COURSE DESCRIPTIONS

HOW TO READ THE COURSE ENTRIES

Courses listed in this catalog apply to the Fall 2018, Spring 2019, and Summer 2019 terms. Courses are ordered numerically within alphabetically arranged subject areas.

- The bolded first line(s) indicate the official course number, a descriptive title, the number of units, and credit-by-exam authority (if applicable). Alpha-suffixes to course numbers indicate either (a) modularized courses where "A" precedes "B", or (b) courses with variable units.
- The following line identifies the applicability of the course to college credit. All courses listed in this catalog are degree-applicable, non-degree-applicable, or non-credit. A subset of degree-applicable courses are also transferable to the CSU and/or the UC systems and are designated as such.
- The next line identifies the type of instructional delivery and the required range of hours for each delivery method per term.
- The next line identifies the grading schema for the course, which may be letter grade only, pass/no-pass grade only, letter grade with option for pass/no pass grading, or not graded.
- Next are italicized lines indicating limitations on enrollment, prerequisites, corequisites, and advisories (as applicable). The course description paragraph follows, with the C-ID number (if applicable) and TOP code assigned to the course appended at the end.

COURSE NUMBERING

1-99
Lower-division transfer and baccalaureate degree level courses. These courses are comparable to those offered in the first two years of a four-year college or university. Courses transferable to the California State University are marked (CSU); courses transferable to the University of California are marked (UC). Some transferable courses have credit limitations at either CSU or UC (or both); students should consult a counselor for details on these limitations.

400-499
Associate degree level courses may be applied to the Associate in Arts and Associate in Science degrees, as well as to certificates.

500-599
Non degree applicable foundational and college preparatory courses are not part of the associate degrees nor certificates, although they may be prerequisites to required courses. College credit is assigned and courses may be included in the student educational plan. These courses may be letter grade or pass/no-pass. If graded, the grades are not included in students’ degree applicable grade point average computation.

600-699
Non-credit courses provide foundational, developmental, occupational, and general education opportunities. They do not earn unit credit, are not considered part of collegiate-level study, and are either not graded or have a pass/no-pass grading schema.

OTHER INFORMATION

Course Identification Number (C-ID)
The C-ID Numbering System is a statewide common number identifying specific courses that participating California colleges and universities have determined are comparable in scope and content to courses offered by other California community colleges, regardless of each college’s unique numbering system. Because courses may be modified and qualified for or deleted from the C-ID database throughout the year, students should consult www.assist.org and an academic counselor to confirm how C-ID qualified courses apply to the four-year college or university to which they plan to transfer.

Credit by Examination [Cx]
Courses designated [Cx] may be challenged for credit by examination.

Independent Study
Independent study courses provide individual students challenging and in-depth study on approved topics within any subject area. Independent study proposals must have the approval of the instructor and appropriate administrator. It is expected that the study will not duplicate existing curriculum; rather, it will be of an advanced nature and extend approved courses or series of courses. Interested students should contact discipline faculty for more information.

Limitations on Enrollment
Some courses have limitations on enrollment. These limitations may require corequisites (concurrent enrollment in other courses), prerequisites (successful completion of other courses or specified assessment scores for English, math, and/or English as a second language), performance criteria, health and safety conditions, or prior acceptance into specified programs. Students not meeting the conditions imposed by these requirements may be unable to register for or may be dropped from any class for which requirements have not been met. See the “Limitations on Enrollment” section elsewhere in this catalog for more information.

Advisories are recommendations for courses or competencies that students are encouraged – but not required – to meet before or in conjunction with the course to which they are attached.

Special Topics
Special topics courses offer in-depth study of topics not currently covered in the existing curriculum. Courses may be lecture, lab, or studio. Topics and unit value are determined by the department at the time of offering. Consult each term’s Schedule of Classes for specifics.

University of California credit for variable topics courses is given only after a review of the scope and content of the course by the enrolling UC campus.

Taxonomy of Program Numbers (TOP)
The TOP number, as assigned by the 6th edition of the Taxonomy of Programs, is listed at the end of each course description. This number is included for Systems Office reference and is not intended for student use. An asterisk (*) following the number indicates a vocational education discipline.
**ACCOUNTING - ACCTG**

**ACCTG-1A FINANCIAL ACCOUNTING (4)**
Lecture 64 - 72 hours.
Grading: Letter Grade  (CSU, UC)
Advisory: CIS-1 Introduction to Computer Information Systems or BUSOT-63
Microsoft Office Excel - Comprehensive
Development and communication of financial information that is useful to investors, creditors, and others to make decisions. Course material covered includes the accounting environment, accounting cycle, application of generally accepted accounting principles, ethics, financial statements, operating, investing, and financing activities.
(C-ID ACCT 110) TOP Code: 0502.00 - Accounting

**ACCTG-1B MANAGERIAL ACCOUNTING (4)**
Lecture 64 - 72 hours.
Grading: Letter Grade  (CSU, UC)
Advisory: CIS-1 Introduction to Computer Information Systems Or experience using spreadsheets.
Prerequisite: ACCTG-1A Financial Accounting
Managerial accounting meets the information needs of internal users by developing and communicating information that is useful for management decision-making. Course material covered includes cost terms and concepts, cost behavior, cost control, cost-volume-profit analysis, profit planning and performance analysis in manufacturing & service environments.
(C-ID ACCT 120) TOP Code: 0502.00 - Accounting

**ACCTG-70 COST ACCOUNTING (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Prerequisite: ACCTG-1B Managerial Accounting
Fundamentals of cost accounting including theoretical concepts, terminology, planning, controlling, and costing for products, services, and customers. Using cost accounting theoretical concepts, students will perform comparative analyses related to product costing for manufacturing, merchandising, and service companies. Students will also evaluate both quantitative and qualitative data to assist management with strategic decision-making, planning, and control.
TOP Code: 0502.00 - Accounting

**ACCTG-430 ACCOUNTING FOR GOVERNMENTAL AND NOT-FOR-PROFIT ORGANIZATIONS (4)**
Lecture 64 - 72 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: ACCTG-1A Financial Accounting
Introduction to the fundamentals of governmental and not-for-profit accounting. Emphasis on accounting for the various fund types and restrictions relevant to government and not-for-profit agencies with both theoretical and practical aspects explored.
TOP Code: 0502.00 - Accounting

**ACCTG-435 PAYROLL ACCOUNTING (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: ACCTG-1A Financial Accounting ACCTG-480 Applied Accounting I or ACCTG-481 Applied Accounting II
Comprehensive overview of federal and state payroll laws and their effect on payroll records and required government reports. Course may be taken every three years as needed to maintain currency with payroll laws.
TOP Code: 0502.00 - Accounting

**ACCOUNTING AND FINANCIAL PLANNING - ACCTGFS**

**ACCTGFS-440 INTRODUCTION TO FINANCIAL PLANNING (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Introduction to the concepts of the personal financial planning process, including budgeting, cash flow, debt considerations, the economic environment, wealth accumulation, and retirement concerns. Examination of regulation and licensing of investment advisors within the financial planning profession.
TOP Code: 0504.00 - Banking and Finance

**ACCTGFS-442 FUNDAMENTALS OF FINANCE AND INVESTING (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Introduction to finance theory and its application to investment decisions involving stocks, bonds, mutual funds, government securities, options, and real estate. Topics include asset allocation principles, modern portfolio theory, investment tools and strategies, diversification, and tax implications of investments.
TOP Code: 0504.00 - Banking and Finance
ACCTGFS-453 U.S. AND CALIFORNIA INCOME TAX PREPARATION (4)
Lecture 64 - 72 hours.
Grading: Letter Grade (Degree-applicable)
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 as fulfilling the 60-hour qualifying education requirement imposed by the State of California for becoming a Registered Tax Preparer.
TOP Code: 0502.10 - Tax Studies

ACCTGFS-465 FINANCIAL ACCOUNTING FOR THE NON-ACCOUNTING MAJOR (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Creation, use, and interpretation of accounting data by the non-accounting business major, from an entrepreneurial perspective. Topics include: business structure and financial statement analyses; forecasted financial statements; cash management and budgeting, including capital and operating budgets; management of receivables and payables; and an overview of financing options, banking relations, and credit management.
TOP Code: 0502.00 - Accounting

AMERICAN SIGN LANGUAGE - ASL

ASL-1 ELEMENTARY AMERICAN SIGN LANGUAGE (4)
Lecture 64 - 76 hours. Laboratory 192 - 228 hours.
Grading: Letter Grade (CSU; UC)
Study of American Sign Language (ASL), including an introduction to current and historical aspects of deaf culture. Skills focus on the basic principles of phrasing, vocabulary, sentence patterns, manual counting and spelling, semantics, and the development of expressive and receptive abilities. Ten hours of supplemental learning in a Success Center that supports this course is required. This course corresponds to the first year of high school ASL.

ASL-2 ELEMENTARY AMERICAN SIGN LANGUAGE (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: ASL-1 Elementary American Sign Language Or one year of high school American Sign Language.
Continued systematic study of the structure, vocabulary, and conversational strategies of American Sign Language (ASL). Skills focus on the basic principles of phrasing, sentence patterns, manual counting and spelling, semantics, and the development of expressive and receptive abilities. Ten hours of supplemental learning in a Success Center that supports this course is required.

ASL-3 INTERMEDIATE AMERICAN SIGN LANGUAGE (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: ASL-2 Elementary American Sign Language Or two years of high school American Sign Language.
Continued study and review of the structure, vocabulary, and conversational strategies of American Sign Language (ASL). Review of ASL grammar, with special emphasis on idiomatic constructions. Continued study of the American Deaf culture, history, community, and language; thereby promoting an understanding of the wide variety of cultural issues concerning the Deaf community. Ten hours of supplemental learning in a Success Center that supports this course is required.

ASL-4 INTERMEDIATE AMERICAN SIGN LANGUAGE (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: ASL-3 Intermediate American Sign Language
Continued study and review of the structure, vocabulary, grammar, and conversational strategies of American Sign Language (ASL). Further development and refinement of ASL fluency in both productive and receptive skills, including mastery of ASL sentence structures. Appreciation and application of Deaf cultural norms, values, and behaviors. Ten hours of supplemental learning in a Success Center that supports this course is required.

ASL-18 INTRODUCTION TO DEAF STUDIES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: ASL-1 Elementary American Sign Language
Overview of Deaf history and the origins of American Sign Language. Introduction to the basic issues of Deaf culture and communication. Students will gain an overview of historical and contemporary issues and people in the Deaf community. This course introduces students to the wide variety of issues involved in Deaf Studies, including linguistics, education, sociology, psychology, and interpreting.

ANTHROPOLOGY - ANTHRO

ANTHRO-1 INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: Eligibility for ENGL-1A as determined by the Chaffey assessment process.
This course introduces the concepts, methods of inquiry, and scientific explanations for biological evolution and their application to the human species. Issues and topics will include, but are not limited to, genetics, evolutionary theory, human variation and bio cultural adaptations, comparative primate anatomy and behavior, and the fossil evidence for human evolution. The scientific method serves as foundation of the course. (C-ID ANTH 110)

ANTHRO-1L LABORATORY FOR BIOLOGICAL ANTHROPOLOGY (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Corequisite: ANTHRO-1 Introduction to Biological Anthropology (may be taken previously).
Optional laboratory experience coordinated with Anthropology 1. Comparative study of both human and non-human primates, human variation, evolution, genetics, forensic anthropology, and the primate fossil record. (C-ID ANTH 115 L)

ANTHRO-2 INTRODUCTION TO ARCHAEOLOGY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Other: Eligibility for ENGL-1A as determined by the Chaffey assessment process.
This course is an introduction to the study of concepts, theories, data and models of anthropological archaeology that contribute to our knowledge of the human past. The course includes a discussion of the nature of scientific inquiry; the history and interdisciplinary nature of archaeological research; dating techniques; methods of survey, excavation, analysis, and interpretation; cultural resource management; professional ethics; and selected cultural sequences. (C-ID ANTH 150)
ANTHRO-3 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Other: Eligibility for ENGL-1A as determined by the Chaffey assessment process.
This course explores how anthropologists study and compare human culture. Cultural anthropologists seek to understand the broad arc of human experience focusing on a set of central issues: how people around the world make their living (subsistence patterns); how they organize themselves socially, politically and economically; how they communicate; how they relate to each other through family and kinship ties; what they believe about the world (belief systems); how they express themselves creatively (expressive culture); how they make distinctions among themselves such as through applying gender, racial and ethnic identity labels; how they have shaped and been shaped by social inequalities such as colonialism; and how they navigate culture change and processes of globalization that affect us all. Ethnographic case studies highlight these similarities and differences, and introduce students to how anthropologists do their work, employ professional anthropological research ethics and apply their perspectives and skills to understand humans around the globe. May be offered as an Honors course.
(C-ID ANTH 120)

ARABIC - ARABIC

ARABIC-1 ELEMENTARY MODERN STANDARD ARABIC (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Introduction to the four basic language skills in functional modern Arabic. Aural, oral, reading, and writing. Students learn the basics of Arabic script and pronunciation while building a foundational vocabulary. Arabic cultural norms, values, and customs are explored and serve as a basis for additional skill-building practice. Ten hours of supplemental learning in a Success Center that supports this course is required for reinforcement of language skills. Corresponds to the first year of high school Arabic.

ARABIC-2 ELEMENTARY MODERN STANDARD ARABIC (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: ARABIC-1 Elementary Modern Standard Arabic Or one year of high school Arabic.
Continued presentation of the four basic language skills in functional modern Arabic - aural, oral, reading, and writing. Skills focus on the continuing practice of Arabic script, correct pronunciation, vocabulary expansion, and applying the rules of grammar and tense to simple declarative sentences and short conversations. Arabic cultural norms, values, and customs are explored and serve as a basis for additional skill-building practice. Ten hours of supplemental learning in a Success Center that supports this course is required for reinforcement of language skills. Corresponds to the second year of high school Arabic.

ARABIC-3 INTERMEDIATE MODERN STANDARD ARABIC (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: ARABIC-2 Elementary Modern Standard Arabic or 2 years of high school Arabic.
Review of basic Arabic grammar. Introduction to more complex sentence structures and verb tenses. Students use Modern Standard Arabic at an intermediate level in speaking, listening, reading, and writing. Includes intermediate uses of Modern Standard Arabic alphabet, conversation strategies, and cultural interactions. Arabic cultural norms, values, and customs are explored and serve as a basis for additional skill-building practice. Ten hours of supplemental learning in a Success Center that supports this course is required.
TOP Code: 1112.00 - Arabic

ARABIC-4 INTERMEDIATE MODERN STANDARD ARABIC (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: ARABIC-3 Intermediate Modern Standard Arabic
Continued study of Modern Standard Arabic leading to a more accurate understanding and use of the language through placing equal emphasis on advanced-level speaking, reading, writing, and listening skills. Sophisticated vocabulary and complex grammatical structures are applied to speaking and writing assignments. Reading comprehension in Arabic is developed in the context of cultural texts and themes. Ten hours of supplemental learning in a Success Center that supports this course is required.

ART - ART

ART-10 FUNDAMENTALS OF DESIGN IN TWO DIMENSIONS (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Introduction to the concepts, applications, and historical references related to two-dimensional art and composition, including the study of the basic principles and elements of line, shape, texture, value, color and spatial illusion. Development of a visual vocabulary for creative expression.
(C-ID ARTS 100)

ART-12 FUNDAMENTALS OF DESIGN IN THREE DIMENSIONS (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: ART-10 Fundamentals of Design in Two Dimensions
Introduction to design in three-dimensions with applications in a variety of sculptural media. Emphasis on the basic elements and organizing principles of design, analysis of form, as well as the implications of space and time. This is a problem-solving course that encourages ideas/concepts, innovative techniques, and manipulation of media in the development of three-dimensional projects.
(C-ID ARTS 101) TOP Code: 1002.00 - Art (Painting, Drawing, and Sculpture)

ART-14 INTRODUCTION TO DRAWING (3)
Lecture 24 - 29 hours. Laboratory 72 - 86 hours.
Grading: Letter Grade (CSU; UC)
Introduction to freehand drawing with an emphasis on drawing from direct observation. Focuses on the development of perceptual skills and the fundamentals of composition. Exploration of traditional and experimental approaches using a variety of black-and-white media.
(C-ID ARTS 110)

ART-15 COLOR THEORY (3)
Lecture 24 - 29 hours. Laboratory 72 - 86 hours.
Grading: Letter Grade (CSU; UC)
A study of the principles, theories, and applications of additive and subtractive color in two dimensions. Topics include major historical and contemporary color systems, production of projects in applied color, and the elements of design as they apply to color.
(C-ID ARTS 270)

ART-16 INTRODUCTION TO PAINTING (3)
Lecture 24 - 29 hours. Laboratory 72 - 86 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: ART-14 Introduction to Drawing or ART-10 Fundamentals of Design in Two Dimensions
Introduction to painting in acrylic media. Exploration of traditional and contemporary approaches and techniques. Development of painting as a means of self-expression. Includes fundamentals of color theory and composition as applied to painting.
(C-ID ARTS 210)
ART-18 INTRODUCTION TO CERAMICS (3)
Lecture 24 - 27 hours. Laboratory 72 - 81 hours.
Grading: Letter Grade
Advisory: ART-10 Fundamentals of Design in Two Dimensions
Introduction to materials, tools, and processes used in making pottery and other ceramic art. Student learns use of potter's wheel, hand building, glazing techniques, and traditional ceramics terminology as well as contemporary concepts of fired clay as art.
TOP Code: 1002.30 - Ceramics

ART-20 CERAMIC SCULPTURE (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
Advisory: ART-12 Fundamentals of Design in Three Dimensions
Introduction to 3 dimensional design, sculptural processes, concepts, and materials with the emphasis on clay.
TOP Code: 1002.20 - Sculpture

ART-30 FIGURE DRAWING (3)
Lecture 24 - 29 hours. Laboratory 72 - 86 hours.
Grading: Letter Grade
Advisory: ART-16 Introduction to Painting or ART-10 Fundamentals of Design in Two Dimensions
Drawing the human form from the model with a focus on structure, anatomy, and its expressive design with particular emphasis on descriptive, interpretive, and contemporary approaches to drawing the figure as well as conceptual strategies. Includes exploration of various methods, techniques, and media in life drawing.
(C-ID ARTS 200) TOP Code: 1002.10 - Painting and Drawing

ART-32 INTERMEDIATE DRAWING (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
Advisory: ART-12 Fundamentals of Design in Three Dimensions
Exploration of artistic concepts, styles, and creative expression related to intermediate-level drawing, focusing on complex subject matter and concepts using a variety of color media, techniques, and methodologies. Students in this course will build on fundamental drawing skills to develop personalized approaches to content and materials in exercises covering multiple historical and contemporary approaches to drawing. Students encouraged to develop work for a portfolio. (C-ID ARTS 205)

ART-34 INTERMEDIATE PAINTING (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
Advisory: ART-10 Fundamentals of Design in Two Dimensions
Continued study of painting in acrylic media. Emphasis placed on solving complex formal and conceptual problems. Individual research in contemporary painting practices. Students encouraged to develop work for a portfolio.
TOP Code: 1002.10 - Painting and Drawing

ART-35 INTERMEDIATE CERAMICS (3)
Lecture 24 - 27 hours. Laboratory 72 - 81 hours.
Grading: Letter Grade
Prerequisite: ART-18 Introduction to Ceramics
Projects designed to further the student's ability to understand and manipulate clay and glazes at the intermediate level. Use of different types of kiln firings, as well as techniques and vessels appropriate for 2nd semester studies. This is primarily dealing with fabrication on the wheel, but also may include slip casting projects and beginning glaze experimentation/mixing.
TOP Code: 1002.30 - Ceramics

ART-40 ADVANCED CERAMICS (3)
Lecture 24 - 27 hours. Laboratory 72 - 81 hours.
Grading: Letter Grade
Advisory: ART-35 Intermediate Ceramics
Prerequisite: ART-20 Ceramic Sculpture
Exploration of more in depth wheel and off-wheel sculptural projects. Attention is given towards the development of personal aesthetic and conceptual focus. Designed to prepare students for portfolio development.
TOP Code: 1002.30 - Ceramics

ART-44 MIXED-MEDIA STUDIO AND THEORY (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
Advisory: ART-12 Fundamentals of Design in Three Dimensions
Designed to explore experimental uses of materials and concepts through techniques such as collage, assemblage, installation and site-specific works, as well as contemporary art and craft. Development of both 2D and 3D mixed-media projects and may include fiber, metal, wood, plastic, and found objects. Emphasis on technical processes, conceptual strategies, and personal expression.
TOP Code: 1002.00 - Art (Painting, Drawing, and Sculpture)

ART-50 INTRODUCTION TO SCULPTURE (4)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
Advisory: ART-12 Fundamentals of Design in Three Dimensions
Introduction to three-dimensional sculptural principles, techniques, and concepts utilizing a wide range of materials and practices in three and four dimensions. Various sculpture methods are practiced with attention to creative self-expression and historical context.
TOP Code: 1002.20 - Sculpture

ART-62A ILLUSTRATION I (3) [Cx]
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
Advisory: ART-16 Introduction to Painting or ART-10 Fundamentals of Design in Two Dimensions
Prerequisite: ART-14 Introduction to Drawing
Introduction to the field of illustration. Emphasis on the development of basic skills in traditional media and understanding fundamental concepts of visual communication.
TOP Code: 1013.00 - Commercial Art

ART-62B ILLUSTRATION II (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
Advisory: ART-12 Fundamentals of Design in Three Dimensions
Prerequisite: ART-62A Illustration I
Techniques and concepts in different major areas of illustration. Emphasis on developing creative problem-solving skills to effectively communicate ideas and concepts using traditional media.
TOP Code: 1030.00 - Graphic Art and Design
ART-63 INTRODUCTION TO GRAPHIC DESIGN (4) [Cx]
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
An Introduction to visual communications in the field of graphic design. The course includes: concept development, the creative design process, production, and presentation techniques through the development of design projects on various media using Adobe Photoshop and Illustrator. Design and production skills including beginning computer software skills.

Students develop conceptual and technical abilities to amplify content through composition, image, typography, symbolism and experimentation. Emphasis will be placed on the application of basic design principles to graphic design problems in visual communications. Design solutions will explore the potential of strategy, concept, and design utilizing composition, layout, illustration, photography, typography, and symbolism. Exercises emphasize the different aspects of analytical and creative design through typical media, for example: a brochure, poster, or advertising billboard.

Topics include: Fundamental studies in the history, theories, techniques, and practices of professional graphic design, developing graphic design projects for traditional and emerging technologies. This course aligns with ARTS 250
TOP Code: 0614.60 - Computer Graphics and Digital Imagery

ART-73 TYPOGRAPHY AND LAYOUT (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
Prerequisite: ART-63 Introduction to Graphic Design or ART-82 Introduction to Digital Media
Introduction to the principles and practice of the most universally important skills in the design field. Typography and page composition for all design contexts. Projects are directed toward both print media and screen-based projects presentations.

ART-82 INTRODUCTION TO DIGITAL MEDIA (4) [Cx]
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
Advisory: ART-10 Fundamentals of Design in Two Dimensions And basic keyboarding skills are recommended.
Introduction to design and development of time based digital media. Course will cover motion graphics, video, animation, sound, social media and web uploading using Adobe After Effects, Premiere Pro, Photoshop, and Illustrator.

ART-83 WEB DESIGN (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Advisory: ART-82 Introduction to Digital Media
Prerequisite: ART-63 Introduction to Graphic Design
Introduction to design and production of Websites using Adobe Muse, Animate, Flash, Photoshop and Illustrator. Topics include dynamic typography, interface design, streaming video, web animation, social media integration, and portfolio production for the web.

ART-89 STUDENT INVITATIONAL EXHIBITION (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Student must pass faculty review of creative project proposal and portfolio in November for the following Spring term course and exhibition. Interested students should contact an art or photography faculty member no later than September 1st. Portfolios and applications are due early November. Honors course for highly motivated studio art, digital media, and photography students who meet portfolio requirements. This course involves in-depth independent research involving critical evaluation of concepts and ideas in the context of contemporary artistic expression, as well as rigorous exploration of media and techniques. In collaboration with the Wignall Museum of Contemporary Art Director/Curator and discipline faculty, selected students cooperatively undertake all phases of mounting a professional quality exhibition of their artworks.
TOP Code: 1001.00 - Fine Arts, General

ART-98ABC INDEPENDENT STUDY: ART (1 - 3)
Grading: Letter Grade  (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Instructor signature is required for registration.
Course is designed for the capable, highly-motivated art student who wishes to explore and develop an independent project in the visual arts. Student and instructor must reach agreement concerning the topic and scope of the project prior to student's registration. Critical thinking and technical skills are expected.

ART-407 HISTORY OF DESIGN (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Study of visual communication integrating typography and image. History of graphic design from the invention of writing to the present electronic age. Relationships between art movements, social settings, and graphic communications styles. Emphasis on Western design, with exploration of non-European cultures.

ART-484 MOTION GRAPHIC ANIMATION (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: ART-63 Introduction to Graphic Design or ART-82 Introduction to Digital Media
Introduction motion graphics animation for design production. Course will cover the use of Adobe After effects as it applies to motion graphics, visual effects, compositing, and animation. Topics include, motion typography, stop motion, reel production, timing, organization and workflow management.

ART-474 IDENTITY SYSTEM DESIGN (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: ART-73 Typography and Layout
The creation of visual identity programs, also known as branding, provides integrated graphic and typographic systems for identifying businesses and organizations in all media and communication contexts. It explains the formal and conceptual organizing considerations that effective branding systems are built on, from initial visual research and concept generation, to final implementation. This course is a final portfolio development class for all Digital Media certificate and degree programs.

ART-478 ILLUSTRATION ON THE COMPUTER (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: ART-82 Introduction to Digital Media or ART-63 Introduction to Graphic Design
Introduction to commercial illustration using the computer. Applying understanding of the design features of software into the problem solving process of commercial assignments, ranging from editorial and promotional expression, to informational and children's book illustration.
TOP Code: 0614.60 - Computer Graphics and Digital Imagery
ART-822 EDITING DIGITAL MEDIA (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: ART-82 Introduction to Digital Media or ART-63 Introduction to Graphic Design
Introduction to editing techniques for digital media production. Course will cover the use of Adobe Premiere Pro in conjunction with digital SLR's and digital audio field recorders. Topics include the history and theories of sound, film, and video art, process and production of time-based media, reel production, timing, organization and workflow management.

ART-888 PORTFOLIO AND PRESENTATION (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: and Completion of a substantial number of required courses in an art, graphic communication, or visual communications major or certificate. Limitation on Enrollment (e.g. Performance tryout or audition): Instructor signature must be obtained prior to enrollment in this course.
Preparation and presentation of portfolio in a professional manner. Emphasis on appropriate selection of work, concept improvement, and methods of presentation. Awarding of certificate is dependent upon successful completion of this course.

ART HISTORY - ARTH

ARTH-3 SURVEY OF WESTERN ART FROM PREHISTORY THROUGH THE MIDDLE AGES (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of the architecture, sculpture, and painting of past cultures from the ancient beginnings of art of the Western World through the Medieval period. Analysis of how symbolism and artistic style reflect the daily life, philosophy, religion, values, and concerns of each culture and historical period. (C-ID ARTH 110)

ARTH-5 SURVEY OF WESTERN ART FROM RENAISSANCE TO CONTEMPORARY (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of the architecture, sculpture, and art of past cultures of the Western World from Renaissance through the Modern period. Analysis of how symbolism, visual concepts, and artistic style reflect the philosophy, religion, values, and concerns of each culture and historical period. (C-ID ARTH 120)

ARTH-7 ARTS OF AFRICA, OCEANIA, AND INDIGENOUS NORTH AMERICA (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of visual and material culture within the historical context of selected civilizations of the South Pacific islands, sub-Saharan Africa, and indigenous North America from ancient to modern times. (C-ID ARTH 140)

ARTH-9 ART OF THE ANCIENT AMERICAS (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of visual and material culture within the historical context of selected ancient American civilizations in Mexico, Central America, and South America up to European contact. (C-ID ARTH 145)

ARTH-11 SURVEY OF ASIAN ARTS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of the art, architecture, religion, and history of India, south and southeast Asia, China, Korea, and Japan from prehistory to modern times. Art styles and characteristics unique to each culture and their function within the ideology of that society are considered. Problems involved in viewing Asian art outside of its original cultural context are discussed at length. (C-ID ARTH 130) TOP Code: 1001.00 - Fine Arts, General

ARTH-19 CONTEMPORARY ART: 1945-PRESENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
This course focuses on the major artistic developments in the United States and Europe from the end of World War II to the present. Tracing the shift away from traditional painting and sculpture to new media including performance, video, installation and photography, this course examines these art practices in the context of historical events and cultural phenomena including the Cold War and Vietnam Wars, the expansion of mass media and consumerism, the emergence of social liberation movements (including Civil Rights, Feminist, and Chicano), and the globalization of the world economies and art networks.

ASTRONOMY - ASTRON

ASTRON-26 STARS AND GALAXIES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Overview of the universe beyond our solar system. Understand progressively larger structures in Astronomy, such as stars, galaxies, and extra-galactic structures by understanding the processes that shape them. Use observations (from telescopes, spacecraft, neutrino and gravity wave detectors, etc.) the scientific method, and basic physical concepts. Briefly consider relativity, black holes, spacetime, and the history and fate of the universe. TOP Code: 1911.00 - Astronomy

ASTRON-27 LIFE IN THE UNIVERSE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Study of extraterrestrial life in the Universe. Includes scientific methods for finding extraterrestrial life, the conditions and processes relevant to life in the Universe, and the origin and evolution of life on Earth. TOP Code: 1911.00 - Astronomy

ASTRON-35 PLANETS AND THE SOLAR SYSTEM WITH LAB (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Study of planets, moons, and other bodies within solar systems. Using observations from telescopes and spacecraft, the scientific method and basic concepts from physics, geology, and other sciences to identify and explain formative processes and unique characteristics. Laboratory activities include formulating a scientific investigation, selecting the appropriate tools and methods of planetary science to image, measure, and/or observe phenomena, analyzing data, identifying error, and reporting results.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture Hours</th>
<th>Laboratory Hours</th>
<th>Grading</th>
<th>Prerequisites</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTOTEC-10</td>
<td>SERVICE AND REPAIR (4) [Cx]</td>
<td>48 - 54 hours</td>
<td>48 - 54 hours</td>
<td>Letter Grade (Degree-applicable)</td>
<td>Introduction to the automotive service industry. Basic principles of the operation of engines, transmissions, driveline, steering, suspension and braking systems, and heating and air conditioning systems. Scheduled and preventative automotive maintenance and minor services are performed. Students also develop a written career plan, outlining their educational, certification, and licensing goals.</td>
<td>TOP Code: 0948.00 - Automotive Technology</td>
</tr>
<tr>
<td>AUTOTEC-15</td>
<td>AUTO ELECTRICITY AND ELECTRONICS (2) [Cx]</td>
<td>24 - 29 hours</td>
<td>24 - 29 hours</td>
<td>Letter Grade (Degree-applicable)</td>
<td>Basic automotive electricity and electronics. Diagnosis of typical automotive electrical concerns using wiring diagrams/schematics and various testers. Emphasis on the use of digital multimeters for troubleshooting. Foundation course for electricity and electronics subject matter found in other automotive technology courses.</td>
<td>TOP Code: 0948.00 - Automotive Technology</td>
</tr>
<tr>
<td>AUTOTEC-407</td>
<td>INTRODUCTION TO HYBRID VEHICLES (2.5)</td>
<td>24 - 27 hours</td>
<td>48 - 54 hours</td>
<td>Letter Grade (Degree-applicable)</td>
<td>Lecture 24 - 27 hours. Laboratory 24 - 27 hours.</td>
<td>TOP Code: 0948.00 - Automotive Technology</td>
</tr>
<tr>
<td>AUTOTEC-416</td>
<td>BASIC AUTOMOTIVE AIR CONDITIONING SYSTEMS (2) [Cx]</td>
<td>24 - 27 hours</td>
<td>24 - 27 hours</td>
<td>Letter Grade (Degree-applicable)</td>
<td>Computer control of the ignition, fuel, and emissions systems. Emphasis on diagnosis and correction of conditions affecting engine performance. This course - together with Automotive Technology 422 - supports the Student Learning Outcomes of the Automotive Technology program by preparing students to take the Automotive Service Excellence (ASE) A8 Technician Certification exam, or the BAR California A8 Equivalent exam.</td>
<td>TOP Code: 0948.00 - Automotive Technology</td>
</tr>
<tr>
<td>AUTOTEC-417</td>
<td>BRAKES (4) [Cx]</td>
<td>48 - 54 hours</td>
<td>48 - 54 hours</td>
<td>Letter Grade (Degree-applicable)</td>
<td>Admissions: AUTOTEC-10 Service and Repair and AUTOTEC-15 Auto Electricity and Electronics</td>
<td>TOP Code: 0948.00 - Automotive Technology</td>
</tr>
<tr>
<td>AUTOTEC-418</td>
<td>SUSPENSION AND STEERING SYSTEMS (4) [Cx]</td>
<td>48 - 54 hours</td>
<td>48 - 54 hours</td>
<td>Letter Grade (Degree-applicable)</td>
<td>Advisory: AUTOTEC-10 Service and Repair and AUTOTEC-15 Auto Electricity and Electronics</td>
<td>TOP Code: 0948.00 - Automotive Technology</td>
</tr>
<tr>
<td>AUTOTEC-422</td>
<td>FUEL, IGNITION, AND EMISSION CONTROL SYSTEMS (5) [Cx]</td>
<td>48 - 54 hours</td>
<td>96 - 108 hours</td>
<td>Letter Grade (Degree-applicable)</td>
<td>Prerequisite: AUTOTEC-10 Service and Repair or AUTOTEC-450 General Automotive Technician A and AUTOTEC-15 Auto Electricity and Electronics or AUTOTEC-455 General Automotive Technician B - 2 years or more of related professional work experience. An introduction to the operational theory, maintenance, and other service requirements for gasoline-electric hybrid vehicles. Safety requirements specific to hybrid vehicles are stressed.</td>
<td>TOP Code: 0948.00 - Automotive Technology</td>
</tr>
<tr>
<td>AUTOTEC-423</td>
<td>ENGINE MANAGEMENT SYSTEMS AND DRIVABILITY (4) [Cx]</td>
<td>48 - 54 hours</td>
<td>48 - 54 hours</td>
<td>Letter Grade (Degree-applicable)</td>
<td>Prerequisite: AUTOTEC-422 Fuel, Ignition, and Emission Control Systems or AUTOTEC-455 General Automotive Technician B</td>
<td>TOP Code: 0948.00 - Automotive Technology</td>
</tr>
<tr>
<td>AUTOTEC-427</td>
<td>ENGINE OPERATION AND SERVICE (5) [Cx]</td>
<td>48 - 54 hours</td>
<td>96 - 108 hours</td>
<td>Letter Grade (Degree-applicable)</td>
<td>Prerequisite: AUTOTEC-10 Service and Repair or AUTOTEC-450 General Automotive Technician A</td>
<td>TOP Code: 0948.00 - Automotive Technology</td>
</tr>
</tbody>
</table>
COURSE DESCRIPTIONS

AUTOTEC-429 ADVANCED AUTOMOTIVE ELECTRICAL SYSTEMS (4) [Cx]
Lecture 40 - 48 hours. Laboratory 72 - 86 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: AUTOTEC-15 Auto Electricity and Electronics or AUTOTEC-455 General Automotive Technician A
Provides the knowledge and skills needed by automotive machinists. Reconditioning of automotive gasoline and diesel engines, including inspection, measuring, and machining of valve train components and construction of cylinder head assemblies. TOP Code: 0948.00 - Automotive Technology

AUTOTEC-430 ENGINE REBUILDING - UPPER ENGINE (5)
Lecture 48 - 54 hours. Laboratory 96 - 108 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: AUTOTEC-10 Service and Repair or AUTOTEC-450 General Automotive Technician A
Provides the knowledge and skills needed by automotive machinists. Reconditioning of automotive gasoline and diesel engines, including inspection, measuring, and machining of lower engine components and the reassembly of cylinder blocks. TOP Code: 0948.00 - Automotive Technology

AUTOTEC-431 ENGINE REBUILDING - LOWER ENGINE (5)
Lecture 48 - 54 hours. Laboratory 96 - 108 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: AUTOTEC-10 Service and Repair or AUTOTEC-450 General Automotive Technician A
Provides the knowledge and skills needed by automotive machinists. Reconditioning of automotive gasoline and diesel engines, including inspection, measuring, and machining of lower engine components and the reassembly of cylinder blocks. TOP Code: 0948.00 - Automotive Technology

AUTOTEC-432 MANUAL AND AUTOMATIC TRANSMISSIONS, TRANSAXLES AND DRIVE TRAINS (5) [Cx]
Lecture 48 - 54 hours. Laboratory 96 - 114 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: AUTOTEC-10 Service and Repair or AUTOTEC-450 General Automotive Technician A and AUTOTEC-15 Auto Electricity and Electronics or AUTOTEC-429 Advanced Automotive Electrical Systems or AUTOTEC-455 General Automotive Technician B
Diagnosis, maintenance, repair and overhaul of automatic and manual transmissions, transaxles and drive trains to include four-wheel and all-wheel drive systems. Special emphasis on the use of diagnostic equipment and methods for accurately determining transmission and transaxle conditions. TOP Code: 0948.00 - Automotive Technology

AUTOTEC-435 HIGH PERFORMANCE ENGINE REBUILDING AND BLUEPRINTING (5)
Lecture 48 - 54 hours. Laboratory 96 - 108 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: AUTOTEC-10 Service and Repair or AUTOTEC-450 General Automotive Technician A
Students develop advanced skills in automotive machining operations, use of precision measuring tools, and high performance engine modification and assembly techniques. Upon completion of this course, students will be able to blueprint an engine to industry standards. TOP Code: 0948.00 - Automotive Technology

AUTOTEC-443 ENGINE AND EMISSION CONTROL TRAINING LEVEL 1 (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: AUTOTEC-10 Service and Repair or AUTOTEC-450 General Automotive Technician A and AUTOTEC-15 Auto Electricity and Electronics or AUTOTEC-455 General Automotive Technician B
The Engine and Emission Control Training is intended to provide students with fundamental knowledge of engine and emission control theory, design, and operation. Students who successfully complete this training will have met the first step of the Bureau of Automotive Repair's (BAR) training requirements for inexperienced or minimally experienced candidates for the Smog Check Inspector License.
Candidates for the Smog Check Inspector license who do not meet BAR specified requirements must complete this training before proceeding to Level 2 Smog Check Training. Candidates who meet the BAR specified requirements are not required to complete this training.
BAR specified requirements: Possess ASE A6, A8, and L1 certification; or possess an AA/AS degree or Certificate in automotive technology and have 1 year experience; or have 2 years' experience and have completed BAR specified training.
TOP Code: 0948.00 - Automotive Technology

AUTOTEC-450 GENERAL AUTOMOTIVE TECHNICIAN A (12)
Lecture 144 - 171 hours. Laboratory 144 - 171 hours.
Grading: Letter Grade (Degree-applicable)
Designed for students who want the occupational training required for employment as an automotive service technician. Content is similar to other courses offered individually - such as Brakes; and Steering and Suspension - with more emphasis placed on development of marketable skills.
TOP Code: 0948.00 - Automotive Technology

AUTOTEC-455 GENERAL AUTOMOTIVE TECHNICIAN B (12)
Lecture 144 - 171 hours. Laboratory 144 - 171 hours.
Grading: Letter Grade (Degree-applicable)
Designed for students who want the occupational training required for employment as an automotive service technician. Content is similar to other courses offered individually - such as Automotive Electrical Systems A; Fuel, Ignition and Emission Control Systems; and Basic Automotive Air Conditioning Systems - with more emphasis placed on developing marketable skills.
TOP Code: 0948.00 - Automotive Technology

AVIATION MAINTENANCE TECHNOLOGY - AMT

AMT-15 INTRODUCTION TO AVIATION MAINTENANCE FOR AIRFRAME AND POWERPLANT (14)
Lecture 144 - 162 hours. Laboratory 240 - 270 hours.
Grading: Letter Grade (CSU)
Aerospace materials, hardware, manufacturing practices and safety, blueprint reading, inspection techniques, aircraft servicing, cleaning and corrosion control and FAA regulations as required for an FAA Airframe and/or Powerplant Technician's License. Includes aircraft mathematics, physics, aerodynamics and flight controls, weight and balance calculations and basic AC and DC electricity required for an FAA Airframe and/or Powerplant Technician's License. This course includes General Aeronautics laboratory hours to fulfill FAA practical aeronautical applications in aerodynamics, physics, weight and balance, FAA and manufacturers publications, aircraft materials and processes, blueprint reading, aircraft servicing, electricity and mathematics.
TOP Code: 0950.00 - Aeronautical and Aviation Technology
AMT-16A AVIATION MATERIALS, PROCESSES, INSPECTIONS & REGULATIONS (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Corequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
General aeronautics laboratory course to fulfill FAA practical aeronautical applications in aerodynamics, FAA and manufacturer's publications, aircraft materials and processes, blueprint reading, aircraft servicing and mathematics.
TOP Code: 0950.00 - Aeronautical and Aviation Technology

AMT-16B AVIATION SCIENCE (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Corequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
General aeronautics laboratory course to fulfill FAA practical aeronautical applications in physics, weight and balance, electricity and mathematics.
TOP Code: 0950.00 - Aeronautical and Aviation Technology

AMT-25 POWERPLANT: AIRCRAFT RECIPROCATING ENGINES (7)
Lecture 72 - 81 hours.  Laboratory 120 - 135 hours.
Grading: Letter Grade  (CSU)
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Theory, fundamentals, construction, maintenance, and operation of reciprocating and turbojet aircraft engines. Related training for the FAA powerplant maintenance technician's license. Lab emphasizes reciprocating engine overhaul, repair, installation and operation.

