, lessons, concert attendance and individual performance. Not designed for beginning students. May be taken a total of four times. 162 hours laboratory. (TBA option)
- MUS-41**
Chamber Singers **2 Units**
(C-ID:MUS 180)
UC, CSU
Prerequisite: None
Limitation on enrollment: Audition on or before the first class meeting
Description: This course is for the study, rehearsal, and public performance of literature for vocal chamber ensemble, with an emphasis on the development of skills needed to perform within an ensemble. Different literature will be studied each semester. Participation in public performances is required. May be taken a total of four times. 108 hours laboratory. (TBA option)
- MUS-52**
Recital Performance **0.50 Units**
CSU
Corequisite: Concurrent enrollment in or prior completion of MUS-39 or MUS-P12
Limitation on enrollment: High competence in a performance medium
Description: Preparation and presentation of a recital performance of 20-25 minutes. 27 hours laboratory. (TBA option)
- MUS-53 Keyboard Proficiency** **1 Unit**
Prerequisite: MUS-32D or the equivalent.
Description: Preparation for the keyboard proficiency examinations required of entering music majors and minors at transfer institutions. Designed for students with extensive prior piano experience. 54 hours laboratory.
- MUS-65**
Basic Musicianship **2 Units**
UC, CSU
Prerequisite: None
Description: An introduction to the basic knowledge and skills necessary to develop the ability to read music. Study of basic skills in music reading, ear training, sight-singing, melodic and harmonic dictation. 36 hours lecture.
- MUS-67**
Community Chamber Ensemble **1 Unit**
CSU
Prerequisite: None.
Limitation on enrollment: Previous experience on the instrument through private instruction and college orchestra performance.
Audition on or before the first class meeting.
Description: A course in developing advanced individual skills through ensemble performance. The ensemble will perform a limited number of concerts throughout the semester. Subsequent enrollment in additional semesters will provide the student an opportunity for additional advanced skill and competency development within the subject matter. May be taken a total of four times. 54 hours laboratory.
- MUS-70**
Guitar Lab Ensemble **1 Unit**
(C-ID:MUS 180)
CSU
Prerequisite: MUS-37
Limitation on enrollment: Audition on or before first class meeting
Description: Study and performance of beginning and intermediate literature for guitar ensemble. May be taken a total of four times. 54 hours laboratory.
- MUS-75**
Advanced Vocal Ensembles **1 Unit**
(C-ID:MUS 180)
UC, CSU
Prerequisite: None
Limitation on enrollment: Audition on or before the first class meeting
Description: This course is for advanced students who need more work on small group literature. There is opportunity for public performance and solo recital concerts. Subsequent enrollment will provide the student an opportunity for additional competency development within the subject matter. May be taken a total of four times. 54 hours laboratory.
- MUS-78**
Beginning Applied Music II **2 Units**
UC, CSU
Prerequisite: None
Limitation on enrollment: Audition on or before the first class meeting
Description: Advanced vocal or instrumental instruction for students who are proficient performers and could benefit from individualized instruction as determined by audition. Course includes individual lessons, supervised practice, individual performance, and jury evaluations. Not designed for beginning students. Course may be taken a total of four times. 108 hours laboratory. (TBA option)

MUS-79**Applied Music II****3 Units**

(C-ID:MUS 160)

UC, CSU

*Prerequisite: None**Limitation on enrollment: Audition on or before the first class meeting.**Corequisite: Enrollment in a two-unit performance class.*

Description: Advanced vocal or instrumental instruction for students who are proficient performers and could benefit from individualized instruction as determined by audition. Each student must complete 10.125 hours per week in a combination of individualized practice, lessons, concert attendance and individual performance. Not designed for beginning students. Course may be taken a total of four times. 162 hours laboratory.

MUS-81**Consort Singers****2 Units**

UC, CSU

*Prerequisite: None**Limitation on Enrollment (e.g. Performance tryout or audition):**Audition on or before the first class meeting.*

Study, rehearsal, and public performance of literature written for vocal ensemble, with an emphasis on the development of skills needed to be a professional musician and section leader within an ensemble. Different literature will be studied each semester. Participation in public performances is required. May be taken a total of four times. 108 hours laboratory. (TBA option)

MUS-87**Applied Music Training****1 Unit**

(C-ID:MUS 160)

UC, CSU

Prerequisite: None

Description: Vocal or instrumental instruction for students who are proficient performers and could benefit from individualized instruction as determined by audition. Each student must complete 54 hours in a combination of individualized practice, lessons, concert attendance and individual performance. Not designed for beginning students. Course may be taken a total of four times. 54 hours laboratory.(TBA option)

MUS-89**Music of Multicultural America****3 Units**

UC, CSU

Prerequisite: None

Description: A comparative and integrative study of the multicultural musical styles of the United States. Includes the musics of Native Americans, European Americans, African Americans, Chicano/Latino Americans, and Asian Americans, from their historical roots to the present. Analysis of musical traditions from a technical and a cultural perspective; and sequential development of listening and descriptive skills through a variety of media including films, recordings, and computer-assisted instruction. Students may not receive credit for both MUS-89 and MUS-89H. 54 hours lecture.

MUS-89H**Honors Music of Multicultural America****3 Units**

UC, CSU

*Prerequisite: None**Limitation on enrollment: Enrollment in the RCCD Honors Program*

Description: An honors course that offers a comparative and integrative study of the multicultural musical styles of the United States. Includes the musics of Native Americans, European Americans, African Americans, Chicano/Latino Americans, and Asian Americans, from their historical roots to the present. Analysis of musical traditions from a technical and a cultural perspective; and sequential development of listening and descriptive skills through a variety of media including films, recordings, and computer-assisted instruction. Students may not receive credit for both MUS-89 and MUS-89H. 54 hours lecture.

MUS-92**Basic Piano****0.50 Units**

UC, CSU

Prerequisite: None

Description: Group piano lessons for beginners. Emphasis on reading pitches and rhythms from music notation in treble and bass clefs, reading lead sheet notation for chords, and learning to play simple melodies and basic chords in a limited number of keys. 27 hours laboratory.

MUS-93**The Business of Music****3 Units**

CSU

Prerequisite: None

Description: An overview of the business side of performing, recording, and publishing music. Study of contracts, trademarks and copyrights, and marketing; including the roles of personal managers, business managers, attorneys, and agents. Overview of songwriting, publishing, recordings and royalties. Basics of touring, merchandising, and local arrangements. 54 hours lecture.

MUS-96A**Class Guitar I****1 Unit***Prerequisite: None*

Description: This beginning course focuses on developing basic guitar playing skills, including reading from music notation, reading chord symbols, and playing open chords, barre chords, scales, and simple melodies. Basic transposition is also covered. 54 hours laboratory.

MUS-200**Music Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Student should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass option.)

MUSIC INDUSTRY STUDIES

MIS-1A**Beginning Performance Techniques****For Studio Recording****2 Units**

CSU

*Prerequisite: None**Limitation on enrollment: Audition on or before the first class meeting*

Description: Introduction to practical performance techniques for the recording studio. Students will have the opportunity to participate in the planning process of a recording session utilizing techniques such as song formation, microphone technique, mixing and production. The class will culminate in a CD recording. This class is appropriate for vocalists and instrumentalists. 108 laboratory hours.

MIS-1B**Intermediate Performance Techniques****For Studio Recording****2 Units**

CSU

Prerequisite: MIS-1A

Description: Continuation of the skills studied in MIS-1A focusing on song collaboration, organization of vocals and instruments needed to record. Students will have the opportunity to participate in the planning process of a recording session utilizing techniques such as song formation, microphone technique, mixing and production. The class will culminate in a CD recording. This class is appropriate for intermediate vocalists and instrumentalists. 108 hours laboratory.

MIS-1C**Advanced Performance Techniques****For Studio Recording****2 Units**

CSU

Prerequisite: MIS-1B

Description: Advanced performance techniques for the recording studio. A continuation of the skills studied in MIS-1B the focus of this course is communication, song collaboration, studio session mapping. Students will have the opportunity to lead a collaborative group, duet or solo project toward successful completion/recording utilizing techniques such as song formation, microphone technique, mixing and production. The class will culminate in a CD recording. This class is appropriate for advanced vocalists and instrumentalists. 108 hours laboratory.

MIS-2**Songwriting****2 Units**

CSU

Prerequisite: MUS-3

Description: Introduction to popular songwriting techniques. Topics covered include chord structure, form, rhythm, melody, harmony, lyrics, chord progressions, preparing lead sheets and arranging. This course is ideal for vocalists and instrumentalists. 18 hours lecture and 54 hours laboratory.

MIS-3**Digital Audio Production 1****4 Units**

CSU

Prerequisite: None

Description: This course introduces the techniques and elements of electronic music production. Topics include synthesis, sampling, MIDI sequencing and audio production. Students will create original compositions using electronic music techniques. Students taking this course will complete the official AVID coursework for Pro Tools 101 and 110 and will have the opportunity to obtain AVID Pro Tools User Certification. 54 hours lecture and 54 hours laboratory.

MIS-4**Digital Audio Production 2****4 Units**

CSU

Prerequisite: MIS-3

Description: This intermediate course continues exploration and application of the elements and techniques of electronic music production. Topics include synthesis, sampling, MIDI sequencing and advanced audio production. Students will create original compositions using electronic music techniques. Students taking this course will complete the official AVID coursework for Pro Tools 201 and 210 and will have the opportunity to obtain AVID Pro Tools Operator Certification. 54 hours lecture and 54 hours laboratory.

MIS-7**Introduction To Music Technology****3 Units**

CSU

Prerequisite: None

Description: This introductory course examines the terminology, equipment, techniques, and concepts related to music technology. The course will survey the principles and practices of audio, MIDI synthesis, notation, and audio recording utilizing hardware and software platforms. 36 hours lecture and 54 hours laboratory.

MIS-10A**Norco Choir I****2 Units**

UC, CSU

*Prerequisite: None**Limitation on enrollment: Audition on or before the first class meeting*

Description: A mixed-voice ensemble dedicated to the performance of traditional choral music, popular vocal ensemble music, spirituals, choral jazz and other 20th century vocal works. Performances may include but are not limited to concerts on campus, in the community, studio recordings, TV tapings, movie appearances, celebrity concerts and national/international concert tours. Subsequent enrollment in additional semesters will provide the student with an opportunity for additional skill and competency development in the subject matter. May be taken a total of two times. 108 hours laboratory. (TBA option)

MIS-10B**Norco Choir II****2 Units**

UC, CSU

Prerequisite: MIS-10A

Description: A continuation of the skill development needed for the performance of traditional choral music, popular vocal ensemble music, spirituals, choral jazz and other 20th century vocal works. Performances may include but are not limited to concerts on campus, in the community, studio recordings, TV tapings, movie appearances, celebrity concerts and national/international concert tours. Subsequent enrollment in additional semesters will provide the student with an opportunity for additional skill and competency development in the subject matter. May be taken a total of two times. 108 hours laboratory. (TBA option)

MIS-11A**Studio Arts Ensemble I****2 Units**

UC, CSU

*Prerequisite: None**Limitation on enrollment: Audition on or before the first class meeting*

Description: An ensemble designed for instrumentalists and vocalists interested in the popular music and entertainment industries. This ensemble is open to: singers, guitarists, drummers, bassists, horn players, string players and keyboardists who work collaboratively to study, perform and/or record selected popular musical arrangements. The music studied in this class will be chosen from a diverse body of popular music literature. Subsequent enrollment will provide students an opportunity for additional skill development and competency in the subject area. May be taken a total of two times. 108 hours laboratory. (TBA option)

MIS-11B**Studio Arts Ensemble II****2 Units**

UC, CSU

Prerequisite: MIS-11A

Description: A continuation of the skill development of instrumentalists and vocalists interested in the popular music and entertainment industries. This ensemble is open to: singers, guitarists, drummers, bassists, horn players, string players and keyboardists who work collaboratively to study, perform and/or record selected popular musical arrangements. The music studied in this class will be chosen from a diverse body of popular music literature. Subsequent enrollment will provide students an opportunity for additional skill development and competency in the subject area. May be taken a total of two times. 108 hours laboratory. (TBA option)

MIS-12**Live Sound Reinforcement****3 Units**

CSU

Prerequisite: None

Description: This course is an overview of live concert sound reinforcement. This course focuses on the fundamentals of equipment set up and configuration, mixing surfaces, amplifiers, speakers, signal path, signal processing, microphones, monitoring and mixing techniques and acoustics. This course offers opportunities for hands-on experience in troubleshooting, sound checking and mixing live sound. 36 hours lecture and 54 hours laboratory.

MIS-13**Recording Studio Workshop I****3 Units**

CSU

Prerequisite: MIS-3 and MIS-12

Description: This applied workshop course is a survey of the fundamental principles and practices of audio recording. Topics include sound and hearing, acoustics, the components of various recording systems and signal flow. It provides practical experience with audio hardware, software and recording techniques. Students will engage in digital audio workstation set up (DAWs) and operation, and will run studio and live sessions from set up to tear down. 36 hours lecture and 54 hours laboratory.

MIS-200**Music Industry Studies Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass option.)

PHILOSOPHY

PHI-10**Introduction to Philosophy****3 Units**

(C-ID:PHIL 100)

UC, CSU

*Prerequisite: None**Advisory: ENG-50 or ENG-80*

Description: A survey and exploration of significant questions in the Western philosophical tradition. Questions are drawn from the various branches of philosophy: metaphysics, theory of knowledge, ethics, aesthetics, political philosophy and/or philosophy of religion. Students may not receive credit for both PHI-10 and PHI-10H. 54 hours lecture.

PHI-10H**Honors Introduction to Philosophy****3 Units**

(C-ID:PHIL 100)

UC, CSU

*Prerequisite: None**Limitation on enrollment: Enrollment in the Honors Program*

Description: A survey and exploration of significant questions in the Western philosophical tradition through an examination of primary sources. Questions are drawn from the various branches of philosophy: metaphysics, theory of knowledge, ethics, aesthetics, political philosophy and/or philosophy of religion. This Honors course offers an enriched experience for accelerated students by means of limited class size, seminar format, discussions and projects generated and led by students, the application of higher level thinking and writing skills analysis, synthesis, and evaluation. Students may not receive credit for both PHI-10 and PHI-10H. 54 hours lecture.

PHI-11**Critical Thinking****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-82*

Description: This course presents critical thinking as a skill to be used for better understanding, evaluating, and constructing arguments. The focus will be on developing and enhancing the student's ability to identify, analyze, and present arguments. Topics covered through analysis and writing include the nature of argument, inductive and deductive reasoning, rhetoric, theory of knowledge, scientific method, and informal fallacies. 54 hours lecture.

PHI-12**Introduction to Ethics: Contemporary Moral Issues****3 Units**

(C-ID:PHIL 120)

UC, CSU

Prerequisite: None

Description: Contemporary problems in ethics. An examination of the moral problems of today in light of ethical theory. Problems examined may include abortion, euthanasia, the death penalty, affirmative action, war, racism, sexism, and others. 54 hours lecture.