AMT-26 POWERPLANT: ENGINE INSTRUMENTATION, LUBRICATION, ELECTRICAL (7)
Lecture 72 - 81 hours.  Laboratory 120 - 135 hours.
Grading: Letter Grade  (CSU)
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Aircraft reciprocating engine instrumentation, lubrication systems, electrical and ignition systems. Lab emphasizes reciprocating engine instrumentation and ignition systems overhaul, repair, installation and operation.

AMT-27 POWERPLANT: RECIPROCATING ENGINE FUEL & AUXILIARY SYSTEMS (7)
Lecture 72 - 86 hours.  Laboratory 120 - 143 hours.
Grading: Letter Grade  (CSU)
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Aircraft reciprocating engine fuel, propeller, and auxiliary systems overhaul, repair, installation, and operation. Lab emphasizes engine induction, cooling, and exhaust systems.

AMT-28A POWERPLANT: RECIPROCATING ENGINE INSPECTION (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Corequisite: AMT-25 Powerplant: Aircraft Reciprocating Engines (May be taken previously)
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Powerplant laboratory course to fulfill FAA practical applications relating to aircraft reciprocating engine inspection, air worthiness directives, and type certificate data sheet compliance. Projects include reciprocating engine on wing inspection (50 and 100 hour) for continued air worthiness and air worthiness directive and type certificate data sheet compliance.

AMT-28B POWERPLANT: ELECTRICAL SYSTEMS (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Corequisite: AMT-26 Powerplant: Engine Instrumentation, Lubrication, Electrical
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Powerplant laboratory course to fulfill FAA practical applications relating to aircraft powerplant electrical systems. Projects include engine starters, generators and their controls.

AMT-28C POWERPLANT: TURBINE ENGINE AUXILIARY SYSTEMS (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Corequisite: AMT-27 Powerplant: Reciprocating Engine Fuel & Auxiliary Systems
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Powerplant laboratory course to fulfill FAA practical applications relating to aircraft turbine engine auxiliary systems. Projects include turbine engine indicating, ignition, lubrication and fuel systems.

AMT-35 AIRFRAME STRUCTURES: FABRICATION, INSPECTION AND REPAIR (7)
Lecture 72 - 81 hours.  Laboratory 120 - 135 hours.
Grading: Letter Grade  (CSU)
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Aircraft metallic and non-metallic structural fabrication, inspection, and repair methods. Related training for FAA airframe maintenance technician's license. Lab emphasizes sheet metal fabrication and repair, composite structures inspections, welding, and alignment of airframe structures.

AMT-36 AIRFRAME PRIMARY SYSTEMS (7)
Lecture 72 - 81 hours.  Laboratory 120 - 135 hours.
Grading: Letter Grade  (CSU)
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Aircraft electrical, hydraulic and landing gear systems. Related training for FAA airframe maintenance technician's license. Lab emphasizes electrical and hydraulic landing gear systems, lighting systems.

AMT-37 AIRFRAME SECONDARY SYSTEMS (7)
Lecture 72 - 81 hours.  Laboratory 120 - 135 hours.
Grading: Letter Grade  (CSU)
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Ice and rain protection systems; fire warning and extinguishing systems; pressurization systems; cockpit instrument systems; avionics systems; oxygen system inspection; antiskid warning systems; door warning lights; interior light systems. Related training for FAA airframe maintenance technician's license. Lab emphasizes ice and rain protection systems; fire warning and extinguishing systems; pressurization systems; cockpit instrument systems; avionics systems; oxygen system inspection; antiskid warning systems; door warning lights; interior light systems.
AMT-38A AIRFRAME STRUCTURE: STRUCTURE FABRICATION (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Corequisite: AMT-35 Airframe Structures: Fabrication, Inspection and Repair
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Airframe laboratory course to fulfill FAA practical applications relating to fabricating airframe structural components, paint application techniques, and inspections of painted surfaces.

AMT-38B AIRFRAME STRUCTURE: HYDRAULIC SYSTEMS (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Corequisite: AMT-36 Airframe Primary Systems
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Airframe laboratory course to fulfill FAA practical applications relating to inspection, operation, and repair of aircraft hydraulic landing gear systems.

AMT-38C AIRFRAME STRUCTURE: AIRCRAFT SECONDARY SYSTEMS AND COMPONENTS (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Corequisite: AMT-37 Airframe Secondary Systems
Prerequisite: AMT-15 Introduction to Aviation Maintenance for Airframe and Powerplant
Airframe laboratory course to fulfill FAA practical applications relating to the proper inspection, operation, and repair of fire-warning/fire extinguishing systems, ice warning systems, and anti-skid systems.

AMT-400 AIRCRAFT ELECTRICAL AND AVIONICS THEORY, REPAIR AND TROUBLESHOOTING (5)
Lecture 64 - 76 hours.  Laboratory 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: AMT-37 Airframe Secondary Systems
This class is a skills building course in the field of Aviation Maintenance Technology. It builds upon the skills and knowledge of the general aviation and airframe programs of study. This course covers the theory, inspection, repair and the diagnosis of modern aircraft electrical/avionics systems. Emphasis placed on electrical wiring interface system (EWIS), communication, navigation and data transmission systems used on general and commercial aviation, drones, and unmanned aerial vehicles (UAVs). This course content provides the knowledge to pass the NCATT (National Center for Aerospace and Transportation Technologies) AET (Aircraft Electronics Technician) test and receive the AET certification. The NCATT curriculum is the recognized leading standard in this area. The aviation industry and our advisory committee has identified the need for aviation technicians to have this advanced knowledge beyond the FAA AMT requirements.
TOP Code: 0950.40 - Aircraft Electronics (Avionics)

BIOLOGY - BIOL

BIOL-1 GENERAL BIOLOGY (4)
Lecture 48 - 54 hours.  Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Introduction to the major themes and principles in Biology through lecture, laboratory and field experiences. Students investigate topics ranging from molecules to the ecosystem. Meets general education requirements.

BIOL-2 ENVIRONMENTAL BIOLOGY (4)
Lecture 48 - 54 hours.  Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
An overview of ecosystem structure and function, with critical evaluation of human-caused ecological problems. Topics include: overpopulation, resource depletion, pollution, climate change, habitat fragmentation, and loss of biodiversity. Course includes a weekend field trip.
TOP Code: 0301.00 - Environmental Science

BIOL-3 CALIFORNIA NATURAL HISTORY (4)
Lecture 48 - 54 hours.  Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
An ecological introduction to California's natural communities. Lecture topics include: energetics, materials cycling, succession, and characteristics of natural communities. Laboratory stresses interrelationships among flora and fauna, geology, and climate, with emphasis on field recognition. Course includes an overnight field trip.

BIOL-10 CONCEPTS IN BIOLOGY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Introduction to the major themes and principles of biology including energy flow and metabolism, structure/function relationships, inheritance patterns, ecology, evolution, and diversity of biological organisms. Students investigate these themes through topics at various levels of organization ranging from molecules to ecosystems.
TOP Code: 0401.00 - Biology, General

BIOL-12 INTRODUCTION TO HUMAN GENETICS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
General introduction to the fundamentals of human heredity. Topics include patterns of inheritance, DNA structure and function, the role of mutation in genetic diseases and cancer, the interaction between genes and the environment, and recent advances in biotechnology and its impact on society.

BIOL-14 HEALTH SCIENCE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
Human health and wellness. Topics include mental health, nutrition, abuse of drugs, alcohol and tobacco, sexually transmitted diseases and other communicable and non-communicable diseases, physical fitness, and many other aspects of positive health. May satisfy the health education unit requirement for a teaching credential in the state of California.
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Description</th>
<th>Prerequisites/Requirements</th>
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<tbody>
<tr>
<td>BIOL-20</td>
<td>HUMAN ANATOMY (4)</td>
<td>Lecture 48 - 54 hours. Laboratory 48 - 54 hours. Grading: Letter Grade (CSU; UC)</td>
<td>Assessment Level: ENGL-1A Composition Eligibility for English 1A as determined by the Chaffey assessment process.</td>
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<td>A systematic study of the microscopic and macroscopic structures of the human body, from cellular to organ systems of organization. Emphasis on cell structures, integumentary, skeletal, muscular, respiratory, cardiovascular, nervous, sensory, digestive, urinary, endocrine, and reproductive systems. Includes considerations of pathologies and disorders of these systems. This course is a CalState/UC transferable course which is intended for biology, general education, kinesiology and health related majors. (C-ID BIOL 110B)</td>
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<tr>
<td>BIOL-22</td>
<td>HUMAN PHYSIOLOGY (4)</td>
<td>Lecture 48 - 54 hours. Laboratory 48 - 54 hours. Grading: Letter Grade (CSU; UC)</td>
<td>Prerequisite: BIOL-20 Human Anatomy and CHEM-9 Health Science Chemistry or CHEM-10 Introductory Chemistry Or 1 year of high school chemistry. The dynamic nature of life processes in the human body, including the physiology of the cell and the functions and interrelations of the organ systems. The course includes the study of the physiological principles, function, integration and homeostasis of the human body at the cellular, tissue, organ, organ system, and organism level. The Lab emphasizes experimentation and scientific reasoning. (C-ID BIOL 120 B)</td>
</tr>
<tr>
<td>BIOL-23</td>
<td>GENERAL MICROBIOLOGY (3)</td>
<td>Lecture 48 - 54 hours. Grading: Letter Grade (CSU; UC)</td>
<td>Prerequisite: BIOL-22 Human Physiology or BIOL-61 Introduction to Cell and Molecular Biology</td>
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<td>Introduction to microbiology, with strong emphasis on microorganisms pathogenic to humans. Topics include microbial morphology, genetics, taxonomy, and metabolism; infectious disease process; mechanisms of controlling microbes; and immunology.</td>
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<td>BIOL-23L</td>
<td>GENERAL MICROBIOLOGY LABORATORY (2)</td>
<td>Laboratory 96 - 108 hours. Grading: Letter Grade (CSU; UC)</td>
<td>Corequisite: BIOL-23 General Microbiology (may be taken previously). Introduction to microbiology laboratory techniques. Methods of culturing, staining, biochemically analyzing, and classifying microorganisms.</td>
</tr>
<tr>
<td>BIOL-30</td>
<td>BEGINNING MEDICAL TERMINOLOGY (3)</td>
<td>Lecture 48 - 54 hours. Grading: Letter Grade (CSU)</td>
<td>Applied medical etymology including the origin, correct spelling, pronunciation, meaning, and current usage of common medical terms, disorders and medical treatments in the context of body systems. Application of relevant vocabulary to clinical records and reports, emphasizing roots, prefixes, infixes, suffixes, medical abbreviations, symbols, and terms common in patients’ records and laboratory reports.</td>
</tr>
<tr>
<td>BIOL-61</td>
<td>INTRODUCTION TO CELL AND MOLECULAR BIOLOGY (5)</td>
<td>Lecture 64 - 72 hours. Laboratory 48 - 54 hours. Grading: Letter Grade (CSU; UC)</td>
<td>Advisory: ENGL-1A Composition Prerequisite: MATH-450 Intermediate Algebra: A Critical Thinking Approach or eligibility for Math 25 as determined by the Chaffey assessment process MATH-420 Essentials of Intermediate Algebra and MATH-420B Bridge to STEM+ from Intermediate Algebra and CHEM-10 Introductory Chemistry or completion of 1-year of high school chemistry. An intensive course designed to prepare students for upper division courses in cell and molecular biology. Topics include biochemical, structural, metabolic, and genetic aspects of cells. Laboratory will include experimental design, a variety of techniques (e.g. microscopy, spectrophotometry, electrophoresis), and data analysis. (C-ID BIOL 190)</td>
</tr>
<tr>
<td>BIOL-62</td>
<td>BIOLOGY OF ORGANISMS (5)</td>
<td>Lecture 48 - 54 hours. Laboratory 96 - 114 hours. Grading: Letter Grade (CSU; UC)</td>
<td>Prerequisite: BIOL-61 Introduction to Cell and Molecular Biology An introduction to the origin and evolution of life on earth, emphasizing systematics, anatomy, physiology, development, and ecology. Lab includes an evolutionary survey of prokaryotes, protists, fungi, plants and animals. (C-ID BIOL 140)</td>
</tr>
<tr>
<td>BIOL-63</td>
<td>EVOLUTIONARY ECOLOGY (4)</td>
<td>Lecture 48 - 54 hours. Laboratory 48 - 54 hours. Grading: Letter Grade (CSU)</td>
<td>Prerequisite: BIOL-61 Introduction to Cell and Molecular Biology Introduction to the principles, theories and methods of evolutionary ecology, including evolutionary theory, speciation, physiological ecology, population dynamics, demographics and life history strategies, niche theory, community interactions and community structure, succession, biogeography, ecosystem ecology, biodiversity, and conservation biology. Course includes one or more overnight field trips. (C-ID BIOL 130 S, when combined with BIOL 62)</td>
</tr>
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<td>BIOL-92A-H</td>
<td>SPECIAL TOPICS: BIOLOGY (1)</td>
<td>Lecture 16 - 18 hours. Grading: Letter Grade (CSU)</td>
<td>Other: Requisites may be imposed for topics that call for specific preparation. Specializations in the biological sciences. Prerequisites and/or corequisites may be required for topics that call for specific knowledge or preparation. Topics vary; see class schedule for current term focus.</td>
</tr>
<tr>
<td>BIOL-92LA-H</td>
<td>SPECIAL TOPICS LABORATORY: BIOLOGY (1)</td>
<td>Laboratory 48 - 54 hours. Grading: Letter Grade (CSU)</td>
<td>Other: Requisites may be imposed for topics that call for specific preparation. Laboratory activities associated with specializations in the biological sciences. Prerequisites and/or corequisites may be required for topics that call for specific knowledge or preparation. Topics vary; see class schedule for current term focus. No individual topic subject may be repeated.</td>
</tr>
<tr>
<td>BIOL-98ABC</td>
<td>INDEPENDENT STUDY: BIOLOGY (1 - 3)</td>
<td>Grading: Letter Grade (CSU)</td>
<td>Advisory: Students should have completed a transfer level course in biology Limitation on Enrollment (e.g. Performance tryout or audition): Instructor signature is required for registration. Course is designed for the capable biology student who wishes to explore and develop an independent project in the biological sciences. Individual inquiry, special techniques, and selected readings are expected. Student and instructor must reach agreement concerning the topic and scope of the project prior to student's registration.</td>
</tr>
</tbody>
</table>

**Course Descriptions**

**Biology, General**

**TOP Code: 0401.00**

Topics vary; see class schedule for current term focus. No individual topic subject may be repeated. Other: Requisites may be imposed for topics that call for specific preparation. Topics vary; see class schedule for current term focus. No individual topic subject may be repeated. **TOP Code: 0401.00 - Biology, General**
BIOL-424 ANATOMY AND PHYSIOLOGY (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: BIOL-30 Beginning Medical Terminology
Human anatomy and physiology with emphasis on the structures and functions of the organ systems. Course is primarily intended for students entering related vocational programs.

BIOL-424L ANATOMY AND PHYSIOLOGY LABORATORY (1)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: BIOL-30 Beginning Medical Terminology
Corequisite: BIOL-424 Anatomy and Physiology (may be taken previously). Laboratory investigation of anatomy and physiology of organ systems from cell through system levels. Course is primarily intended for students entering related vocational programs.

BROADCASTING - BRDCAST

BRDCAST-3 INTRODUCTION TO ELECTRONIC MEDIA (3)
Lecture 48 - 54 hours. Laboratory 144 - 171 hours.
Grading: Letter Grade (CSU)
This course introduces the history, structure, function, economics, content and evolution of radio, television, film, the Internet, and new media, including traditional and mature formats. The social, political, regulatory, ethical and occupational impact of the electronic media are also studied.

BRDCAST-55 BEGINNING AUDIO PRODUCTION (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
This course serves as an introduction to the theory and practice of audio production for radio, television, film and digital recording applications. Principles of digital audio production, digital recording, microphone use and placement, sound effects, audio mixing and sound design and aesthetics. Practical experience with microphones, multi-track digital audio recording and mixing, editing, mastering and control-board cueing. Digitizing and mixing compact disc, DVD, audio/video, and analog sources with music, spoken word, voice-over narration, and sound effects. Integration of sound design in motion pictures, television and the media arts. General F.C.C. rules and regulations pertinent to the broadcast industry. Upon completion, students will have basic knowledge of applied audio concepts, production workflow, equipment functions, and audio editing software. (C-ID FTVE 120)

BRDCAST-60 BEGINNING SINGLE CAMERA PRODUCTION (3) [Cx]
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Knowledge of Macintosh computer keyboarding is recommended.
The course provides an introduction to the theory, terminology, and operation of high definition single camera video production, including composition and editing techniques, camera operation, portable lighting, video recorder operation, audio control and basic editing. This course focuses on the aesthetics and fundamentals of scripting, producing, directing on location, postproduction, and exhibition/distribution. Overview of crew positions and production protocols for Electronic Field Production (EFP), Electronic News Gathering (ENG), commercial, public service announcement, and short dramatic stories. (C-ID FTVE 130)

BRDCAST-62 BEGINNING TV STUDIO PRODUCTION (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Possession of basic computer skills.
This course introduces theory, terminology and operation of a multi-camera television studio and control room. Topics include studio signal flow, directing, theory and operation of camera and audio equipment, switcher operation, fundamentals of lighting, graphics, video control and video recording and real-time video production. Additional topics include: lighting board operation, video signal engineering, multi-camera line switching techniques for live broadcasts. Students coordinate cameras and on-screen performers, and collaborate with production crew members and master control-room personnel, to produce, direct, and edit multi-camera studio productions. (C-ID FTVE 135)

BRDCAST-67 BEGINNING RADIO PRODUCTION (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Introductory course in theory and application of audio production techniques for radio. Students will gain a basic understanding of audio equipment in both live and pre-recorded broadcasting. This includes recording equipment, mixers, digital audio production, radio program formats, broadcast writing and announcing skills. Production of various live radio broadcasts on Chaffey College radio, and automated media programming. Application of radio production techniques in audio board operation, produce Internet audio/radio streaming audio, digital multi-track recording, mixing and editing. Study of current FCC rules and regulations. Students examine and explore radio programming concepts, focusing on aesthetics, creating content, announcing, and produce weekly radio broadcasts. (C-ID FTVE 125)

BRDCAST-70 POSTPRODUCTION FOR BROADCASTING & CINEMA (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Students assemble and create a broadcasting and/or cinematic story. Broadcasting and cinema editing assignments may also include some of the following: commercial/psa, music video, documentary and dramatic student projects. Other post production topics include editing workflows, audio sweetening, title sequences, keying, color grading, picture lock and mastering processes. Students from the photography, graphic arts, digital media, music, and theatre disciplines are encouraged to enroll and contribute to individual productions.

BRDCAST-74 HIGH DEFINITION CINEMATOGRAPHY (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Basic computer skills are recommended.
Visual theory, techniques, and methodology of high-definition cinematography applied to the production of dynamic television stories. Integration of Advanced Television Systems Committee (ATSC) broadcast technologies with widescreen videography. Emphasis on aesthetic enhancements in the writing, production and editing of single camera produced stories. Students collaboratively produce and/or edit a high-definition video project.
### BUSINESS - BUS

**BUS-10 INTRODUCTION TO BUSINESS (3) [Cx]**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  
(CSU, UC)  
A survey in business providing a multidisciplinary examination of how culture, society, economic systems, legal, international, political, financial institutions, and human behavior interact to affect a business organization's policy and practices within the U.S. and a global society. Demonstrates how these influences impact the primary areas of business including: organizational structure and design; leadership, human resource management, organized labor practices; marketing; organizational communication; technology; entrepreneurship; legal, accounting, financial practices; the stock and securities market; and therefore affect a business ability to achieve its organizational goals. (C-ID BUS 110)

**BUS-49 BUSINESS DECISIONS USING BASIC QUANTITATIVE TOOLS (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  
(CSU; UC)  
Business and management decision-making using basic quantitative tools. Managerial decisions in the areas of marketing, finance, accounting, real estate, insurance, transportation, and logistics. Examples include markups, markdowns, discounts, simple interest, depreciation, financial ratios, compound interest, investment decisions, inventory decisions, and payroll. Instruction in the use of the electronic business calculator is an integral part of the course work. Students must supply their own business calculator.

**BUS-60 BUSINESS ETHICS (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  
(CSU)  
Exploration of various theories and commonly occurring business ethics issues. Systems approaches for making business decisions that are responsible, practical, and defensible. Benefits of implementing value-based business strategies to achieve competitive advantage and profits. Course focus is on systemic implementation of ethical and socially responsible tools, and the integration of ethics into workplace operations.  
TOP Code: 0506.00 - Business Management

**BUS-61 INTRODUCTION TO GLOBAL BUSINESS (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  
(CSU)  
Overview of global business concepts and decision-making, with an emphasis on cultural differences. Analyze the social, cultural, legal, environmental, political, technological, and competitive trends within international business and examine the operation and performance of multinational corporations.  
TOP Code: 0508.00 - International Business and Trade

**BUS-88 BUSINESS COMMUNICATION (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  
(CSU)  
Prerequisite: ENGL-1A Composition  
Study and application of the principles of ethical and effective business communication. Emphasis on planning, organizing, composing and revising business documents and presentations using word processing software for written documents, and presentation-graphics software to create and deliver professional-level oral reports. Stress on development of writing fluency, professional tone and use of proper grammar in routine business communications, including letters, memoranda, business reports (both written and oral), and e-mail. Introduction to business research and the job application process. (C-ID BUS 115)

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**BUS-496ABCD INTERNSHIPS IN BUSINESS (1 - 4)**  
Grading: Pass/No-Pass  
(Degree-applicable)  
Limitation on Enrollment (e.g. Performance tryout or audition): Consent of Business program coordinator is required for registration. Supervised internship in cooperation with private, public, and/or non-profit sector employers. Designed to apply knowledge and learn new skills, directly related to the student's program of study, outside of the normal classroom environment. Placement is arranged through the instructor. Participation requirements may vary with the job setting. Occupational work experience courses may be repeated any number of times and in any unit combination not exceeding eight units per semester and sixteen units total for all types of work experience instruction.

### BUSINESS LEGAL STUDIES - BUSL

**BUSL-10 INTRODUCTION TO LAW AND THE LEGAL PROCESS (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  
(CSU; UC)  
Assessment Level: Eligibility for ENGL-1A as determined by the Chaffey assessment.  
Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students or ENGL-495 College Reading and Writing  
Exploration of the roles of the law, the courts, and the participants in our legal system. Examination of legal institutions and practices. Analysis of substantive laws -- from torts and contracts to consumer protection and civil rights -- and their effects. Consideration of the impact of individual plaintiffs, defendants, lawyers and jurists on the law and our legal system.  
TOP Code: 1401.00 - Law, General

**BUSL-28A BUSINESS LAW I (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  
(CSU; UC credit limitations)  
Fundamental legal principles pertaining to business transactions. Introduction to the legal process and dispute resolution. Coverage of federal and state court systems. Comprehensive study of contracts under the common law and the Uniform Commercial Code. Other topics include sources of law, business ethics, tort law, constitutional law, tort law, agency, business organizations, and criminal law as applied to business.  
(C-ID BUS 125)  
TOP Code: 0505.00 - Business Administration

**BUSL-28B BUSINESS LAW II (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  
(CSU; UC credit limitations)  
Prerequisite: BUSL-28A Business Law I  
Special applications of law in business. Comprehensive study of commercial paper, creditors' rights, secured transactions, agency and employment, partnerships, corporations, personal and real property, and governmental regulation of business. Students analyze laws and rules, then apply appropriate concepts to factual scenarios in written and oral arguments.  
TOP Code: 0505.00 - Business Administration

**BUSL-50 LEGAL ASPECTS OF REAL ESTATE (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  
(CSU)  
Advisory: RE-10 Real Estate Principles  
Introductory course to acquaint students with current California real estate law, with emphasis on its application in real estate brokerage, legal, and related fields. Course is applicable toward the educational requirements for broker's license and real estate salesperson's license.  
TOP Code: 0511.00 - Real Estate
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
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</thead>
</table>
| BUSL-400   | INTRODUCTION TO PARALEGAL STUDIES (3)                 | Lecture 48 - 54 hours. | Grading: Letter Grade  
Advisory: BUSL-400 Introduction to Paralegal Studies and BUSOT-455  
Fundamentals of English for Business and  
Fundamentals of legal research, writing, and analysis for the paralegal. Topics include: reading and analysis of statutes; research using primary authorities, secondary sources, and computer-assisted research tools; law office writings, including transmittal and client opinion letters, pleadings, law office memorandums, case briefs, and memorandums of law; and legal citation rules. |
| BUSL-401   | LEGAL RESEARCH AND WRITING (3)                        | Lecture 48 - 54 hours. | Grading: Letter Grade  
Advisory: BUSL-400 Introduction to Paralegal Studies and BUSL-28A Business Law I  
Study of the California Evidence Code, the Federal Rules of Evidence, and a paralegal's role in the analysis and application of the rules of civil and criminal evidence. Topics include: evidence gathering and investigation, jurisdiction, venue, initiation of civil proceedings, pleadings (including complaints and answers), filing a lawsuit, discovery procedures, trial preparation and trial assistance, post-trial practice, and alternative dispute resolution. |
| BUSL-402   | CIVIL LITIGATION (3)                                  | Lecture 48 - 54 hours. | Grading: Letter Grade  
Prerequisite: BUSL-400 Introduction to Paralegal Studies and BUSL-28A Business Law I  
Fundamental aspects of civil procedure, with emphasis on the roles of the paralegal in civil litigation. Topics include: evidence gathering and investigation, jurisdiction, venue, initiation of civil proceedings, pleadings (including complaints and answers), filing a lawsuit, discovery procedures, trial preparation and trial assistance, post-trial practice, and alternative dispute resolution. |
| BUSL-403   | EVIDENCE (3)                                          | Lecture 48 - 54 hours. | Grading: Letter Grade  
Advisory: BUSL-400 Introduction to Paralegal Studies  
Prerequisite: BUSL-28A Business Law I  
Study of the California Evidence Code, the Federal Rules of Evidence, and a paralegal's role in the analysis and application of the rules of civil and criminal evidence. Topics include: evidence gathering and investigation, admissibility of relevant evidence, methods of proving character, modern competency rules, impeachment, testimony by lay and expert opinions, hearsay and hearsay exceptions, constitutional constraints on the admissibility of evidence, the impact of California's 1982 Proposition 8 ('Victim's Bill of Rights?'), and privileges. |
| BUSL-404   | LAW OFFICE OPERATIONS (3)                             | Lecture 48 - 54 hours. | Grading: Letter Grade  
Advisory: BUSOT-608 Microsoft Office Word - Expert and BUSL-400 Introduction to Paralegal Studies  
Introductory course for students pursuing careers as legal office professionals or individuals currently working in a law office wishing to improve their skills. State and federal court systems, legal terminology, preparation of court documents, and the concepts of civil procedures in various areas of the law operative in California are explored. Topics include: structure of the courts, practices and procedures of the law, terminology and vocabulary, preparation of court documents, an introduction to legal research, legal calendaring, and client contact. Hands-on projects include using Microsoft Word or Corel WordPerfect to prepare simulated legal writings and complete legal forms. |
| BUSL-405   | LEGAL DOCUMENT PREPARATION (3)                        | Lecture 48 - 54 hours. | Grading: Letter Grade  
Advisory: BUSOT-40A Beginning Computer Keyboarding  
Creation of legal documents using word processing software. Focus on creation of litigation documents, correspondence, contracts, memoranda, and other legal documents. Creation of pleading captions, tables of contents, tables of authorities, pleading paper, headers, footers, office forms, etc. Students will also learn to edit, format, proof, save, and print legal documents. |
| BUSL-406   | ADVANCED LEGAL RESEARCH AND WRITING (3)               | Lecture 48 - 54 hours. | Grading: Letter Grade  
Prerequisite: BUSL-401 Legal Research and Writing  
Advanced legal research, writing, and analysis for the paralegal. This course builds on the skills acquired in BUSL 401. Students will refine legal analysis and citation skills, conduct legal research, and prepare sophisticated legal documents. Projects may include memoranda of points and authorities, office memoranda, client letters, briefs, motions, stipulations, judicial orders, and contracts. |
| BUSL-407   | CRIMINAL LAW & PROCEDURE (3)                          | Lecture 48 - 54 hours. | Grading: Letter Grade  
Prerequisite: BUSL-28A Business Law I  
Basic principles of criminal and criminal procedure law for the paralegal. Study of the constitutional, statutory and rule-based issues that arise in criminal law and the formal processing of criminal cases. Topics include: the elements of common law felonies and misdemeanors, the principal defenses to criminal charges, key provisions of the Fourth, Fifth, Sixth, and Fourteenth Amendments, the pretrial and trial process, sentencing, appeals, and remedies for constitutional violations. These topics are examined from the perspectives of lawyers, paralegals, and jurists on criminal law and the criminal procedure law. |
| BUSL-408   | BANKRUPTCY AND DEBTOR/CREDITOR RELATIONS (3)         | Lecture 48 - 54 hours. | Grading: Letter Grade  
Prerequisite: BUSL-28A Business Law I  
Fundamentals of debt and debtor creditor relations, including debt creation, secured transactions, liens, and debt collection. Study of federal Bankruptcy Law and Bankruptcy procedures, including discharge, and reorganization. The paralegal’s role in Bankruptcy Law practice. |
| BUSL-409   | FAMILY LAW (3)                                        | Lecture 48 - 54 hours. | Grading: Letter Grade  
Basic principles of California family law for the paralegal. Topics include rights of parents and minor children, adoption, divorce, child custody, visitation, marital property rights, spousal and child support, family law litigation. |

TOP Code: 1402.00 - Paralegal
BUSL-410 INTERNATIONAL BUSINESS LAW (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSL-61 Introduction to Global Business
Legal aspects and ramifications of international trade. Multinational enterprises, sovereignty, technology transfer, arbitration, negotiation and diplomacy.
TOP Code: 0508.00 - International Business and Trade

BUSL-411 ESTATE PLANNING AND PROBATE LAW (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSL-400 Introduction to Paralegal Studies
Fundamentals of estate planning and probate law for paralegals. Topics include estate planning, intestate succession, wills, trusts, community property, joint tenancy, guardianships and conservatorships, and powers of attorney.
TOP Code: 1402.00 - Paralegal

BUSL-412 IMMIGRATION LAW (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSL-400 Introduction to Paralegal Studies
Fundamentals of Immigration Law for Paralegals. Topics include client selection and interviewing, temporary and permanent visas, residency, preferences, asylum, citizenship, courts, agencies, immigration forms, and ethical issues for paralegals in immigration practice.
TOP Code: 1402.00 - Paralegal

BUSL-413 WORKERS' COMPENSATION LAW (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: BUSL-28A Business Law I
Fundamentals of Workers' Compensation law for the paralegal. Topics include types of injuries and benefits, claims, medical treatment, benefits, litigation, appeals, settlement, and the paralegal's role in a workers' compensation practice.
TOP Code: 1402.00 - Paralegal

BUSL-435 THE LAW OF MARKETING AND BUSINESS COMPETITION (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSL-28A Business Law I
Introduction to legal principles relevant to the marketing of goods and services. Examination of the impact of the United States Constitution, antitrust, unfair competition, business torts, trademark, copyright, patents, consumer protection, and franchising laws on products, pricing, promotion, and distribution.
TOP Code: 0509.00 - Marketing and Distribution

BUSINESS AND OFFICE TECHNOLOGIES - BUSOT

BUSOT-40A BEGINNING COMPUTER KEYBOARDING (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Beginning course in computer keyboarding with mastery of the alphabetic and numeric keyboard and correct touch-typing techniques. Introduction to the personal computer, word processing, disk management, and formatting of basic business correspondence.
TOP Code: 0514.00 - Office Technology/Office Computer Applications

BUSOT-40B COMPUTER KEYBOARDING: SPEED AND ACCURACY DEVELOPMENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Advisory: BUSOT-40A Beginning Computer Keyboarding or Equivalent Experience - (e.g., high school coursework or experience in a certain profession)
Develop computer literacy. Analyze, evaluate, and improve keyboarding speed and accuracy using correct keyboarding techniques. Intense review of letters, numbers, symbols, 10-key, and the production of basic reports, business letters, and memoranda.
TOP Code: 0514.00 - Office Technology/Office Computer Applications

BUSOT-50 FILING AND RECORDS MANAGEMENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Advisory: BUSOT-40A Beginning Computer Keyboarding
Instruction and simulated work applications using basic filing principles, procedures, and systems defined by ARMA International. Emphasis is placed on information storage of multiple record types and retrieval systems. Also discussed are management aspects of records retention, disposition, and the operation of a records management program.
TOP Code: 0514.40 - Office Management

BUSOT-60A MICROSOFT OFFICE WORD - SPECIALIST (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSOT-60A Microsoft Office Word - Specialist or BUSOT-60B Microsoft Office Word - Expert
This module prepares students to use the current word processing application of business software. Students develop job skills while building a foundation for other software applications. Students will be able to create, edit, format and customize, save, print, and retrieve documents. Course helps prepare students for certification testing. Computer assignments are a required part of this course.
TOP Code: 0514.00 - Office Technology/Office Computer Applications

BUSOT-60B MICROSOFT OFFICE WORD - EXPERT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSOT-60A Microsoft Office Word - Specialist or BUSOT-60B Microsoft Office Word - Expert
A hands-on approach to advanced formatting features of Microsoft Word: Customizing and streamlining using macros, building blocks, quick parts, autocorrect, themes, styles, and templates; creating multiple-page business documents using tabling features, indexes, page numbering, tables and charts, and reference citations; and using reviewing tools for adding comments and tracking in shared documents. Computer assignments are a required part of this course.
TOP Code: 0514.00 - Office Technology/Office Computer Applications

BUSOT-61 MICROSOFT OFFICE POWERPOINT (1.5) [Cx]
Lecture 24 - 27 hours.
Grading: Letter Grade  (CSU)
Advisory: BUSOT-40A Beginning Computer Keyboarding and BUSOT-60A Microsoft Office Word - Specialist
A hands-on introduction to concepts, terminology, and features of a presentation software program to create electronic presentations for support personnel and business managers. Topics include formatting and animating slide texts, charts, tables, and graphics as utilized in business presentations and integration with other software programs.
TOP Code: 0514.00 - Office Technology/Office Computer Applications
**BUSOT-410 MS Publisher Comprehensive (3) [Cx]**

Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSOT-60A Microsoft Office Word - Specialist

This hands-on course covers full-featured desktop publishing software and introduces the beginning and advanced concepts. Emphasis is in desktop publishing for business, featuring terminology, software, hardware, catalogs, magazines, editing, printing text, tables, graphics, style sheets and master pages, special effects, templates, scanned images, and formatting and managing long documents.