PHI-15**Bio-Medical Ethics****3 Units**

UC, CSU

Prerequisite: None

Description: An introduction to some of the ethical questions which affect medical research and the health care industry. The topics covered will include: the foundations of ethical judgments, the nature of moral reasoning, the ethics of medical practitioner-patient relationships, confidentiality, death and dying, medical experimentation, animal research, abortion and euthanasia, genetic engineering and the new reproductive technologies. 54 hours lecture.

PHI-19**Native American Thought****3 Units**

CSU

Prerequisite: None

Description: Philosophical and religious beliefs and practices of Native Americans. Explores Native American history and thoughts regarding man and nature. Emphasis placed on Native American thought and its relevance to contemporary problems and conflicts between American society and government and American Indian culture. 54 hours lecture.

PHI-22**Philosophy of Science****3 Units**

UC, CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: An examination of philosophical ideas about the nature of scientific knowledge, how it enables us to understand the world, and the role of values in science. Historical and current examples from the various sciences will be used to explore these questions. The dependence of contemporary policy and personal decisions on scientific knowledge will also be explored. 54 hours lecture.

PHI-32**Introduction to Symbolic Logic****3 Units****(Same as MAT-32)**

(C-ID:PHIL 210)

UC, CSU

*Prerequisite: None**Limitation on enrollment: May not be taken if credit for MAT-32 has been granted.*

Description: Introduces the principles of deductive reasoning, including the practical application of modern symbolic techniques. 54 hours lecture.

PHI-33**Introduction to Social and Political Philosophy****3 Units**

UC, CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: An introduction to issues in social and political philosophy. Discusses both the development of political philosophy in response to varying historical problems and the application of political philosophy to contemporary issues; topics studied include ancient Greek, social contract, communism, and modern political philosophy. 54 hours lecture.

PHI-35**Philosophy of Religion****3 Units****(Same as HUM-35)**

UC, CSU

*Prerequisite: None**Advisory: PHI-10 or PHI-10H or PHI-11 and REA-83 and qualification for ENG-1A*

Description: An introduction to the examination of religious claims from a philosophical perspective. Emphasis will be placed upon examining the rational justification for various traditional faith claims, and upon examining the relationship between rationality and faith. The course presumes a basic knowledge of philosophical argumentation. 54 hours lecture.

PHOTOGRAPHY

PHO-20

Introduction to Digital Photography

3 Units

CSU

Prerequisite: None

Description: Theory and practice in the basic techniques of producing digital photographs with technical and artistic merit. Acquire competency in the use of cameras with an emphasis on understanding the relationship of shutter, aperture and focal length. Software utilized may include Adobe Photoshop, Adobe Lightroom and others. Students are required to supply their own digital single lens reflex (SLR) camera with manual controls. 36 hours lecture and 54 hours laboratory.

PHYSICAL EDUCATION

(See KINESIOLOGY)

PHYSICAL SCIENCE

PHS-1

Introduction to Physical Science

3 Units

UC, CSU

Prerequisite: None

Description: Fundamental concepts of earth, space, and environmental science (astronomy, geology, meteorology, and oceanography) and principles of physics and chemistry, especially as they relate to these fields. Emphasis is placed on the application of science in the understanding and solution of environmental problems. 54 hours lecture.

PHYSICS

PHY-2A

General Physics I

4 Units

(C-ID:PHYS 105)(C-ID: PHYS 100S = PHY-2A + PHY-2B)

UC, CSU

Prerequisite: None

Corequisite: MAT-1A

Description: Meets the requirements for students majoring in biological science, including pre-medical and pre-dental students. This course examines: properties of matter; study of kinematics and mechanics, including Newton's laws, energy, momentum, and rotational motion; fluid mechanics; gravitation; study of oscillatory motion; study of wave motion, including sound waves. 54 hours lecture and 54 hours laboratory.

PHY-2B

General Physics II

4 Units

(C-ID: PHYS 100S = PHY-2A + PHY-2B)

UC, CSU

Prerequisite: PHY-2A

Description: Meets the requirements for students majoring in biological science, including pre-medical and pre-dental students. This course includes: study of thermodynamics, including temperature, methods of heat transfer, calorimetry, ideal gas law, laws of thermodynamics, entropy, and heat engines; study of electricity and magnetism, including electric field and potential, Gauss Law, current, Ohm's Law, capacitance and inductance, Faradays Law; study of optics, including electromagnetic waves, reflection, refraction, interference, and diffraction; study of modern physics, including the photoelectric effect, de Broglie wavelength, quantum numbers, and radioactive decay. 54 hours lecture and 54 hours laboratory. (Letter Grade or Pass/No Pass option.)

PHY-4A

Mechanics

4 Units

(C-ID:PHYS 205)

UC, CSU

Prerequisite: None

Corequisite: MAT-1A

Description: Examines vectors, particle kinematics and dynamics, work and power, conservation of energy and momentum, rotation, oscillations and gravitation. 54 hours lecture and 54 hours laboratory.

PHY-4B

Electricity and Magnetism

4 Units

(C-ID:PHYS 210)

UC, CSU

Prerequisite: PHY-4A

Corequisite: MAT-1B

Description: Study of electric fields, voltage, current, magnetic fields, electromagnetic induction, alternating currents and electromagnetic waves. 54 hours lecture and 54 hours laboratory.

PHY-4C

Heat, Light and Waves

4 Units

UC, CSU

Prerequisite: PHY-4A

Corequisite: MAT-1B

Description: Examines fluid mechanics; temperature, heat transfer, thermal properties of matter, laws of thermodynamics; oscillations and waves; reflection, refraction, lenses and mirrors, interference, and diffraction. 54 hours lecture and 54 hours laboratory.

PHY-10

Introduction to General Physics

3 Units

UC, CSU

Prerequisite: MAT-52

Description: A non-science major physics course covering mechanics, properties of matter, heat, sound, light, electricity and magnetism, and nuclear physics. 54 hours lecture.

PHY-11**Physics Laboratory****1 Unit**

UC, CSU

*Prerequisite: None**Corequisite: PHY-10*

Description: An optional laboratory science course for the non-science major. Emphasis on laboratory techniques, student experimentation and laboratory demonstrations. 54 hours laboratory.

PHYSIOLOGY AND ANATOMY

(See ANATOMY AND PHYSIOLOGY)

POLITICAL SCIENCE

POL-1**American Politics****3 Units**

(C-ID:POLS 110)

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A*

Description: An introduction to United States and California government and politics, including their constitutions, political institutions and processes, and political actors. Examination of political behavior, political issues, and public policy. Students may not receive credit for both POL-1 and POL-1H. 54 hours lecture.

POL-1H**Honors American Politics****3 Units**

(C-ID:POLS 110)

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A**Limitation on enrollment: Enrollment in the Honors Program*

Description: This course addresses the principles, institutions and critical issues of American politics, with emphasis placed on the national government. Specifically, the course offers an enhanced exploration of the philosophic and ideological sources of the American political system and its political culture, political parties and electoral system as well as political interest groups, mass movements, public policy, the media, the judicial system, and California state and local government. The honors course offers an enriched educational experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher-order critical thinking skills. Students may not receive credit for both POL-1 and POL-1H. 54 hours lecture.

POL-2**Comparative Politics****3 Units**

(C-ID:POLS 130)

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A*

Description: A comparative study of selected European, Asian, African, Latin American, and Middle Eastern political systems. Concerned with broadening and deepening the students understanding of the nature and variety of political systems. Course topics will include a study of institutions, issues, and policies of various countries. Students may not receive credit for both POL-2 and POL-2H. 54 hours lecture.

POL-4**Introduction to World Politics****3 Units**

(C-ID:POLS 140)

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A*

Description: A study of the theories, paradigms, and issues of global politics. Special attention is given to the role of the United States in the international community, the role of international organizations and international political economy. Students may not receive credit for both POL-4 and POL-4H. 54 hours lecture.

POL-4H**Honors Introduction to World Politics****3 Units**

(C-ID:POLS 140)

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A**Limitation on enrollment: Enrollment in the Honors Program*

Description: A study of the theories, paradigms, and issues of global politics. Special attention is given to the role of the United States in the international community, the role of international organizations and international political economy. This honors course offers an enriched experience for accelerated students by means of limited class size, seminar format, student-generated and-led discussions and projects, a focus on primary texts in translation, and the applications of higher-level thinking and writing skills analysis, synthesis, and evaluation. Students may not receive credit for both POL-4 and POL-4H. 54 hours lecture.

POL-5**The Law and Politics****3 Units**

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A*

Description: The principles and problems of the constitution are examined, with emphasis on how the constitution impacts public policy. Also, the course looks at the constitutional considerations affecting civil rights and liberties. 54 hours lecture.

POL-7A**Current Political Issues A****3 Units**

CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: Current political issues is designed to provide students the opportunity to examine major national and global issues which are not fully covered in the regular department curriculum. Topics selected are defined as current critical issues facing our nation and globe and will vary with each course offering. Each issue will be covered in detail, as will potential solutions to each issue and the political bodies involved in attempting resolution. 54 hours lecture.

POL-11**Political Theory**

(C-ID:POLS 120)

UC, CSU

*Prerequisite: None**Advisory: REA-83 and qualification for ENG-1A*

Description: This course will examine the major contributions of political thinkers from Socrates to the present. Political concepts such as democracy, the rule of law, justice, natural rights, sovereignty, citizenship, power, the state, revolution, liberty, reason, materialism, toleration, and the place of religion in society and politics are traced from their origins, through their development and changing patterns, to show how they influence political thinking and institutions today. 54 hours lecture.

3 Units**POL-13****Introduction American Foreign Policy**

UC, CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: The goal of this course is to provide students with comprehensive and critical coverage of U.S. foreign policy since W.W.II. Through a coherent chronological narrative, the course traces the evolution of U.S. foreign policy from its assumption of world leadership during and after World War II to its present concerns with sprouting democracies, a militarized policy, and global economic and political interdependence. 54 hours lecture.

3 Units**POL-14****Internship in Political Science**

CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: This course will examine the process of decision making in the public arena of local, state and national politics. Policy development, public administration and the bureaucratic implementation of policy will be analyzed. The student will be assigned to work 90 hours in a political or public administrative state or local office as the internship component of this course. 27 hours lecture and 90 hours volunteer internship required.

3 Units

PSYCHOLOGY

PSY-1**General Psychology**

(C-ID:PSY 110)

UC, CSU

Prerequisite: None

Description: Historical and philosophical antecedents of contemporary psychology; the scientific study of behavior and mental processes as systemized in learning, motivation, emotion, personality, intelligence, and thought. 54 hours lecture. Students may not receive credit for both PSY-1 and PSY-1H.

3 Units**PSY-1H****Honors General Psychology**

(C-ID:PSY 110)

UC, CSU

*Prerequisite: None**Limitation on enrollment: Enrollment in the Honors Program*

Description: Historical and philosophical antecedents of contemporary psychology; the scientific study of behavior and mental processes as systemized in learning, motivation, emotion, personality, intelligence, and thought. This honors course offers an enriched experience for accelerated students through limited class size, seminar format, focus on primary texts, and application of higher level critical thinking skills. Students may not receive credit for both PSY-1 and PSY-1H. 54 hours lecture.

3 Units**PSY-2****Biological Psychology**

(C-ID:PSY 150)

UC, CSU

Prerequisite: PSY-1 or PSY-1H

Description: The scientific study of brain-behavior relationships and mental processes. Issues addressed include: historical scientific contributions and current research principles for studying brain-behavior associations and mental processes, basic nervous system structure and function, sensory and motor systems, emotion, motivation, learning and memory, sleep and dreaming, and neurological and mental disorders. Ethical standards for human and animal research are discussed in the context of both invasive and non-invasive experimental investigations. 54 hours lecture.

3 Units**PSY-8****Introduction to Social Psychology**

(C-ID:PSY 170)

UC, CSU

Prerequisite: None

Description: An introduction to the study of individual human behavior in relation to the social environment. It includes emphasized topics such as aggression, prejudice, interpersonal attraction, attitude change, gender roles, and social cognition. 54 hours lecture.

3 Units**PSY-9****Developmental Psychology**

(C-ID:PSY-180)

UC, CSU

Prerequisite: None

Description: This course examines the biological, social and environmental variable of human life-span development in the physical, cognitive, and psychosocial domains. Theory, research, and application of life span relevant material in psychology are presented. 54 hours lecture.

3 Units**PSY-33****Theories of Personality**

UC, CSU

Prerequisite: None

Description: This course examines the basic concepts and principles of the prevailing theories of personality and evaluates the scientific, theoretical, and practical merits of their assumptions and propositions. 54 hours lecture.

3 Units

PSY-35**Abnormal Psychology****3 Units**

(C-ID:PSY 120)

UC, CSU

Prerequisite: None

Description: Survey of historical and contemporary approaches to diagnosing, understanding, and treating major forms of psychological disorder, including: anxieties, fears, obsessions, psychoses, sexual and personality disorders, disorders of childhood and adolescence. 54 hours lecture.

PSY-48**Statistics for the Behavioral Sciences
(Same as SOC-48)****3 Units**

(C-ID: MATH 110) (C-ID: SOCI 125)

UC, CSU

Prerequisite: MAT-35

Description: This course introduces students to basic statistical methods and analyses commonly used in behavioral science research. Topics cover both inferential and descriptive statistics including correlations, regression analysis, chi-squares, t-tests, analysis of variance, and an introduction to factorial designs. This course covers the logic of hypothesis testing and emphasizes conceptualization of material and interpreting findings for use in behavioral science research above computation. This course trains students to use a statistical software package used by behavioral science researchers and prepares them to proficiently consume published research in the behavioral sciences. 54 hours lecture.

PSY-50**Research Methods in Psychology****4 Units**

(C-ID:PSY 205B)

UC, CSU

Prerequisite: PSY-1, and MAT-12 or MAT-12H

Description: This course introduces students to psychological research methods with emphasis on the use of the scientific method. The laboratory will complement the lectures and allow each student to design and conduct behavioral research, including collecting and analyzing research data. 63 hours lecture and 27 hours laboratory.

READING

REA-2**Flexible Reading****2 Units**

CSU

Prerequisite: None

Description: Intended for readers who are interested in enhancing reading flexibility and effectiveness in comprehension, vocabulary, and study skills. Students practice using a variety of comprehension strategies, including computer assisted instruction. 36 hours lecture. (Letter Grade, or Pass/No Pass option.)

REA-3**Reading for Academic Success****3 Units**

CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: Intended to provide students with a review and study of reading skills at the college level. Students will receive instruction in fundamental, academic, and discipline-specific reading skills. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

REA-4**Critical Reading as Critical Thinking****3 Units**

CSU

*Prerequisite: None**Advisory: Qualification for ENG-1A*

Description: This course is intended for students to fully understand the relationship between critical reading and critical thinking. Emphasis will be placed on the development of reading skills in the interpretation, analysis, criticism and advocacy of ideas encountered in academic reading. 54 hours lecture.