**TOP Code: 0514.00 - Office Technology/Office Computer Applications**

**BUSOT-452 Office Financial Bookkeeping (3)**

Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)

Bookkeeping procedures to broaden the skills of the office professional in handling business financial records and other supporting documents relevant to the operation of a small business. Includes mastery of the business financial features of the 10-key display calculator with speed and proficiency.

TOP Code: 0514.00 - Office Technology/Office Computer Applications

**BUSOT-455 Fundamentals of English for Business (3)**

Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)

Study and review of grammar, punctuation, vocabulary, and sentence structure to prepare students for employment and college-level business writing courses. Overview of sentence structure, paragraphs, business vocabulary, and basic communication skills. Practice in applying basic principles of communication and critical-thinking skills leading to understanding of effective business communications.

TOP Code: 0514.00 - Office Technology/Office Computer Applications

**BUSOT-460 Proofreading: Text-Editing Skills (3) [Cx]**

Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSOT-80A Microsoft Office Word - Specialist and Or concurrent enrollment in BUSOT-455 Fundamentals of English for Business

Development of the essential skills needed to perform proofreading and text-editing functions for the automated office. Emphasis on formatting and accuracy of input using word processing software and office reference manuals.

TOP Code: 0514.00 - Office Technology/Office Computer Applications

**BUSOT-462 Digital Transcription and Voice Recognition Software (3)**

Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSOT-80A Microsoft Office Word - Specialist and Or concurrent enrollment in BUSOT-460 Proofreading: Text-Editing Skills

Development of a marketable skill in digital transcription using word processing skills and voice recognition software. Emphasis on increasing transcription skills in punctuation, spelling, vocabulary, and production of mailable business correspondence and reports from dictated, realistic materials from various professions.

**BUSOT-470 Office Systems and Procedures (3)**

Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSOT-80A Microsoft Office Word - Specialist and Coordination and refinement of the duties and responsibilities of the office professional, including the organization of those duties, the personal qualifications of the office professional, and business office ethics and etiquette in a diverse and global business environment. Emphasis on work procedures, technology in the office, stress- and time-management techniques, team work, customer service, event planning and business travel arrangements.

TOP Code: 0514.40 - Office Management
BUSOT-471 ADMINISTRATIVE OFFICE MANAGEMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSOT-60A Microsoft Office Word - Specialist BUSOT-40B Computer Keyboarding: Speed and Accuracy Development
Introduction to the study and application of basic principles for managing a business office. Strategies to maintain a sound, flexible, and dynamic office organization whose objectives correspond to those of the business. Principles of management that pertain to objectives of the organization, scope and assignment of responsibilities, unity of functions, use of specialization, delegation of authority and responsibility, unity of command, span of control, centralization or decentralization of managerial authority, staffing, and work ethics.
TOP Code: 0514.40 - Office Management

BUSOT-475 MEDICAL OFFICE PROCEDURES (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
A focus on the career of a medical front office assistant. Topics include: meeting the patient, scheduling appointments, EHR (Electronic Healthcare Records), storage, management, healthcare coding, billing, telemedicine, collection, financial records, reimbursement medical law, ethics, HIPAA (Privacy & Security), data entry using flow sheets, anatomical drawings, accreditation regulation, and quality improvement.

BUSINESS AND OFFICE TECHNOLOGIES:
MEDICAL CODING AND BILLING - BUSOTMD

BUSOTMD-408 CODING OF BODY SYSTEMS FOR MEDICAL BILLING AND CODING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: BIOL-30 Beginning Medical Terminology
This course is designed for individuals pursuing careers in medical administration. The purpose of this course is to learn the appropriate medical codes and terminology assigned to body systems. Medical coders apply case scenario coding and management of medical record abstracting.
TOP Code: 1223.10 - Health Information Coding

BUSOTMD-410 CPT CURRENT PROCEDURAL TERMINOLOGY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: BIOL-30 Beginning Medical Terminology
Procedural Coding class presents an overview of nomenclature and classification systems, with focus on coding clinical and procedural information from medical records. Introduction to the Common Procedural Terminology contains instruction in coding procedures, sequencing and coding conventions. Review of procedural coded by procedure, service, organ or other anatomic site, condition, synonyms, eponyms, and abbreviations. Coding software applications is introduced.

BUSOTMD-420 BASIC ICD-10-CM CODING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Corequisite: BUSOTMD-408 Coding of Body Systems for Medical Coding and Billing (may be taken previously).
Prerequisite: BIOL-30 Beginning Medical Terminology
Beginning coding class presents an overview of nomenclature and classification systems, with focus on coding outpatient and inpatient clinical information from medical records. Introduction to the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM); contains instruction in coding diagnoses, outpatient and inpatient, sequencing and coding conventions. Review of complications and co-morbidities. Coding software applications introduced.

BUSOTMD-430 INTERMEDIATE LEVEL ICD-10-CM, ICD-10-PCS CODING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: BUSOTMD-410 Basic CPT-4 Coding and BUSOTMD-420 Basic ICD-9-CM Coding
Advanced coding class addressing more complex issues related to ICD-10- CM and ICD-10-PCS coding. Focus on using actual medical records in applying learning at a higher coding skill level. Computerized encoders and groupers emphasized. Coding software application introduced. Ambulatory Patient Classifications (APCs) and Resource-Based Relative Value Scales (RBRVs) also covered.

BUSOTMD-440 MEDICAL BILLING, REIMBURSEMENT, AND COMPLIANCE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: BUSOTMD-430 Intermediate Level ICD-9-CM and CPT4 Coding
Comprehensive study of medical claim forms for payment and reimbursement for all types of payers, as well as translating medical procedures, prescriptions, and diagnoses into a code within the healthcare industry. Coursework taught from the practitioner’s perspective, focuses on skills and coding competencies used with updated curriculum covering the latest coding standards such as ICD-10-CM, CPT, and HCPCS.

BUSINESS: MANAGEMENT - BUSMGT

BUSMGT-11 RETAIL MERCHANDISING AND MANAGEMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Role of retailing in serving the needs of the community. Analysis of consumer needs, store location, financial requirements, and legal process of starting a retail operation. Planning for store layout, merchandise mix, vendor negotiation, pricing, displaying, advertising, selling, and controlling of merchandise.

BUSMGT-13 SUPPLY CHAIN MANAGEMENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Tools and techniques for design and improvement of any supply chain, through the optimal use of information, materials, and technology to improve efficiency and reduce costs. Integration of outside suppliers and customers into an organization’s supply chain. Overview of career opportunities within the field.
TOP Code: 0510.00 - Logistics and Materials Transportation
BUSMGT-14 TRANSPORTATION MANAGEMENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Traffic management principles and techniques that facilitate distribution of the world's commerce. Analysis of the major forms of transportation - motor, rail, air, water, pipeline, inter-modal, and international - and their integration into a distribution system. Carrier management and selection, including rate structures, scheduling, outsourcimg, private fleet operations, and transportation customers. Governmental regulations on tariffs and transportation of hazardous materials.
TOP Code: 0510.00 - Logistics and Materials Transportation

BUSMGT-40 INTRODUCTION TO MANAGEMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
A survey of management concepts, basic functions, and skills as they apply at all levels within the contemporary work environment. Application of management theory to managerial practices to improve organizational effectiveness and efficiency, and enhance national and international competitiveness.
TOP Code: 0506.00 - Business Management

BUSMGT-42 HUMAN RESOURCE MANAGEMENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Advisory: BUSMGT-40 Introduction to Management
Formulation and implementation of human resource policy concerned with the major aspects of how an organization deals with its people - how it acquires them, utilizes them, rewards them, and separates them. Explores how the personnel functions integrate with the overall strategy of the firm in determining the success of the firm.

BUSMGT-44 INTRODUCTION TO HUMAN RELATIONS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Assists the individual in the business organization in understanding the group and individual dynamics, perception, conflict, motivation, leadership, influence, and authority relationships and the causation of behavior.

BUSMGT-45 SMALL BUSINESS OWNERSHIP AND MANAGEMENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Business concepts and skills tailored to creating and maintaining a sustainable competitive advantage in a small business. Fundamentals of owning and operating a small business including finance, employment law, and marketing strategies.

BUSMGT-48 QUALITY MANAGEMENT PRINCIPLES (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
For individuals who want to understand and improve existing processes. Implementation of continuous improvement and the understanding of the various quality philosophies and tools. Basic principles, objectives, and policies of a Quality Management program.

BUSMGT-430 WAREHOUSE MANAGEMENT AND MATERIAL HANDLING (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Essential skills for warehouse managers, with emphasis on the planning, protection, productivity, and quality control functions in warehouse and distribution operations. Topics include: warehouse design and layout, effective communications, industry terminology, technology, distribution systems, inventory management and protection, accountability, auditing, and safety rules and regulations.

BUSMGT-440 PRINCIPLES OF LEADERSHIP (2) [Cx]
Lecture 32 - 36 hours.
Grading: Letter Grade  (Degree-applicable)
Leadership principles in business. Topics include differentiation between management and leadership; traits and characteristics of natural, charismatic, and situational leaders; styles and tactics used by effective leaders to enhance individual and team performance; problem-solving, coaching, and conflict-resolution skills; and leadership's effects on organizational communication. Students use industry tools to assess their own leadership style and capabilities.

BUSMGT-436 INTRODUCTION TO LOGISTICS MANAGEMENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Fundamental concepts of logistics with an emphasis on outbound goods movement. Techniques of organizing, analyzing and controlling logistics systems. Topics include: supply chain, packaging, customer service, transportation, warehouse and distribution center site selection, and procurement functions.
TOP Code: 0510.00 - Logistics and Materials Transportation

BUSMGT-466 INTRODUCTION TO PROJECT MANAGEMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
A comprehensive, integrative understanding of effectively and efficiently defining, planning, scheduling, budgeting, managing risk, and executing major projects in order to increase an organization's competitive advantage.
TOP Code: 0506.30 - Management Development and Supervision

BUSMGT-470 ESSENTIALS OF FACILITIES MANAGEMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
A study of the basic concepts that describe the field of facility management and how it can be of value to an organization. This course reviews a leader's role in tactical planning for how to schedule and accomplish daily facility management tasks that support the operation of an organization's facilities.
TOP Code: 0506.30 - Management Development and Supervision

BUSMGT-480 PRINCIPLES OF SUPERVISION (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUSMGT-40 Introduction to Management or BUS-60 Business Ethics
Management functions and techniques of supervising and motivating personnel. Topics include: employee and management relations, systematic approach to problem solving, supervisor as leader, decision making, strategic planning, employee counseling and discipline, organizing and authority delegation, supervising diversity, conflict management, supervision laws, and case studies in functional supervision.
BUSMKT-13 PROFESSIONAL SELLING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Concepts and techniques used to sell ideas, products and services, especially the psychological and social aspects of persuasion. Effective tactics in prospecting, pre-approach planning, securing appointments, preparing and making sales presentations, closing strategies, follow-up and maintaining customer relations, and managing a sales territory. Emphasis on problem-solving.
TOP Code: 0509.40 - Sales and Safesmanship

BUSMKT-40 MARKETING PRINCIPLES (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
Advisory: BUS-10 Introduction to Business
Principles and methods of marketing as practiced by successfully managed business firms. Course is management-oriented, covering demand analysis, forecasting, product development, price determination, distribution channels, material handling, advertising, personal selling, and global and Internet marketing.
TOP Code: 0509.00 - Marketing and Distribution

BUSMKT-402 INTRODUCTION TO IMPORT/EXPORT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUS-61 Introduction to Global Business Or equivalent business experience.
Fundamentals of importing and exporting goods, including essential terms, strategies, organizations, regulations, terms of access, documentation, shipment, and financing involved with the international movement of merchandise.
TOP Code: 0508.00 - International Business and Trade

BUSMKT-405 INTERNATIONAL MARKETING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: BUS-61 Introduction to Global Business Or equivalent business experience.
Theory and practices of international marketing to include market entry strategies, analysis of foreign markets, culture and marketing, product design, pricing, distribution, promotion and sales.

BUSMKT-55 ADVERTISING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Historical, economic, social, and psychological appeal of advertising. Practical and psychological aspects of product packaging, trademarks, and color. Production techniques for the basic advertising media. Advertising management techniques, campaign scheduling, budgeting, and evaluation. Career opportunities and trends.

CHEM-7 CHEMISTRY IN EVERYDAY LIFE WITH LAB (4)
Lecture 48 - 54 hours.  Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Advisory: Completion of Math 520 or Math 420 or Math 450 or eligibility for Math 25.
Prerequisite: or 1-year high school algebra MATH-410 Elementary Algebra or MATH-550 Introduction to Algebra
General Education science course designed for non-science major students who are seeking a lab science course. The course is an introduction to chemistry providing a basic understanding of how scientific measurements are taken and presented, the scientific method, and how chemical principles are applied to everyday life and used to address scientific issues in society. Laboratory work will provide hands-on activities to teach laboratory skills and support the concepts presented in the lecture.

CHEM-8 CHEMISTRY IN SOCIETY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Advisory: Completion of Math 420 or Math 450 or eligibility for Math 25
ENGL-495 Fundamentals of College Reading and Writing or ENGL-495 College Reading and Writing
Prerequisite: or 1 year high school algebra MATH-410 Elementary Algebra or MATH-550 Introduction to Algebra
General Education science course designed for non-science major students who are seeking a science course without a lab. The course is an introduction to chemistry providing a basic understanding of how scientific measurements are taken and presented, the scientific method, and how chemical principles are applied to everyday life and used to address scientific issues in society.
(C-ID CHEM 100)

CHEM-9 HEALTH SCIENCE CHEMISTRY (5)
Lecture 64 - 76 hours.  Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Advisory: Completion of Math 25
Prerequisite: or Eligibility for Math 25 MATH-425 Intermediate Algebra Or MATH-420 Essentials of Intermediate Algebra and MATH-420B Bridge to STEM+ from Intermediate Algebra
This course is for students completing a certificate program or associate degree in a health science such as Vocational Nursing, Radiological Technology, and Associate Degree Nursing. The course is an introduction to the principles of chemistry including inorganic chemistry, organic chemistry, and biochemistry. Topics covered include measurements, properties and classification of matter, atomic structure, bonding and nomenclature, chemical equations, stoichiometry, gas laws, solutions, acids, bases and pH, equilibrium, nuclear chemistry, and organic and biochemical structure and reactions. Laboratory work will provide hands-on activities to teach laboratory skills and support the concepts presented in the lecture. This course is not intended for science majors.
CHEM-10 INTRODUCTORY CHEMISTRY (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Advisory: Completion of Math 450 or Math 420 and MATH 420B or eligibility for Math 25.
Prerequisite: 1 year of high school algebra - or Eligibility for MATH 450 or MATH 420 and MATH 420B as determined by the Chaffey assessment process MATH-410 Elementary Algebra or MATH-550 Introduction to Algebra or Essentials of Intermediate Algebra and MATH-420B Bridge to STEM+ from Intermediate Algebra
First semester General Chemistry for Science and Engineering students.
Topics include: atomic structure and periodic properties; types and structure of matter; thermochemistry; chemical reactions; stoichiometry; nomenclature; bonding models and theories; gas, liquid, solid, and solution properties. Laboratory with hands-on activities to reinforce lecture concepts, develop chemical laboratory techniques, and use the scientific methods of inquiry.
(C-ID CHEM 102)

CHEM-12 ELEMENTARY ORGANIC AND BIOCHEMISTRY (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Prerequisite: CHEM-10 Introductory Chemistry
This course is primarily intended for transfer students pursuing degrees in health science areas such as bachelor degrees in Nursing, Dental Hygiene, Dietitian, and other health science related degrees. The course is a survey of organic chemistry and biochemistry with a focus on biological applications and an emphasis on cellular and organism chemistry. Topics covered include organic functional groups, nomenclature, structure and reactions of organic compounds, structure and biological importance of carbohydrates, lipids, amino acids, proteins, nucleic acids, DNA, and RNA. Laboratory work will provide hands-on activities to teach laboratory skills and support the concepts presented in the lecture. This course is not intended for science majors.

CHEM-24A GENERAL CHEMISTRY I (5)
Lecture 48 - 54 hours. Laboratory 96 - 108 hours.
Grading: Letter Grade (CSU; UC)
Advisory: Completion or concurrent enrollment of Math 25.
Prerequisite: CHEM-10 Introductory Chemistry and or completion of 1-year of high school chemistry MATH-425 Intermediate Algebra or MATH-450 Intermediate Algebra: A Critical Thinking Approach or eligibility for Mathematics 25 as determined by the Chaffey Assessment MATH-420 Essentials of Intermediate Algebra and MATH-420B Bridge to STEM+ from Intermediate Algebra
First semester General Chemistry for Science and Engineering students.
Topics include: atomic structure and periodic properties; types and structure of matter; thermochemistry; chemical reactions; stoichiometry; nomenclature; bonding models and theories; gas, liquid, solid, and solution properties.
Laboratory with hands-on activities to reinforce lecture concepts, develop chemical laboratory techniques, and use the scientific methods of inquiry.
(C-ID CHEM 102)

CHEM-24B GENERAL CHEMISTRY II (4)
Lecture 48 - 54 hours. Laboratory 96 - 108 hours.
Grading: Letter Grade (CSU; UC)
Advisory: MATH-25 College Algebra Completion or concurrent enrollment
Prerequisite: CHEM-24A General Chemistry I
Second semester General Chemistry for Science and Engineering students.
Topics include kinetics, equilibrium, acid/base/buffers, thermodynamics, electrochemistry, nuclear chemistry, descriptive chemistry, and organic chemistry. Laboratory provides hands-on activities to reinforce lecture concepts, develop chemical laboratory techniques, and use the scientific method of inquiry.

CHEM-70 QUANTITATIVE ANALYSIS (4)
Lecture 32 - 36 hours. Laboratory 96 - 108 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CHEM-24B General Chemistry II
Quantitative Analysis is for science majors and meets the requirements for chemistry majors, pre-med students, and pre-dentistry students. Topics include: Introduction to the methods of gravimetric, volumetric, electrochemical techniques, separation techniques, and instrumental analysis. Parallels the quantitative analysis usually offered in the sophomore year in most four-year colleges and universities.

CHEM-75A ORGANIC CHEMISTRY I (5)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CHEM-24B General Chemistry II
This is the first semester in a year-long course in organic chemistry designed for students majoring in science and engineering. Topics cover major classes of organic compounds: aliphatic hydrocarbons; alkyl halides; alcohols; and ethers. This includes nomenclature, structure and stereochemistry, properties, reactions, mechanisms, and spectroscopy. Laboratory provides hands-on activities on the basic techniques of organic chemistry including synthesis, separation, purification, and analysis by using various spectroscopic methods.
(C-ID CHEM 150)

CHEM-75B ORGANIC CHEMISTRY II (5)
Lecture 64 - 72 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CHEM-75A Organic Chemistry I
This course is a continuation of Chem 75A expanding the study of organic chemistry to include aromatic compounds, introduction to organometallic compounds, aldehydes and ketones, carboxylic acids and their derivatives, enolates, amines, and introduction to biochemistry. Topics include nomenclature, structure and stereochemistry, properties, reactions, and mechanisms. Laboratory work emphasizes the techniques of organic synthesis, purification, qualitative analysis, and analysis by using various spectroscopic methods.

COURSE DESCRIPTIONS

CHILD DEVELOPMENT AND EDUCATION - CDE

CDE-1 PRINCIPLES & PRACTICES IN EARLY CHILDHOOD EDUCATION (3)
(Cx)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Proof of a negative tuberculosis test within the past 12 months may be required for some site visits.
Developmentally appropriate practices applied to programs, environments, emphasizing the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, creative, and intellectual development for all children. This course includes a review of the historical roots of early childhood programs and the evolution of the professional practices promoting advocacy, ethics, and professional identity.
(C-ID ECE 120) TOP Code: 1305.00 - Child Development/Early Care and Education
CDE-2 Child Growth and Development (3) [CX]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Advisory: Proof of negative tuberculosis test within the past 12 months may be required for some site visits.
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 of various stages.
(C-ID ECE 200) TOP Code: 1305.00 - Child Development/Early Care and Education

CDE-3 Observation and Assessment (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Proof of negative tuberculosis test within the past 12 months may be required for some site visits.
This course focuses on the appropriate use of assessment and observation strategies to document development, growth, play, and learning to join with families and professionals in promoting children's success. Recording strategies, rating systems, portfolios, and multiple assessment tools are explored.
(C-ID ECE 200) TOP Code: 1305.00 - Child Development/Early Care and Education

CDE-4 Child, Family, and Community (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: Proof of negative tuberculosis test within the past 12 months may be required for some site visits.
An examination of the developing child in a societal context focusing on the interrelationships of family, school, and community and emphasizing historical and socio-cultural factors. The processes of socialization and identity development will be highlighted, showing the importance of respectful, reciprocal relationships that support and empower families.
(C-ID CDEV 110) TOP Code: 1305.00 - Child Development/Early Care and Education

CDE-5 Health, Safety and Nutrition (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Cardiopulmonary Resuscitation (CPR) and first aid training is recommended. Proof of a negative tuberculosis test within the past 12 months may be required for some site visits.
Introduction to the laws, regulations, standards, policies and procedures and early childhood curriculum related to child health safety and nutrition. The key components that ensure physical health, mental health and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. Focus on integrating the concepts into everyday planning and program development for all children.
(C-ID ECE 220) TOP Code: 1305.40 - Preschool Age Children

CDE-6 Teaching in a Diverse Society (3) [CX]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Proof of negative tuberculosis test within the past 12 months may be required for some site visits.
Examination of the development of social identities in diverse societies including theoretical and practical implications of oppression and privilege as they apply to young children, families, programs, classrooms, and teaching. Various classroom strategies will be explored emphasizing culturally and linguistically appropriate anti-bias approaches supporting all children in becoming competent members of a diverse society. Course includes self-examination and reflection on issues related to social identity, stereotypes and bias, social and educational access, media and schooling.
(C-ID ECE 230) TOP Code: 1305.00 - Child Development/Early Care and Education

CDE-7 Curriculum Development: The Creative Arts (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a negative tuberculosis test within the past 12 months may be required for some site visits.
Introduction to the creative arts for young children. Storytelling, language, visual arts, drama, music, and dance are examined as an integral part of the child's world. Theories and techniques to develop children's creative abilities are explored. Emphasis on creative processes through appreciation of diversity in art and culture. Perspectives on values and problem solving that engage children's participation at all levels.
TOP Code: 1305.00 - Child Development/Early Care and Education

CDE-8 Curriculum Development: Math and Sciences (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a negative tuberculosis test within the past 12 months may be required for some site visits.
Introduction to how children learn and develop concepts of math and science. Examination of young children's problem-solving abilities in regard to math and the sciences. Examination of theories that reinforce activities designed to practice skills in math and science domains. Introduction of learning strategies and styles are also explored.
TOP Code: 1305.00 - Child Development/Early Care and Education

CDE-23 Introduction to Children with Special Needs (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Proof of negative tuberculosis test within the past 12 months may be required for some site visits.
Prerequisite: CDE-2 Child Growth and Development
Presentation of different types of physical and behavioral difficulties that interfere with normal cognitive, social, and emotional growth. Recognition of these difficulties, where to seek appropriate professional help, and how to work with children with special needs in the home and in the school.
TOP Code: 1305.20 - Children with Special Needs

CDE-24 Introduction to Curriculum Theory (2)
Lecture 32 - 38 hours.
Grading: Letter Grade (CSU)
Corequisite: CDE-24W Practicum I: Supervised Occupational Work Experience and Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a negative tuberculosis test within the past 12 months is required AND - students must present proof of immunization for measles, pertussis and influenza administered within the previous 12 months.
Prerequisite: CDE-1 Principles & Practices in Early Childhood Education and CDE-2 Child Growth and Development and CDE-3 Observation and Assessment and CDE-4 Child, Family, and Community Principles of early childhood growth and development as they apply to appropriate curriculum design. Curriculum planning of cognitive, physical, social, emotional, cultural, creative, and language arts lesson plans for developmentally appropriate environments.
(C-ID ECE 130, when combined with CDE-24W)
CDE-24W PRACTICUM I: SUPERVISED OCCUPATIONAL WORK EXPERIENCE (1)
Hours: 60 hours/term (unpaid) or 75 hours/term (paid) on-site work experience for each unit of credit.
Grading: Letter Grade (CSU)
Corequisite: CDE-24 Introduction to Curriculum Theory and Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a negative tuberculosis test within the past 12 months is required AND students must present proof of immunization for measles, pertussis and influenza administered within the previous 12 months.
Other: 60 hours unpaid supervised practicum in various community child development programs.
Supervised occupational work experience practicum demonstrating principles of early childhood growth and development to teaching. Curriculum planning and implementation of cognitive, physical, social, emotional, cultural, creative, and language arts lesson plans in developmentally appropriate environments.
(C-ID ECE 130, when combined with CDE-24)

CDE-25 ADVANCED CURRICULUM THEORY (2)
Lecture 32 - 38 hours.
Grading: Letter Grade (CSU)
Corequisite: CDE-25W Practicum II: Supervised Occupational Work Experience and Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a negative tuberculosis test within the past 12 months is required AND students must present proof of immunization for measles, pertussis and influenza administered within the previous 12 months.
Advanced principles and practices of curriculum theory of early childhood growth and development and their application through student teaching. Emphasis on health and safety, language capability, cognitive development, and physical needs in the learning environment, as well as development of effective communication skills for teachers. Advanced curriculum planning and implementation of cognitive, physical, social, emotional, cultural, creative, and language arts lesson plans in developmentally appropriate environments, with focus on the creation of an unbiased curriculum and learning environment.
(C-ID ECE 210, when combined with CDE-25W)

CDE-25W PRACTICUM II: SUPERVISED OCCUPATIONAL WORK EXPERIENCE (1)
Hours: 60 hours/term (unpaid) or 75 hours/term (paid) on-site work experience for each unit of credit.
Grading: Letter Grade (CSU)
Corequisite: CDE-25 Advanced Curriculum Theory
Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a negative tuberculosis test within the past 12 months is required AND students must present proof of immunization for measles, pertussis and influenza administered within the previous 12 months.
Other: 60 hours supervised practicum in various community child development programs.
Supervised application of the principles of early childhood growth and development to student teaching. Emphasis on health and safety, language capability, cognitive development, and physical needs in the learning environment, as well as development of effective communication skills for teachers. Advanced curriculum planning and implementation of cognitive, physical, social, emotional, cultural, creative and language arts lesson plans in developmentally appropriate environments, with focus on the creation of an unbiased curriculum and learning environment.
(C-ID ECE 210, when combined with CDE-25)

CDE-415 DYNAMICS OF PLAY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: Proof of a negative tuberculosis test within the past 12 months may be required for some site visits.
Introduction to a child's brain physiology and functioning. Current brain research and its relevance to educational practices and the guidance of young children. Current brain research findings in the areas of learning and memory, effects of stress and drugs, emotional and intellectual functioning, and gender differences in brain function and behavior for the developing child. Implications of brain research on communicating and interacting with young children in ways that elicit positive behaviors.
TOP Code: 1305.00 - Child Development/Early Care and Education

CDE-416 BRAIN RESEARCH AND THE IMPLICATIONS FOR CLASSROOM TEACHING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: CDE-2 Child Growth and Development - Proof of a negative tuberculosis test within the past 12 months may be required for some site visits.
Infant and toddler (birth through three years of age) development, as reflected in theory and research findings, including socialization, emotional development and temperament. Appropriate health, safety, and nutritional practices for environments; routines; and culturally sensitive care for infants and toddlers are also covered.

CHINESE - CHIN

CHIN-1 ELEMENTARY MANDARIN CHINESE I (4)
Lecture 64 - 72 hours.
Grading: Letter Grade (CSU: UC)
Introduction to Mandarin Chinese, taught within the context of Chinese culture.
Introduction to the customs, cultural practices, and geography of China through lectures, films, web activities, and reading assignments. Focus on the four major skills of language learning - listening comprehension, speaking, reading, and writing - and the grammar and vocabulary necessary to acquire these skills. Ten hours of supplemental learning in a Success Center that supports this course is required. This course corresponds to the first year of high school Chinese.
CHIN-2 Elementary Mandarin Chinese II (4)
Lecture 64 - 72 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CHIN-1 Elementary Mandarin Chinese I or - One year of high school Chinese.
Continuing study of Mandarin Chinese, taught within the context of Chinese culture. Customs, cultural practices, and geography of China are explored through lectures, films, web activities, and reading assignments. Focus on the further development of conversation, reading, and writing skills. Review of basic structures and expanded knowledge of verbs, grammar, and vocabulary. Emphasis on the communicative approach to language acquisition with emphasis on the appreciation of the culture. Ten hours of supplemental learning in a Success Center that supports this course is required. This course corresponds to the second year of high school Chinese.

CHIN-3 Intermediate Mandarin Chinese I (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CHIN-2 Elementary Mandarin Chinese II or
This course is the third semester of Mandarin Chinese, taught within the context of Chinese culture. Customs, cultural practices, and geography of China are explored through lectures, films, web activities, and reading assignments. Focus on the development of conversation, reading, and writing skills. Development of idioms and more advanced grammar. Emphasis on the communicative approach to language acquisition with special attention to the appreciation of the Chinese culture. Ten hours of supplemental learning is required in the Success Center that supports this course.

CHIN-4 Intermediate Mandarin Chinese II (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CHIN-3 Intermediate Mandarin Chinese I
This course is the fourth semester of Mandarin Chinese, taught within the context of Chinese culture. Customs, cultural practices, and geography of China are explored through lectures, films, web activities, and reading assignments. Focus on the development of conversation, reading, and writing skills. Development of idioms and more advanced grammar. Emphasis on the communicative approach to language acquisition with special attention to the appreciation of the Chinese culture. Ten hours of supplemental learning is required in the Success Center that supports this course.

CHIN-18 Chinese Civilization and Culture (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
This course is a general introduction to the basic components of Chinese culture as it has developed over the last five thousand years. Topics to be addressed will include the major philosophical thoughts of Taoism, Confucianism, and Buddhism; practices to promote health such as the Martial Arts, Kong Fu, herbal medicine, and acupuncture; customs and festivals like the Chinese Lunar New Year's Day and the Mid-Autumn Moon holiday; their varying and diverse culinary habits, and their rich and illustrious art forms of poetry, painting, and calligraphy. Both historical developments and contemporary tribulations will be examined, through selected readings, movies, video clipplings, field trips, as well as class discussions in different formats. This course does not presume prior knowledge of China or the Chinese language.

CINEMA - CINEMA

CINEMA-20 Screenwriting - Cinema (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Comprehensive overview of scriptwriting for motion pictures and cinematic formats. Students employ writing theory and critical analysis of classical literature to formulate story ideas, develop storytelling techniques, enhance narrative structure, and write polished scripts. Various screenwriting software applications are utilized to format, chart, outline, storyboard, and write dynamic stories for motion pictures and cinematic formats.

CINEMA-22 Introduction to Media Writing (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Basic keyboarding.
Basic introductory course in writing for film, television, documentary and electronic media. Emphasis on preparing scripts in proper formats, including fundamental technical, conceptual and stylistic issues related to writing fiction and non-fiction screenplays for informational and entertainment purposes in television and electronic media. Includes a writing evaluation component as a significant part of the course requirement.

CINEMA-25 Survey of World Cinemas (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Historical introduction of motion pictures as an art form, through the study and viewing of international cinematic works. Development of motion pictures as an evolving art and its influence on cinematic story-telling and related visual media. Focus is on the methods of decoding universal signs, symbols, metaphors, and the semiotics of motion picture imagery. Examines the impact of significant producers, directors, writers, cinematographers, and cinematic innovations.

CINEMA-26 Survey of American Cinema (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Analysis and discussion of the portrayals of African Americans, Asians, Latinos, Native Americans and other American national cultures including representations of class, gender and issues of diversity. Historical overview on the birth of American cinema, silent movie classics, silent comedies and story structure of the Hollywood hero. General topics are: the studios, directors, stars, westerns, musicals, gangster, science fiction, film noir, animation and independent features and short movies.

CINEMA-30 Beginning Motion Picture Production (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
This course provides an introduction to the theory, terminology, and process of motion picture production for film and television. Topics include basic cinematography including the operation, function and creative uses of production and post-production equipment, scriptwriting, camera operation, shot composition, lighting, sound recording and mixing, and editing. Classic movie making techniques are combined with digital and/or Pro 8mm cameras and other technologies to achieve a 'cinematic look' to assigned projects. (C-ID FTVE 150)
### COMSTD-2 Fundamentals of Effective Speaking (3)

**Lecture 48 - 54 hours.**  
**Grading: Letter Grade (CSU)**  
**Advisory: ESL-475 Fundamentals of College Reading and Writing for ESL Students**  
**Assessment Level: Eligibility for English 1A as determined by the Chaffey assessment process, or completion of English 495 or English as a Second Language 475.**  
Emphasis on preparing and delivering various types of speeches before an audience. Communication theory and speech criticism are included for student application. A variety of situations are provided to prepare the student to speak with greater skill and confidence. (C-ID COMM 110)

### COMSTD-4 Fundamentals of Interpersonal Communication (3)

**Lecture 48 - 54 hours.**  
**Grading: Letter Grade (CSU)**  
**Advisory: ENGL-1A Composition**  
In-depth exploration of the variables of the interpersonal communication processes as they occur in day-to-day, face-to-face human interaction. Current theories of interpersonal communication are analyzed and applied. (C-ID COMM 130)

### COMSTD-6 Fundamentals of Small Group Communication (3)

**Lecture 48 - 54 hours.**  
**Grading: Letter Grade (CSU; UC)**  
**Advisory: ESL-475 Fundamentals of College Reading and Writing for ESL Students**  
Principles of communication in a variety of group contexts. Theory, application, and evaluation of group communication processes, including problem solving, conflict management, decision-making, and leadership. Develop competence and confidence as a group member and leader through a combination of theoretical and practical application of small group principles in everyday life. Study and practice in various group activities. May be offered as an Honors course. (C-ID COMM 140)

### COMSTD-8 Fundamentals of Speech Communication (3)

**Lecture 48 - 54 hours.**  
**Grading: Letter Grade (CSU; UC)**  
This introductory communication course focuses on the basic foundations of interpersonal communication, small group communication and public speaking. Students will be introduced to the breadth of the communication discipline. Additionally, students will examine and practice human communication principles and theories, at a basic level, to develop critical thinking and communication competencies in a variety of contexts. (C-ID COMM 115)

### COMSTD-12 Mass Communication and Society (3)

**Lecture 48 - 54 hours.**  
**Grading: Letter Grade (CSU; UC)**  
A critical examination of the form, content, and influence of the processes of mass communication. Historical overview and examination of mass-mediated reality using theories of rhetoric and symbolic interaction. Special attention given to the impact of both media technology and message content on how we live and what we believe as individuals and as a society. May be offered as an Honors course. (C-ID JOUR 100)

### COMSTD-14 Oral Interpretation of Literature (3)

**Lecture 48 - 54 hours.**  
**Grading: Letter Grade (CSU; UC)**  
Theoretical and practical experience in the oral interpretation of prose, poetry, and dramatic literature. In-depth study of the oral and analytical skills required to perform literature and of the critical skills required to evaluate oral interpretation performance. Recommended for students of speech communication studies, theatre, English, and the teaching professions. (C-ID COMM 170)  
TOP Code: 1506.00 - Speech Communication

### COMSTD-72 Logic and Argumentation (3)

**Lecture 48 - 54 hours.**  
**Grading: Letter Grade (CSU; UC)**  
**Prerequisite: ENGL-1A Composition**  
The study of argumentation as an oral and written skill with an emphasis on the principles of critical thinking and sound reasoning. Examination of quality and types of evidence, identification of faulty and misleading arguments, and development of techniques for defending and refuting arguments. Social and political issues are the basis for research, analysis, and evaluation. (C-ID COMM 120)
### COMSTD-74 Intercultural Communication (3)

Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Advisory: ESL-475 Fundamentals of College Reading and Writing for ESL Students
Assessment Level: Eligibility for ENGL 1A Composition Eligibility for English 1A as determined by the Chaffey assessment process
Identification and analysis of processes and problems of communication between people of different cultures. Effects of differences in attitudes, social organization, role expectations, language and nonverbal behavior and their interrelationships. Principles of communication theory as applied to an intercultural setting. May be offered as an Honors course. (C-ID COMM 150)

### COMSTD-76 Gender and Communication (3)

Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Advisory: COMSTD-8 Fundamentals of Speech Communication and ESL-475 Fundamentals of College Reading and Writing for ESL Students - Eligibility for English 1A as determined by the Chaffey assessment process
Examination of communication patterns existing between males and females. Designed to integrate theory and practice, and to heighten students' awareness of the importance of gender as a communication variable. Emphasis on perception, verbal and nonverbal communication in interpersonal, small group and public settings. Communication problems relating to gender are addressed along with listening, assertiveness, negotiation and other conflict management strategies.

### COMSTD-78 Family Communication (3)

Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Advisory: or Eligibility for EngI-1A as determined by the Chaffey Assessment process ESL-475 Fundamentals of College Reading and Writing for ESL Students
Introduction to communication in the family setting. Analysis of how communication-related behavior affects the development, maintenance, enhancement, and deterioration of family relationships. Through group and class discussion, students develop insights about speech variables and communication processes which affect familial interaction.

### COMPUTER INFORMATION SYSTEMS - CIS

### CIS-1 Introduction to Computer Information Systems (3) [Cx]

Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Principles and applications of computers, including their role in business and society. Designed to provide computer competency for both Computer Information Systems majors and non-majors. Fundamentals of information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware and software components. (C-ID IT IS 120)

### CIS-4 Fundamentals of Microsoft Windows (1.5) [Cx]

Lecture 24 - 27 hours.
Grading: Letter Grade   (CSU)
Introduction to the terminology, application, and use of the graphical operating system. Topics include installation and setup, file management, security, networking, Internet access and communication, hardware and software maintenance, administrative tools, and others. TOP Code: 0702.00 - Computer Information Systems

### CIS-15 Microsoft Access Database Design and Development (3) [Cx]

Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Prerequisite: CIS-1 Introduction to Computer Information Systems
Microsoft Access database design and development for database administrators responsible for company-wide database access and control.