REA-81**Foundations for College Reading****3.5 Units***Prerequisite: None*

Description: Intended for students in need of basic remediation. Instruction in basic reading skills, along with individually prescribed work in which a wide range of material will be utilized. 54 hours lecture and 36 hours laboratory. (Non-degree credit course. Letter Grade, or Pass/No Pass option.)

REA-82**College Reading and Strategies****3.5 Units***Prerequisite: REA-81 or qualifying placement level*

Description: Intended for students who experience significant difficulty in reading college-level materials. Instruction in reading skills at a less basic level than that required in Reading 81, along with individually prescribed practice work, in which a wide range of materials will be utilized. 54 hours lecture and 36 hours laboratory. (Non-degree credit course. Letter Grade, or Pass/No Pass option.)

REA-83**College Reading and Thinking****3 Units***Prerequisite: REA-82 or ESL-73 or qualifying placement level*

Description: Intended for students who experience moderate difficulty in reading college-level material. Instruction in reading skills at a more advanced level than those covered in REA-82. 54 hours lecture. (Non-degree credit course. Letter Grade or Pass/No Pass option.)

REA-86**Reading Strategies for Textbooks****1 Unit***Prerequisite: None*

Description: This course is intended for students currently enrolled in a lecture class where the curriculum and instruction depends on extensive textbook readings. Students will receive instruction on using different reading comprehension strategies designed for better understanding and retention of textbook material. 18 hours lecture. (Non-degree credit course. Pass/No Pass only.)

REAL ESTATE

RLE-80**Real Estate Principles****3 Units**

CSU

Prerequisite: None

Description: The real estate principles course covers basic laws and principles of California real estate; fundamentals, terminology, concepts, current practices and current market trends in real estate. Assists those preparing for the real estate sales person and broker license examination. 54 hours lecture.

RLE-81**Real Estate Practices****3 Units**

CSU

Prerequisite: None

Description: Covers basic laws and principles of California real estate, terminology and daily operations in a real estate brokerage. Includes listing, prospecting, advertising, financing, sales techniques, escrow and ethics. Applies toward state's educational requirements for the brokers examination. 54 hours lecture.

RLE-82**Legal Aspects of Real Estate****3 Units**

CSU

Prerequisite: None

Description: California real estate law, including rights incident to property ownership and management, agency, contracts, and application to real estate transfer, conveyance, probate proceedings, trust deeds, and foreclosure, as well as recent legislation governing real estate transactions. Applies toward educational requirement of brokers examination. 54 hours lecture.

RLE-83**Real Estate Finance****3 Units**

CSU

Prerequisite: None

Description: Analysis of real estate financing, including lending policies and problems in financing transactions in residential, apartment, commercial, and special purpose properties. Methods of financing properties emphasized. 54 hours lecture.

RLE-85**Real Estate Economics****3 Units**

CSU

Prerequisite: None

Description: Trends and factors affecting the value of real estate; the nature and classification of land economics; the development of property, construction and subdivision, economic values and real estate evaluation; real estate cycles and business fluctuations, residential market trends, real and special purpose property trends. 54 hours lecture.

RLE-200**Real Estate Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass.)

SOCIOLOGY**SOC-1****Introduction to Sociology****3 Units**

(C-ID:SOCI 110)

UC, CSU

*Prerequisite: None**Advisory: ENG-50*

Description: An introduction to the basic concepts relating to the study of society. The course includes investigation into the foundations of sociology including its overall perspective, theoretical orientations, and research methodology; the foundations of social life including the components of culture, social interaction and the process of socialization, groups, organizations, and deviance; economic social inequality based upon class, race, sex, and age; social institutions; and dimensions of social change. Students may not receive credit for both SOC-1 and 1H. 54 hours lecture

SOC-1H**Honors Introduction to Sociology****3 Units**

(C-ID:SOCI 110)

UC, CSU

*Prerequisite: None**Limitation on enrollment: Enrollment in the RCCD Honors Program*

Description: An honors level introduction to the basic concepts relating to the study of social behavior and human groups. This honors level course includes investigation into the foundations of sociology including theoretical perspectives, research methodology, and the components of social structure. Social interaction, culture, and social inequality (including, but not limited to, race, gender, sex, and social class), and dimensions of social change will be examined. Students may not receive credit for both SOC-1 and SOC-1H. 54 hours lecture.

SOC-2**American Social Problems****3 Units**

(C-ID:SOCI 115)

UC, CSU

Prerequisite: None

Description: Identification and analysis of major social problems confronting contemporary 20th century America; emphasizing, among other topics, urban and rural transformations, family life, minorities, criminal and delinquent behavior. 54 hours lecture.

SOC-3**Social Inequality****3 Units**

UC, CSU

Prerequisite: None

Description: This course introduces students to the extent of inequality in its various forms in American society, the consequences of inequality for individual life chances and for society as a whole, the theoretical explanations given for the existence of inequality, and to the persistence of inequality and poverty. 54 hours lecture.

SOC-10**Race And Ethnic Relations****3 Units**

(C-ID:SOCI 150)

UC, CSU

Prerequisite: None

Description: An introduction to the relevant theories and operational definitions that ground the study of race and ethnic relations in the social sciences. Extensive treatment of prejudice, discrimination and the concept of racism. The course brings into sharper focus the history and contemporary status of White ethnics, religious minorities, American-Indians, African-Americans, Hispanic-Americans, and women in the United States. Social institutions, such as family, education, politics, and the economy receive special attention for each group. The similarities and differences in ethnic hostilities between the U.S. and other societies are closely examined. 54 hours lecture

SOC-12**Marriage and Family Relations****3 Units**

(C-ID:SOCI 130)

UC, CSU

*Prerequisite: None**Advisory: SOC-1 and ENG-50*

Description: Examines the major trends in marriage, families, and intimate relationships. Focuses on how inequality and diversity affect intimate and family relations. Discusses the dynamics of gender inequality among families and couples and how family life is shaped by race and ethnicity, social class, and sexuality. Discusses issues of interpersonal violence, divorce, and life in later years. 54 hours lecture.

SOC-15**Women in American Society****3 Units**

UC, CSU

Prerequisite: None

Description: An introduction to the sociology of women, emphasizing the social implications of the women's movement, including the historical, political, and economic roots of women's subordination and liberation in the United States. The course includes analysis of women's roles in American society, including, but not limited to, the family, the workplace, politics, education, religion, and the law. 54 hours lecture.

SOC-20**Introduction to Criminology****3 Units**

(C-ID:SOCI 160)

UC, CSU

Prerequisite: None

Description: An introduction to the fundamentals of Criminology; including surveys of the theories of crime, statistical procedures and research methodology, types of crime, criminal etiology, the origins and features of criminal law, the police, courts, and corrections. An analysis of the interrelations between social organization, the perceptions of social harm, and the dynamics of social control. 54 hours lecture.

SOC-48**Statistics for the Behavioral Sciences****3 Units****(Same as PSY-48)**

(C-ID: MATH 110) (C-ID SOCI 125)

UC, CSU

Prerequisite: MAT-35

Description: This course introduces students to basic statistical methods and analyses commonly used in behavioral science research. Topics cover both inferential and descriptive statistics including correlations, regression analysis, chi-squares, t-tests, analysis of variance, and an introduction to factorial designs. This course covers the logic of hypothesis testing and emphasizes conceptualization of material and interpreting findings for use in behavioral science research above computation. This course trains students to use a statistical software package used by behavioral science researchers and prepares them to proficiently consume published research in the behavioral sciences. 54 hours lecture.

SOC-50**Introduction to Social Research Methods****3 Units**

(C-ID: SOCI 120)

UC, CSU

Prerequisite: SOC-1 or SOC-1H

Description: Examination of the fundamental elements of empirical research and the ways sociologists think critically, including attention to the nature of theory, hypothesis, variables and ethics of research. Application of qualitative and quantitative analytic tools including logic and research design, such as experimental, survey, observational, comparative historical research and case studies. 54 hours lecture.

SPANISH

SPA-1**Spanish 1****5 Units**

(C-ID:SPAN 100)

UC, CSU

*Prerequisite: None**Advisory: Completion of placement test to assess level of proficiency in Spanish.*

Description: This course concentrates on developing basic skills in listening, reading, speaking and writing. Emphasis is placed on acquisition of vocabulary, structures and grammatical patterns necessary for comprehension of native spoken and written Spanish at the beginning level. This course includes discussion of Hispanic culture and daily life. Students may receive credit for only one of the following: SPA-1 or SPA-1H or SPA-1A and 1B. 90 hours lecture and 18 hours laboratory.(TBA option)(Letter Grade, or Pass/No Pass option.)

SPA-2**Spanish 2****5 Units**

(C-ID:SPAN 110)

UC, CSU

Prerequisite: SPA-1B or SPA-1 or SPA-1H, or qualifying placement level on the Spanish assessment test or the equivalent

Description: Further development of basic skills in listening, reading, speaking and writing. A continued emphasis on the acquisition of vocabulary, structures and grammatical patterns necessary for comprehension of standard spoken and written Spanish at the beginning level. This course includes an expanded discussion of Hispanic culture and daily life. 90 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

SPA-3**Spanish 3****5 Units**

(C-ID:SPAN 200)

UC, CSU

Prerequisite: SPA-2 or SPA-2H or qualifying placement level on the Spanish assessment test or the equivalent

Description: Development of intermediate skills in listening, reading, speaking and writing. A continued emphasis on the acquisition of vocabulary, structures and grammatical patterns necessary for comprehension of standard spoken and written Spanish at the intermediate level. This course includes an expanded discussion of Hispanic culture and daily life. 90 hours lecture and 18 hours laboratory. (TBA option) (Letter Grade, or Pass/No Pass option.)

SPA-3N**Spanish for Spanish Speakers****5 units***Prerequisite: SPA-2 or SPA-2H or qualifying placement level on the Spanish assessment test, the equivalent or*

Description: Enrichment and formalization of speaking, reading and writing skills in Spanish. Emphasis on vocabulary expansion, awareness of standard versus non-standard lexicon, introduction to various Spanish dialects. Intense review of grammar and linguistic terminology necessary to expand and enrich language skills. Introduction to diverse literary materials, writing styles and composition techniques. Intensive survey of Latino culture in the United States and in the Spanish-speaking world. Designed for students with near-native fluency, having acquired the language in a non-academic environment, and having received minimal or no formal instruction in Spanish. 90 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

SPA-4**Spanish 4****5 Units**

(C-ID:SPAN 210)

UC, CSU

Prerequisite: SPA-3 or SPA-3N, qualifying placement level on the Spanish assessment test or the equivalent

Description: Further development of intermediate skills in listening, reading, speaking and writing. A review of the vocabulary, structures and grammatical patterns necessary for comprehension of standard spoken and written Spanish at the intermediate level. Enhancement of basic Spanish language skills through the reading of authentic literary and factual texts. This course includes an expanded discussion of Hispanic culture and daily life. 90 hours lecture and 18 hours laboratory. (TBA option)(Letter Grade, or Pass/No Pass option.)

SPA-8**Intermediate Conversation****3 Units**

UC, CSU

Prerequisite: SPA-2 or SPA-2H or SPA-3 or SPA-3N or SPA-4

Description: Intermediate-level vocabulary building and improvement of speaking proficiency in the context of Hispanic culture, daily life, and topics of current interest. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

SPA-11**Spanish Culture and Civilization****3 Units**

UC, CSU

Prerequisite: None

Description: Introductory survey of Spanish culture and civilization as reflected in language, literature, art, history, politics, customs and social institutions. Class conducted in English. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

SPA-12**Latin American Culture and Civilization****3 Units**

UC, CSU

Prerequisite: None

Description: Introductory survey of Latin American culture and civilization as reflected in language, literature, art, history, politics, customs and social institutions. Class conducted in English. 54 hours lecture. (Letter Grade, or Pass/No Pass option.)

SUPPLY CHAIN TECHNOLOGY

SCT-1**Introduction to Automated Warehousing****3 Units***Prerequisite: None*

Description: An industrial technology overview course covering the basic knowledge and skills needed for supply chain technicians to successfully work in an automated distribution center. Introduction to the troubleshooting and maintenance of complex electro-mechanical systems is a major focus of this class. 36 hours lecture and 54 hours laboratory.

SCT-200**Supply Chain Technology Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.*

Description: This course is designed to coordinate the student's occupational on-the-job training with related instruction in work-related skills. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit. (Letter Grade or Pass/No Pass option.)

THEATER ARTS

THE-2

Play Practicum- Special Projects Laboratory I 1 Unit

Advisory: Acting and production skills desirable based on a successful audition.

Description: A course in play production from casting to performance including units in acting, set construction, lighting, costuming, house management, props and make-up on a small scale. Subsequent enrollment will provide the student an opportunity for additional skill and competency development within the subject matter. May be taken a total of four times. 54 hours laboratory.

THE-3

Introduction to the Theater 3 Units

(C-ID:THTR 111)

UC, CSU

Prerequisite: None

Description: A comprehensive study of theatrical styles and forms with units in directing, acting, designing, technical theater, playwriting, and genres, to acquaint the student with the diverse nature of theater leading to an appreciation and understanding of theater as a separate and distinctive art form. 54 hours lecture.

THE-5

Theater Practicum 3 Units

(C-ID:THTR 191)

UC, CSU

Prerequisite: None

Advisory: Acting and production skills desirable based on a successful audition

Description: A course in play production from casting to performance including units in acting, set construction, lighting, costuming, house management, props and make-up. Subsequent enrollment will provide the student an opportunity for additional skill and competency development within the subject matter. May be taken a total of four times. 162 hours laboratory. (TBA Option)

THE-29

Musical Theater Appreciation 3 Units

UC, CSU

Prerequisite: None

Description: A study of the history and literature of the genre of musicals from 19 century to present day. Emphasis will be placed on the stylistic distinctions of the musical and the contribution of individual composers, librettists, lyricists, choreographers, directors and designers to the genre of musical theatre. Students will study the genre's social and cultural significance as a separate and distinctive art form. 54 hours lecture.

THE-32

Acting Fundamentals - Theater Games and Exercises 3 Units

(C-ID: THTR 151)

UC, CSU

Prerequisite: None

Description: Foundation training for actors through theater games and improvisational exercises for developing expressive freedom, creativity, relaxation, sensory awareness and concentration. Development and preparation of the actor's instrument: voice, speech, body and imagination. Beginning of relationship and motivation. 36 hours lecture and 54 hours laboratory. (TBA Option)

THE-33

Scene Acting-Creating a Role 3 Units

(C-ID:THTR 152)

UC, CSU

Prerequisite: THE-32

Description: Fundamentals of creating a role through beginning scene study and monologues with emphasis in modern realism. Building of character through text analysis and practical applications such as use of body, voice and imagination. Continued development of actors body through exercises. Advanced work in motivation, relationships and emotional discovery and release. 36 hours lecture and 54 hours laboratory.