### CIS-50 Introduction to Computer Networks (3) [Cx]

Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Prerequisite: CIS-1 Introduction to Computer Information Systems
This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP (Internet Protocol) addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for further study of computer networks. It uses the OSI (Open Systems Interconnection) and TCP (Transmission Control Protocol) layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. Preparation for the CompTIA Network+ certification exam. (C-ID ITIS 150)
TOP Code: 0708.10 - Computer Networking

### CIS-68 Internet Technologies (1.5) [Cx]

Lecture 24 - 27 hours.
Grading: Letter Grade   (CSU)
Introduction to and use of the Internet. Topics include access, hardware, software, protocols, security, communication, file transfer, search tools, e-commerce, and other current Internet and Web technologies.

### CIS-420 Computer Security Basics (1.5)

Lecture 24 - 27 hours.
Grading: Letter Grade   (Degree-applicable)
Introduction to security issues affecting individual computers and Internet access. Protection strategies from viruses, Trojan-Horse programs, e-mail attacks, and other forms of intrusion. Selection, installation, and use of anti-virus software.
TOP Code: 0701.00 - Information Technology, General

### CIS-421 Social Media Technology (1.5)

Lecture 24 - 27 hours.
Grading: Letter Grade   (Degree-applicable)
Social Media technologies enable individuals to create, collaborate, and share information with audiences of all sizes. Students will explore the possibilities and limitations of social media in the business and Career and Technical Education environments and will gain hands-on experience with several forms of social media technology. Those who complete this course will also learn to use social media productively and have a framework for understanding and evaluating new tools and platforms.

### CIS-431 Project Management for Information Technology (3)

Lecture 48 - 54 hours.
Grading: Letter Grade   (Degree-applicable)
Advisory: CIS-1 Introduction to Computer Information Systems
Fundamentals of project management applied to the field of information technology using current project management software. Topics include: creating task lists; setting up resources; developing, formatting, and printing the project plan; organizing and formatting project details; tracking progress; measuring performance; and reporting project status.
TOP Code: 0707.20 - Database Design and Administration
CIS-435 FUNDAMENTALS OF MICROSOFT VISIO (1.5)
Lecture 24 - 29 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: CIS-1 Introduction to Computer Information Systems
Fundamentals of the popular diagramming software used for business and
information technology. Plan, create, and customize flowcharts, project
schedules, organization charts, office layouts, network and other IT diagrams,
and templates.

CIS-460 FUNDAMENTALS OF CODING (1.5)
Lecture 24 - 27 hours.
Grading: Letter Grade (Degree-applicable)
A foundation for exploring what coding is, why it is needed, and how it is used
in controlling digital technology such as creating computer software, apps,
websites, and the interfacing of devices for the Internet of Things (IoT).
Topics include introduction to coding concepts and terminology, types of
programming languages, logic, syntax, debugging, hardware, documentation,
Internet of Things (IoT), careers in programming, and others.

CIS-496ABCD INTERNSHIPS IN COMPUTER INFORMATION SYSTEMS (1 - 4)
Hours: 60 hours/term (unpaid) or 75 hours/term (paid) on-site work experience
for each unit of credit.
Grading: Letter Grade (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Consent of the
Computer Information Systems Program Coordinator is required.
Supervised internship in cooperation with private or public sector employers.
Designed to apply knowledge and learn new skills directly related to the
student's program of study outside of the normal classroom environment.
Placement is arranged through the instructor. Participation requirements may
vary with the job setting.

COMPUTER INFORMATION SYSTEMS: GAME DEVELOPMENT - CISGAME

CISGAME-1 FUNDAMENTALS OF GAME DEVELOPMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CIS-1 Introduction to Computer Information Systems
Introduction to the principles of interactive 2D and 3D game development.
Work in teams to development game concepts and build prototypes. Topics
include: history, hardware, graphics, sound, game genres, design elements,
game generation software, game programming, artificial intelligence, and
available careers in game development
TOP Code: 0707.00 - Computer Software Development

CISGAME-2 FUNDAMENTALS OF GAME DEVELOPMENT II (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Prerequisite: CISGAME-1 Fundamentals of Game Development
Game development using creation software and development tools. Topics
include: game design methods; content development, including graphics and
sound; game logic; programming concepts such as objects, properties,
methods, and events; basic concepts of movement and collision; testing; and
identifying and fixing bugs.

CISGAME-403 FUNDAMENTALS OF GAME PROGRAMMING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: CISGAME-1 Fundamentals of Game Development
Introduction to game programming using a popular computer game
programming language. Fundamentals of planning, syntax, logic, testing,
debugging, and documentation in the development of computer games.
TOP Code: 0707.10 - Computer Programming

CISGAME-420 MOBILE/WEB GAME DEVELOPMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: CISGAME-1 Fundamentals of Game Development
Programming and Design for mobile and web games. Topics include:
fundamentals of games and logic, game development, positioning and
movement of elements, Development and comparison of Web tools and
mobile emulators, collision detection and reaction, graphics, sound,
animations, and testing and debugging projects.
TOP Code: 0707.10 - Computer Programming

COMPUTER INFORMATION SYSTEMS: HARDWARE AND SUPPORT - CISHDSP

CISHDSP-40 MICROCOMPUTER HARDWARE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Prerequisite: CIS-1 Introduction to Computer Information Systems
This course provides an introduction to the computer hardware and software
skills needed to help meet the growing demand for entry-level ICT
professionals. The fundamentals of computer hardware and software as well
as advanced concepts such as security, networking, and the responsibilities of
an ICT professional will be introduced. Provides current and relevant
computer technical skills required for entry level PC Technician positions
and/or preparation for computer industry certification. Topics include basic
analysis of microcomputers and related equipment including computer
hardware installations, configuring (upgrading) computers, troubleshooting
techniques and the interaction between computer hardware and software.
Preparation for the CompTIA A+ certification exams.

COMPUTER INFORMATION SYSTEMS: INTERNET AND WEB DEVELOPMENT - CISIWEB

CISIWEB-72 WEB PAGE DEVELOPMENT AND PUBLISHING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: CIS-68 Using the Internet
Basic web page development using HTML (Hypertext Markup Language) and
CSS (Cascading Style Sheets). Topics include web site planning, responsive
Web page creation, hyperlinks, formatting, graphics, multimedia, tables,
scripting, dynamic page creation, and Web publishing.
TOP Code: 0707.10 - Computer Programming
<table>
<thead>
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<th>COURSE DESCRIPTIONS</th>
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<tr>
<td><strong>CISIWEB-74 CREATING DYNAMIC WEB CONTENT USING JAVASCRIPT (3)</strong>&lt;br&gt;Lecture 48 - 54 hours.&lt;br&gt;Grading: Letter Grade (CSU; UC)&lt;br&gt;Prerequisite: CISIWEB-72 Web Page Development and Publishing&lt;br&gt;Creating dynamic multimedia content using Javascript, HTML5, CSS, Canvas, and Jquery. Topics include: integrating JavaScript and HTML, coding, testing, debugging, enhancing the use of images, media, and Web Page objects; and developing online dynamic content and client-side Web applications.</td>
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<tr>
<td><strong>CISIWEB-424 WORDPRESS WEB DEVELOPMENT (1.5)</strong>&lt;br&gt;Lecture 24 - 27 hours.&lt;br&gt;Grading: Letter Grade (Degree-applicable)&lt;br&gt;Advisory: CIS-68 Using the Internet&lt;br&gt;Development of Websites using the WordPress Content Management System (CMS). Includes wordpress.com and wordpress.org, Wordpress codex, installation, using the dashboard, navigation, themes, plugins, widgets, organizing content, multimedia, blogs, security, Search Engine Optimization (SEO), troubleshooting, modifying with HTML and CSS, and other topics.</td>
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<td><strong>CISNTWK-11 MICROSOFT NETWORK SERVER (3)</strong>&lt;br&gt;Lecture 48 - 54 hours.&lt;br&gt;Grading: Letter Grade (CSU)&lt;br&gt;Prerequisite: CIS-50 Introduction to Computer Networks&lt;br&gt;In-depth study of Microsoft network server software and the administration of a network. Topics include: installation and configuration, active directory, file system management, and security. Helps prepare students for the Microsoft Certified Professional (MCP) and Microsoft Certified Systems Engineer (MCSE) exams.</td>
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<td><strong>CISNTWK-12 INTRODUCTION TO NETWORK SECURITY ADMINISTRATION (3)</strong>&lt;br&gt;Lecture 48 - 54 hours.&lt;br&gt;Grading: Letter Grade (CSU)&lt;br&gt;Prerequisite: CIS-50 Introduction to Computer Networks&lt;br&gt;An introduction to the fundamental principles and topics of Information Technology Security and Risk Management at the organizational level. It addresses hardware, software, processes, communications, applications, and policies and procedures with respect to organizational Cybersecurity and Risk Management. Preparation for the CompTIA Security+ certification exams.</td>
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<td><strong>CISNTWK-20 INTRODUCTION TO CYBERSECURITY: ETHICAL HACKING (3)</strong>&lt;br&gt;Lecture 48 - 54 hours.&lt;br&gt;Grading: Letter Grade (CSU)&lt;br&gt;Prerequisite: CIS-50 Introduction to Computer Networks and CISNTWK-12 Introduction to Network Security Administration&lt;br&gt;This course introduces the network security specialist to the various methodologies for attacking a network. Students will be introduced to the concepts, principles, and techniques, supplemented by hands-on exercises, for attacking and disabling a network within the context of properly securing a network. The course will emphasize network attack methodologies with the emphasis on student use of network attack techniques and tools and appropriate defenses and countermeasures.</td>
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<td><strong>CISNTWK-413 TCP/IP (1.5)</strong>&lt;br&gt;Lecture 24 - 27 hours.&lt;br&gt;Grading: Letter Grade (Degree-applicable)&lt;br&gt;Prerequisite: CIS-50 Introduction to Computer Networks&lt;br&gt;Study of Transmission Control Protocol/Internet Protocol (TCP/IP) and its implementation on various operating systems. Helps prepare students for the Microsoft Certified Professional (MCP), Microsoft Certified Systems Engineer (MCSE), and CompTIA exams.&lt;br&gt;TOP Code: 0708.10 - Computer Networking</td>
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<td><strong>COMPUTER INFORMATION SYSTEMS: NETWORKING - CISNTWK</strong></td>
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<tr>
<td><strong>CISCO-1 CISCO INTERNETWORKING I (4)</strong>&lt;br&gt;Lecture 64 - 76 hours.&lt;br&gt;Grading: Letter Grade (CSU)&lt;br&gt;Advisory: CIS-1 Introduction to Computer Information Systems Or equivalent experience.&lt;br&gt;First in a four-course sequence that qualifies students to take the Cisco Certified Entry Networking Technician (CCENT) and the more advanced Cisco Certified Network Associate (CCNA) examinations. Topics include: PC hardware/software review, Local Area and Wide Area Networks (LAN's and WAN's), network devices, the Open System Interconnect (OSI) model, media, cable installation, network design, routing, switching, addressing, security, documentation, and basic wireless. Meets latest CCNA certification requirements.</td>
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<td><strong>COMPUTER INFORMATION SYSTEMS: PROGRAMMING - CISCO</strong></td>
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<tr>
<td><strong>CISCO-1 CISCO INTERNETWORKING I (4)</strong>&lt;br&gt;Lecture 64 - 76 hours.&lt;br&gt;Grading: Letter Grade (CSU)&lt;br&gt;Advisory: CIS-1 Introduction to Computer Information Systems Or equivalent experience.&lt;br&gt;First in a four-course sequence that qualifies students to take the Cisco Certified Entry Networking Technician (CCENT) and the more advanced Cisco Certified Network Associate (CCNA) examinations. Topics include: PC hardware/software review, Local Area and Wide Area Networks (LAN's and WAN's), network devices, the Open System Interconnect (OSI) model, media, cable installation, network design, routing, switching, addressing, security, documentation, and basic wireless. Meets latest CCNA certification requirements.</td>
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CISCO-2 CISCO INTERNETWORKING II (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU)
Advisory: CISCO-1 Cisco Internetworking I Or equivalent experience.
Second in a four-course sequence that qualifies students to take the newest Cisco CCENT and CCNA examinations. Topics include: implementing LAN and WAN connectivity using routers and switches, IPv4/IPv6 addressing, network security, access-lists, network protocols such as RIPv2/EIGRP/OSPF, and troubleshooting. Students gain skills through configuring Cisco devices and managing the software. Comprehensive review of all topics covered in Cisco I and 2.

CISCO-3 CISCO INTERNETWORKING III (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU)
Advisory: CISCO-2 Cisco Internetworking II Or equivalent experience.
Third in a four-course sequence that qualifies students to take the newest Cisco CCNA examination. Topics include: intermediate switching and routing; configuration of routers and switches for wired and wireless networks; Virtual LANs (VLANs), Virtual Trunking Protocol (VTP), Spanning Tree Protocol (STP); advanced IP addressing techniques; Variable Length Subnet Masking (VLSM); intermediate routing protocols such as multi area OSPF, Hot Standby Routing (HSRP), network security/troubleshooting and management issues. Meets latest CCNA certification requirements.

CISCO-4 CISCO INTERNETWORKING IV (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU)
Advisory: CISCO-3 Cisco Internetworking III Or equivalent experience.
Final course in a four-course sequence that qualifies students to take the newest Cisco CCNA examination. Topics include: Network Design/Security policies; advanced LAN/WAN/Wireless technologies; IP addressing techniques; Quality of Service, Monitoring, Troubleshooting, Network Programming, Cloud and Virtualization. Comprehensive review of all topics covered in Cisco I, II, III, and IV courses in preparation for the newest CCNA certification exam.

CISCO-415 CISCO INTERNETWORKING V (4)
Lecture 64 - 76 hours.
Grading: Letter Grade and Pass/No-Pass (Degree-applicable)
Advisory: CISCO-4 Cisco Internetworking IV Or equivalent training/experience.
CCNP ROUTE, Implementing Cisco IP Routing. Course of a three course prep sequence for the newest CCNP examinations. Topics include: CCNA review, overview of converged and scalable routed internetworks. Advanced routing principles/protocols such as EIGRP, multi area OSPF, and BGP for enterprise ISP connectivity. Route features, optimization, manipulating, updates, redistribution, filtering, multi-casting, security and advanced IPv4/IPv6 address management.

CISCO-416 CISCO INTERNETWORKING VI (4)
Lecture 64 - 72 hours.
Grading: Letter Grade and Pass/No-Pass (Degree-applicable)
Advisory: CISCO-2 Cisco Internetworking II or equivalent experience
CCNA Security equips students with the knowledge and skills needed to prepare for the latest CCNA Security certification and entry-level security specialist careers. This course is a hands-on, career-oriented e-learning solution that emphasizes practical experience. Network threats are identified and appropriate technologies such as virtual private networks, firewalls, intrusion prevention/cryptographic systems and security protocols are discussed and used to mitigate.

CISCO-417 CISCO INTERNETWORKING VII (4)
Lecture 64 - 76 hours.
Grading: Letter Grade and Pass/No-Pass (Degree-applicable)
Advisory: CISCO-4 Cisco Internetworking IV Or equivalent training/experience.
CCNP SWITCH, Implementing Cisco Switched Networks. Course of a three course prep sequence for the newest CCNP examinations. Topics include, CCNA review, use of routing and switching technologies together, virtual LANs (VLANs), inter VLAN routing, virtual transport protocol (VTP), spanning tree protocol (STP), and redundancy technologies such as HSRP and VRRP. Access control, security issues, port security, root guard, mac flooding, rogue devices, and spoofing. Implement support for wireless and voice over IP (VOIP).

CISCO-418 CISCO INTERNETWORKING VIII (4)
Lecture 64 - 76 hours.
Grading: Letter Grade and Pass/No-Pass (Degree-applicable)
Advisory: CISCO-3 Cisco Internetworking III Or equivalent training/experience.
CCNA Collaboration; voice, video, data and mobile applications implementation in a network. Topics include implementing and optimizing converged networks. Implement and troubleshoot Cisco Unified Communication and Collaboration, TelePresence, and Digital Media Player in different business video solution architectures. Administrator/end user interfaces, telephony/mobility features, and Cisco UC solutions maintenance.

CISCO-419 CISCO INTERNETWORKING IX (4)
Lecture 64 - 76 hours.
Grading: Letter Grade and Pass/No-Pass (Degree-applicable)
Advisory: CISCO-4 Cisco Internetworking IV or equivalent training/experience.
CCNP TSHOOT. Course in a three course prep sequence for the newest CCNP examinations. Extensive CCNA/CCNP review. Skills include monitoring, troubleshooting and maintaining enterprise routed and switched IP networks using technology based practices. Prepares student for the latest externally administered Cisco CCNA Route/Switch and CCNP TSHOOT exams.

CISCO-420 CISCO INTERNETWORKING X (4)
Lecture 64 - 72 hours.
Grading: Letter Grade and Pass/No-Pass (Degree-applicable)
Advisory: CISCO-2 Cisco Internetworking II or equivalent experience.
Cisco Health Information Networking: equips students with knowledge that can be applied toward entry-level specialist careers in healthcare information/communications technology (ICT) and networking.

COMPUTER SCIENCE - COMPSCI

COMPSCI-1 PROGRAMMING CONCEPTS AND METHODOLOGY I (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: CISPROG-1 Introduction to Computer Programming.
Introduces the discipline of computer science using a high level language, utilizing programming and practical hands-on problem solving. Topics include: hardware, software, computer architecture, memory and registers, input-output data operations, storage, information control, problem solving, and Object Oriented Programming. First course in a sequence of courses that is compliant with the standards of the Association for Computing Machinery (ACM) (C-ID COMP 122).
COMPSCI-2 PROGRAMMING CONCEPTS AND METHODOLOGY II (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: COMPSCI-1 Programming Concepts and Methodology I
Application of software engineering techniques to the design and development of large programs; data abstraction and structures and associated algorithms (C-ID COMP 132)

COMPSCI-3 COMPUTER ARCHITECTURE AND ORGANIZATION (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: COMPSCI-1 Programming Concepts and Methodology I
The organization and behavior of real computer systems at the assembly-language level. The 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 examined, noting the various data representation errors and potential procedural errors. (C-ID COMP 142)

COMPSCI-4 DISCRETE STRUCTURES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: MATH-61 Pre-Calculus and COMPSCI-1 Programming Concepts and Methodology I
Fundamental topics for Computer Science, such as logic, proof techniques, set theory, introduction to computer programming, basic counting rules, relations, functions and recursion, graphs and probability trees.
TOP Code: 0706.00 - Computer Science (transfer)

COOPERATIVE EDUCATION - COOPED

COOPED-497ABCD COOPERATIVE EDUCATION: GENERAL WORK EXPERIENCE
(1 - 4)
Hours: 60 hours/term (unpaid) or 75 hours/term (paid) on-site work experience for each unit of credit.
Grading: Letter Grade (Degree-applicable)
Other: Must be employed or have an internship.
Supervised employment which is intended to assist students in achieving job-related learning objectives and acquiring desirable work habits, attitudes, and career awareness. The work experience need not be related to the students' educational goals. Career and professional development include knowledge, judgments, skills and attitudes essential for success in the world of work, and achievement of job related learning objectives. One course unit will equal 60 hours of volunteer/unpaid work experience OR one unit will equal 75 hours of paid work experience, with a maximum of 6 units per semester. Students may earn up to a total of 15 semester credit hours for all types of work experience instruction.
TOP Code: 4932.00 - General Work Experience

CRIMINAL JUSTICE - CJ

While many of the Criminal Justice courses may be challenged for Credit-by-Examination, a limitation to the number of challenges may apply. Contact the office of the Dean of Social and Behavioral Sciences for more information.

CJ-1 INTRODUCTION TO THE CRIMINAL JUSTICE SYSTEM (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
This course introduces students to the characteristics of the criminal justice system in the United States. Focus is placed on examining crime measurement, theoretical explanations of crime, responses to crime, components of the system, and current challenges to the system. The course examines the evolution of the principles and approaches utilized by the justice system and the evolving forces which have shaped those principles and approaches. Although justice structure and process is examined in a cross cultural context, emphasis is placed on the US justice system, particularly the structure and function of US police, courts, and corrections. Students are introduced to the origins and development of criminal law, legal process, and sentencing and incarceration policies. (C-ID AJ 110)

CJ-2 CONCEPTS OF CRIMINAL LAW (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CJ-1 Introduction to the Criminal Justice System
Historical development of criminal law, philosophy of law and constitutional provisions, definitions, classification of crime and the application to the criminal justice system. Legal research, study of case law, methodology, and concepts of law as a social force. This course is approved for C-ID AJ-120.

CJ-3 CRIMINAL COURT PROCESS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Prerequisite: CJ-1 Introduction to the Criminal Justice System
Step-by-step examination of the criminal prosecution process from pre-arrest through final disposition, and the associated court actions taken by the defense and prosecution. Roles and responsibilities of law enforcement, the judiciary and corrections, viewed as both independent and collectively operating segments within the criminal justice system. Review of past and current criminal justice procedures as they relate to individual Constitutional and procedural rights. This course is approved for C-ID AJ-122.

CJ-4 COMMUNITY AND THE JUSTICE SYSTEM (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CJ-1 Introduction to the Criminal Justice System
This course examines the complex, dynamic relationship between communities and the justice system in addressing crime and conflict with an emphasis on the challenges and prospects of administering justice within a diverse multicultural population. Topics may include the consensus and conflicting values in Culture, Religion, and Law. Roles of justice system agencies and practitioners, focusing on the interrelationships between the various agencies and their interaction with a diverse multicultural population. Analysis of the differences between community-oriented and problem-solving policing, with emphasis on the resultant public perception and effectiveness of law enforcement actions. This course aligns with C-ID AJ-160.
CJ-5 LEGAL ASPECTS OF EVIDENCE (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Prerequisite: CJ-1 Introduction to the Criminal Justice System
Origin, development, philosophy, and the constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search, and seizure; kinds and degrees of evidence and the rules governing admissibility; judicial decisions interpreting individual rights; and case studies. This course aligns with C-ID AJ-124.

CJ-6 JUVENILE PROCEDURES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Advisory: CJ-1 Introduction to the Criminal Justice System
This course is an examination of the origin, development, and organization of the Juvenile Justice System as it evolved in the American Justice System. The course explores the theories that focus on Juvenile Law, courts and processes, and the constitutional protections extended to juveniles administered in the American Justice System. This course also includes evaluation of factors that contribute to delinquency, as well as those that aid in its prevention/repression. C-ID AJ-220.

CJ-7 CRIMINAL INVESTIGATION (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Prerequisite: CJ-1 Introduction to the Criminal Justice System
This course addresses the techniques, procedures, and ethical issues in the investigation of crime, including organization of the investigative process, crime scene searches, interviewing and interrogating, surveillance, source of information, utility of evidence, scientific analysis of evidence and the role of the investigator in the trial process. This course also includes the fundamentals of investigations: collection and preservation of physical evidence, scientific aids, modus operandi, sources of information, fingerprints, polygraphs, follow-up, and case preparation. C-ID AJ-140.

CJ-8 CRIMINOLOGY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Advisory: CJ-1 Introduction to the Criminal Justice System
Sociological analysis of crime, criminal behavior, and the criminal justice system. Explores the history and social construction of crime and criminality and examines the definition of crime and its violations as well as the laws and methods used to control criminal behavior. Discuss measurement of crime and basic theoretical explanations of criminal behavior. C-ID SOCI-160.

CJ-9 CRIME SCENE MANAGEMENT AND FORENSIC EVIDENCE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Prerequisite: CJ-1 Introduction to the Criminal Justice System

CJ-10 VIOLENCE IN AMERICA (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
An exploration of victimization theories, classification of violent crimes, and perpetrator identification. Crime and its impact on victims and society as a whole. Primary, secondary and tertiary victimization, intimate violence, workplace violence, school violence and terrorism are explored. TOP Code: 2105.10 – Corrections

CJ-51 INTRODUCTION TO CORRECTIONS (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Advisory: CJ-51 Introduction to Corrections
Philosophical and practical overview of the history, evolution and current practices of the field of corrections, including extensive examination of the roles and responsibilities of the three prongs of the United States criminal justice system. Critical analysis of five correctional philosophies and their impact on correctional systems, processes, clients, case law, and client’s rights. Includes a critical examination of the types of correctional institutions and community based programs, and an examination of contemporary correctional issues. Exploration of the diverse career opportunities available at the city, county, state, and federal levels. This course aligns with C-ID AJ-200.

CJ-52 CONTROL AND SUPERVISION OF INMATES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Advisory: CJ-51 Introduction to Corrections
Inmate supervision in correctional institutions, including security procedures, contraband control, treatment programs, and prison dynamics. Prison staff responsibilities and the effect of their application on inmate culture and institution characteristics. Current and historical methods of controlling inmates.

CJ-53 CORRECTIONAL LAW (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Advisory: CJ-51 Introduction to Corrections
Legal aspects of corrections from conviction/commitment to release. Discussion of laws addressing processes of the correctional system and facilities, including county jails, juvenile halls, state prisons, probation, parole, executions, clemency, commutations, and terms of imprisonment. Policy, procedure and regulations governing escapes, treatment and prison records. Survey of correctional programs at the various levels of government from a legal perspective. Legal and due process rights of offenders. The balance of protecting the rights of offenders versus the need to protect society.

CJ-54 PUBLIC RELATIONS AND CORRECTIONS (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Advisory: CJ-51 Introduction to Corrections
Various aspects of public relations and methods of communication with the public concerning correctional goals and concepts. Survey of problems and methods of improving attitudes toward correctional programs. Relations with criminal justice agencies including law enforcement and other government organizations, prison-prevention groups, and job-placement services. Designed for both pre-service and in-service personnel.

CJ-55 CRIME AND DELINQUENCY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Advisory: CJ-51 Introduction to Corrections
An analysis of the causation theories attributed to crime, delinquency and deviance, and the implications for the offender, the victim and the justice system. An examination of the history and progression of our country's attempts to control its crime problem. Classification of crimes, criminals and statutory laws are explored.
CJ-56 CORRECTIONAL INTERVIEWING AND COUNSELING (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Powerful and appropriate interviewing and counseling techniques for use with correctional clients, who may include perpetrators, victims, family members, and witnesses. Strategies for dealing with sidetracking, aversion, and defensive responses. Effective use of encouragement, silence, redirection, non-verbal communication, and rapport in interviews. Intervention, counseling, and appropriate referrals in crisis situations. Ethics, boundary, and confidentiality issues encountered by counselors and caseworkers.

CJ-57 PROBATION AND PAROLE (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Overview of the history and philosophical foundations of probation and parole in the United States. Organization and operations of probation and parole agencies as particular segments of the criminal justice system. Probation as part of the judicial process, and parole as part of the corrections system. Theoretical concerns exemplified in probation and parole supervision, as well as the practical aspects of probation and parole services. Review and evaluation of community-based corrections and the programs included in response to criminal behavior. Issues and problems relating to the present investigation report, determinate versus indeterminate sentencing, the vast and diverse roles of the probation officer and parole agent, and case law decisions affecting probation and parole practice.

CJ-58 ETHNIC GROUP RELATIONS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Survey of minority roles, problems, and relationships within the criminal justice system. Explanation of the impact and effect of stereotypes and prejudice within the system and how it affects its decision makers. Examination of our society's stratification and perspectives based on race, ethnicity, class and gender as they relate to crime and justice in America. Identification of cultural traditions that may affect the rehabilitation process of the correctional client.

CJ-408 PATROL OPERATIONS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: CJ-1 Introduction to the Criminal Justice System
Responsibilities, techniques, and methods of police patrol. Topics include: purpose and types of patrol, communications, observations, tactics, recording, courtroom testimony, and community relations.

CJ-410 NARCOTICS AND VICE INVESTIGATION (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Vice control (gambling, prostitution, sex crimes, alcohol, etc.) and the identification of narcotic and dangerous drug use. Detection, suppression, arrests, prosecution, and offenses as stipulated in the California Penal Code, Health and Safety Code, Welfare and Institutions Code, Business and Professional Code, and Vehicle Code. Topics include: surveillance, court testimony, probable cause, search warrants, and court decisions related to the narcotic and vice offenders. Special consideration is given to physical evidence and the Uniform Control Substance Act.

CJ-412 WRITING FOR CRIMINAL JUSTICE PROFESSIONALS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: BUSOT-455 Fundamentals of English for Business or ESL-551 English as a Second Language V or Assessment Level: Or eligibility for ENGL-495 or ESL-475 as determined by the Chaffey assessment process.

Different types of written reports prepared by criminal justice professionals. Students prepare misdemeanor, felony, pre-sentencing, parole/probation and administrative reports, organizing and presenting the information obtained from investigations, interviews & interrogations. Topics include: content; criminal elements; correct style and structure; clarity and conciseness; grammar, punctuation, and spelling; neatness; completeness; and accuracy. The importance of quality reports is stressed.

CJ-413 POLICE SUPERVISION, LEADERSHIP AND MANAGEMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: CJ-408 Patrol Operations
Role, function, and duties of the law enforcement supervisors and managers. Topics include: defining the mission of law enforcement agencies; organizational structure; patrol operations, scheduling and deployment; department policies and procedures, personnel training; performance evaluations, selection, promotion of personnel; oral and written communications, including response to complaints and community concerns.

CJ-459 WOMEN AND THE CRIMINAL JUSTICE SYSTEM (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
A historical study of women involved in the criminal justice system as victims, offenders, and criminal justice professionals. Causative factors for women's increased propensity for crime are reviewed, as well as the female professionals' rise to prominence and effectiveness in a male-dominated profession.

CULINARY ARTS - CUL

CUL-15 SANITATION, SAFETY, AND EQUIPMENT MANAGEMENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a current negative tuberculosis test is required.
Safety, sanitation, and proper equipment management issues in the food service industry. In-depth coverage of industry-based sanitation and safety standards that prevent contamination and food-borne illness, forestall on-the-job accidents and injuries of workers, and preclude equipment misuse and damage. Disaster planning fire prevention, and basic first aid procedures are highlighted. Special emphasis on the local, state, and federal agencies and programs - such as OSHA, HACCP, and Serv-Safe having regulatory oversight in food service workplaces. (C-ID HOSP 110)
TOP Code: 1307.10 - Restaurant and Food Services and Management

CUL-17 PRINCIPLES OF FOOD PREPARATION (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Other: Proof of a current negative tuberculosis test is required.
Prerequisite: CUL-15 Sanitation, Safety, and Equipment Management
Principles and techniques in professional food preparation, including science and technology of the kitchen, food service safety and sanitation policies and procedures, recipe specifications, and kitchen equipment use and maintenance. This course also covers nutritional components of foods under review. These components include the digestion, absorption and metabolism of nutrients. Culinary concepts include as mise en place, dry and moist cookery, appropriate use of produce, dairy and dry goods, and sustainability using local sourcing. Includes hands-on professional food preparation techniques with an emphasis on collaboration and teamwork.
TOP Code: 1306.30 - Culinary Arts
CUL-22 RESTAURANT AND CATERING OPERATIONS (3)
Lecture 16 - 19 hours. Laboratory 96 - 114 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a current negative tuberculosis test is required.
Prerequisite: CUL-17 Principles of Food Preparation
Planning, marketing, organization, execution and food preparation for a restaurant or a catered banquet. Acting as managers, chefs, and crew, students will produce menus and cook a variety of dishes for different styles of catered events. Students will utilize the professional and technical presentation methods used for plated meals, buffet luncheons, and passed hors d’oeuvres.
TOP Code: 1307.10 - Restaurant and Food Services and Management

CUL-440 INTRODUCTION TO BAKING (4)
Lecture 16 - 19 hours. Laboratory 144 - 171 hours.
Grading: Letter Grade (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a current negative tuberculosis test is required.
This course covers fundamental baking skills for students who intend to specialize in baking and pastry making for commercial production. Production of yeast and quick breads, cakes, cookies, pies, and pastries, as well as decorating and icings are undertaken. Gourmet baked items and pastries are produced in a time-restricted quality-minded setting. This course is for students pursuing a career in culinary arts/culinary management. Aligned with C-ID CULI 180X

CUL-441 ADVANCED PROFESSIONAL BAKING (4)
Lecture 16 - 19 hours. Laboratory 144 - 171 hours.
Grading: Letter Grade (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a current negative tuberculosis test is required.
Prerequisite: CUL-440 Introduction to Baking
Advanced baking and patisserie techniques including advanced formulas. Explore advanced fundamentals techniques in baking and patisserie. Examine how a formula works including changes of yields and altering percentages of ingredients in formulas to produce desired results are stressed. Introduction to hot, cold, and frozen desserts with concentration on the composition of restaurant style plated desserts. Topics include traditional composed desserts, modern menu fusion, international/ethnic and classical dessert combinations.
TOP Code: 1306.30 - Culinary Arts

CUL-442 PROFESSIONAL COOKING (4)
Lecture 16 - 18 hours. Laboratory 144 - 162 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: CUL-17 Principles of Food Preparation
Beginning through intermediate introduction to the culinary arts, including a historical and contemporary exploration of cultural cuisines. Practical application of culinary theory and technique that provides students with a realistic experience of professional cooking and kitchen culture. Focus on basic and intermediate knife skills; Foundations, principles and practical skills focusing on meat, poultry, fish and shellfish; the production of stocks, soups and sauces; vegetable and starch identification, fabrication, and cookery; egg and breakfast comestibles; and the cold kitchen, including salad, cold sauce, and sandwich preparation. Examination of the history and modern interpretations of the art of garde manger, including hors d’oeuvres, pates, terrines, and charcuterie. Kitchen safety and sanitation rules are revisited and practiced.
TOP Code: 1306.30 - Culinary Arts

CUL-443 ARTISAN BREADS (4)
Lecture 16 - 19 hours. Laboratory 144 - 171 hours.
Grading: Letter Grade (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a current negative tuberculosis test is required.
Prerequisite: CUL-440 Introduction to Baking
Artisan Breads provides students with the information, tools, and instruction to gain proficiency in preparation of a variety of artisan breads. This course will also focus on international breads and an evaluation of bread and yeast products from throughout the world. Emphasis is placed on learning to mix, ferment, shape, bake, and store hand-crafted breads. Students focus on traditional fermentation, as well as the science of the ingredients. Students learn assembly and speed necessary to increase their proficiency in meeting production deadlines with quality products.
TOP Code: 1306.30 - Culinary Arts

CUL-444 WORLD CUISINE (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: CUL-17 Principles of Food Preparation
This course will introduce students to cuisines found throughout the World. Culinary history and general characteristics that have influenced the development of each region’s cuisine will be studied. This includes the geography, climate, religion and trade that have played a role in the development of distinct international cuisines. Specific areas of instruction will include the identification of ingredients and equipment related to each region or cuisine.
TOP Code: 1306.30 - Culinary Arts

CUL-445 CAKE DECORATING, PASTRY ART, AND CHOCOLATES (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: CUL-441 Advanced Professional Baking
Course presents a variety of preparation techniques that emphasize the fundamentals of the American and European style of cake decoration and commercial culinary practices. Course introduces fundamental techniques in chocolate production, including candies, confections and desserts.

DANCE - DANCE

DANCE-1 SURVEY OF DANCE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: ESL-475 Fundamentals of College Reading and Writing for ESL Students - Eligibility for ENGL-1A as determined by the Chaffey assessment process
A conceptual and historical study of dance from antiquity to the present emphasizing the cultural and historical development of dance as a theatrical art and social form. This non-studio course includes lectures, readings, and films.

DANCE-2 THEATRICAL DANCE (3)
Lecture 48 - 54 hours. Studio 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Study of physical movement as it relates to the body on the stage including movements commonly used in musical theatre, jazz, and modern dance techniques. This course is for the theatre and/or dance major, or any performer or student interested in developing awareness of dance theory and understanding the importance of control, coordination, balance, strength, and conscious development of movement habits.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture Hours</th>
<th>Studio Hours</th>
<th>Grading:</th>
<th>Advisory:</th>
<th>Top Code:</th>
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</thead>
<tbody>
<tr>
<td>DANCE-7A BALLET IA (1)</td>
<td>Skill acquisition and practice of fundamental classical ballet barre and center technique at the beginning level. Study of ballet theory, history, and vocabulary.</td>
<td>48 - 54 hours.</td>
<td>48 - 54 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-7A BALLET IA</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-7B BALLET IB (1)</td>
<td>Skill improvement in fundamental classical ballet barre and center technique at the advanced beginning level. Continued study of ballet theory, history, and vocabulary.</td>
<td>48 - 54 hours.</td>
<td>48 - 54 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-7B BALLET IB</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-8A BALLET IIA (1)</td>
<td>Further development of jazz dance skills and vocabulary at the advanced beginning level emphasizing technique and creativity, and drawing upon classical and contemporary styles. Introduction of modern dance theory, history, and criticism. Application of skills through warm-ups; center-floor strength, flexibility, body control techniques; and traveling techniques progressing to choreographed combinations.</td>
<td>48 - 54 hours.</td>
<td>48 - 54 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-8A BALLET IIA</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-8B BALLET IIB (1)</td>
<td>Further development and practice of intermediate level combinations with modifications and complications. Continued study of technique, styles, and rhythms adding more</td>
<td>48 - 54 hours.</td>
<td>48 - 54 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-8B BALLET IIB</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-10A JAZZ DANCE IA (1)</td>
<td>Further development of jazz dance skills and vocabulary at the advanced beginning level emphasizing technique and both classical and contemporary styles. Application of skills through more complex, enhanced warm-ups; center-floor strength, flexibility, body control techniques; and choreographed combinations.</td>
<td>48 - 54 hours.</td>
<td>48 - 54 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-10A JAZZ DANCE IA</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-10B JAZZ DANCE IB (1)</td>
<td>Further development of jazz dance skills and vocabulary at the advanced beginning level emphasizing technique and both classical and contemporary styles. Application of skills through more complex, enhanced warm-ups; center-floor strength, flexibility, body control techniques; and choreographed combinations.</td>
<td>32 - 36 hours.</td>
<td>32 - 36 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-10B JAZZ DANCE IB</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-12 INTRODUCTION TO DANCE (3)</td>
<td>Further development of jazz dance skills and vocabulary at the advanced beginning level emphasizing technique and creativity, and drawing upon classical and contemporary styles. Introduction of modern dance theory, history, and criticism. Application of skills through warm-ups; center-floor strength, flexibility, body control techniques; and traveling techniques progressing to choreographed combinations.</td>
<td>48 - 54 hours.</td>
<td>48 - 54 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-12 INTRODUCTION TO DANCE</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-20A MODERN DANCE IA (1)</td>
<td>Further development of modern dance skills and vocabulary at the advanced beginning level emphasizing technique and creativity, and drawing upon classical and post-modern styles, as well as contemporary styles. Introduction of modern dance theory, history, and criticism. Application of skills through warm-ups; center-floor strength, flexibility, body control techniques; and traveling techniques progressing to choreographed combinations.</td>
<td>48 - 54 hours.</td>
<td>48 - 54 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-20A MODERN DANCE IA</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-20B MODERN DANCE IB (1)</td>
<td>Further development of modern dance skills and vocabulary at the advanced beginning level emphasizing technique and creativity, and drawing upon classical and post-modern styles, as well as contemporary styles. Further analysis of modern dance theory, history, and criticism, and application of skills through more complex, enhanced warm-ups; center-floor strength, flexibility, body control techniques; and traveling techniques progressing to choreographed combinations.</td>
<td>32 - 36 hours.</td>
<td>48 - 54 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-20B MODERN DANCE IB</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-25 DANCE CONDITIONING AND SOMATIC TECHNIQUES (2)</td>
<td>Dance conditioning and somatic techniques emphasizing alignment/placement dynamics, core stabilization, flexibility, strength, and efficiency for the dancer. May include Pilates, Alexander Technique, and other disciplines. Basic dance-related anatomical analysis of movement and mind-body connection through dance-conditioning system of floor mat work.</td>
<td>16 - 19 hours.</td>
<td>48 - 54 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-25 DANCE CONDITIONING AND SOMATIC TECHNIQUES</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-30A TAP DANCE IA (1)</td>
<td>Introduction of basic jazz dance skills and vocabulary emphasizing technique and style through warm-ups; center-floor strength, flexibility, body control techniques; and travelling techniques progressing to choreographed combinations.</td>
<td>32 - 36 hours.</td>
<td>32 - 36 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-30A TAP DANCE IA</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>DANCE-30B TAP DANCE IB (1)</td>
<td>Further development of tap dance skills and vocabulary at the advanced beginning level emphasizing technique, styles, and rhythms through warm-ups, travelling techniques, and choreographed combinations.</td>
<td>32 - 36 hours.</td>
<td>32 - 36 hours.</td>
<td>Letter Grade (CSU; UC)</td>
<td>DANCE-30B TAP DANCE IB</td>
<td>1008.00 - Dance</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Studio</td>
<td>Grade</td>
<td>Advisory</td>
<td>Limitation on Enrollment</td>
<td>Description</td>
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<tr>
<td>DANCE-40A</td>
<td>MODERN DANCE IIA (1)</td>
<td>48</td>
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<td></td>
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<td>Intermediate-level modern dance skills and vocabulary with additional development and complexity emphasizing expanded technical and artistic range and expression, and drawing upon classical, post-modern, and contemporary styles. In-depth analysis of modern dance theory, history, and criticism. Continued refinement of skills through more complex warm-ups; center-floor strength, flexibility, body control techniques; traveling techniques; and lengthier choreographed combinations.</td>
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<tr>
<td>DANCE-40B</td>
<td>MODERN DANCE IIB (1)</td>
<td>48</td>
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<td></td>
<td>Advanced-level modern dance skills and vocabulary emphasizing technical mastery and deep artistic range and expression, and drawing upon classical, post-modern, and contemporary styles. Mastery of skills and professionalism through complex, stylized warm-ups; center-floor strength, flexibility, body control techniques; traveling techniques; improvisation; and lengthy choreographed combinations.</td>
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<tr>
<td>DANCE-42</td>
<td>DANCE PRODUCTION I (3)</td>
<td>48</td>
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<td>Course provides theatre dance experience in a fully-produced dance concert production. Students gain knowledge of all aspects of the choreographic and rehearsal process culminating in dance performance of faculty and advanced student dance works in ensemble roles.</td>
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<tr>
<td>DANCE-44</td>
<td>DANCE PRODUCTION II (3)</td>
<td>144</td>
<td></td>
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<td>Further development of tap dance skills and vocabulary at the advanced level emphasizing technical mastery, styles, and rhythms. Increasing technical and artistic range through more complex warm-ups, travelling techniques, and choreographed combinations.</td>
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<tr>
<td>DANCE-50A</td>
<td>JAZZ DANCE IIA (1)</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td>Intermediate-level jazz dance skills and vocabulary with additional development and complexity emphasizing expanded technical and artistic range and expression, and drawing upon both classical and contemporary styles. Mastery of skills and professionalism through complex, stylized warm-ups; center-floor strength, flexibility, body control techniques; traveling techniques; and choreographed combinations.</td>
</tr>
<tr>
<td>DANCE-50B</td>
<td>JAZZ DANCE IIB (1)</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td>Further development of tap dance skills and vocabulary at the advanced level emphasizing technique, styles, and rhythms. Increasing technical and artistic range through more complex warm-ups, travelling techniques, and choreographed combinations.</td>
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<tr>
<td>DANCE-60A</td>
<td>TAP DANCE IIA (1)</td>
<td>48</td>
<td></td>
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<td>Basic techniques and styles of Hip Hop dance both historical and current emphasizing musicality, rhythms, basic and complex movements required to develop performance and choreographic skills, and critical viewing and analysis of Hip Hop dance choreography.</td>
</tr>
<tr>
<td>DANCE-60B</td>
<td>TAP DANCE IIB (1)</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td>Basic technique and styles of American and Latin ballroom dance with an emphasis on partnering skills, footwork, rhythms, musicality, and performance. Dance styles may include Salsa, Tango, Rumba, Bachata, Cha-Cha, Samba, Swing, Waltz, Fox trot, and Night Club 2-Step.</td>
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<tr>
<td>DANCE-420</td>
<td>SOCIAL DANCE (1)</td>
<td>48</td>
<td></td>
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<td>Basic techniques and styles of American and Latin ballroom dance with an emphasis on partnering skills, footwork, rhythms, musicality, and performance. Dance styles may include Salsa, Tango, Rumba, Bachata, Cha-Cha, Samba, Swing, Waltz, Fox trot, and Night Club 2-Step.</td>
</tr>
<tr>
<td>DANCE-450</td>
<td>STUDENT CHOREOGRAPHY FOR PERFORMANCE (0.75)</td>
<td>36</td>
<td></td>
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<td></td>
<td>This course provides practical experience for students to present their own original choreography for public performance and/or perform advanced student choreography in an in-studio setting. Students work with exploratory dance forms, cast their own dances, and manage their rehearsal schedules in preparation for performance in an in-studio dance production. Hours are arranged in the dance room. This course will only be offered in the fall semester.</td>
</tr>
</tbody>
</table>
DENTAL - DENTAL

DENTAL-400 DENTAL ASSISTING CORE SCIENCES (6) [Cx]
Lecture 64 - 72 hours. Laboratory 96 - 108 hours.
Grading: Letter Grade (Degree-applicable)
Core competencies and foundational skills. Topics include an overview of applicable biomedical terms and functions, dental anatomy, infection prevention and control, medical and dental emergencies, ethics and professionalism, patient interaction, dental charting, community health and diversity, and basic laboratory skills.
TOP Code: 1240.10 - Dental Assistant

DENTAL-410 DENTAL ASSISTING PRECLINICAL SCIENCES (6) [Cx]
Lecture 48 - 54 hours. Laboratory 144 - 162 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: DENTAL-400 Dental Assisting Core Sciences
Study and application of dental processes, performed in a preclinical site. Students engage in an in-depth study of dental materials, instrumentation, procedures, protocols, and familiar with the various dental specialties.
TOP Code: 1240.10 - Dental Assistant

DENTAL-420 RADIOGRAPHY FOR DENTAL ASSISTANTS (6) [Cx]
Lecture 48 - 54 hours. Laboratory 144 - 162 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: DENTAL-400 Dental Assisting Core Sciences
In-depth study of dental radiography. Topics include evolution of standard and digital radiography; basic principles, characteristics and terminology; oral physics and biological effects; sterilization and infection control; film types and exposures; safety procedures in the use and maintenance of equipment; placement and processing techniques; film mounting; error identification and correction; and the use of radiographs in diagnoses and treatment planning. Evaluation and documenting of pathological intraoral findings during mouth inspections are also covered. Students master skills in pre-clinical and clinical assignments.
TOP Code: 1240.10 - Dental Assistant

DENTAL-430 CLINICAL PRACTICE (6) [Cx]
Laboratory 288 - 324 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: DENTAL-420 Radiography for Dental Assistants
Prerequisite: DENTAL-410 Dental Assisting Preclinical Sciences
Students are assigned to extramural (off-site) clinical facilities, which include general and specialty dental practices. Experiential objectives are the application of four-handed dentistry concepts, auxiliary utilization, direct patient care, and dental office procedures. Student participation in community and professional development activities that occur within the term is a required part of the course.
TOP Code: 1240.10 - Dental Assistant

DISABILITY PROGRAMS AND SERVICES - DPS

For all DPS courses: Students with specific disabilities and educational limitations should have a physician’s recommendation/release for class activities. This provides the instructor with information necessary to tailor a program to the needs and capabilities of the individual student.
For DPS-657: Student must be identified under Title V regulations as a student with a verifiable disability. Student should have the willingness to work in large and small groups, individualized and/or laboratory settings, and the desire to develop vocational work skills, reading, and money handling as related to a vocation and independent living. Student must not be injurious to self or others.

DPS-523 BEGINNING JOB READINESS SKILLS (1.5)
Laboratory 72 - 86 hours.
Grading: Pass/No-Pass (Non-degree-applicable)
Corequisite: DPS-576 Beginning Job Skills Practicum Lab
Limitation on Enrollment (e.g. Performance tryout or audition): and Orientation & Instructor’s signature required
The first in a series of open-entry/open-exit self-paced courses for students with disabilities. This course introduces basic job readiness skills which prepare students for competitive employment.

DPS-524 INTERMEDIATE JOB READINESS SKILLS (1.5)
Laboratory 72 - 86 hours.
Grading: Pass/No-Pass (Non-degree-applicable)
Corequisite: DPS-577 Intermediate Job Skills Practicum Lab
Limitation on Enrollment (e.g. Performance tryout or audition): and Orientation & Instructor’s signature required
The second course in the series of open-entry/open-exit self-paced courses for students with disabilities. The course focuses on intermediate job readiness skills to further prepare students for competitive employment.

DPS-525 ADVANCED JOB READINESS SKILLS (1.5)
Laboratory 72 - 86 hours.
Grading: Pass/No-Pass (Non-degree-applicable)
Corequisite: DPS-578 Advanced Job Skills Practicum Lab
Limitation on Enrollment (e.g. Performance tryout or audition): and Orientation & Instructor’s signature required
Open-entry/open-exit, self-paced course for students with disabilities. This third course in the series focuses on advanced job readiness skills for competitive employment.

DPS-526 MASTERY OF JOB READINESS SKILLS (1.5)
Laboratory 72 - 86 hours.
Grading: Pass/No-Pass (Non-degree-applicable)
Corequisite: DPS-579 Mastery of Job Skills Practicum Lab
Limitation on Enrollment (e.g. Performance tryout or audition): and Orientation and Instructor signature required.
Open-entry / open-exit self-paced course for students with disabilities focused on job placement skills for obtaining competitive employment.
Laboratory 24 - 29 hours.
Grading: Non-Credit (Not graded)
Self-paced, open-entry/open-exit course offering individualized and or group instruction in job development, job search techniques, job holding skills, and the utilization of community rehabilitation resources for students with developmental, learning, and/or physical disabilities. Work experience, supported employment, and/or job placement and follow-up services are provided as a practicum for applying learned skills in a real work environment.

DPS-657 VOCATIONAL SKILLS FOR STUDENTS WITH DISABILITIES (0)
Laboratory 48 - 54 hours.
Grading: Non-Credit (Not graded)
Self-paced, open-entry/open-exit course for students with disabilities, teaching work skills that increase their earning potential and level of independence. Students learn skills necessary to progress in vocational and independent living environments to achieve their vocational goals. In order to insure equal access, classes are held in the community providing underrepresented students the opportunity for quality educational programming. Students learn the basic academics that support vocational development and increase their level of independence. Curriculum may include entry level work skills, job retention skills, and interpersonal skill development.

DRAFTING - DRAFT

DRAFT-20 COMPUTER-AIDED DRAFTING AND DESIGN (4) [Cx]
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Introduction to Computer Aided Drafting and Design (CADD) technology, terminology, and application, using an industry-standard program. Drawing creation; detailing and dimensioning; management of drawing files; management of user environment; producing hardcopy output of drawings; introduction to parametric sketching; Emphasis on two-dimensional working drawings. Coursework will be completed using the AutoCAD software.
TOP Code: 0953.00 - Drafting Technology

DRAFT-21 MECHANICAL DESIGN I (3) [Cx]
Lecture 16 - 19 hours. Laboratory 96 - 114 hours.
Grading: Letter Grade (CSU)
Advisory: DRAFT-20 Computer-Aided Drafting and Design
Prerequisite: EGTECH-10 Introduction to Engineering Design/Graphics or - 1 year of high school drafting using SolidWorks or similar feature-based modeling software
Engineering graphics for product design, manufacturing and construction. Emphasis on production of layouts and engineering drawings. Orthographic projection of primary views, section views, detail views and auxiliary views. Detailing of drawing views including dimensions, tolerancing, notes/labels and drawing formats. Assignments will be completed using the SolidWorks CAD software.
TOP Code: 0953.40 - Mechanical Drafting

DRAFT-41 MECHANICAL DESIGN AND DRAFTING II (4)
Lecture 32 - 38 hours. Laboratory 96 - 114 hours.
Grading: Letter Grade (CSU)
Advisory: DRAFT-21 Mechanical Design I
Other: 1 year experience using SolidWorks.
Prerequisite: EGTECH-10 Introduction to Engineering Design/Graphics or Advanced mechanical design/drafting with an on interpretation and preparation of part and assembly drawings. Emphasis on application of ASME Y14.5 geometrical and positional tolerancing and Six-Sigma tolerance stacking/analysis practices. Additional topics will include techniques for automating and customizing application software. Coursework will be completed using the SolidWorks software.
TOP Code: 0953.40 - Mechanical Drafting
DRAFT-43 ADVANCED CAD MODELING AND APPLICATIONS (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Prerequisite: EGTECH-10 Introduction to Engineering Design/Graphics
Advanced concepts and development of three-dimensional solid models. Emphasis on techniques for part and assembly modeling using a feature-based parametric CAD solid modeler. Students are prepared for and take the CSWA (Certified SolidWorks Associate) Exam. Coursework is done using the SolidWorks CAD software.
TOP Code: 0953.00 - Drafting Technology

DRAFT-50 ARCHITECTURAL DESIGN I (3) [Cx]
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Advisory: DRAFT-20 Computer-Aided Drafting and Design Intro to Revit Architecture software. Projects of simple residential and commercial buildings will be employed. Student drawings will reflect the integration of topics concepts and the various plans needed for a complete set of working drawings, including floor plans, elevations, section views, schedules and other construction documents are covered. Hands-on exercises will be used to reinforce the functions of Revit. Coursework will be completed using REVIT Architecture software.
TOP Code: 0953.10 - Architectural Drafting

DRAFT-51 ARCHITECTURAL DESIGN II (3) [Cx]
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Advisory: DRAFT-50 Architectural Design I
Design issues associated with more complex buildings and settings, including the impact of zoning, local codes, and challenging sites. Students will be using Revit Architecture software in order to help students master techniques used to develop and graphically convey architectural concepts, mainly using Revit Architecture. Students will progress an understanding of the design process related to space through digital media. Topics include: residential multiple story building, and small commercial design projects, green building design/materials, and environmental impact. Hands-on exercises will be used to reinforce the functions of Revit. Coursework will be completed using the REVIT Architecture software.
TOP Code: 0953.10 - Architectural Drafting

DRAFT-53 ARCHITECTURAL APPLICATIONS OF CAD (4) [Cx]
Lecture 32 - 38 hours. Laboratory 96 - 114 hours.
Grading: Letter Grade  (CSU)
Prerequisite: DRAFT-51 Architectural Design II
In-depth use of parametric three-dimensional for Building Information Modeling (BIM), building design and production of working drawings using Revit Architecture Software and exploring creating families. This will build upon the skills developed in Drafting 51 and will also include a light version of Revit MEP and Structure in order to create and modifying three-dimensional topography and buildings, parametric building walls with floor and roof slabs, creating floor reflected ceiling plans, generating building elevations and sections, and creating professional quality renderings. Hands-on exercises will be used to reinforce the functions of Revit.
TOP Code: 0953.10 - Architectural Drafting

DRAFT-78 ADVANCED MECHANICAL DESIGN APPLICATIONS (4) [Cx]
Lecture 32 - 38 hours. Laboratory 96 - 114 hours.
Grading: Letter Grade  (CSU)
Advisory: DRAFT-43 Advanced CAD Modeling and Applications or Other: 1 year experience using SolidWorks or similar feature-based modeling software
Prerequisite: EGTECH-10 Introduction to Engineering Design/Graphics or Advanced modeling/drawing of machine parts in the various stages of manufacturing with required back-up items such as jigs, fixtures, weldments, tooling, molds and dies. Advanced topics such as surfacing may also be included. Students will be prepared for the and take CSWP (Certified SolidWorks Professional) Exam. Coursework will be completed using the SolidWorks software.
TOP Code: 0953.00 - Drafting Technology

EARTH SCIENCE - ESC

ESC-1 EARTH SCIENCE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
Geology, oceanography, meteorology, and planetology aspects of the physical environment; designed for general education and earth science majors.
(C-ID GEOL 120)

ESC-1L EARTH SCIENCE LABORATORY (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
Corequisite: ESC-1 Earth Science (may be taken previously). Optional laboratory for Earth Science. Use the tools and methods of science to image, measure and observe phenomenon in geology, oceanography, astronomy and meteorology. (C-ID GEOL 120 L)

ESC-5 OCEANOGRAPHY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
Introduction to the marine sciences. Properties of water, air-sea interaction, ocean currents, waves, tides, beaches, marine life, marine resources, ocean pollution, and the nature and origin of the sea floor.

ESC-5L OCEANOGRAPHY LABORATORY (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
Corequisite: ESC-5 Oceanoaphy Use the tools and methods of science to image, measure and observe phenomenon in oceanography.

ECONOMICS - ECON

ECON-1 INTRODUCTION TO ECONOMICS (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Provide an overview of basic economic theories and models and apply them to analyze contemporary economic issues. Topics include the U.S. economic system, domestic and international economic issues, e.g. wealth and income distribution, sustainable economic growth, health and health care reform, unemployment, globalization, environmental issues, regulation, deregulation, inflation, interest rates, discrimination, corporations and labor unions and contemporary labor issues.
TOP Code: 2204.00 - Economics
<table>
<thead>
<tr>
<th>COURSE DESCRIPTIONS</th>
<th>EDUCATION - ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ECON-2 PRINCIPLES OF MACROECONOMICS (3)</strong></td>
<td><strong>ED-10 ELEMENTARY CLASSROOM FIELDWORK (3)</strong></td>
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<tr>
<td>Lecture 48 - 54 hours.</td>
<td>Lecture 48 - 54 hours.</td>
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<td>Grading: Letter Grade (CSU; UC)</td>
<td>Grading: Letter Grade (CSU; UC)</td>
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<tr>
<td>Assessment Level: Eligibility for MATH-450 or higher as determined by the Chaffey</td>
<td>Assessment Level: ENGL-1A Composition</td>
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<td>process.</td>
<td>Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a</td>
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<tr>
<td>Prerequisite: MATH-410 Elementary Algebra or MATH-550 Introduction to Algebra</td>
<td>negative TB test within past 12 months and legal fingerprint clearance through Chaffey College</td>
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<td>An introductory course focusing on aggregate economic analysis. Topics include</td>
<td>Human Resources Department are required for fieldwork placement.</td>
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<td>market systems, aggregate measures of economic activity, macroeconomic equilibrium,</td>
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<td>money and financial institutions, monetary and fiscal policy, international</td>
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<td>economics, and economic growth. (C-ID ECON 202)</td>
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<tr>
<td>U.S. economic system and institutions and the their origins will be examined</td>
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<td>including; theories and policies concerning economic growth and development,</td>
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<td>business cycles, unemployment, full employment, inflation, taxation, deficits,</td>
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<td>the national debt, public choice, money, banking, interest rates, international</td>
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<td>trade and finance, and competing economic views (e.g. Classical, New Classical,</td>
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<td>Keynesian, Monetarism, Sustainable Growth Theories, and Human Scale Economics).</td>
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<td>TOP Code: 2204.00 - Economics</td>
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<tr>
<td><strong>ECON-4 PRINCIPLES OF MICROECONOMICS (3) [Cx]</strong></td>
<td><strong>ED-400 INTRODUCTION TO EDUCATION AND TEACHING (3) [Cx]</strong></td>
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<tr>
<td>Lecture 48 - 54 hours.</td>
<td>Lecture 48 - 54 hours.</td>
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<td>Grading: Letter Grade (CSU; UC)</td>
<td>Grading: Letter Grade (Degree-applicable)</td>
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<td>Assessment Level: Eligibility for MATH-450 or higher as determined by the Chaffey</td>
<td>Advisory: ENGL-450 Fundamentals of Composition or ESL-450 Fundamentals of Composition for ESL Students</td>
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<td>process.</td>
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<tr>
<td>Prerequisite: MATH-410 Elementary Algebra or MATH-550 Introduction to Algebra</td>
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<td>This is an introductory course focusing on choices of individual economic decision-</td>
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<td>makers. Topics include scarcity; individual and household decision making;</td>
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<td>business decision making; specialization and trade; market equilibrium;</td>
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<td>elasticity; production and cost theory; market structures; factor markets;</td>
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<td>effects of taxes on individuals and businesses; income distribution and poverty;</td>
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<td>economics of race, gender, and culture; and market failure. May be offered as an</td>
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<td>Honors course.</td>
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<td>(C-ID ECON 201) TOP Code: 2204.00 - Economics</td>
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<td><strong>ECON-7 ECONOMIC HISTORY OF THE UNITED STATES (3)</strong></td>
<td><strong>EMERGENCY MEDICAL TECHNICIAN - EMT</strong></td>
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<tr>
<td>Lecture 48 - 54 hours.</td>
<td><strong>EMT-405 EMERGENCY MEDICAL RESPONDER (3) [Cx]</strong></td>
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<td>Grading: Letter Grade (CSU; UC)</td>
<td>Lecture 40 - 48 hours. Laboratory 24 - 29 hours.</td>
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<td>Surveys events in the U.S. from the middle of the 17th Century to the present.</td>
<td>Grading: Letter Grade (Degree-applicable)</td>
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<td>The class uses economic analysis to examine the social, political and economic</td>
<td>Advisory: Students should possess good dexterity and physical condition,</td>
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<td>events from the Colonial Period to the present. Topics will include the</td>
<td>have the ability to lift and carry up to 150 pounds, and be able to work in</td>
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<td>evolution of the banking systems and financial services, manufacturing and</td>
<td>confined spaces and different positions (e.g. on the ground or floor).</td>
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<td>tariffs, land and resource use, labor issues, government regulation and</td>
<td>Emergency Responder and CPR training for the professional rescuer, fulfilling</td>
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<td>deregulation, slavery, the rise of big business, international trade, income and</td>
<td>California Code of Regulations Title 22 requirements. Emergency care</td>
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<td>wealth distribution, business cycles, monetary and fiscal policy, and U.S.</td>
<td>knowledge and skills required for Emergency Medical Technicians,</td>
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<td>interaction with the global economy.</td>
<td>Professional and Volunteer Firefighters, and Peace Officers. Course meets</td>
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<td>TOP Code: 2204.00 - Economics</td>
<td>the American Heart Association CPR prerequisite and recommended</td>
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<td>preparation for admission to the EMT program, and is approved by the Inland</td>
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<td>County Emergency Medical Agency (ICEMA).</td>
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<td>TOP Code: 1250.00 - Emergency Medical Services</td>
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<td><strong>ECON-8 HISTORY OF ECONOMIC IDEAS (3)</strong></td>
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<td>Lecture 48 - 54 hours.</td>
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<td>Grading: Letter Grade (CSU; UC)</td>
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<td>Advisory: ENGL-1A Composition Advisory: Completion of English 1A recommended.</td>
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<tr>
<td>Historical development of the institutions and ideas related to our present</td>
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<td>economic system, emphasizing the writings of the &quot;great economists&quot;, including</td>
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<td>Smith, Ricardo, Marx, Marshall, Hayek, Robinson, Keynes, and Schumpeter.</td>
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<td>Students will critically examine a variety of schools of thought, with the</td>
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<td>objective of improving their ability to think clearly and logically.</td>
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<td>TOP Code: 2204.00 - Economics</td>
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**TOP Code: 2204.00 - Economics**
EMT-411 EMERGENCY MEDICAL TECHNICIAN (7) [Cx]
Lecture 80 - 90 hours. Laboratory 96 - 108 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: Students should possess good dexterity and have good physical condition with the ability to lift 150 pounds and work in confined areas and in different positions (i.e. ground and floor).
Limitation on Enrollment (e.g. Performance tryout or audition): Students must be 18 years of age at the start of the course. - Students must possess a current American Heart Association Health Care Provider CPR card.
Prerequisite: EMT-405 Emergency Medical Responder and
This course will provide EMT students with training to recognize the signs and symptoms of illness and traumatic injuries, as well as instruction on how to perform life-saving skills.

This course meets requirements as defined in the California Code of Regulations (CCR) Title 22, and is approved by the State of California EMS Authority, and local EMSA Inland Counties EMS Agency (ICEMA). This course includes lecture and laboratory experiences. Students must be a minimum of 18 years of age prior to beginning field experience. A minimum of 24 hours of field experience is included in the course, which consist of clinical rotation at Hospital, and/or ambulance ride along as required in CCR Title 22.

Upon successful completion of the course, students are eligible to register for the National Registry licensing examination which is taken off campus at an approved testing site.

Students upon successful completion of EMT 405 and EMT 411 may pursue the Emergency Medical Provider Certificate of Achievement.
TOP Code: 1250.00 - Emergency Medical Services

ENGINEERING - ENGIN

ENGIN-11 INTRODUCTION TO ENGINEERING (2)
Lecture 32 - 38 hours.
Grading: Letter Grade (CSU; UC)
Introduction to the engineering profession. Exploration of the educational requirements for engineers and engineering programs available at four-year schools. Students examine the various engineering fields, along with the design standards, creativity, and professional ethics unique to the profession. Guest speakers and industry exposure provide first-hand accounts of the profession's scope and responsibilities.

ENGIN-26 ENGINEERING GRAPHICS AND CAD (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: MATH-31 Plane Trigonometry
This course covers the principles of engineering drawings in visually communicating engineering designs and an introduction to computer-aided design (CAD). Topics include the development of visualization skills; orthographic projections; mechanical dimensioning and tolerancing practices; and the engineering design process. Assignments develop sketching and 2-D and 3-D CAD skills. The use of CAD software is an integral part of the course. Course aligns with ENGR 150

ENGIN-30 ENGINEERING APPLICATION OF DIGITAL COMPUTATION (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: MATH-65A Calculus I
Structured programming concepts applied to engineering problem types, such as center of mass, ballistics, column buckling, design, and reduction of experimental data. Structured approach used, with applications to flow charts and computer programming. Mathematical techniques include iterative solution, bisection, Raphson-Newton, statistics, and matrix operations.

ENGIN-50 ENGINEERING STATICS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: PHYS-45 Physics for Scientists and Engineers I and MATH-65A Calculus I
Vector treatment of statics of Particles and Rigid Bodies. Free body diagrams application to problems of Equilibrium (two and three dimensions) with systems of forces in trusses, frames and machines. Principles of Friction, Distributed Forces, Centroid and Centers of Gravity, Moments of Inertia for area and mass, and Shear and Bending Moment.

ENGIN-52 ENGINEERING DYNAMICS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: MATH-65B Calculus II and ENGIN-50 Engineering Statics
Kinematics and kinetics of particles, systems of particles, and rigid bodies from a Newtonian viewpoint. Force- acceleration, work-energy, and impulse-momentum principles. Planar kinematics and kinetics of rigid bodies.
Introduction to mechanical vibration. Vector mathematics where appropriate.

ENGIN-56 MATERIALS OF ENGINEERING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: CHEM-24A General Chemistry I
Properties of materials as they relate to atomic and crystal structure. Topics include atomic structure and bonding; crystalline structures; phases and phase diagrams; metals, polymers, ceramics, and composites; mechanical deformation and fracture; electrical, magnetic, and optical properties; corrosion; and process methods.

ENGIN-71 CIRCUIT ANALYSIS (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: PHYS-46 Physics for Scientists and Engineers II and MATH-65B Calculus II

ENGINEERING TECHNOLOGY - EGTECH

EGTECH-10 INTRODUCTION TO ENGINEERING DESIGN/GRAPHICS (4) [Cx]
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of the design process as applied to engineering and related fields, with emphasis on 3-D computer modeling software used in industry. Additional topics include: design sketching, visualization, geometric relationships, assembly modeling, and model documentation.
TOP Code: 0924.00 - Engineering Technology, General (requires Trigonometry)
ENGL-1A COMPOSITION (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: Eligibility for English 1A as determined by Chaffey assessment process
Prerequisite: ENGL-495 College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students
Careful study and practice of expository and argumentative writing techniques and the frequent writing of compositions with the ultimate goal of a research project. A minimum of 6,000 written words is expected over the course of the term. Three arranged hours of supplemental learning in a Success Center that supports this course is required. Designed to prepare the student for satisfactory college writing. May be offered as an Honors course. (C-ID ENGL 100)

ENGL-1B ADVANCED COMPOSITION AND CRITICAL THINKING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: ENGL-1A Composition
Using primarily non-fiction reading models, students emulate and incorporate various rhetorical strategies in the development of written analysis and researched argumentation. Focus on logical analysis (e.g., inductive and deductive reasoning) and effective reasoning, establishing credibility, and emotional appeals to develop persuasive arguments. Course is writing intensive with a minimum production requirement of 6,000 words. May be offered as an Honor course. (C-ID ENGL 105)

ENGL-1C INTRODUCTION TO LITERATURE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: ENGL-1A Composition
This course introduces representative works from major genres, develops students? close reading and analytical writing skills, and promotes appreciation and critical understanding of the cultural, historical, and aesthetic qualities of literature. Introduces the central literary genres: novel, short story, poem, and play. Close reading of the literature guides inexperienced readers toward greater understanding and appreciation of imaginative literature, and provides more experienced readers with new perspectives through the analysis of the techniques and purposes of specific writers. Students are taught how to organize and compose the literary essay. May be offered as an Honors course. (C-ID ENGL 120)

ENGL-7A CREATIVE WRITING: SHORT FICTION (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: or Eligibility for English 1A as determined by the Chaffey assessment process.
Prerequisite: ENGL-495 College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students Seminar in short fiction writing. Students study the underlying principles of this form of literature, write short stories, and analyze each other's work.

ENGL-7B CREATIVE WRITING: FICTION (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: or Eligibility for English 1A as determined by the Chaffey assessment process.
Prerequisite: ENGL-495 College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students Seminar in fiction writing focused on longer works. Students study the underlying principles of this form of literature; write longer and more developed short stories, novellas, or several chapters of a novel; analyze and critique each other's work; edit/revise/rewrite to ready for publication; and research potential markets for submission.
**ENGL-7D Creative Writing: Poetry (3)**

Lecture 48 - 54 hours.

Grading: Letter Grade (CSU; UC)

Assessment Level: Eligibility for English 1A as determined by the Chaffey assessment process

Prerequisite: ENGL-495 College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students

Writing seminar focusing on analysis of methods, forms, and meanings of poetry with emphasis on the elements of figurative language, sound, rhythm, and tone. Students develop critical standards for judging the worth of a poem, give their critical estimates of professional and student work, and write their own poetry.

**ENGL-7E Creative Writing: Nonfiction (3)**

Lecture 48 - 54 hours.

Grading: Letter Grade (CSU; UC)

Assessment Level: Eligibility for English 1A as determined by the Chaffey assessment process

Prerequisite: ESL-475 Fundamentals of College Reading and Writing or ESL-495 College Reading and Writing

Course in creative nonfiction writing. Review of the principles employed in writing creative nonfiction such as memoirs, personal essays, review, profiles, nature articles, and reportage. Students create essays, analyze and respond to student and professional writing, craft works intended for publication, and research potential markets for submission.

**ENGL-32 Introduction to the Novel (3)**

Lecture 48 - 54 hours.

Grading: Letter Grade (CSU; UC)

Advisory: ENGL-1A Composition

Reading and analysis of novels of established merit drawn from multiple cultures.

**ENGL-33 Introduction to Poetry (3)**

Lecture 48 - 54 hours.

Grading: Letter Grade (CSU; UC)

Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students or ENGL-495 College Reading and Writing

Survey of poetry written in English from the Middle Ages through the present day. Increases students' knowledge of poetry and its history and acquaints them with techniques of analysis. Special attention is given to poetic voice, syntax, figures of speech, sonics, and form. NOTE: English 33 is not a creative writing course for poetry.

**ENGL-35 Literary Magazine Production (4)**

Lecture 48 - 54 hours. Laboratory 48 - 54 hours.

Grading: Letter Grade (CSU)

Advisory: Strong word processing skills.

Prerequisite: ESL-475 Fundamentals of College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students

Concepts and practices of magazine production, including the design and maintenance of a web version. Acting as editors and assistants for The Chaffey Review, students master the fundamentals of editorial evaluation and selection, copyediting, proofreading, layout and design, production, promotion, and distribution.

**ENGL-68 Mythology (3)**

Lecture 48 - 54 hours.

Grading: Letter Grade (CSU; UC)

Prerequisite: ENGL-495 College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students

Major myths, especially in relation to the culture in which they arose, with a special emphasis on Greek myths. Broad comparison of the myths of many cultures and their influence on subsequent literature.

**ENGL-70A World Literature I (3)**

Lecture 48 - 54 hours.

Grading: Letter Grade (CSU; UC)

Prerequisite: ENGL-1A Composition

Chronological survey of significant authors and texts of world literature from earliest times through the mid-1600's. Selected works derive from Europe, the Middle East, Asia, and other areas. Extensive reading and discussion of works reflecting the diversity of thought in the world. Examination of the relationship between historical events and literary works, and the impact of works on their age and ensuing eras. Strong writing component with emphasis on textual analysis. (C-ID ENGL 140)

**ENGL-70B World Literature (3)**

Lecture 48 - 54 hours.

Grading: Letter Grade (CSU; UC)

Prerequisite: ENGL-1A Composition

Chronological survey of significant authors and texts of world literature, including Europe, the middle East, Asia and other areas, from the mid-17th century to the present. Extensive reading and discussion of works reflecting diverse cultural viewpoints. Examination of the relationship between historical events and literary works, and the impact of works upon their age and ensuing eras. Strong writing component with emphasis on textual analysis. (C-ID ENGL 145)

**ENGL-71 Folklore (3)**

Lecture 48 - 54 hours.

Grading: Letter Grade (CSU; UC)

Prerequisite: ENGL-1A Composition

Introduction to folklore and analysis of its various forms: myths, legends, fairy tales, fables, epics, and tall tales. Course consists of close reading of selected works and discussion of criteria for assessing the literary value of these stories and determining their significance as the primary source of themes, motifs, metaphors, and allusions that are encountered throughout literature.

**ENGL-73 LGBT Literature (3)**

Lecture 48 - 54 hours.