THE-34

Scene Study in Various Theatrical Styles 3 Units

UC, CSU

Prerequisite: THE-32

Description: Advanced scene study with emphasis on a variety of theatrical styles, excluding classical verse. Advanced development of the emotional and character range of the actor. Development of the actors artistic sense and presentation with regard to text, environment, actions and choices. Public performance required. 36 hours lecture and 54 hours laboratory. (TBA Option)

THE-35

Classical Acting with Emphasis in

Shakespearean Verse 3 Units

UC, CSU

Prerequisite: THE-32

Description: Development of techniques for performing classical verse with an emphasis in Shakespearean texts. Special emphasis on actors physical instrument, voice, speech and body, to handle demands of elevated verse. Analysis and thematic aspects of Shakespeare and elevated verse, especially meter, rhythm, structure, imagery, antithesis, word games, patterns, stressing and inflections. Practical applications through scene and monologue work. 36 hours lecture and 54 hours laboratory.

THE-39

Acting for the Camera 3 Units

UC, CSU

Prerequisite: None

Advisory: THE-32

Description: Principles and techniques of specialized methods and styles involved in acting for the camera culminating in performance on film. This course encompasses the study and exercise in the special techniques of acting for the motion picture and television cameras. Emphasis will be placed on gaining an understanding of the various camera angles, shots, positions and actor behaviors that are unique to acting before a camera. Practical work in front of a camera is required. 45 hours lecture and 27 hours laboratory.

THE-41

Elementary Stagecraft 3 Units

(C-ID:THTR 171)

UC, CSU

Prerequisite: None

Advisory: THE-2 and THE-4 and THE-5 and THE-6

Description: Basic physical equipment of the theater, including use and safety, elementary set construction, scenic painting, drafting and critical analysis of scenic design for the theater. 36 hours lecture and 54 hours laboratory. (TBA Option)

THE-44**Theatrical Set Design****3 Units**

(C-ID:THTR 172)

UC, CSU

*Prerequisite: None**Advisory: THE-5 or THE-6 or THE-41*

Description: The study of the principles, techniques and practices of scenic design and execution for the stage. Includes script analysis in relation to the aesthetic and dramaturgical demands of theatre art in formulating design concepts. Analysis of space, movement, mood, period, style, texture, materials and color to achieve the execution of design concepts through techniques of rendering, model-making, drafting and presentation. Working collaboratively with the director and design staff while maintaining production budget guidelines. 45 hours lecture and 27 hours laboratory. (TBA Option)

THE-46**Theatrical Costume Design****3 Units**

(C-ID:THTR 174)

UC, CSU

*Prerequisite: None**Advisory: ART-17 or ART-40*

Description: The study of the principles, techniques and practices of theatrical costume design for stage, television and film. Includes script and character analysis to achieve characterization through design and working collaboratively with the director and design staff. The choice, use and manipulation of patterns, textiles, jewelry and accessories to imitate the historical needs of the production while maintaining production budget guidelines. Student will be assigned costume crew responsibilities for a theatrical production. 45 hours lecture and 27 hours laboratory.

THE-48**Theatrical Lighting Design****3 Units**

(C-ID:THTR 173)

UC, CSU

*Prerequisite: None**Advisory: THE-5 or THE-6 or ART-23*

Description: The study and implementation of the principles, techniques and practices of lighting design for the stage. Includes training in the creative concepts of lighting design, how to create a light plot, hang the lighting instruments for a show, as well as the practical use and operation of lighting equipment used to execute the design. Students will also be trained in industry safety standards that will prepare the student for work in the industry. Student will be assigned lighting crew responsibilities for a theatrical production. 45 hours lecture and 27 hours laboratory.

WELDING

WEL-34**Metal Joining Process****2 Units**

CSU

Prerequisite: None

An introduction to metal joining processes for engineering and manufacturing technology majors. Techniques and procedures related to design and problem solving will be strongly emphasized. 27 hours lecture and 27 hours laboratory.

WORK EXPERIENCE

WKX-200**Work Experience****1-4 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment*

Description: This course is designed to coordinate the students occupational on-the-job training with related instruction in work-related skills, including occupational and educational resources, career planning, resume development and interview techniques. Students may earn up to four (4) units each semester for a maximum of 16 units of work experience. No more than 20 hours per week may be applied toward the work requirement; 60 hours of volunteer work or 75 hours of paid work in the semester are required for each unit. WKX-200 is an enrolling course for General Work Experience and Occupational Work Experience courses. Students enrolling in WKX-200 are administratively moved to the appropriate general or occupational work experience course after the first class meeting. Determination of the appropriate work experience course is made by the instructor, with input from the student, based upon several factors, including the number of hours worked during the semester, occupational program requirements, and type of work in which the student is engaged. 18 hours orientation and 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit.

WKX-201**General Work Experience****1-3 Units**

CSU

*Prerequisite: None**Advisory: Students should have paid or voluntary employment.**Students should have paid or voluntary employment*

Description: This course is designed to coordinate the students occupational on-the-job training with related instruction in work-related skills, including occupational and educational resources, career planning, resume development and interview techniques. Students may earn up to three (3) units each semester for two (2) semesters or a maximum of 6 units of work experience. No more than 20 hours per week may be applied toward the work requirement; 60 hours of volunteer work or 75 hours of paid work in the semester are required for each unit. 18 hours lecture and 60 hours of volunteer work experience or 75 hours of paid work experience are required for each enrolled unit.

APPRENTICESHIP CREDIT COURSES

ELE-400

Introduction to the Electrical Trades and Construction Safety 3.5 units

Prerequisite: None.

Limitation on Enrollment: Student must be a registered State indentured apprentice.

Focusing on electrical trades, students will examine safety issues surrounding construction job-sites and installation of electrical systems. Includes OSHA 10 Construction certification training, identification of job-site hazards, safe work practices and personal protective equipment for various construction site hazards. Care for breathing and cardiac emergencies along with basic first aid and automatic external defibrillator (AED) training for use on both adults and children. Substance abuse will be addressed. Basic math operations will be reviewed and reinforced. 45 hours lecture and 54 hours laboratory.

ELE-401

Introduction to Electrical Theory, Basic Math Concepts, and the National Electric Code 3.5 units

Prerequisite: None.

Limitation on Enrollment: Student must be a registered State indentured apprentice.

Provides an introduction to algebraic and trigonometric concepts and application of their principles to solve basic electrical equations and layout conduit bends. Teaches the student to apply basic electrical theory to predict circuit behavior. Basic conduit bending techniques will be developed. The National Electrical Code will be introduced. 45 hours lecture and 54 hours laboratory.

ELE-402

Advanced DC Circuit Concepts, Introduction to 3-Phase AC Circuits, Test Equipment, and National Electric Code Applications 3.5 units

Prerequisite: None.

Limitation on Enrollment: Student must be a registered State indentured apprentice.

Electrician circuit analysis techniques, series, parallel, and combination DC circuits, test equipment, National Electric Code (NEC), and elementary 3-Phase AC circuits will be introduced. 45 hours lecture and 54 hours laboratory.

ELE-403

AC Circuit Concepts, Applied Electronics, and National Electric Code Applications 3.5 units

Prerequisite: None.

Limitation on Enrollment: Student must be a registered State indentured apprentice.

Electrician AC theory including an exploration of inductance and capacitance and the effect of their combined reactants on AC circuits along with the application of electronic concepts and components. 45 hours lecture and 54 hours laboratory.