Grading: Letter Grade (CSU; UC)

Prerequisite: ENGL-1A Composition

Introductory analysis of LGBT literature written in the English language, with some review of Western and world classical literature. Identification of and analysis of major LGBT authors and themes. Special focus on the development of queer theory as a means of interpreting literature. Investigation of modes including drama, poetry, essays, short stories, and the novel.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
<th>Lecture Hours</th>
<th>Graduation</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL-74</td>
<td>ASIAN-AMERICAN LITERATURE</td>
<td>3</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Chronological survey of significant authors and texts of American literature from its beginnings in the colonial period to the 1860s. Extensive reading and discussion of works reflecting the diversity of the United States. Examination of the relationship between historical events and literary works. Strong writing component with emphasis on textual analysis. (C-ID ENGL 130)</td>
</tr>
<tr>
<td>ENGL-75A</td>
<td>AMERICAN LITERATURE</td>
<td>3</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Chronological survey of significant authors and texts of American literature from the 1860s to the present. Extensive reading and discussion of works reflecting the diversity of the United States. Examination of the relationship between historical events and literary works. Strong writing component with emphasis on textual analysis. (C-ID ENGL 130)</td>
</tr>
<tr>
<td>ENGL-75B</td>
<td>AMERICAN LITERATURE</td>
<td>3</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Chronological survey of significant authors and texts of American literature from the 1860s to the present. Extensive reading and discussion of works reflecting the diversity of the United States. Examination of the relationship between historical events and literary works. Strong writing component with emphasis on textual analysis. (C-ID ENGL 130)</td>
</tr>
<tr>
<td>ENGL-76</td>
<td>AFRICAN-AMERICAN LITERATURE</td>
<td>3</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Chronological survey of significant authors and texts of American literature from the 1860s to the present. Extensive reading and discussion of works reflecting the diversity of the United States. Examination of the relationship between historical events and literary works. Strong writing component with emphasis on textual analysis. (C-ID ENGL 130)</td>
</tr>
<tr>
<td>ENGL-77</td>
<td>LATINO LITERATURE</td>
<td>3</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Chronological survey of significant authors and texts of American literature from the 1860s to the present. Extensive reading and discussion of works reflecting the diversity of the United States. Examination of the relationship between historical events and literary works. Strong writing component with emphasis on textual analysis. (C-ID ENGL 130)</td>
</tr>
<tr>
<td>ENGL-79</td>
<td>NATIVE AMERICAN LITERATURES</td>
<td>3</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Chronological survey of major authors and texts of British literature from the Old English to the Neoclassic period (up to the last quarter of the 18th century). Extensive reading and discussion of works. Examination of the relationship between historical events and literary works. Strong writing component with emphasis on textual analysis. (C-ID ENGL 160)</td>
</tr>
<tr>
<td>ENGL-80A</td>
<td>SURVEY OF BRITISH LITERATURE</td>
<td>3</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Chronological survey of major authors and texts of British literature from the Old English to the Neoclassic period (up to the last quarter of the 18th century). Extensive reading and discussion of works. Examination of the relationship between historical events and literary works. Strong writing component with emphasis on textual analysis. (C-ID ENGL 160)</td>
</tr>
<tr>
<td>ENGL-80B</td>
<td>SURVEY OF BRITISH LITERATURE</td>
<td>3</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Chronological survey of major authors and texts of British literature from the Old English to the Neoclassic period (up to the last quarter of the 18th century). Extensive reading and discussion of works. Examination of the relationship between historical events and literary works. Strong writing component with emphasis on textual analysis. (C-ID ENGL 160)</td>
</tr>
<tr>
<td>ENGL-81</td>
<td>SHAKESPEARE</td>
<td>3</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Extensive reading, along with oral and written discussion, of a selected group of Shakespearean plays.</td>
</tr>
<tr>
<td>ENGL-495</td>
<td>COLLEGE READING AND WRITING</td>
<td>4</td>
<td>64 - 72</td>
<td>Degree-applicable</td>
<td></td>
<td>Careful study and practice of critical thinking, reading, and expository writing techniques, using primarily nonfiction texts, and the frequent writing of compositions with the ultimate goal of writing essays using sources. Emphasizes study skills and prepares the student for English 1A and a variety of academic disciplines. Five hours of supplemental learning in a Success Center that supports this course are required. NOTE: Students who have successfully completed ESL 475 may not take English 495.</td>
</tr>
<tr>
<td>ENGL-675</td>
<td>PREPARATION FOR COLLEGE READING AND WRITING</td>
<td>0</td>
<td>64 - 76</td>
<td>Pass/No-Pass</td>
<td>(Non-credit)</td>
<td>Extensive reading, along with oral and written discussion, of a selected group of Shakespearean plays.</td>
</tr>
</tbody>
</table>

Assessment Level: Eligibility for English 1A as determined by the Chaffey Assessment Process.
ENGLISH AS A SECOND LANGUAGE - ESL

ESL-475 FUNDAMENTALS OF COLLEGE READING AND WRITING FOR ESL STUDENTS (4)
Lecture 64 - 72 hours.
Grading: Letter Grade (Degree-applicable)
Assessment Level: Eligibility for ESL 475 as determined by the Chaffey assessment process
Prerequisite: ESL-551 English as a Second Language V or
Careful study and practice of critical thinking, reading, and expository writing techniques for non-native speakers of English. Uses primarily nonfiction texts to facilitate composition writing with the ultimate goal of writing an essay using sources. Prepares the student for English 1A and a variety of academic disciplines. Five hours of supplemental learning in a Success Center that supports this course is required.
NOTE: Students who have successfully completed English 475 may not take ESL 475.
TOP Code: 4930.87 - English as a Second Language-Integrated

ESL-502 ESL FOR WORKPLACE AND ACADEMIC SUCCESS (3)
Lecture 48 - 54 hours.
Grading: Pass/No-Pass (Non-degree-applicable)
Assessment Level: Assessment Level Eligibility for ESL 531 (Level 3) as determined by the Chaffey assessment test.
Prerequisite: ESL-621 English as a Second Language II or
Prepares students for jobs, job advancement, career success and academic success by strengthening language skills for the workplace. Topics include: career pathways, interviewing and resume writing, cultural norms, and academic skills. Focus is on developing the formal reading, writing, oral language and vocabulary skills commonly used in the workplace.
TOP Code: 4930.87 - English as a Second Language-Integrated

ESL-508 PRONUNCIATION OF AMERICAN ENGLISH (3)
Lecture 48 - 54 hours.
Grading: Pass/No-Pass (Non-degree-applicable)
Prerequisite: or Placement recommendation by the ESL assessment test into 541 or higher ESL-531 English as a Second Language III
Intensive instruction in the oral production of American English, targeted to intermediate and advanced ESL students. Focus on speaking and pronunciation skills to improve fluency and minimize accent impact imparted by the speaker's native language. Topics include: sound systems of consonants and vowels, pitch and intonation patterns, rhythm and phrasing, and sound reductions. Eight hours of supplemental learning in a Success Center that supports this course is required.
TOP Code: 4930.86 - English as a Second Language-Speaking/Listening

ESL-531 ENGLISH AS A SECOND LANGUAGE III (4)
Lecture 64 - 72 hours.
Grading: Pass/No-Pass (Non-degree-applicable)
Assessment Level: Assessment Level Eligibility for ESL 531 as determined by the Chaffey assessment process
Prerequisite: ESL-621 English as a Second Language II or
This is the third multi-skills core course in the study of English with reading, writing, listening and speaking designed for students whose first language is not English. The course includes reading and writing the English alphabet, producing the sound system, as well as practicing simple grammar, reading, and writing. Students also learn basic classroom rules and communication necessary for success at school. Ten hours of supplemental learning in a Success Center that supports this course is required.
TOP Code: 4930.87 - English as a Second Language-Integrated

ESL-541 ENGLISH AS A SECOND LANGUAGE IV (4)
Lecture 64 - 72 hours.
Grading: Pass/No-Pass (Non-degree-applicable)
Assessment Level: Assessment Level Eligibility for ESL 541 as determined by the Chaffey assessment process
Prerequisite: ESL-531 English as a Second Language III or
This is the fourth multi-skills core course in the study of English reading, writing, listening, and speaking designed for students whose first language is not English. The course further develops and adds to the skills taught in ESL 531: grammar and sentence structure, paragraph organization and development, reading, and speaking skills. Eight hours of supplemental learning in a Success Center that supports this course is required.
TOP Code: 4930.87 - English as a Second Language-Integrated

ESL-551 ENGLISH AS A SECOND LANGUAGE V (4)
Lecture 64 - 72 hours.
Grading: Letter Grade (Non-degree-applicable)
Assessment Level: Assessment Level Eligibility for ESL 551 as determined by the Chaffey assessment process
Prerequisite: ESL-541 English as a Second Language IV or
An introduction to the academic reading, writing, critical thinking, and oral communication expected at the college level. This is the fifth multi-skills core course in the study of English reading, writing, listening and speaking designed for students whose first language is not English. The course further develops and adds to the skills taught in ESL-541: grammar and sentence structure, essay organization and development, reading, and speaking skills. Eight hours of supplemental learning in a Success Center that supports this course is required.
TOP Code: 4930.87 - English as a Second Language-Integrated

ESL-611 ENGLISH AS A SECOND LANGUAGE I (0)
Lecture 64 - 72 hours.
Grading: Non-Credit (Pass/No Pass)
Assessment Level: Eligibility for ESL 611 as determined by the Chaffey assessment process
This is the first multi-skills core course in the study of English with reading, writing, listening and speaking designed for students whose first language is not English. The course includes reading and writing the English alphabet, producing the sound system, as well as practicing simple grammar, reading, and writing. Students also learn basic classroom rules and communication necessary for success at school. Ten hours of supplemental learning in a Success Center that supports this course is required.
TOP Code: 4930.87 - English as a Second Language-Integrated

ESL-621 ENGLISH AS A SECOND LANGUAGE II (0)
Lecture 64 - 72 hours.
Grading: Non-Credit (Pass/No Pass)
Assessment Level: or Eligibility for ESL 621 as determined by the Chaffey assessment process
This is the second multi-skills core course in the study of English with reading, writing, listening and speaking designed for students whose first language is not English. The course includes basic listening and speaking skills, beginning with simple words and phrases, then progressing to sentence level interaction. It also includes basic classroom culture, basic US culture, and communication necessary for success in school and life. Ten hours of supplemental learning in a Success Center that supports this course is required.
TOP Code: 4930.87 - English as a Second Language-Integrated
ESL-650 English and Citizenship (0)
Lecture 48 - 54 hours.
Grading: Non-credit (Pass/No-Pass)
Assessment Level: Placement recommendation at ESL 531 or higher level
ESL course as determined by Chaffey ESL assessment process.
Prerequisite: ESL-621 English as a Second Language II or
A beginning non-credit course for non-native speakers of English who wish to
become citizens of the United States. Topics: basic English, basic US History
and Government, American culture and civics.
TOP Code: 4930.90 - Citizenship

FASHION DESIGN - FASHD

FASHD-20 History of Fashion (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Origin and evolution of apparel styles through history, from Egyptian to
contemporary periods. Sociological, economic, political, and physical factors
affecting apparel choices through the centuries. Trends of recurring styles
throughout the fashion cycle.
TOP Code: 1303.00 - Fashion

FASHD-40 Beginning Clothing Construction (2) [Cx]
Lecture 16 - 19 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Principles and techniques for developing fundamental skills in clothing
construction using woven fabrics.
TOP Code: 1303.00 - Fashion

FASHD-42 Advanced Clothing Construction (2)
Lecture 16 - 19 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Prerequisite: FASHD-40 Beginning Clothing Construction
Advanced construction techniques for couture sewing, tailoring and other
complex garments, and the handling of specialty fabrics.
TOP Code: 1303.00 - Fashion

FASHD-45 Design Fundamentals for Fashion and Interiors (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Identification and utilization of the elements and principles of design common
to fashion and interior design, while encompassing all arts including painting,
sculpture, and architecture. Emphasis on creative expression through
utilization of good design principles and elements.

FASHD-61 Pattern Drafting I (3) [Cx]
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: FASHD-40 Beginning Clothing Construction
Theory and practice in developing flat patterns for apparel, utilizing industry
standards and full-scale blocks. Garments, photos and illustrations are
analyzed for design and translated to paper patterns, then sewn in muslin to
test for design replication, fit and accuracy.
TOP Code: 1303.10 - Fashion Design

FASHD-65 Fashion Illustration (2) [Cx]
Lecture 16 - 19 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Introductory fashion sketching, leading to more advanced fashion figure
drawing and descriptive rendering for fashion designers, illustrators, and
merchandisers. Development of original designs and the uses of techniques
drawing for the fashion industry.
TOP Code: 1303.00 - Fashion

FASHD-72 Fashion Draping (2)
Lecture 16 - 19 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Prerequisite: FASHD-40 Beginning Clothing Construction
Three dimensional draping in muslin, and other textile and non-textile
materials, and translation of the drape to a hard pattern.
TOP Code: 1303.10 - Fashion Design

FASHD-428 Computer-Aided Design (2)
Lecture 16 - 18 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: Basic computer skills are recommended. FASHD-45 Design
Fundamentals for Fashion and Interiors
Introductory course using CAD software to create flat sketches, colorize
designs, assemble story boards, scan images and the effective use of
program features to create and alter shapes and manipulate text.
TOP Code: 1303.10 - Fashion Design

FASHD-442 Industrial Sewing (2)
Lecture 16 - 19 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: FASHD-40 Beginning Clothing Construction
Apparel industry construction techniques and assembly of garments utilizing
industrial sewing machines, with a special emphasis on stretch fabrics.
TOP Code: 1303.00 - Fashion

FASHD-445 Fitting and Alterations of Patterns and Apparel (2)
Lecture 16 - 19 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: FASHD-40 Beginning Clothing Construction
Analysis of figure variations and application of pattern adjustments for proper
fit. Topics include: ready-to-wear and commercial pattern alterations, and the
development of custom patterns. Students will examine pricing, skills,
equipment, and client management for an alteration businesses.
TOP Code: 1303.30 - Fashion Production

FASHD-470 Apparel Production (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: FASHD-40 Beginning Clothing Construction and FASHM-10
Introduction to the Fashion Industry
The design, development, pricing, sourcing, sample making, manufacturing,
and marketing of a line of clothing.
TOP Code: 1303.30 - Fashion Production

FASHD-471 Advanced Patternmaking (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: FASHD-61 Pattern Drafting I and FASHD-40 Beginning Clothing
Construction
Theory and practice in developing flat patterns for sportswear, suits, linings
and knitwear. Research of design details in more complicated garments and
implementation into full-scale patterns. Patterns are tested in muslin, then in
designer fabric, with the final pattern ready for industry production.
TOP Code: 1303.00 - Fashion
### FASHM-10 INTRODUCTION TO THE FASHION INDUSTRY (3) [Cx]

**Lecture 48 - 54 hours.**
Grading: Letter Grade (CSU; UC)

Basic study of the fashion design and merchandising industry including leading designers and geographical centers, distribution, textile and apparel production, fashion cycles, retail outlets, merchandising techniques, and employment opportunities.

**TOP Code: 1303.20 - Fashion Merchandising**

### FASHM-11 FASHION RETAIL MERCHANDISING AND MANAGEMENT (3)

**Lecture 48 - 54 hours.**
Grading: Letter Grade (CSU)

Prerequisite: FASHM-10 Introduction to the Fashion Industry

From the perspective of the fashion industry analysis of consumer needs, store location, financial requirements, and legal process of starting a retail operation. Planning for store layout, merchandise mix, vendor negotiation, pricing, displaying, advertising, selling, e-commerce, and controlling of merchandise.

**TOP Code: 1303.20 - Fashion Merchandising**

### FASHM-12 VISUAL MERCHANDISING (3)

**Lecture 48 - 54 hours.**
Grading: Letter Grade (CSU)

Store design and space planning to maximize fashion sales. Visual display of store windows and vignettes using proper techniques and art principles.

**TOP Code: 1303.20 - Fashion Merchandising**

### FASHM-15 IMAGE AND FASHION SELECTION (3)

**Lecture 48 - 54 hours.**
Grading: Letter Grade (CSU)

Clothing choices for the professional workplace and California lifestyles. Analysis of body composition and proportions, individual coloring, and personality in the selection of a trendy, sophisticated, comfortable, and budget-appropriate wardrobe.

**TOP Code: 1303.20 - Fashion Merchandising**

### FASHM-60 TEXTILES (3) [Cx]

**Lecture 48 - 54 hours.**
Grading: Letter Grade (CSU; UC)

Study of the textile fibers, yarns, weaves, and finishes which give the consumer and designer a background for intelligent selection, use, and care of modern fabrics. Special emphasis will be given to man-made fiber performance and properties.

**TOP Code: 1303.20 - Fashion Merchandising**

### FASHM-482 INDUSTRY INTERNSHIPS: FASHION MERCHANDISING (1)

**Hours: 60 hours/term (unpaid) or 75 hours/term (paid) on-site work experience.**
Grading: Letter Grade (Degree-applicable)

Prerequisite: FASHD-42 Advanced Clothing Construction and FASHD-61 Pattern Drafting I

Industry internship in cooperation with area private and public sector employers providing new or expanded learning opportunities directly related to fashion design and production and readying the student for employment.

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### FIRE TECHNOLOGY: PROFESSIONAL FIREFIGHTER - FIRETEC

The Fire Prevention Inspector courses are designed for (1) Students who are seeking a career as a Fire Inspector working within a fire department fire prevention bureau, (2) Fire Professionals preparing for the California State Board of Fire Service for Fire Inspector Certification, and (3) Individuals seeking employment as an inspector within Corporate Industry. Upon successful completion of Fire 420-423 with a score of 80% or higher on the final examination, the student and fire professional will receive a Certificate of Completion from The California Fire Service Training and Education System (CFSTES). To become certified as a Fire Inspector I the applicant must meet all requirements as set forth by the Office of the State Fire Marshall, State Fire Training.

### FIRETEC-1 PRINCIPLES OF EMERGENCY SERVICES (3) [Cx]

**Lecture 48 - 54 hours.**
Grading: Letter Grade (CSU)

This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics; life safety initiatives.

This course is identified by the National Fire Academy and FESHE as an approved course as listed in the National Fire Academy FESHE Model Curriculum Associate’s document produced 2011, Revised 2014, 2016. This course is included as part of the articulation between CSU and Community Colleges and by standardized CID numbers. The course units are transferable into the CSULA Bachelors Program. C-ID FIRE 100X
COURSE DESCRIPTIONS

FIRETEC-2 FIRE BEHAVIOR AND COMBUSTION (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
This course explores the theories and fundamentals of fire causation, spread, and control. In-depth study of fire chemistry and physics, characteristics of combustible and flammable substances, unique dangers of hazardous materials, types of extinguishing agents, and fire control techniques. This course is identified by the National Fire Academy and FESHE as an approved course as listed in the National Fire Academy FESHE Model Curriculum Associate's document produced 2011, Revised 2014, 2016. This course is included as part of the articulation between CSU and Community Colleges and by standardized CID numbers. The course units are transferable into the CSULA Bachelors Program.
C-ID FIRE 140X

FIRETEC-3 FIRE PROTECTION SYSTEMS (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
This course provides information relating to the design features and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers. This course is identified by the National Fire Academy and FESHE as an approved course as listed in the National Fire Academy FESHE Model Curriculum Associate's document produced 2011, Revised 2014, 2016. This course is included as part of the articulation between CSU and Community Colleges and by standardized CID numbers. The course units are transferable into the CSULA Bachelors Program.
C-ID FIRE 120X
TOP Code: 2133.00 - Fire Technology

FIRETEC-4 BUILDING CONSTRUCTION FOR FIRE PROTECTION (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Components of building construction relating to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. Evolution of building and fire codes, developed in response to historical fires, in residential, commercial, and industrial occupancies. This course is identified by the National Fire Academy and FESHE as an approved course as listed in the National Fire Academy FESHE Model Curriculum Associate's document produced 2011, Revised 2014, 2016. This course is included as part of the articulation between CSU and Community Colleges and by standardized CID numbers. The course units are transferable into the CSULA Bachelors Program.
C-ID FIRE 130X
TOP Code: 2133.00 - Fire Technology

FIRETEC-5 FIRE PREVENTION (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
The Fire Prevention course provides fundamental knowledge relating to the field of fire prevention. Topics include; history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use and application of codes and standards, plans review, fire inspections, fire and life safety education, and fire investigation. This course is identified by the National Fire Academy and FESHE as an approved course as listed in the National Fire Academy FESHE Model Curriculum Associate's document produced 2011, Revised 2014, 2016. This course is included as part of the articulation between CSU and Community Colleges and by standardized CID numbers. The course units are transferable into the CSULA Bachelors Program.
C-ID FIRE 110X
TOP Code: 2133.00 - Fire Technology

FIRETEC-6 FIRE APPARATUS AND EQUIPMENT (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Introduction to the mechanized equipment operated by fire service personnel and the regulations pertaining to its use. Topics include; driving laws and techniques, construction and operation of pumping engines, ladder trucks, aerial platforms, specialized equipment, and apparatus maintenance. This course is identified by the National Fire Academy and FESHE as an approved course as listed in the National Fire Academy FESHE Model Curriculum Associate's document produced 2011, Revised 2014, 2016. This course is included as part of the articulation between CSU and Community Colleges. The course units are transferable into the CSULA Bachelors Program.
TOP Code: 2133.00 - Fire Technology

FIRETEC-7 STRATEGIES AND TACTICS (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Prerequisite: FIRETEC-1 Principles of Emergency Services
Principles of fire control, through utilization of personnel, equipment, extinguishing agents, and fire command and control procedures. Use of information on building construction types in fire control. Pre-fire planning and the organized approach to decision making on the fire ground. This course is identified by the National Fire Academy and FESHE as an approved course as listed in the National Fire Academy FESHE Model Curriculum Associate's document produced 2011, Revised 2014, 2016. This course is included as part of the articulation between CSU and Community Colleges and by standardized CID numbers. The course units are transferable into the CSULA Bachelors Program.
TOP Code: 2133.00 - Fire Technology

FIRETEC-9 PRINCIPLES OF FIRE AND EMERGENCY SERVICES SAFETY & SURVIVAL (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services. This course curriculum is approved by the National Fire Academy (FESHE).

FIRETEC-10 WILDLAND FIRE CONTROL (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: FIRETEC-2 Fire Behavior and Combustion
This course provides students with a fundamental knowledge of the factors affecting wildland fires including fuel, weather, topography, prevention, fire behavior, and public education. Students also learn about control techniques common to all agencies involved in wildland fire control.
TOP Code: 2133.10 - Wildland Fire Technology

FIRETEC-11 LEGAL ASPECTS OF EMERGENCY SERVICES (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
This course will address the Federal, State, and local laws that regulate emergency services and include a review of national standards, regulations, and consensus standards.
Advisory: FIRETEC-420 Fire Inspector 1A - Duties and Administration
Grading: Letter Grade  (Degree-applicable)
Lecture 32 - 36 hours.
FIRETEC-421 FIRE INSPECTOR 1B, FIRE AND LIFE SAFETY (2) [Cx]
Grading: Letter Grade  (Degree-applicable)
Lecture 32 - 36 hours.
FIRETEC-420 FIRE INSPECTOR 1A - DUTIES AND ADMINISTRATION (2) [Cx]
Lecture 48 - 54 hours.
SERVICES (3) [CX]
FIRETEC-12 OCCUPATIONAL SAFETY AND HEALTH FOR EMERGENCY SERVICES (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU)
This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations.

FIRETEC-420 FIRE INSPECTOR 1A - DUTIES AND ADMINISTRATION (2) [Cx]
Lecture 32 - 36 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: FIRETEC-5 Fire Prevention FIRETEC-1 Principles of Emergency Services - Individuals who are currently working in the Fire Service or Emergency Services may enroll in this course. - and Course assumes familiarity with firefighting procedures and protocols, as it is designed for entry level personnel.
Provides fundamental information regarding the responsibility and authority for fire inspections, principles and procedures used to correct fire hazards, and occupancy classifications.
Course assumes familiarity with firefighting procedures and protocols, as it is designed for certified fire personnel. Non-firefighters are permitted to take the course, however they are ineligible to apply for the State Fire Marshall CFSTES certificate upon successful completion of the course.

The Fire Prevention Inspector courses are designed for (1) Students who are seeking a career as a Fire Inspector working within a fire department fire prevention bureau, (2) Fire Professionals preparing for the California State Board of Fire Service for Fire Inspector Certification, and (3) Individuals seeking employment as an inspector within Corporate Industry. Upon successful completion of Fire 420-423 with a score of 80% or higher on the final examination, the student and fire professional will receive a Certificate of Completion from The California Fire Service Training and Education System (CFSTES). To become certified as a Fire Inspector I the applicant must meet all requirements as set forth by the Office of the State Fire Marshall, State Fire Training.

TOP Code: 2133.50 - Fire Academy

FIRETEC-421 FIRE INSPECTOR 1B, FIRE AND LIFE SAFETY (2) [Cx]
Lecture 32 - 36 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: FIRETEC-420 Fire Inspector 1A - Duties and Administration
This course provides students with a basic knowledge of field inspection roles and responsibilities specific to California including tents, canopies, and temporary membrane structures; fireworks and explosives; and wildland urban interface environments.

The Fire Prevention Inspector courses are designed for (1) Students who are seeking a career as a Fire Inspector working within a fire department fire prevention bureau, (2) Fire Professionals preparing for the California State Board of Fire Service for Fire Inspector Certification, and (3) Individuals seeking employment as an inspector within Corporate Industry. Upon successful completion of Fire 420-423 with a score of 80% or higher on the final examination, the student and fire professional will receive a Certificate of Completion from The California Fire Service Training and Education System (CFSTES). To become certified as a Fire Inspector I the applicant must meet all requirements as set forth by the Office of the State Fire Marshall, State Fire Training.

TOP Code: 2133.50 - Fire Academy

FIRETEC-423 FIRE INSPECTOR 1D: FIELD INSPECTION-CALIFORNIA SPECIFIC (1) [Cx]
Lecture 16 - 18 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: FIRETEC-422 Fire Inspector 1C - Field Inspection
This course provides students with a basic knowledge of field inspection roles and responsibilities specific to California including tents, canopies, and temporary membrane structures; fireworks and explosives; and wildland urban interface environments.

The Fire Prevention Inspector courses are designed for (1) Students who are seeking a career as a Fire Inspector working within a fire department fire prevention bureau, (2) Fire Professionals preparing for the California State Board of Fire Service for Fire Inspector Certification, and (3) Individuals seeking employment as an inspector within Corporate Industry. Upon successful completion of Fire 420-423 with a score of 80% or higher on the final examination, the student and fire professional will receive a Certificate of Completion from The California Fire Service Training and Education System (CFSTES). To become certified as a Fire Inspector I the applicant must meet all requirements as set forth by the Office of the State Fire Marshall, State Fire Training.

TOP Code: 2133.50 - Fire Academy

FRENCH - FR

FR-1 ELEMENTARY FRENCH I (4)
Lecture 64 - 72 hours.
Grading: Letter Grade  (CSU: UC)
A systematic presentation of language patterns and of the underlying cultural ideas necessary for communicating in the four basic skills of listening, speaking, reading, and writing. Students are introduced to the life, culture, and language of French-speaking populations. Ten hours of supplemental learning in a Success Center that supports this course is required. This course corresponds to the first year of high school French.
### GEOGRAPHY - GEOG

#### GEOG-1 WORLD REGIONAL GEOGRAPHY (3)
**Lecture 48 - 54 hours.**
Grading: Letter Grade  
(CSU; UC)
Survey of the world's culture regions and nations as interpreted by geographers, including physical, cultural, and economic features. Emphasis on spatial and historical influences on population growth, transportation networks, and natural environments. Identification and importance of the significant features of regions.

#### GEOG-2 INTRODUCTION TO WEATHER, CLIMATE AND SOCIETY (3)
**Lecture 48 - 54 hours.**
Grading: Letter Grade  
(CSU; UC)
This course provides a survey of the scientific and societal issues associated with weather and climate variability and change. The course will examine physical phenomena observed in the Earth's weather and climate. Topics include atmospheric structure and composition, solar radiation and energy balances, temperature, seasonal changes, atmospheric moisture, clouds and fog, precipitation, air pressure, winds, air masses and fronts, cyclones, weather forecasting, climate and climate change.

The course will also review the current debate on climate change from a scientific point of view, with a focus on those aspects that have the largest potential impact on global society.  
(C-ID GEOG 130)

**TOP Code:** 1930.00 - Earth Science

#### GEOG-3 GEOGRAPHY OF CALIFORNIA (3)
**Lecture 48 - 54 hours.**
Grading: Letter Grade  
(CSU; UC)
A thematic approach to the state's issues, processes and topics relevant to geography including climate, landforms, natural vegetation, water resources, cultural landscape, ethnic diversity, urban and agricultural regions, and the economy. This course explores the physical, and human landscapes that have evolved as a result of the human-environment interface. 
(C-ID GEOG 140)

#### GEOG-4 PHYSICAL GEOGRAPHY (3)
**Lecture 48 - 54 hours.**
Grading: Letter Grade  
(CSU; UC)
This course is a spatial study of the Earth's dynamic physical systems and processes. Topics include: Earth-sun geometry, weather, climate, water, landforms, soil, and the biosphere. Emphasis is on the interrelationships among environmental and human systems and processes and their resulting patterns and distributions. Tools of geographic inquiry are also briefly covered; they may include: maps, remote sensing, Geographic Information Systems (GIS) and Global Positioning Systems (GPS). Broad-based course with an interdisciplinary outlook.  
(C-ID GEOG 110)

#### GEOG-5 PHYSICAL GEOGRAPHY LABORATORY (1)
**Laboratory 48 - 54 hours.**
Grading: Letter Grade  
(CSU; UC)
Corequisite: GEOG-4 Physical Geography (may be taken previously).
This course is design to provide supplemental exercises in topics covered in Physical Geography lecture. Lab experience will include map analysis and interpretation, weather prognostication, landform processes and evolution, tectonics, biogeography, and habitat analysis.  
(C-ID GEOG 111)

Field observation and analysis of physical environments to accompany Geography 4. Laboratory is held in the field for on-site interpretation of climate, soils, landforms, plant, and animal distribution.

#### GEOG-6 ENVIRONMENTAL GEOGRAPHY (3)
**Lecture 48 - 54 hours.**
Grading: Letter Grade  
(CSU; UC)
Global perspectives on environmental geography. Geographical approach to the biosphere: environmental principles, economics and environment, human impact, extinction and biodiversity, food/population crises, the social environment, global tampering, global climate change, and contemporary values in global environmental issues.

#### GEOG-10 CULTURAL GEOGRAPHY OF NORTH AMERICA (3)
**Lecture 48 - 54 hours.**
Grading: Letter Grade  
(CSU; UC)

#### GEOG-11 HUMAN GEOGRAPHY (3)
**Lecture 48 - 54 hours.**
Grading: Letter Grade  
(CSU; UC)
This course is a study of diverse human populations, their cultural origins, diffusion and contemporary spatial expressions. Topics include: demography, languages and religions, urbanization and landscape modification, political units and nationalism, and economic systems and development.  
(C-ID GEOG 120)
GERONTOLOGY - GERO

GERO-11 INTRODUCTION TO GERONTOLOGY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Interdisciplinary overview of the diverse characteristics, strengths, and needs of the increasing number of older persons. Topics include, aging services and community resources, occupations and career preparation in gerontology, information on aging and old age, laws and regulations governing work with the elderly, and ethical and policy issues.

GERO-18 AGING AND THE LIFE COURSE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
The scientific study of the social, cultural, and policy issues for an aging society from a gerontological perspective. Through gerontological research, study diversity in the aging process: cultural, economic, gender, and racial/ethnic differences. Study aging as a social construct including life-long age status and role expectations based on a gerontological perspective. Emphasis on society’s response and the subsequent effects on individuals and their family/friends.

GERO-22 DYING AND DEATH (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Study of death from a gerontological perspective, including historical views, societal practices, cross-cultural influences, biomedical issues including active and passive euthanasia, suicide, death rites, and the grieving process. Overview of the legal aspects of organ donation, autopsies, advanced directives, and living wills.

GERO-23 AGING AND OLDER ADULTHOOD (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Study of the aging process from a gerontological perspective with emphasis on major psychological theories of aging, stereotypes about aging and older adults, changes in physical health, cognition, mental health, and social relationships during later life.

GERO-400 PRINCIPLES OF CAREGIVING: OLDER ADULTS AND THEIR CARE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Functions and responsibilities of caregiving for older adults in both formal and informal settings. Students will explore medically-related as well as the social and emotional needs of those receiving care. Topics include individualized assessment, problem solving, interventions, effective communication, client advocacy, and functional decline factors.

GERO-404 HEALTH AND WELLNESS FOR OLDER ADULTS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Understanding healthy aging as well as chronic conditions of later life. Health behaviors and lifestyle factors that contribute to good health in later life. Wellness practices that contribute to disease prevention and health promotion.

GERO-407 GERONTOLOGY CAREER COOPERATIVE EDUCATION (3)
Laboratory 144 - 171 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: GER-11 Introduction to Gerontology
Supervised work experience in public or private agencies, facilities, or organizations. Designed to apply gerontological knowledge, learn new skills, and provide career-related work experience in community situations. Instructor arranges student placement, and maintains contact with student throughout semester via online tools and resources.

GERO-455 RESOURCES AND SERVICES FOR OLDER ADULTS (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Provides students with skills needed to access community resources and services for older adults. An introduction to resources, services, eligibility requirements, and funding. An overview of strategies to locate resources through direct contact as well as Internet research. Students acquire a basic understanding of applications pertinent to gerontological service settings, and learn to locate resources, programs, and services for older adults.

GERO-462 ACTIVITY COORDINATOR TRAINING (4)
Lecture 64 - 72 hours.
Grading: Letter Grade (Degree-applicable)
State-certified training for individuals working as activity directors in a skilled nursing facility. Practice in documentation and familiarization with Title 22 requirements, OBRA regulations, job description, basic medical terminology, and skills necessary for an activity director. Organizing, implementing and evaluating activities programs. Geriatric drugs, psycho-social needs, and other aging issues. Producing activity calendars, maximizing patient interests and participation. Therapeutic and bedside activities. Styles of leadership, and an overview of the functions of the interdisciplinary team. This is a classroom-based intensive training

GERO-463 SOCIAL WORK DESIGNEE/ASSISTANT TRAINING (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Functions and responsibilities of the social work designee charged with meeting the medically-related social and emotional needs of residents in long-term care facilities. Topics include assessment, care plans, patient advocacy, interventions, problem solving, behavioral modifications, family dynamics, elder care and abuse, bioethics, spiritual needs, and community resource development.
GUIDANCE - GUID

GUID-2 ESSENTIALS OF STUDENT SUCCESS (2)
Lecture 32 - 36 hours.
Grading: Letter Grade (CSU)
Designed to increase student proficiency and retention in college. Topics include: learning styles, study and time management techniques, motivation, library research methods, critical thinking, memory and reading strategies, and exploration of college services. Helps students develop the personal and interpersonal communication skills critical to becoming responsible learners. Introduces students to the various segments of higher education and campus culture.

GUID-3 CAREER EXPLORATION AND LIFE PLANNING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Career and life planning for students seeking direction in setting life, academic and career goals. Use of a psychological-social perspective highlights the person environment dynamics influential in the preparation for a fulfilling career and personal development. Topics include problem-solving approaches; evaluation of values, interests, abilities, skills, and personality characteristics; intensive career investigation; self-marketing skill development; psychological and social issues that impact career and life choices; academic learning strategies; college and life skills; diversity; and assessment of personal characteristics related to educational success.

GUID-6 SUCCESSFUL COLLEGE TRANSITION (2)
Lecture 32 - 36 hours.
Grading: Letter Grade (CSU)
A course for new students that want to start college with a Hope, Growth and Grit mindset and learn the necessary skills to transition successfully to college. Topics to be reviewed in depth include: student services; first-year academic planning strategies; academic resources; policies and procedures; completion requirements for Career Technical Education (CTE) programs; Associate Degrees, and transfer pathways; as well as integrate critical thinking skills and personal management strategies necessary to the planning and successful implementation of a first-year educational plan.

GUID-507 OPENING DOORS TO STUDENT EFFECTIVENESS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Non-degree-applicable)
Designed for returning and continuing students to address the academic and personal challenges of student effectiveness. Various assessment tools are employed to identify and evaluate student preparation and attitude for a successful college experience. Positive growth and self-motivation strategies are explored, with a special focus on developing an educational plan and life goals. Students address previously employed learning skills and methods to evaluate their effectiveness. New and improved methods of study, time management, and the utilization of college support programs are mastered and applied. This course is designed for students in the Opening Doors to Excellence program. Three arranged hours of supplemental learning in a Success Center that supports this course is required.

GUID-650 SUPERVISED TUTORING (0)
Hours: Variable and arranged; based on student need as determined by assessment, diagnostic instruments, and/or instructor recommendation. Grading: Non-Credit (Not graded)
Limitation on Enrollment (e.g. Performance tryout or audition): Referral by course instructor or academic counselor is required. - and Students must be enrolled in another Chaffey College course.
Open-entry/open-exit supervised tutoring course that provides students assistance in understanding college course assignments. Individualized/small group tutoring and Supplemental Instruction (SI) sessions are conducted outside of class time in a learning assistance center, and are structured to help students achieve specific course objectives or improve learning and study skills in specific subject matter. The content of this course varies according to the course for which tutoring is sought.

HEATING VENTILATION AIR CONDITIONING AND REFRIGERATION - HVACR

HVACR-600 INTRODUCTION TO HEATING VENTILATION AND AIR CONDITIONING (0)
Lecture 48 - 54 hours. Laboratory 24 - 27 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: HVACR-601 HVAC Piping Practices
Provides a broad introduction to the world of the HVAC technician. The most basic operating principles of HVAC systems are presented along with a review of technician licensing and trade-governing regulations. The final portion of the module describes potential career paths for the well-trained HVAC technician. This curriculum aligns with NCCER HVACR Curriculum.

HVACR-601 HVAC PIPING PRACTICES (0)
Lecture 16 - 18 hours. Laboratory 24 - 27 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: HVACR-600 Introduction to Heating Ventilation and Air Conditioning
This course introduces students to the heating, Ventilation and Air Conditioning piping commonly used in the HVAC trade. This curriculum aligns with NCCER HVACR Curriculum.

HVACR-602 HVAC ELECTRICAL SYSTEMS (0)
Lecture 48 - 54 hours. Laboratory 24 - 27 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: HVACR-600 Introduction to Heating Ventilation and Air Conditioning
This course introduces students to the electrical concepts commonly used in the HVAC trade. This curriculum aligns with NCCER HVACR Curriculum.

HVACR-603 ENVIRONMENTAL PROTECTION AGENCY CERTIFICATION (0)
Lecture 48 - 54 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: HVACR-600 Introduction to Heating Ventilation and Air Conditioning
This class prepares students for the certification test, and contains all the information a technician will require to successfully complete the test. This curriculum aligns with NCCER HVACR Curriculum. NCCER is an officially recognized training provider for North American Technician Excellence (NATE), and independent, third-party certification body for HVAC/R technicians.
HVAC-604 HVAC COMPRESSORS AND REFRIGERANTS (0)
Lecture 16 - 18 hours. Laboratory 48 - 54 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: HVACR-603 Environmental Protection Agency Certification
This course introduces students to compressors, refrigerants, leak detection, evacuation, recovery and charging components commonly used in the trades. This curriculum aligns with NCCER HVACR Curriculum.

HVAC-605 HVAC METERING DEVICES, HEAT PUMPS AND BASIC MAINTENANCE (0)
Lecture 8 - 9 hours. Laboratory 48 - 54 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: HVACR-604 HVAC Compressors and Refrigerants
This course introduces students to metering devices, heat pumps and basic maintenance commonly used in the HVAC trade. This curriculum aligns with NCCER HVACR Curriculum.

HIST-1 WORLD HISTORY: PRE-CIVILIZATION TO 1500 (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Prerequisite: Eligibility for English 1A as determined by the Chaffey assessment process, or satisfactory completion of English 475 ESL-475 Fundamentals of College Reading and Writing for ESL Students
Comparative, integrative study of the world's major civilizations, from pre-history to 1500, including those in Eurasia (Mesopotamia, Egypt, Hebrews, Greece and Rome, India and China), Africa, and the Americas. Emphasis on the similarities and differences between these civilizations, and on their influences on the unfolding of human history. May be offered as an Honors course. (C-ID HIST 150)

HIST-2 WORLD HISTORY: 1500 TO PRESENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Prerequisite: Eligibility for English 1A as determined by the Chaffey assessment process, or satisfactory completion of English 475 ESL-475 Fundamentals of College Reading and Writing for ESL Students
Comparative, integrative study of the world's major civilizations, from pre-history to 1500, including those in Eurasia (Mesopotamia, Egypt, Hebrews, Greece and Rome, India and China), Africa, and the Americas. Emphasis on the similarities and differences between these civilizations, and on their influences on the unfolding of human history. May be offered as an Honors course. (C-ID HIST 160)

HIST-4 HISTORY OF SLAVERY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Advisory: ENGL-1A Composition
Survey of slavery from ancient times to the present. The origins of slavery in human societies, development as an institution, and the impact on the course of world history.