ELE-404

Digital Logic Circuits, Conductor Characteristics, Applications, and National Electric Code (NEC) 3.5 units

Prerequisite: None.

Limitation on Enrollment: Student must be a registered State indentured apprentice.

Digital logic concepts and their real-world application. Electrician identification, selection, and installation of electrical conductors in accordance with National Electrical Code (NEC). 45 hours lecture and 54 hours laboratory.

ELE-405

Electrician Blueprint Reading with Code Applications for National Electric Code (NEC) 3.5 units

Prerequisite: None.

Limitation on Enrollment: Student must be a registered State indentured apprentice.

Electrician studies of blueprints and specifications. Application of the National Electric Code will cover current protection, panel-boards, and lighting systems. 45 hours lecture and 54 hours laboratory.

ELE-406

Grounding Systems, Advanced Blueprints and Specifications, Motor Design and Installation, and National Electric Code 3.5 units

Prerequisite: None.

Limitation on Enrollment: Student must be a registered State indentured apprentice.

Advanced concepts for blueprints and specifications. Study of motor design and application and National Electric Code concepts. 45 hours lecture and 54 hours laboratory.

ELE-407

Motor Control Principles, Generators and Power Supplies, with National Electric Code (NEC) 3.5 units

Prerequisite: None.

Limitation on Enrollment: Student must be a registered State indentured apprentice.

Techniques for controlling AC and DC motors; students examine conventional and cutting-edge technologies for power generation. 45 hours lecture and 54 hours laboratory.

ELE-408

Transformer Theory, Leadership, Management, and Test Equipment 3.5 units

Prerequisite: None.

Limitation on Enrollment: Student must be a registered State indentured apprentice.

Explores electrician theory and field application of transformers, test equipment, including management and leadership principles for supervisors, along with special equipment for security systems for the grid. 45 hours lecture and 54 hours laboratory.

ELE-409**Electrician Specialty Systems****3.5 units***Prerequisite: None.**Limitation on Enrollment: Student must be a registered State indentured apprentice.*

Examines specialty electrical systems commonly found in building construction. Includes fire alarm systems, closed-circuit television (CCTV) systems, telephone systems, cable television (CATV & MATV) systems, local area networks (LANs), fiber optic data systems, heating and air conditioning control systems, and lightning protection systems. 45 hours lecture and 54 hours laboratory.

ELE-420**Introduction to Sound/Communication****Trade Industry****3.5 units***Prerequisite: None.**Limitation on Enrollment: Student must be a registered State indentured apprentice.*

An introduction to the sound and communication industry. Students will examine the fundamentals of wiring methods, fastening devices, electrical conductors, circuits, voltage and data communication. Basic math operations will be reviewed and reinforced. Care for breathing and cardiac emergencies along with basic first aid for use on both adults and children. Substance abuse will be addressed. 45 hours lecture and 54 hours laboratory.

ELE-421**Electrical Theory and Practices DC****3.5 units***Prerequisite: None.**Limitation on Enrollment: Student must be a registered State indentured apprentice.*

Study of floor and plot plans, basic blueprint reading and circuit drawing, theory of magnetism, DC and AC generators, motors and transformers, on-the-job safety, first aid, electrical code, telephony and data communications. 45 hours lecture and 54 hours laboratory.

ELE-422**Electrical Theory and Practices AC****3.5 units***Prerequisite: None.**Limitation on Enrollment: Student must be a registered State indentured apprentice.*

Study of apprenticeship, electrical inductance, capacitance and reactance, including grounded conductors, branch circuits, transformer principles, RCL circuits and filters. 45 hours lecture and 54 hours laboratory.

ELE-423**Semiconductor Electronics****3.5 units***Prerequisite: None.**Limitation on Enrollment: Student must be a registered State indentured apprentice.*

Study of solid-state electronic theory and components, diodes, transistors, SCR, triacs, diacs, IC amplifiers and op amps. 45 hours lecture and 54 hours laboratory.

ELE-424**Introduction to Digital Electronics and Signaling Devices****3.5 Units***Prerequisite: None.**Limitation on Enrollment: Student must be a registered State indentured apprentice.*

Introduction to digital electronic technology and electronic equipment. Instruction includes basic digital systems, binary and decimal numbering systems, decision-making logic circuits, Boolean Algebra, flip-flops, counters, shift registers, encoders, decoders, ROMs, DC to AC converters and organization of these component blocks to accomplish manipulation of data. 45 hours lecture and 54 hours laboratory.

ELE-425**Management/Alarms/Codes/Circuits****3.5 units***Prerequisite: None.**Limitation on Enrollment: Student must be a registered State indentured apprentice.*

Introduction to management, installation of security and fire alarm systems, the National Electrical Code as it relates to alarm installation and circuits as applied to alarm systems. 45 hours lecture and 54 hours laboratory.

ELE-499**Electrician Apprenticeship Work Experience****1-4 units***Prerequisite: None.**Limitation on Enrollment: Student must be a registered State indentured apprentice.*

This course provides students the opportunity to work in the electricians apprenticeship program for the purpose of developing specific skills to meet the goals and objectives of the electricians Joint Apprenticeship and Training Committee (J.A.T.C.). Students complete work experience hours at approved training sites. Students may take up to 16 units total across all work experience course offerings. This course may be taken up to four times when there are new or expanded learning objectives. Only one work experience course may be taken per semester. 60 hours of volunteer work experience (maximum of 240 hours) or 75 hours of paid work experience (maximum of 300 hours) are required for each enrolled unit.

NON-CREDIT COURSES

Non-credit courses are one of several educational options offered by community colleges. They offer students access to a variety of low- and no-cost courses that do not carry any unit value, but can help students in reaching personal and professional goals. They provide lifelong learning, career preparation opportunities, and skill remediation, development or proficiency. They can serve as an educational gateway for students who want to improve their earning power, literacy skills or access to higher education. Non-credit courses are approved by the District Curriculum Committee, the Board of Trustees and the state Chancellor's Office.

WRITING CLINIC

ENG-885

Writing Clinic

0 Units

Transfer: Prerequisite: None

Description: Intended for students who need concentrated attention in various areas of grammar, punctuation, and composition. Self-paced, open-entry/open-exit, with no traditional lecture-based component. Instead, it requires students to do the majority of their coursework independently. Each student follows a sequential series of modules based on his or her diagnosis. Students meet with their instructor in the Writing and Reading Center for the pre-and post-test and as needed for one-on-one instruction or small group study for the duration of the students' enrollment in the course. May be taken a total of four times. 27 hours laboratory. (Non-credit course.)(TBA option)

ENGLISH AS A SECOND LANGUAGE

ESL-801

ESL Support for Career and Technical Programs

0 Units

Transfer: Prerequisite: None

Advisory: ESL-53

Description: This course, designed for multi-lingual students whose primary language is not English, is intended for students currently enrolled in an entry-level vocational class. Students will receive instruction including writing, reading, speaking, vocabulary building and test taking skills designed to help them succeed in the content area course. Subsequent enrollment in an additional semester will provide the student with an opportunity for continued skills and competency development within the level and subject matter. May be taken a total of eight times. 36 hours lecture. (Non-credit course. Pass/No Pass only.)

READING CLINIC

REA-887

Reading Clinic

0 Units

Transfer: Prerequisite: None

Description: This self-paced course provides practice on individually prescribed learning plans designed to improve and develop reading skills. Instruction is provided on an individualized basis through conferences with the student. Subsequent enrollment in the course will provide the student further opportunities for additional skill and competency development within the subject matter. May be taken a total of four times. 27 hours laboratory. (Non-credit course.)