HIST-5 EARLY WESTERN CIVILIZATIONS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Development of the cultural foundations of Western peoples from prehistoric times, through the rise and diffusion of civilization in the era of Middle Eastern dominance and the Middle Ages, and culminating with the Renaissance period in Western Europe. (C-ID HIST 170)

HIST-6 MODERN WESTERN CIVILIZATIONS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Development of the cultural foundations of Western peoples from the Commercial Revolution and the development of the nation-state in Europe through the French Revolution, and the Industrial Revolution. Changes created in Western society by mass politics, world wars and their aftermath, as seen in the modern world. (C-ID HIST 180)

HIST-7 HISTORY OF THE MIDDLE EAST (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Prerequisite: Eligibility for English 1A as determined by the Chaffey assessment process, or satisfactory completion of English 475 ESL-475 Fundamentals of College Reading and Writing for ESL Students
Survey of the history of the Middle East from earliest times to the present, focusing on the period from the birth of the Prophet Mohammad in 570 and the Treaty of Versailles in 1920.

HIST-9 HISTORY OF ASIAN CIVILIZATIONS I (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Prerequisite: Eligibility for English 1A as determined by the Chaffey assessment process, or satisfactory completion of English 475 ESL-475 Fundamentals of College Reading and Writing for ESL Students
Cultural development of Asian peoples from prehistoric times to the sixteenth century A.D., with emphasis on the religion and philosophy as well as early social and political institutions in China, India, Japan, and Korea.

HIST-10 HISTORY OF ASIAN CIVILIZATIONS II (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Cultural development of Asian peoples and nations from the sixteenth century A.D. to the present, with emphasis on the tension created by the impact of the West on traditional Asian institutions in China, Japan, and Southeast Asia. Focuses particularly on the response of those cultures in terms of socioeconomic and political developments.

HIST-12 ASIAN AMERICAN HISTORY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Historical experience of the Asian-American community in the United States from the mid-nineteenth century to today. Overview of specific issues confronted by Asian groups, and their cultural roots, immigration experiences, and settlement patterns.

HIST-16 WESTWARD MOVEMENT AND THE INDIANS WARS 1840-90 (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Survey of the westward movement of the American frontier and the Indian Wars of 1840-1890. Historical significance of the people and events that comprise this crucial period in the formation of the American identity are studied from the perspectives of Native Americans and other ethnic groups, as well as Anglo-Americans.

HIST-17 UNITED STATES HISTORY THROUGH 1877 (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Prerequisite: Eligibility for English 1A as determined by the Chaffey assessment process, or satisfactory completion of English 475 ESL-475 Fundamentals of College Reading and Writing for ESL Students
Survey of United States history from its colonial foundations through Reconstruction. Satisfies the California State University requirement in American History. May be offered as an Honors course. (C-ID HIST 130)
COURSE DESCRIPTIONS

**HIST-18 UNITED STATES HISTORY FROM 1865 (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: Eligibility for English 1A as determined by the Chaffey assessment process, or satisfactory completion of English 475 ESL-475 Fundamentals of College Reading and Writing for ESL Students
Development of the United States from the Reconstruction Era through the present. Satisfies the California State University requirement in American History. May be offered as an Honors course. (C-ID HIST 140)

**HIST-19 HISTORY OF ETHNIC RELATIONS IN THE UNITED STATES (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of the American historical experience of ethnic, gender, and racial relations, as well as introducing fundamental theories of identity, racism and ethnocentrism. Examines the cultural, political and economic practices and institutions that support or challenge racism, racial and ethnic inequalities. Emphasis is given to Native, African, Hispanic, and Asian-American cultural experiences as well as the interrelationships of those minority groups with each other and with the dominant American culture. (C-ID SOCI 150)

**HIST-20 HISTORY OF THE UNITED STATES FROM 1945-PRESENT (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: ESL-475 Fundamentals of College Reading and Writing for ESL Students
Other: Eligibility for ENGL-1A as determined by the Chaffey assessment process.
Careful analysis of recent events in U.S. history from 1945 to the present, including an in-depth analysis of current events, movements and trends.

**HIST-21 THE SIXTIES IN AMERICAN HISTORY (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Issues and events of one of the most turbulent decades in American history - the 1960s, such as Civil Rights and the Vietnam War. May be taught in lecture or seminar format.

**HIST-25 women in united states history (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of the history of women in America from the colonial period to the present with emphasis on relevant political, economic, and social factors.

**HIST-37 CALIFORNIA HISTORY (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: Eligibility for English 1A as determined by the Chaffey assessment process, or satisfactory completion of ESL-475 Fundamentals of College Reading and Writing for ESL Students
Survey of the history of California from pre-Columbian times to the present. Topics will include Native cultures, Spanish colonization, the mission system, Mexican rule, the Mexican War, the gold rush, the state constitution, Progressive-era political reforms, and immigration. Meets the subject matter requirements for the Liberal Studies degree, in preparation for teaching grades K-8. Course meets subject matter and state/local government state code requirements for students pursuing an Elementary Education degree in preparation for teaching grades K-8.
TOP Code: 2205.00 - History

**HIST-40 RETROSPECTIVE OF WORLD WAR II (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
World War II from the perspective of various viewpoints relative to the war’s impact on but not limited to the following: history, sociology, philosophy, literature, the arts, business/technology, psychology, science, political science, religion, economics, and sports.

**HIST-50 AFRICAN-AMERICAN HISTORY I (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
African-American experience from the seventeenth-century African heritage to the American Civil War. Focuses on two great transitions: from Africa to New World slavery and from slavery to emancipation.

**HIST-51 AFRICAN-AMERICAN HISTORY II (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
African-American experience from emancipation to the present. Focuses on legal and extra-legal racial and gender discrimination in rural and urban settings after emancipation; migrations to northern industries and western lands; and black contributions to United States policy and economy.

Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
The study of the historical relationship between Mexico and the United States from their common Native American roots to present-day. Examination of pivotal events and their outcomes, such as the Spanish and British colonial systems, processes of independence and nation-building, the Mexican-American War, the 1910 Mexican Revolution, the Oil Crisis of the 1970’s, NAFTA, and present border conflicts.

**HIST-71 CHICANOS: THE CHICANO MINORITY IN THE UNITED STATES (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Historical development of a Mexican-American community and the emergence of a Chicano cultural identity. Social, cultural, political, and economic issues and conflicts affecting the Chicano minority from the nineteenth century to the present.

**HOMELAND NATIONAL SECURITY - HNS**

**HNS-10 INTRODUCTION TO HOMELAND SECURITY (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
This course explores and introduces the fundamentals of national security, global security and terrorism. Aspects of U.S. federal, state and local inter-agency cooperation to combat domestic and foreign threats will be discussed. Additional issues of discussion will include Narco-terrorism, terrorist groups and motivation of terrorists.

**HNS-11 INTELLIGENCE ANALYSIS AND SECURITY MANAGEMENT (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
This course introduces the concept of intelligence analysis and its relationship to the security management of terrorist attacks, man-made disasters and natural disasters. Vulnerabilities of U.S. national defense and the private sector, as well as the threats posed to these institutions, will be analyzed. Course also examines intelligence community operations and associated intelligence support of homeland security measures implemented by the U.S.
### HOSPITALITY MANAGEMENT - HOTFS

**HOTFS-10 INTRODUCTION TO HOSPITALITY MANAGEMENT (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (CSU)
- Overview of the hospitality industry with emphasis on career opportunities and guest services. This course covers organization and management of the hospitality industry, including restaurants, hotels, convention centers, amusement parks, and areas of leisure and travel.
- **TOP Code:** 1307.00 - Hospitality Management

**HOTFS-14 QUANTITY FOOD PRODUCTION MANAGEMENT (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (CSU)
- Management methods for quantity food production in the food service industry. Prepares students for entry-level positions in both commercial and institutional settings. Students study the role of management with regards to challenges prevalent in quantity food production, equipment, labor, scheduling and nutritional concerns.
- **TOP Code:** 1307.10 - Restaurant and Food Services and Management

**HOTFS-21 PURCHASING, COST CONTROLS, AND MENU PLANNING (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (CSU)
- Principles, policies, and procedures associated with the procurement and conveyance of food and beverages in the food service industry. Deals with markets, federal and trade grades, government regulations, packaging, comparative versions of price buying, yields and quality control. Focus on systems for selecting product, appropriate receipt and storage, inventory controls, menu item specification development, commercial menu costing strategies, and descriptive menu design and marketing. Fundamentals of menu writing, types of menus, layout, design, and food merchandising. Analyze menus for effectiveness.

**HOTFS-32 HOSPITALITY LAW (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (CSU)
- Study of the legal aspects of hospitality law both historically and as it exists today. Topics include torts and contracts, real and personal property rights, duties of innkeepers, food and beverage liability and proper documentation.

**HOTFS-422 HOTEL OPERATIONS (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (Degree-applicable)
- Operation and organization of a variety of lodging facilities for the hospitality industry. Covers front office, housekeeping, food and beverage, human resources, property maintenance, revenue management and forecasting, pricing and inventory.

**HOTFS-428 HUMAN RESOURCES MANAGEMENT IN HOSPITALITY (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (Degree-applicable)
- Advisory: HOTFS-10 Introduction to Hospitality Management Management of human resources and techniques applicable to the hospitality industry. Topics include: recruitment, selection, hiring, coaching, employee development and motivation, benefits, performance management, counseling and discipline.

**HOTFS-431 HOSPITALITY MARKETING MANAGEMENT (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (Degree-applicable)
- The application of basic marketing principles in the hospitality service product. Students will develop and present strategic marketing plans for a hospitality organization. Identification of the market, image development, advertising, sales promotions, public relations, and the administration and control of a marketing plan.

**HOTFS-450 PRINCIPLES OF PUBLIC EVENTS AND CONVENTION MANAGEMENT (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (Degree-applicable)
- An overview of the event planning industry. Topics include step-by-step planning, budgeting, marketing and execution of a variety of events. Students will learn to write specifications for the venue, establish registration procedures, manage and evaluate the event.

**HOTFS-451 SOCIAL EVENTS AND PRIVATE EVENT MANAGEMENT (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (Degree-applicable)
- Prerequisite: HOTFS-10 Introduction to Hospitality Management
- An overview of event management related to all aspects of social events including: weddings, Quinceañera, birthday parties, reunions, fundraisers, etc. Topics include: types of private events, difference between event planning and event managements, the scope and responsibilities associated with private events and event management. This course will teach the importance of room dimensions and floor plans, and provide an understanding of the process of vetting and approving vendors.

**HOTFS-452 EVENT SALES, MARKETING AND FINANCIAL MANAGEMENT (3)**
- **Lecture:** 48 - 54 hours.
- **Grading:** Letter Grade (Degree-applicable)
- Prerequisite: HOTFS-10 Introduction to Hospitality Management
- This course will provide an overview of event sales, marketing, financial management. Topics include effective sales and marketing strategies, market data analysis, proposals, presentations, Internet marketing, promotions, budgeting, forecasting, pricing and profitability, and cost controls. Using the Excel template, students will understand how cost saving measures can affect the bottom line. Determine the cost per head at an event, and specifically how to control costs.

**HOTFS-482 INDUSTRY INTERNSHIP: HOSPITALITY MANAGEMENT (1)**
- **Lecture:** 16 - 19 hours.
- **Grading:** Letter Grade (Degree-applicable)
- Prerequisite: HOTFS-422 Hotel Operations or CUL-442 Professional Cooking
- Supervised work experience in a hotel, restaurant, or commercial kitchen. Includes front office, housekeeping, marketing and kitchen experience. Student will spend a minimum of 60 hours (if unpaid) or 75 hours (if paid) on the work site.
- **TOP Code:** 1307.00 – Hospitality
HUMANITIES - HUMAN

HUMAN-5 ARTS AND IDEAS: ANTIQUITY TO RENAISSANCE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: or Eligibility for ENGL-1A as determined by the Chaffey assessment process
Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students
An interdisciplinary study of the movements in art, music, literature, and philosophy of Ancient Western Civilization, within a cultural and historical perspective.
TOP Code: 1504.00 - Classics

HUMAN-6 ARTS AND IDEAS: RENAISSANCE TO MODERN (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: or Eligibility for ENGL-1A as determined by the Chaffey assessment process
Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students
An interdisciplinary study of the movements in art, music, literature, and philosophy from 1500s Western Civilization to the modern era within a cultural and historical perspective.
TOP Code: 1504.00 - Classics

HUMAN-20 THE HOLOCAUST: HISTORY AND PHILOSOPHY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: or Eligibility for ENGL-1A as determined by the Chaffey assessment process
Prerequisite: ENGL-495 Fundamentals of College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students
Examination of the philosophical underpinnings and historical developments leading to the rise of Nazi Germany and the implementation of a policy of destruction for European Jewry.

INDUSTRIAL ELECTRICAL TECHNOLOGY CORE - IET

IET-401A INTRODUCTION TO ELECTRICITY (2.5) [Cx]
Lecture 32 - 36 hours. Laboratory 24 - 27 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: MATH-550 Introduction to Algebra or higher level math course
Principles of basic electricity. Ohm's Law, series and parallel circuits, conventional current theory, current flow, conductors and insulators, combination circuits, and power ratings.

IET-401B INDUSTRIAL BASIC CONTROLS (2.5) [Cx]
Lecture 32 - 38 hours. Laboratory 24 - 29 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: One year or more of professional experience in the related field. IET-401A Introduction to Electricity
Study of batteries and other sources of electricity, magnetism, magnetic induction, direct current generators, measuring instruments, resistive and capacitive circuits.

IET-403A ELECTRICAL MOTORS AND CONTROLS I (2.5) [Cx]
Lecture 32 - 38 hours. Laboratory 24 - 29 hours.
Grading: Letter Grade
Advisory: or One to two years or more of professional experience in the related field IET-401A Introduction to Electricity
Principles of motor controls. Topics include: direct current motors, basic trigonometry, alternating current, inductance in alternating current circuits, resistive-inductive series circuits, capacitors, and resistive-inductive-capacitive parallel circuits.

IET-403B ELECTRICAL MOTORS AND CONTROLS II (2.5)
Lecture 32 - 38 hours. Laboratory 24 - 29 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: IET-403A Electrical Motors and Controls I One year or more of work experience in the related field or completion of IET-403A
Applications of motor controls. Topics include: resistive-inductive parallel circuits, resistive-inductive-capacitive parallel circuits, three-phase circuits, single- and three-phase transformers, single- and three-phase motors, and three-phase alternators.

IET-405 NATIONAL ELECTRIC CODE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: Two years or more of field related work experience or completion of IET-403A
Interpretation and application of the National Electric Code (NEC) with emphasis on wire size, conduit, motor load protection, classified areas, grounding, and latest NEC updates.

IET-407 ELECTRICAL BLUEPRINTS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: One year or more of field related work experience or completion of IET-403A
Interpretation of basic ladder diagrams, one line diagrams, electrical symbols, schematics, hydraulic symbols and diagrams including pictorials.

IET-411 PROGRAMMABLE LOGIC CONTROLLERS (3) [Cx]
Lecture 40 - 48 hours. Laboratory 24 - 29 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: or Two or more years of field related work experience and basic computer skills IET-403B Electrical Motors and Controls II and IET-407 Electrical Blueprints
Ladder diagrams, common computer terms, and operation of the programmer. Verifying and programming of timers and counters.

IET-413 INTERMEDIATE PROGRAMMABLE LOGIC CONTROLLERS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: or Two or more years of field related work experience including basic knowledge in PLC's
Prerequisite: IET-411 Programmable Logic Controllers
PLC advanced ladder diagrams; operations of the programmer; verifying, editing, and programming of timers, counters, master control relays and jump instructions using a computer.
IET-414 ADVANCED PROGRAMMABLE LOGIC CONTROLLERS (3)
Lecture 40 - 45 hours. Laboratory 24 - 27 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: IET-413 Intermediate Programmable Logic Controllers
This course covers advanced software and the practical skills necessary to program, communicate, and edit logic controls for an industrial touch screen HMI including: creating and configuring dynamic, pushbuttons, multistate indicator, and numeric input and output objects. The course also covers the fundamentals of configuring as well as the operation of analog input and output device controls using a PLC. Students will determine parameter settings and scale data for analog input and output modules. Students will use Allen-Bradley communication protocol, EtherNet IP, and software.

IET-415 ADVANCED ELECTRICITY LABORATORY (2)
Lecture 16 - 19 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: or Two or more years of field related experience including PLC's static devices IET-405 National Electric Code and IET-407 Electrical Blueprints and IET-411 Programmable Logic Controllers and IET-420 Fundamentals of Control Systems Technology
Application and integration of concepts and skills covered in the advisory lecture courses. Topics include: designing motor control systems, translating information from blueprint to ladder diagrams and employing it into the PLC program, and applying assignments into a hardwire system.
TOP Code: 0934.40 - Electrical Systems and Power Transmission

IET-417 ELECTRICAL TROUBLESHOOTING (3)
Lecture 40 - 45 hours. Laboratory 24 - 27 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: or Two or more years of field related work experience including DC/AC motor controls and blueprint reading, and developing troubleshooting skills.
TOP Code: 0934.40 - Electrical Systems and Power Transmission

IET-418 AC VARIABLE FREQUENCY SPEED DRIVE (1.5)
Lecture 16 - 19 hours. Laboratory 24 - 29 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: IET-419 DC Variable Speed Drive or - Two or more years of field related work experience.
Function and controls of an AC variable frequency drive and its application on the field, including setting, tuning, and configuration.

IET-419 DC VARIABLE SPEED DRIVE (1.5)
Lecture 16 - 19 hours. Laboratory 24 - 29 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: IET-419 DC Variable Speed Drive or - Two or more years of field related work experience.
Function and controls of a DC variable speed drive and its application on the field, including adjustments, settings, tuning, and configuration.

IET-420 FUNDAMENTALS OF CONTROL SYSTEMS TECHNOLOGY (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: IET-403A Electrical Motors and Controls I and IET-411 Programmable Logic Controllers or - Two years or more of professional work experience that includes knowledge of static devices.
This course covers the fundamental knowledge and practical skills necessary to install and maintain standard measurement and control instrumentation. Includes instruction on the following concepts of process control: calibration, maintenance, repair, & troubleshooting; piping and instrumentation diagram (P&ID) basics; project start-up, commissioning, loop checking, project organization, & planning; evaluation of loop performance; P&IDs and ISA Standards; documentation; installation practices; hazardous area classification; intrinsic safety; logical analysis; common problems; types and uses of loop diagrams; basics of Smart Devices and Digital Controllers; calculating and configuring Smart Transmitters.
TOP Code: 0934.40 - Electrical Systems and Power Transmission

IET-421 OSHA SAFETY TRAINING (2)
Lecture 32 - 36 hours.
Grading: Letter Grade  (Degree-applicable)
Industry safety and health standards, taught in accordance with Occupational Safety and Health Administration (OSHA) requirements. Course is targeted to entry-level workers. Upon successful completion, students receive the OSHA (30-hour) card.

IET-422 INTERNSHIP IN INDOORIC HOUSEHOLD (1)
Hours: 60 hours/term (unpaid) or 75 hours/term (paid) on-site work experience.
Grading: Letter Grade  (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Instructor signature is required prior to enrollment. - Enrollment in any industrial electricity course.
Prerequisite: IET-401A Introduction to Electricity
Supervised industry internship in cooperation with private or public sector employers. Provides students expanded, hands-on learning opportunities to apply knowledge and learn new skills directly related to their industrial electricity systems program of study, outside of the classroom environment. Placement is arranged by approved by the instructor. Participation requirements may vary with the job setting.

INDUSTRIAL ELECTRICAL TECHNOLOGY
ELECTROMECHANICAL TECHNOLOGY - IETELMT

IETELMT-430 HYDRAULIC FUNDAMENTALS (2) [Cx]
Lecture 24 - 29 hours. Laboratory 24 - 29 hours.
Grading: Letter Grade  (Degree-applicable)
Introduction to hydraulic fundamentals, demonstration of hydraulic power, basic circuits, functional circuits, and troubleshooting.

IETELMT-432 ELECTRICAL CONTROL OF HYDRAULIC SYSTEMS (2)
Lecture 24 - 29 hours. Laboratory 24 - 29 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: IETELMT-430 Hydraulic Fundamentals
Principles of electrical control of hydraulic systems, electrical concepts of ladder diagrams, functional systems of electrical/hydraulic sequencing of cylinders, industrial applications, and troubleshooting electrically-controlled hydraulic systems.
INDUSTRIAL MAINTENANCE MECHANIC - INDMM

INDMM-400 INTRO TO CONSTRUCTION SAFETY, TRADE MATH, RIGGING, AND TOOLS (3) [CX]
Lecture 48 - 54 hours.  Laboratory 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
This course introduces basic safety and trade math for construction using OSHA approved standards by emphasizing how to follow safe work practices and procedures, introduction hand and power tools, construction drawings, and basic rigging.
TOP Code: 0945.00 - Industrial Systems Technology and Maintenance

INDMM-401 BASIC COMMUNICATION AND EMPLOYABILITY SKILLS, AND CORE TESTING (2.5) [CX]
Lecture 32 - 38 hours.  Laboratory 24 - 29 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: INDMM-400 Intro to Construction Safety, Trade Math, Rigging, and Tools Or six months or more of work experience in a related field.
This course provides students with techniques for communicating effectively with co-workers and supervisors, introduces critical thinking and problem solving skills, and provides an introduction to material handling. Students also have the opportunity to demonstrate the skills learned in the classroom.
TOP Code: 0945.00 - Industrial Systems Technology and Maintenance

INDMM-402 FUNDAMENTALS OF INDUSTRIAL MAINTENANCE, OXYFUEL, AND CRAFT SKILLS (3.5) [CX]
Lecture 48 - 54 hours.  Laboratory 24 - 29 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: INDMM-401 Basic Communication and Employability Skills, and Core Testing
This course is designed to give the student the fundamental skills necessary to increase success in the workforce, how to use Oxyfuel cutting equipment safely, and how to apply quantitative skills commonly used by industrial maintenance mechanics, such as gaskets, pumps, valves, and lubrication. This course covers an introduction to test instruments along with an orientation of the tools of the trade, such as fasteners and anchors
TOP Code: 0945.00 - Industrial Systems Technology and Maintenance

INDMM-403 TRADE MATH AND DRAWINGS, MATERIAL HANDLING, AND MOBILE EQUIPMENT (2.5) [CX]
Lecture 32 - 38 hours.  Laboratory 24 - 29 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: INDMM-402 Fundamentals of Industrial Maintenance, Oxyfuel, and Craft Skills
This course is designed to give the student the fundamental quantitative skills commonly used by industrial maintenance personnel. Topics include: ratios and proportions as they apply to industrial maintenance, basic algebra applicable to industrial maintenance, circumference problems as applied in industrial maintenance, solving for right triangles using the Pythagorean theorem applicable to the use of rigging, construction drawings, techniques of material handling, and mobile and support equipment.
TOP Code: 0945.00 - Industrial Systems Technology and Maintenance

INDMM-604 INDUSTRIAL MECHANICAL MATH AND PRECISION TOOLS (0)
Lecture 48 - 54 hours.  Laboratory 24 - 29 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: INDMM-403 Trade Math and Drawings, Material Handling, and Mobile Equipment
This course is designed to give the student the fundamental quantitative skills commonly used by industrial maintenance personnel in the area of piping. Topics include: the proper use of level, feeler gauge, calipers, micrometer, dial indicator, protractor, gauge blocks, speed measurement tools, and pyrometer. Functions of thermal imaging, vibration analysis, and acoustic vibrations.
TOP Code: 0945.00 - Industrial Systems Technology and Maintenance

INDMM-605 INTRODUCTION TO INDUSTRIAL PIPING (0)
Lecture 16 - 19 hours.  Laboratory 24 - 29 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: INDMM-604 Industrial Mechanical Math and Precision Tools
This course covers an introduction to test instruments along with an introduction to material handling, including basic layout, piping components, and introduction to ferrous metal piping practices.
TOP Code: 0945.00 - Industrial Systems Technology and Maintenance

INDMM-606 INTRODUCTION TO VALVES, BEARINGS AND TESTING (0)
Lecture 16 - 19 hours.  Laboratory 24 - 29 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: INDMM-605 Introduction to Industrial Piping
This course covers the installation of bearings, couplings, belt and chain drives and mechanical seals. This course includes the identification, installation and maintenance of valves, introduction to bearings, as well as hydrostatic and pneumatic testing.
TOP Code: 0945.00 - Industrial Systems Technology and Maintenance

INDMM-607 INSTALLATION OF BEARINGS, COUPLINGS, SEALS, AND DRIVES (0)
Lecture 16 - 19 hours.  Laboratory 48 - 54 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: INDMM-606 Introduction to Valves, Bearings and Testing
This course covers the installation of bearings, couplings, belt and chain drives and mechanical seals.
TOP Code: 0945.00 - Industrial Systems Technology and Maintenance

INDMM-608 SETTING BASEPLATES AND ALIGNMENT (0)
Lecture 8 - 9 hours.  Laboratory 48 - 54 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: INDMM-607 Installation of Bearings, Couplings, Seals, and Drives
This course covers the setting of baseplates and soleplates, precision leveling procedures, pre-alignment and conventional alignment. Course may be repeated.

INDMM-609 ADVANCED ALIGNMENT (0)
Lecture 8 - 9 hours.  Laboratory 48 - 54 hours.
Grading: Non-Credit (Pass/No Pass)
Prerequisite: INDMM-608 Setting Baseplates and Alignment
This course further develops skills students need to understand alignment in the industrial field. Misalignment of equipment can cause damage to bearings, couplings to name a few. Specific topics include shaft runout using dial indicator jig, complex reverse dial indicators, and indicator sag.

INDMM-610 FUNDAMENTALS OF PRESSURE, HEATING & COOLING SYSTEMS (0)
Lecture 24 - 29 hours.  Laboratory 48 - 54 hours.
Grading: Non-Credit (Pass/No Pass)
This course provides student's with the fundamentals of, pressure, heating, and cooling systems used in the industrial mechanical craft. May be repeated.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture</th>
<th>Laboratory</th>
<th>Graduation Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID-10</td>
<td>INTRODUCTION TO INTERIOR DESIGN (3)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Overview of the interior design field. Topics covered include: interior design profession, history of styles, elements and principles of design, design process, building systems, space planning, visual communication, color, lighting, materials, furnishings, textiles and window treatments for Residential and non-residential interiors.</td>
</tr>
<tr>
<td>ID-11</td>
<td>HISTORY OF ARCHITECTURE AND INTERIORS I (3)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Furniture, interior and architectural styles of ancient Egypt, Greece, and Rome; the European Middle Ages, Renaissance, French periods, and non-western world to 1820.</td>
</tr>
<tr>
<td>ID-12</td>
<td>HISTORY OF ARCHITECTURE AND INTERIORS II (3)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Furniture, interior and architectural styles of the English, Anglo-American, late 19th and 20th century Western periods, and non-western cultures.</td>
</tr>
<tr>
<td>ID-16</td>
<td>QUICK SKETCHING FOR INTERIOR DESIGNERS (2.5)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Manual and computer sketching techniques for illustrating interiors. Includes one and two point perspective drawing creation, color rendering, shading, textures, and use of a variety of presentation techniques and medium. Emphasis on quick presentation of ideas for the designer and client. Completed projects become part of a student portfolio.</td>
</tr>
<tr>
<td>ID-17</td>
<td>INTRODUCTION TO LIGHTING (3)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Basic principles of lighting and their application. Visual perception, properties of light and color, sources and luminaires, lighting design elements and techniques, and elementary calculations. Energy efficient lighting practices and applicable codes and regulations. Written and graphic design documents.</td>
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<tr>
<td>ID-21</td>
<td>SPACE PLANNING (3)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Course focuses on the design process, human factors in design, ADA compliance, spacial relationships, aesthetic considerations and codes. Emphasis is placed on furniture layouts and space planning for various spaces in residential and non-residential interiors.</td>
</tr>
<tr>
<td>ID-22</td>
<td>INTERIOR DESIGN MATERIALS (3)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Materials and treatments used in interior design for commercial and residential installations, including “green” resources. Field trips to vendors and resources may be required.</td>
</tr>
<tr>
<td>ID-25</td>
<td>INTERIOR DESIGN MANAGEMENT (2)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Practical course in the special problems encountered in the interior design profession, including measuring and estimating materials, purchasing, client relationships, ethics, methods of compensation, contracts and business documents.</td>
</tr>
<tr>
<td>ID-30</td>
<td>INTERIOR DESIGN STUDIO (3.5)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Computer-aided drafting &amp; design using professional software, such as AutoCAD, Revit, Sketchup, or ArchiCAD. Course will focus on 3D modeling and production of 2D Floor plans, furniture layouts, elevations, lighting plans, 3D perspectives, and photo-realistic renderings. Use of various scanners, printers and plotters.</td>
</tr>
<tr>
<td>ID-427</td>
<td>COMPUTER DRAFTING &amp; DESIGN FOR INTERIORS (3)</td>
<td>Lecture</td>
<td>Laboratory</td>
<td>Letter Grade</td>
<td>Advanced course integrating knowledge, problem solving, conceptual development, visual and oral communication concerning a residential and a non-residential project. Course focuses on design process, furniture layouts, effective space plans, elevations, reflected ceiling plans, lighting and electrical plans, renderings and creating models. Additional course emphasis in selecting interior components and materials as well as providing estimates and scheduling for two complete projects.</td>
</tr>
</tbody>
</table>
**COURSES DESCRIBED**

**JOUR-10 NEWSWRITING (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: Eligibility for ENGL-1A as determined by the Chaffey Assessment process
Prerequisite: ENGL-495 College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students
This course will provide an introduction to multimedia storytelling with a journalism emphasis. Techniques that will be explored include use of video, photos, audio, animation, and text to convey interactive news and feature stories through the Internet and other electronic media. It also will include techniques in digital research, critical thinking, and synthesis. Principles of writing news stories with emphasis on selecting and organizing information in a clear, accurate, coherent, and concise manner. Fundamentals of correct grammar and spelling are stressed, as well as news copy preparation and format. Examination of the legal and ethical issues facing journalists. Students will report and write based on their original interviews and research to produce news content. Experiences may include covering speeches, meetings and other events, writing under deadline and use of AP Style. (C-ID JOUR 110)

**JOUR-11 MULTIMEDIA REPORTING (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: JOUR-10 Newswriting
Prerequisite: ENGL-1A Composition
Principles and practice in multimedia storytelling with a journalism emphasis. Using digital research, critical thinking and synthesis, students will explore video, photos, audio, animation, and text to convey interactive news and feature stories through the Internet and other electronic media. (C-ID JOUR 120)

**JOUR-12 NEWSMEDIA PRACTICUM I (3)**
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Assessment Level: Eligibility for ENGL-1A as determined by the Chaffey Assessment process
Prerequisite: ENGL-495 College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students
This course requires higher skill level and/or leadership/management involvement than JOUR 30. Intermediate student media practicum that includes a lab and regularly produces a news or feature non-fiction product with a journalism emphasis by and for students and distributed to a campus or community audience. Must include weekly news assignments. May include a variety of student media across multiple platforms, including print, broadcast, and online. Includes practical experience in design/layout, visual, online, multimedia journalism and emerging technologies. Must be student produced with student leadership. (C-ID JOUR 130)

**JOUR-13 NEWSMEDIA PRACTICUM II (3)**
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Prerequisite: JOUR-10 Newswriting or JOUR-30 Student Media Practicum I
This course will emphasize the rules, court etiquette, history, and advanced skills of tennis including singles and doubles play so that students may participate in a lifetime activity. Fundamental instruction includes serving, forehand, backhand, volley shots and game strategy.

**KINESIOLOGY: ACTIVITY - KINACT**

**KINACT-1 BEGINNING TENNIS (1)**
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Emphasis on court etiquette, history, and fundamental skills for tennis including singles and doubles play so that students may participate in a lifetime activity. Fundamental instruction includes serving, forehand, backhand, volley shots and game strategy.

**KINACT-2 ADVANCED TENNIS (1)**
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
This course will emphasize the rules, court etiquette, history, and advanced skills of tennis.

**KINACT-9 SWIMMING (1)**
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Basic skills and safety precautions for swimming. Several different strokes are taught according to skill levels.

**KINACT-16 VOLLEYBALL (1)**
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Course will emphasize rules, strategy, and basic volleyball skill development such as setting, digging, serving, spiking and team strategies.
### KINACT-17 ADVANCED VOLLEYBALL (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Advisory: Previous volleyball experience.
The course will include teaching of the advanced skills of volleyball with emphasis on strategy, skills and complex offensive and defensive schemes.

### KINACT-20 BASKETBALL (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Rules, court etiquette, basic offensive and defensive positions, and basic passing and dribbling techniques of basketball.

### KINACT-22 SOCCER (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Designed to introduce the student to the game of soccer. Emphasis on providing information and practice in the skills of kicking, trapping, shooting, passing, rules and basic tactics. The class is for beginners as well as students who have played soccer.

### KINACT-23 INTERMEDIATE SOCCER (1)
Lecture 16 - 19 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Advisory: KINACT-22 Soccer
Designed for players with basic soccer playing skills and understanding of the game, who wish to improve their playing abilities. Topics include heading drills, systems of play, ball control skills, and advanced defense and offense tactics.

### KINACT-24 AEROBIC CROSS TRAINING (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
High energy aerobic exercises to improve overall cardiovascular fitness including muscle strength and endurance, flexibility, and body composition. The use of step benches, medicine balls, hand weights, and flex bands along with discussions of health related topics.

### KINACT-25 SPINNING FOR FITNESS (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Use of an indoor cycling bike for improving overall physical fitness and health. Students develop a safe and efficient spinning program designed to meet their fitness goals. Suitable for all genders and fitness levels.

### KINACT-26 BEGINNING PILATES MATWORK (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
This course is an introduction to Pilates mat work. Pilates is a form of mind-body exercise that improves flexibility and endurance while building strength. An emphasis will be placed on strengthening the core, which consists of muscles in the abdomen, low back, and hips. Students can expect to improve coordination and balance in daily activities or for fitness and sport.

### KINACT-28A BEGINNING YOGA (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
This course is designed for the beginning students who would like to learn the importance of breath, alignment of postures and relaxation techniques to improve health and fitness of the mind and body. The goal of the course is to improve flexibility, muscle strength, endurance, and coordination through the physical postures of yoga. Introduction to relaxation techniques will be incorporated for stress reduction and mental calm.

### KINACT-28B INTERMEDIATE YOGA (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Prerequisite: KINACT-28A Beginning Yoga
This course is designed for intermediate students to advance their yoga skills through breathing exercises, alignment of physical postures and advanced forms of relaxation techniques to improve health and fitness of the mind and body. The goal of the course is to advance flexibility, muscle strength, endurance and coordination through the challenge of intermediate physical postures such as inversions, arm balances, twists and wraps. Intermediate levels of meditation will be incorporated for stress reduction and mental calm.

### KINACT-29A BEGINNING BODY CONDITIONING (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Course is designed to teach the student the basic exercises for the development of the major muscles. Emphasis is placed on muscular strength, endurance and flexibility.

### KINACT-29B INTERMEDIATE BODY CONDITIONING (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Prerequisite: KINACT-29A Beginning Body Conditioning
Course is designed to teach the student intermediate exercises for the development of the major muscles. Emphasis is placed on muscular strength, endurance flexibility and plyometrics. The student will be introduced to interval training and plyometrics.

### KINACT-29C ADVANCED BODY CONDITIONING (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Prerequisite: KINACT-29B Intermediate Body Conditioning
Course is designed to teach the student advanced exercises for the development of the major muscles. Emphasis is placed on muscular strength, endurance flexibility plyometrics and Olympic strength training.

### KINACT-31 INTRODUCTION TO SELF-DEFENSE AND PERSONAL SAFETY (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)

### KINACT-32 BEGINNING JIU-JITSU (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Introduction to the basic techniques and strategies of Brazilian Jiu-Jitsu. Instruction focuses on the fundamental positions, sweeps, escapes, and submissions of this “gentle art” of self-defense. General conditioning, coordination, and body movement will also be emphasized.

### KINACT-35 CARDIO FITNESS FOR LIFE (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Walking or running for physical health, muscular strength, fitness, weight control, and general well-being. Students develop a personalized fitness program with the assistance of the instructor, allowing them to work at their own pace. Focus will include both cardiovascular efficiency and muscular strength. Suitable for all ages and fitness levels.
**KINESIOLOGY: LECTURE - KINLEC**

**KINLEC-2 INSTRUCTION TO ATHLETIC TRAINING (3)**  
Lecture 40 - 48 hours.  Laboratory 24 - 29 hours.  
Grading: Letter Grade  (CSU; UC)  
Advisory: Possession of current first-aid and cardiopulmonary resuscitation cards.  
This course will cover concepts of prevention, recognition, emergency care, evaluation, management, treatment and rehabilitation and reconditioning resulting from physical activity and athletics. Legal and ethical issues, professionalism, organization and administration of a sports medicine facility. This course is focused on preparing those interested in becoming Athletic Trainers and Coaches. **KINLEC-17 FIRST AID & EMERGENCY RESPONSE TO COMMUNITY DISASTERS (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  (CSU; UC)  
Advisory: Students should be able to work in confined spaces and in different positions (e.g. on the ground or the floor)  
Prepares the participant to make appropriate decisions in an emergency situation to help sustain life, reduce pain, and minimize the consequence of sudden injury or illness until more advanced medical help can arrive. Course covers triage, professional CPR for adult, child and infant, use of automated external defibrillators, OSHA guidelines for the isolation of bloodborne pathogens in the workplace, open/closed wounds, broken bones, drowning, childbirth, spinal injuries. Those who successfully complete this course will be awarded an American Red Cross certificate, which qualifies the holder to be entered into the National American Red Cross database to be called in the case of disasters. Holders of the certificate are also qualified to work at First Aid stations at public events such as sporting events, concerts, and parades. **KINLEC-11 THEORY AND ANALYSIS OF FOOTBALL (2)**  
Lecture 32 - 36 hours.  
Grading: Letter Grade  (CSU)  
Comprehensive video review of football techniques. Video tape from four-year colleges, community colleges, and high schools will be reviewed and analyzed. For physical education majors who want to coach football.  
TOP Code: 0835.60 - Coaching **KINLEC-18 INTRODUCTION TO KINESIOLOGY (3)**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  (CSU; UC)  
This course is an introduction to the interdisciplinary 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. (C-ID KIN 100) **KINLEC-14 LIFEGUARD TRAINING (3) [Cx]**  
Lecture 48 - 54 hours.  
Grading: Letter Grade  (CSU; UC)  
Assessment Level: 1) Swim 300 yards continuously. 2) Starting in the water, swim 20 yards using breaststroke, surface dive 7 - 10 feet, retrieve a 10-pound object, return to the surface, swim 20 yards back to the starting point with the object and exit the water without using a ladder or steps, within 1 minute, 40 seconds.  
Designed primarily for special-interest groups responsible for preventing water accidents and making water rescues. Information and practice to develop functional water rescues and accident prevention required by lifeguard crews. Upon successful completion of this course, students receive the following certificates: American Red Cross Lifeguard Training, American Red Cross Standard First Aid, and American Red Cross CPR for the Professional Rescuer. **KINLEC-19 PRACTICAL APPLICATIONS IN ATHLETIC TRAINING I (2)**  
Lecture 8 - 9 hours.  Laboratory 72 - 81 hours.  
Grading: Letter Grade  (CSU)  
Prerequisite: KINLEC-2 Introduction to Athletic Training  
This course will provide first semester students with the opportunity to observe and learn the basic principles and protocols of athletic training during day-to-day sports activities in a supervised lab setting. Basic athletic training room and event observation with an emphasis on prevention, care, evaluation, treatment, and rehabilitation for the upper extremity. This course will help the student prepare for transfer to a Commission on Accreditation of Athletic Training Education (CAATE) accredited athletic training program. **KINLEC-21 PRACTICAL APPLICATIONS IN ATHLETIC TRAINING II (2)**  
Lecture 8 - 9 hours.  Laboratory 72 - 81 hours.  
Grading: Letter Grade  (CSU)  
Prerequisite: KINLEC-19 Practical Applications in Athletic Training I  
This course will provide the second semester student with the opportunity to observe and learn the basic principles and protocols of athletic training during day-to-day sports activities in a supervised lab setting. Basic athletic training room and event observation with an emphasis on prevention, care, evaluation, treatment, and rehabilitation for the lower extremity. This course will help the student prepare for transfer to a Commission on Accreditation of Athletic Training Education (CAATE) accredited athletic training program. This course is a continuation of KINLEC-19. **KINLEC-22 PRACTICAL APPLICATIONS IN ATHLETIC TRAINING III (2.5)**  
Lecture 8 - 9 hours.  Laboratory 96 - 108 hours.  
Grading: Letter Grade  (CSU)  
Prerequisite: KINLEC-21 Practical Applications in Athletic Training II  
This course will provide third semester student with the opportunity to observe and learn the advanced principles and protocols of athletic training during day-to-day sports activities in a supervised lab setting. Advanced athletic training room and event observation with an emphasis on prevention, care, evaluation, treatment, and rehabilitation for the upper and lower extremity. This course will help the student prepare for transfer to a Commission on Accreditation of Athletic Training Education (CAATE) accredited athletic training program. This course is a continuation of KINLEC-21.
**KINLEC-24 BIOMECHANICS (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
Advisory: BIOL-20 Human Anatomy
An introductory study of anatomical and mechanical analysis of motion as it pertains to exercise and sport. Students will study muscles, joints, bones, nerves and muscle analysis of movement patterns.

**KINLEC-32 OUTDOOR ADVENTURES (2)**
Lecture 16 - 18 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Advisory: Comfort in an outdoors environment and good physical fitness are recommended for course success.
Introduces the techniques of environmentally-sensitive backpacking, selection and evaluation of backpacking equipment and its use, group planning, conditioning, back country safety and first-aid, and survival information. Team work and leadership skills appropriate for the back country are introduced. Field trips are required.

**KINESIOLOGY: TEAM - KINTM**
In-season (competition) intercollegiate Kinesiology: Team courses (KINTM-41 through 59) are open-entry activity.

Off-season (conditioning) intercollegiate Kinesiology: Team courses (KINTM-1 through 15, 27, and KINTM-61A-69) are structured/scheduled activity.

Students may take all KINTM courses (excluding KINTM-16, 18, and 19) up to four times, restricted to 175 hours of competition and 175 hours of conditioning per sport, per year.

**KINTM-1 FOOTBALL TEAM ACTIVITY (1)**
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment based on a successful tryout.
Information and practice in the development of football basic skills and techniques. Primarily intended for students who wish to compete in the sport of football.

**KINTM-1A FOOTBALL TEAM ACTIVITY (0.5)**
Laboratory 24 - 29 hours.
Grading: Letter Grade  (CSU)
Advisory: Competitive football background
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment is based on a successful tryout.
Information and practice in the development of football basic skills and techniques.

**KINTM-2 VOLLEYBALL TEAM ACTIVITY, WOMEN (1)**
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment based on a successful tryout.
Designed for women interested in learning competitive volleyball and joining the women's intercollegiate team.

**KINTM-3A BASKETBALL TEAM ACTIVITY, WOMEN (0.5)**
Laboratory 24 - 29 hours.
Grading: Letter Grade  (CSU)
Advisory: Competitive basketball background.
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment is based on a successful tryout.
Designed for men interested in playing competitive men's basketball.

**KINTM-3 CROSS COUNTRY TEAM ACTIVITY, MEN (1)**
Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment based on a successful tryout.
Provides training in skills, techniques, strategies, and conditioning for cross country runners. Designed for men interested in competitive cross country at the college level.
KINTM-8 CROSS COUNTRY TEAM ACTIVITY, WOMEN (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment based on a successful tryout.
Provides training in skills, techniques, strategies, and conditioning for cross country runners. Designed for women interested in competitive cross country at the college level.

KINTM-9 WATER POLO TEAM ACTIVITY, WOMEN (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment based on a successful tryout.
Rules, etiquette, history, and advanced skills of water polo. Course is designed for prospective women’s water polo team participants.

KINTM-11 SWIMMING TEAM ACTIVITY, MEN AND WOMEN (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment based on successful tryout.
Rules and fundamental skills involved in competitive swimming strokes. Designed for students interested in competitive swimming.

KINTM-14 SOCCER TEAM ACTIVITY, MEN (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment based on successful tryout.
Information and practice to develop basic soccer skills, techniques, and strategies. Designed for men interested in playing competitive soccer at the college level.

KINTM-15 SOCCER TEAM ACTIVITY, WOMEN (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment based on successful tryout.
Information and practice to develop basic soccer skills, techniques, and strategies. Designed for women interested in playing competitive soccer at the college level.

KINTM-16 DANCE/SPRIT TEAM (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Previous dance training is recommended
Limitation on Enrollment (e.g. Performance tryout or audition): Admission is by audition
Development of performance skills focusing on Hip Hop and Jazz style techniques. Course is for students who will represent the college at football and basketball games, national dance competitions, and community events. Emphasis is on competition-level performance skills as well as dance team protocol and etiquette.

KINTM-18 BEGINNING DANCE/CHEER TEAM (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Previous dance training is recommended
Limitation on Enrollment (e.g. Performance tryout or audition): Admission is by audition
This course is designed for beginning skills in cheer techniques, conditioning, jumping, and dance. This course is for students who will represent the college at athletic contests, national dance competitions, and community events.

KINTM-19 INTERMEDIATE DANCE/CHEER TEAM (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Admission is by audition
This course is designed for intermediate skills in cheer techniques/motivation and dance. This course is for students who will represent the college at athletic contests, national dance competitions, and community events.

KINTM-27 BASEBALL TEAM CLASS, MEN (2)
Laboratory 96 - 114 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Advanced skills for competing in football contests. Information and daily practice to develop a high level of proficiency in football skills and techniques.

KINTM-41 INTERCOLLEGIATE FOOTBALL (3)
Laboratory 175 - 175 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Opportunity for women to compete at the intercollegiate level in volleyball.

KINTM-42 INTERCOLLEGIATE VOLLEYBALL TEAM, WOMEN (3)
Laboratory 175 - 175 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Opportunity for women to compete at the intercollegiate level in softball.

KINTM-44 INTERCOLLEGIATE SOFTBALL TEAM, WOMEN (3)
Laboratory 175 - 175 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Opportunity for women to compete at the intercollegiate level in softball.

KINTM-45 INTERCOLLEGIATE WATER POLO TEAM, MEN (3)
Laboratory 175 - 175 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Limitation on Enrollment (e.g. Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Competitive intercollegiate water polo team involving skills and knowledge of all aspects of competitive play.
Opportunity for women to compete at the intercollegiate level in soccer. Restriction to student athletes who meet both skill and eligibility requirements. Opportunity for men to compete at the intercollegiate level in baseball.

Opportunity for men and women to compete at the intercollegiate level in swimming. Restriction to student athletes who meet both skill and eligibility requirements. Limitation on Enrollment (e.g., Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Grading: Letter Grade (CSU; UC credit limitations)

Opportunity for men to compete at the intercollegiate level in cross country. Restriction to student athletes who meet both skill and eligibility requirements. Limitation on Enrollment (e.g., Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Grading: Letter Grade (CSU; UC credit limitations)

Opportunity for men to compete at the intercollegiate level in soccer. Restriction to student athletes who meet both skill and eligibility requirements. Limitation on Enrollment (e.g., Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Grading: Letter Grade (CSU; UC credit limitations)

Opportunity for women to compete at the intercollegiate level in cross country. Restriction to student athletes who meet both skill and eligibility requirements. Limitation on Enrollment (e.g., Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Grading: Letter Grade (CSU; UC credit limitations)

Opportunity for men to compete at the intercollegiate level in basketball. Restriction to student athletes who meet both skill and eligibility requirements. Limitation on Enrollment (e.g., Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Grading: Letter Grade (CSU; UC credit limitations)

Opportunity for women to compete at the intercollegiate level in basketball. Restriction to student athletes who meet both skill and eligibility requirements. Limitation on Enrollment (e.g., Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Grading: Letter Grade (CSU; UC credit limitations)

Opportunity for men to compete at the intercollegiate level in water polo. Restriction to student athletes who meet both skill and eligibility requirements. Limitation on Enrollment (e.g., Performance tryout or audition): Enrollment is restricted to student athletes who meet both skill and eligibility requirements. Competitive intercollegiate women’s water polo team, involving skills and proficiency in basketball skills and techniques during conference play and post-season schedule.

Advanced sport-specific drills and exercises designed for volleyball athletes. Other: Concurrent or previous enrollment in any Volleyball course. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

Advanced sport-specific drills and exercises designed for volleyball athletes. Other: Concurrent or previous enrollment in any Volleyball course. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.
KINTM-61A BASKETBALL STRENGTH AND CONDITIONING FOR ATHLETES (0.5)
Laboratory 24 - 29 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Basketball KINTM course.
Advanced sport-specific drills and exercises designed for basketball athletes. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

KINTM-62 FOOTBALL STRENGTH AND CONDITIONING FOR ATHLETES (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Football PETEAM course.
Advanced sport-specific drills and exercises designed for preseason football athletes necessary for proper conditioning. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

KINTM-62A FOOTBALL STRENGTH AND CONDITIONING FOR ATHLETES (0.5)
Laboratory 24 - 29 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Football KINTM course.
Advanced sport-specific drills and exercises designed for football athletes. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

KINTM-64 SOFTBALL STRENGTH AND CONDITIONING FOR ATHLETES (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Softball KINTM course.
Advanced sport-specific drills and exercises designed for softball athletes. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

KINTM-65 WATER POLO STRENGTH AND CONDITIONING FOR ATHLETES (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Water Polo KINTM course.
Advanced sport-specific drills and exercises designed for water polo athletes. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

KINTM-65A WATER POLO STRENGTH AND CONDITIONING FOR ATHLETES (0.5)
Laboratory 24 - 29 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Water Polo KINTM course.
Advanced sport-specific drills and exercises designed for water polo athletes. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

KINTM-66 BASEBALL STRENGTH AND CONDITIONING FOR ATHLETES (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Baseball KINTM course.
Advanced sport-specific drills and exercises designed for baseball athletes. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

KINTM-66A BASEBALL STRENGTH AND CONDITIONING FOR ATHLETES (0.5)
Laboratory 24 - 29 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Baseball KINTM course.
Advanced sport-specific drills and exercises designed for baseball athletes. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

KINTM-67A SWIMMING STRENGTH AND CONDITIONING FOR ATHLETES (0.5)
Laboratory 24 - 29 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Swimming KINTM course.
Advanced sport-specific drills and exercises designed for swimming athletes. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.

KINTM-69 CROSS COUNTRY STRENGTH AND CONDITIONING FOR ATHLETES (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Concurrent or previous enrollment in any Cross Country KINTM course.
Advanced sport-specific drills and exercises designed for cross country athletes. Increased volume, intensity, frequency, and duration of specific activities improve strength, speed, flexibility, and overall conditioning, to enhance athletic performance. Exercises are prescribed by the instructor and are tailored to the physical demands of the sport and individuals’ capabilities.
### LIFE MANAGEMENT - LIFE

**LIFE-670 Transition Skills and Well-Being (0)**

*Description:* This course is designed to support the development of adults transitioning to independent living. The course focuses on assessing individual strengths and fostering life-management skills that support well-being in five critical domains: career, social, physical, financial, and community.

### MATHEMATICS - MATH

#### MATH-4 Mathematical Concepts for Elementary School Teachers (4)

*Description:* Study of mathematical concepts targeted primarily to students preparing to teach elementary school mathematics. For such students, this course fulfills the same transfer requirement as Math-25 College Algebra. Topics include: real number systems and sub-systems, patterns and sequences, basic set theory, logic, and mathematical induction. Emphasis is on comprehension of concepts and application of logical reasoning and critical analysis in problem-solving. (C-ID MATH 120)

#### MATH-17 Statway II (4)

*Description:* The Statway path is a two-semester sequence recommended only for students following a non-STEM pathway. This course is the second semester of two in the Statway sequence. The course explores the concepts of probability and statistics with requisite algebraic topics integrated throughout. Statistics topics emphasize data analysis and include basic concepts of probability; confidence intervals; hypothesis tests for means, proportions, and variance; chi-squared tests; and ANOVA (Analysis of Variance). Statway students participate in collaborative group learning, develop skills to maintain a positive perspective towards learning, and engage in classroom activities that introduce statistical concepts and skills. Both courses in the sequence, Math 415 and 17 must be completed with a passing grade to receive credit for transfer-level statistics.

#### MATH-25 College Algebra (4)

*Description:* Further studies in algebra and trigonometry for students intending to take calculus. Polynomial equations; functions and inverses, factoring techniques, nonlinear inequalities including absolute values, partial fractions, introduction to limits, graphing polynomial and rational functions, conic sections, trigonometric functions and their inverses, parametric equations, exponential and logarithmic functions, polar coordinates, vectors. Trigonometric concepts emphasized as needed for calculus, including identities, equations, and applications. A graphing calculator is required; students should see instructor for specifics, since CAS-based calculators may be prohibited.

#### MATH-31 Plane Trigonometry (4)

*Description:* Trigonometric functions including definitions of the circular functions. Radian measure, graphs, inverse trigonometric functions, trigonometric equations and identities, solution of right and oblique triangles, applications, vectors, complex numbers, polar coordinates and graphs, equation of conics, and rotation of axes. Students may be required to obtain a graphing utility for the course.

#### MATH-60 Calculus for Business (4) [Cx]

*Description:* Calculus for students following a non-STEM pathway. This course is the second semester and requires Math-61 as an eligibility for Math 31 or as determined by the Chaffey assessment process. Techniques of calculus as applied to problem solving in business and economics. Topics include: limits, continuity, differentiation and integration in one and several dimensions, optimization, and transcendental functions. (C-ID MATH 140)

#### MATH-61 Pre-Calculus (4) [Cx]

*Description:* Further studies in algebra and trigonometry for students intending to take calculus. Polynomial equations; functions and inverses, factoring techniques, nonlinear inequalities including absolute values, partial fractions, introduction to limits, graphing polynomial and rational functions, conic sections, trigonometric functions and their inverses, parametric equations, exponential and logarithmic functions, polar coordinates, vectors. Trigonometric concepts emphasized as needed for calculus, including identities, equations, and applications. A graphing calculator is required; students should see instructor for specifics, since CAS-based calculators may be prohibited.

#### MATH-65A Calculus I (4) [Cx]

*Description:* Functions, limits, and continuity; differentiation of algebraic, trigonometric, logarithmic, and exponential functions; and the definite integral and some applications, including rectilinear motion and average value. Students may be required to obtain a graphing utility for the course. (C-ID MATH 211)

#### MATH-65B Calculus II (4) [Cx]

*Description:* Applications of the definite integral including area, volume, arc length, surfaces of revolution, work, and centroids of planar regions; differentiation and integration involving hyperbolic, inverse trigonometric and inverse hyperbolic functions; techniques of integration; indeterminate forms and improper integrals; infinite series; conic sections; polar coordinates and parametric equations. Students may be required to obtain a graphing utility for the course. (C-ID MATH 221)
**MATH-75 CALCULUS III (5) [Cx]**
Lecture 80 - 95 hours.
Grading: Letter Grade  (CSU; UC)
Advisory: Prior experience with a graphing calculator is needed.
Prerequisite: MATH-65B Calculus II
Topics include: vectors; lines planes and surfaces in space; cylindrical and spherical coordinates; vector-valued functions; functions of several variables; differential calculus, including partial derivatives, chain rule, directional derivatives, gradients, implicit differential and extreme values; multiple integration; line integrals; surface integrals; Jacobians; vector theory; and theorems of Gauss, Green, and Stokes. Students may be required to obtain a graphing utility for the course. (C-ID MATH 230)

**MATH-81 LINEAR ALGEBRA (4) [Cx]**
Lecture 64 - 76 hours.
Grading: Letter Grade  (CSU; UC)
Prerequisite: MATH-75 Calculus III
This course develops the techniques and theory needed to solve and classify systems of linear equations. Solution techniques include row operations, Gaussian elimination, and matrix algebra. Investigates the properties of vectors in two and three dimensions, leading to the notion of an abstract vector space. Vector space and matrix theory are presented including topics such as inner products, norms, orthogonality, eigenvalues, eigenspaces, and linear transformations. Selected applications of linear algebra are included. (C-ID MATH 250)

**MATH-85 DIFFERENTIAL EQUATIONS (4) [Cx]**
Lecture 64 - 76 hours.
Grading: Letter Grade  (CSU; UC)
Prerequisite: MATH-75 Calculus III
Methods and theory of solving ordinary differential equations; including existence of solutions, series solutions, and singular points. Laplace transforms and linear systems. Applications primarily in the physical sciences. A graphing utility is required; see instructor for specifics, since CAS-based calculators may be prohibited. (C-ID MATH 240)

**MATH-401 MATHEMATICS FOR HEALTH SCIENCE (1)**
Lecture 16 - 18 hours.
Grading: Letter Grade  (Degree-applicable)
Assessment Level: or Eligibility for Mathematics 550 as determined by the Chaffey assessment process.
Prerequisite: MATH-550 Introduction to Algebra or Course is targeted to students applying for the Nursing A.D.N. program. Topics include: metric, apothecary, and household systems of measurement; system conversions; adult and child dosages; and calculations involving oral, intravenous, and intramuscular medication administrations.

**MATH-417 STATWAY I (5)**
Lecture 80 - 90 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory - Prior Enrollment: MATH-550 Introduction to Algebra Placement through the assessment process.
The Statway path is a two-semester sequence recommended only for students following a non-STEM pathway. This course is the first semester of two in the Statway sequence and is a prerequisite for the concepts explored in Math 15. The course explores the concepts of probability and statistics with requisite algebraic topics integrated throughout. Statistics topics emphasize data analysis and include methods for collecting data, graphical and numerical descriptive statistics, correlation, and linear regression. Algebra topics include proportional relationships (including variation) with applications, expressions, linear equations and systems with applications, functions, quadratic and exponential equations, and linear and exponential/logarithmic models. Statway students participate in collaborative group learning, learn skills to maintain a positive perspective towards learning and engage in classroom activities that introduce statistical concepts and skills. Both courses in the sequence, Math 417 and Math 17, must be taken to receive credit for college level statistics.

**MATH-420 ESSENTIALS OF INTERMEDIATE ALGEBRA (4)**
Lecture 64 - 72 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory - Concurrent Enrollment: MATH-642 Skill Building for Math 420 or Advisory - Prior Enrollment: MATH-550 Introduction to Algebra
Prerequisite: Eligibility for Math 420 as determined by the Chaffey assessment process.
This course is designed to be the Intermediate Algebra prerequisite specifically for Statistics 10 or Math 4. Topics covered include the following: first degree equations and inequalities; factoring; quadratic equations and inequalities; equations with radicals; applications; exponential functions and their inverses; graphing; sequences and series; and determining linear equations in two variables. A student may not earn credit for both Math 420 and Math 450. Any student who takes Math 420 and wants to enroll in Math 25, must take Math 420B prior to enrolling in Math 25.

**MATH-420B BRIDGE TO STEM+ FROM INTERMEDIATE ALGEBRA (1)**
Lecture 16 - 18 hours.
Grading: Letter Grade  (Degree-applicable)
Corequisite: MATH-420 Essentials of Intermediate Algebra (May be taken previously).
This course is specifically designed to help students who have already taken Math 420 and prepare them for Math 25. A student who enrolls in Math 420B must have already taken Math 420 prior to enrolling in Math 420B. Topics covered in this course include the following: Logarithmic properties and log functions; conics; systems of equations with matrices; rational expressions and equations.
MATH-450 INTERMEDIATE ALGEBRA: A CRITICAL THINKING APPROACH (5)
Lecture 80 - 90 hours.
Grading: Letter Grade (Degree-applicable)
Advisory - Concurrent Enrollment: MATH-645 Skill Building for Math 450 or
Advisory - Prior Enrollment: MATH-550 Introduction to Algebra
Assessment Level: Eligibility for Math 550 as determined by the Chaffey assessment process.

This course is designed to help students with their first transfer level math course. Topics include: factoring, rational expressions and their operations, polynomial, radical, absolute value, exponential and logarithmic expressions, equations, and functions; linear and non-linear inequalities; quadratic functions; graphing of non-linear functions; complex numbers; non-linear single variable inequalities; conic sections; sequences; series; and the Binomial Theorem. There is a 5 hour supplemental learning requirement that will need to be met in the Success Centers. The Math Department strongly recommends that any student wanting or needing extra support for this course consider enrolling in MATH-645 to be taken concurrently with MATH-450.

MATH-550 INTRODUCTION TO ALGEBRA (4)
Lecture 64 - 72 hours.
Grading: Letter Grade (Non-degree-applicable)
Advisory - Prior Enrollment: MATH-650 Mathematical Foundations or Assessment Level: Eligibility for Math 550 as determined by the Chaffey assessment process

This course is based on the fundamentals of algebra. Topics include: rational number arithmetic, order of operations, Pythagorean Theorem, variable expressions, solving linear equations, application problems, graphing linear equations in two variables, polynomial operations, special products and factoring, solution and application of linear and rational equations, solving linear systems of two equations, and determining the equation of a line. There is a 7 hour supplemental learning requirement that will need to be met in the Success Centers.

MATH-642 SKILL BUILDING FOR MATH 420 (0)
Lecture 32 - 36 hours.
Grading: Non-Credit (Pass/No Pass)
Advisory - Concurrent Enrollment: MATH-420 Essentials of Intermediate Algebra

This course is designed to be taken concurrently with Math 420. This course focuses on mastery of algebra competencies including: the graphing and writing of linear equations, factoring, and quadratic equations. The Mathematics Department recommends that this course be taken by any student who might need extra support while taking Math 420.

MATH-645 SKILL BUILDING FOR MATH 450 (0)
Lecture 32 - 36 hours.
Grading: Non-Credit (Pass/No Pass)

This course is designed to be taken concurrently with Math 450. This course focuses on mastery of algebra competencies, including: linear equations, systems of linear equations, factoring, rational expressions, and quadratic equations. The Mathematics Department recommends that this course be taken by any students who might need extra support while taking Math 450.

MATH-650 MATHEMATICAL FOUNDATIONS (0)
Lecture 32 - 36 hours.
Grading: Pass/No-Pass (Non-credit)
Other: This course is designed for students placing below the Math 550 level.
Mathematics Review for students whose assessment results indicate placement below Introduction to Algebra, and who wish to re-acquire the skills needed to re-assess into a higher level mathematics course. The course focuses on operations of whole numbers, rational numbers, decimal numbers and integers. Other topics include: ratios, proportions and measurement.
Successful completion of this course allows the student to bypass the 3-month waiting period for re-assessment.

MUSIC - MUSIC

MUSIC-2A MUSIC HISTORY AND LITERATURE (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Chronological survey of music in Western culture, encompassing the Medieval through Baroque periods. Origins of Western music up through the era of Johann Sebastian Bach and George Frideric Handel.

MUSIC-2B MUSIC HISTORY AND LITERATURE (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Chronological survey of music in Western culture, from 1750 to the present. Explores the music of the great composers of the Classical, Romantic, and 20th century eras.

MUSIC-4 MUSIC APPRECIATION (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
A survey of art music in western civilization. Topics studied include but are not limited to elements of music, basic musical forms, music periods, styles, and the role of music and musicians in the western world. (C-ID MUS 100)

MUSIC-5 MUSIC THEORY AND MUSICIANSHIP I (4) [Cx]
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Advisory: MUSIC-35 Piano for Music Majors I
This course, through guided composition, analysis, and cultural inquiry, incorporates the following concepts: rhythm and meter; basic properties of sound; intervals; diatonic scales and triads; diatonic chords; basic cadential formulas and phrase structure; dominant seventh; figured bass symbols; and non-harmonic tones; music as science, mathematics, and philosophy in Ancient Greek culture; musical form in the context of poetic, artistic and architectural form. Students explore the history and evolution of music notation in the context of the growth of European vernacular literacy, and development of skills in handwritten notation is expected. (C-ID MUS 125)

In addition, the musicianship component of this course applies and develops the rhythmic, melodic, and harmonic materials of the first semester of Music Theory through ear training, sight singing, analysis, and dictation, drawing from and examining musical sources from European art music, traditional/folk music from American, European, and non-European cultures, and American popular music.
MUSIC-6 Music Theory and Musicianship II (4) [Cx]
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Advisory: MUSIC-36 Piano for Music Majors II
Prerequisite: MUSIC-5 Music Theory and Musicianship I
This course incorporates the concepts from Music Theory and Musicianship I. In addition, through guided composition and analysis, the course will include: an introduction to two-part counterpoint; voice leading involving four-part chorale writing; diatonic harmony; and an introduction to secondary/applied chords and modulation. Applies and develops the rhythmic, melodic, and harmonic materials of the second semester of Music Theory through ear training, sight singing, analysis, and dictation. Students continue to explore the history and evolution of music notation and theory, as well as cultural influences thereon, through examination and analysis of historically and geographically diverse musical examples. (C-ID MUS 135)

MUSIC-7 Music Theory and Musicianship III (4) [Cx]
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Advisory: MUSIC-37 Intermediate Piano
Prerequisite: MUSIC-6 Music Theory and Musicianship II
This course incorporates the concepts from Music 6, Music Theory and Musicianship II. In addition, through writing and analysis, the course will include: introduction to chromatic harmony; secondary/applied chords; modulation; borrowed chords; introduction to Neapolitan and augmented-sixth chords. Applies and develops the rhythmic, melodic, and harmonic materials through ear training, sight singing, analysis, and dictation. (C-ID MUS 140)

MUSIC-8 Music Theory and Musicianship IV (4) [Cx]
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Advisory: MUSIC-38 Studio Piano
Prerequisite: MUSIC-7 Music Theory and Musicianship III
This course incorporates the concepts from Music 7, Music Theory and Musicianship III. In addition, through writing and analysis, the course will include: post-Romantic techniques such as borrowed chords and modal mixture, chromatic mediants, Neapolitan and augmented-sixth chords, 9th, 11th and 13th chords, altered chords and dominants; and 20th century techniques such as: Impressionism, tone rows, set theory, pandiatonicism and polyauralism, meter and rhythm. Applies and develops the rhythmic, melodic, and harmonic materials of the fourth semester of Music Theory through ear training, sight singing, analysis, and dictation. (C-ID MUS 150)

MUSIC-10 Songwriting and Commercial Harmony (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Prerequisite: MUSIC-6 Music Theory and Musicianship II
Introduction to the application of commercial music theory and technology to the songwriter. Diatonic and non-diatonic harmony including the circle of fifths, extended and altered chords, basic chord substitution, slash chords, chord symbols, substitution and common chord progressions with direct application to commercial song forms. Introduction to operation and use of the drum machine, synthesizer and computer as related to class projects.

MUSIC-15 Introduction to Music Business (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Survey of the music industry, with emphasis on individual career options, roles, and responsibilities. Contracts, relationships, and interaction of song writing, publishing, copyright law, recording, broadcasting, managing, booking, licensing, and merchandising.

MUSIC-16 Introduction to Recording Arts (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Theory and application of contemporary recording concepts, techniques and equipment utilizing modern technology and practice in the recording studio.

MUSIC-17 Electronic Music (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Some keyboard skill and/or experience with electronic components.
Electronic sound production. Topics include: sound types, sound manipulation, sequencing, Musical Instrument Digital Interface (MIDI), and editing.

MUSIC-18 Computer Assisted Recording and Editing (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: MUSIC-16 Introduction to Recording Arts
Techniques and applications of recording and editing sound on personal computers. Hardware, software, editing for song, sound effects and dialog for film.
TOP Code: 1005.00 - Commercial Music

MUSIC-21 History of Jazz (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of the development of jazz from its origins in the Afro-American society, through the developmental periods of the various metropolitan areas, to the present-day eclectic style. Includes correlation with sociological influence.

MUSIC-22 History and Survey of Rock Music (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of rock music styles covering their origins, development, and cultural impact. Designed to make students aware of the role of rock music in shaping our society.

MUSIC-26 World Music (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Music and music cultures around the world, focusing on their role(s) in those cultures. Extensive listening and musical vocabulary development to facilitate the discussion and interpretation of the music. Some performance expected.

MUSIC-35 Piano for Music Majors I (1)
Studio 48 – 57 hours.
Grading: Letter Grade (CSU; UC)
Development of the ability to read simple piano scores in the classical literature. Development of a keyboard sense from the standpoint of touch and sound. Major and minor scales, the use of primary chords and their inversions in harmonizing melodies. Some key transposition.

MUSIC-36 Piano for Music Majors II (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: MUSIC-35 Piano for Music Majors I
Second semester of Piano for Music Majors further advances the development of the ability to read piano scores in the classical literature, the development of a keyboard sense from the standpoint of touch and sound, major and minor scales, the use of primary chords and their inversions in harmonizing melodies, and key transposition.
MUSIC-37 INTERMEDIATE PIANO (1)
Studio 48-54 hours.
Grading: Letter Grade (CSU)
Advisory: MUSIC-35 Piano for Music Majors I
Piano literature of second and third levels focusing on differences in historical styles. Extensive sight reading, performance of all major and minor scales, chords, and arpeggios. Some analysis and melodic harmonization.

MUSIC-38 STUDIO PIANO (1)
Studio 48-54 hours.
Grading: Letter Grade (CSU)
Advisory: MUSIC-35 Piano for Music Majors I or Limitation on Enrollment (e.g. Performance tryout or audition): Audition with instructor's signature.
Basic contemporary harmony and chording techniques. Performance of popular music in a variety of styles. Reading from lead sheets and construction of song arrangements. Approach to basic improvisation.

MUSIC-40 BEGINNING GUITAR (1) [Cx]
Studio 48-54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: MUSIC-35 Piano for Music Majors I
Student must provide own guitar for use in class.

MUSIC-41 INTERMEDIATE GUITAR (1)
Studio 48-54 hours.
Grading: Letter Grade (CSU; UC)
Basic fundamentals which prepare the student for most styles of guitar playing. Emphasis on chording, right-hand technique, and melodic playing, as well as basic music reading. Student must provide own guitar for use in class.

MUSIC-42 ADVANCED GUITAR (1)
Studio 48-54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: MUSIC-40 Beginning Guitar or - The ability to sight-read in the first position.
Further exploration of guitar literature and the capabilities of the solo guitar. Student must provide own guitar for use in class.

MUSIC-50 APPLIED MUSIC (0.5)
Laboratory 24 - 29 hours.
Grading: Letter Grade (CSU)
Corequisite: MUSIC-78 Jazz Band or MUSIC-77 Community Concert Band or MUSIC-75 Chamber Choir or MUSIC-76 Chamber Choir or MUSIC-55 Concert Choir
Limitation on Enrollment (e.g. Performance tryout or audition): Audition required.
This course consists of individualized study of the appropriate techniques and repertoire for the specific instrument or voice being studied. The emphasis is on the progressive development of skills needed for solo performance. Achievement is evaluated through a juried performance. (C-ID MUS 160)

MUSIC-58 APPLIED MUSIC (0.5)
Laboratory 24 - 29 hours.
Grading: Letter Grade (CSU)
Corequisite: MUSIC-78 Jazz Band or MUSIC-77 Community Concert Band or MUSIC-76 Chamber Choir or MUSIC-75 Concert Choir
Limitation on Enrollment (e.g. Performance tryout or audition): Audition required.
This course consists of individualized study of the appropriate techniques and repertoire for the specific instrument or voice being studied. The emphasis is on the progressive development of skills needed for solo performance. Achievement is evaluated through a juried performance. (C-ID MUS 160)

MUSIC-76 CHAMBER CHOIR (1.5)
Studio 72 - 81 hours.
Grading: Letter Grade (CSU; UC)
Advisory: Previous significant choral singing experience is desirable.
Limitation on Enrollment (e.g. Performance tryout or audition): Audition is required first week of class to determine basic music reading ability, tonal memory, independence in carrying an assigned part, and ability to blend with other voices.
Advanced study and performance of varied choral music, with a focus on a cappella art, folk, and popular music. Requires established vocal and musical skills, including basic music reading, vocal technique, and choral rehearsal practice. Attendance at public performances is required. (C-ID MUS 180)

MUSIC-77 COMMUNITY CONCERT BAND (1)
Studio 48 - 54 hours.
Grading: Letter Grade (CSU)
Assessment Level: Students may pre-register, but instructor will assess students ability to play a musical instrument on first day of class.
Limitation on Enrollment (e.g. Performance tryout or audition): Students may pre-register, but will be assessed by instructor on first day of class as to ability to play a musical instrument.
Instrumental music group specializing in training and experience in a wide sampling of band repertoire, through rehearsals and performance. Attendance at on-campus end of semester concert in the theatre is required. Student must provide their own instrument. Some larger instruments will be available through the Music Department. (C-ID MUS 180)

MUSIC-78 JAZZ BAND (1)
Studio 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: Students may pre-register in class, but instructor will access students ability to play musical instrument on first day of class.
Limitation on Enrollment (e.g. Performance tryout or audition): Intermediate to advanced proficiency on one's musical instrument, together with the ability to read music is required. Audition on the first day of class on the following instruments: trumpet, trombone, saxophone, bass and bass guitar, keyboards, drums, guitar, and auxiliary percussion.
Instrumental studio/performing group, emphasizing reading, improvisation and stylistic concepts as they apply to the intermediate/advanced player. In most instances, student is expected to supply his/her own instrument. Attendance at public performances is required. (C-ID MUS 180)

MUSIC-98ABC INDEPENDENT STUDY: MUSIC (1 - 3)
Lecture 16 - 19 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Limitation on Enrollment (e.g. Performance tryout or audition): Instructor signature is required for registration.
Special project course designed for the capable, well-motivated student. Each student explores and develops a project or a paper on an area of personal interest in music. Nature and extent of the project must be decided by student and instructor before the student may sign up for the course. Type and extent of the project determines the number of units allowed. Regardless of the unit combination;
NURSING ASSISTANT - NURAST

Students must apply for admission into the Nursing Assistant program. See Programs of Study area for requirements. Students enrolled in two corequisite-linked courses (i.e. Nursing Assistant 400 and 400L) will have the lower of the two grades earned assigned to both courses when either course grade is less than a “C” or “CR”.

NURAST-400 Nursing Assistant (3.5)
Lecture 56 - 67 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: NURAST-400L Nursing Assistant Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Admission to the Nursing Assistant Program.

Fundamental principles of basic nursing care necessary to meet the hygiene, comfort, and safety needs of clients, including the prevention, identification and reporting of suspected patient abuse. Focus on developing communicative skills and effective interpersonal relations with clients, families, and fellow health care team members. Course follows the guidelines established by the California Department of Public Health (CDPH).

NURAST-400L Nursing Assistant Laboratory (2)
Laboratory 96 - 114 hours.
Grading: Pass/No-Pass (Degree-applicable)
Corequisite: NURAST-400 Nursing Assistant Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Admission into the Nursing Assistant Program.

Clinical application of the basic nursing care required to provide for the hygiene, comfort, and safety needs of clients in long-term health care settings. Focus on roles and responsibilities, knowledge of and adherence to federal and state regulations, demonstration of nursing skills, and practice in effective communications.

NURAST-405 Nursing Assistant Skills Laboratory (0.5)
Laboratory 24 - 29 hours.
Grading: Pass/No-Pass (Degree-applicable)
Corequisite: NURAST-400 Nursing Assistant and NURAST-400L Nursing Assistant Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Admission into the Nursing Assistant Program.

Demonstration and student practice of the twenty one core skills requiring mastery, in preparation for the state competency evaluation for the California Department of Public Health (CDPH) Certified Nurse Assistant (CNA) exam.

NURAST-420 Home Health Aide (1.5)
Lecture 24 - 29 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: NURAST-420L Home Health Aide Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Admission into the Nursing Assistant program, and possession of an active California Certified Nursing Assistant (CNA) certificate.

Role of the home health aide in providing personal client care in assisted living and home care settings. Topics include: interpretation of medical and social needs of patients, preparation of nutritionally-appropriate meals, assistance with client self- administration of medication, provision of personal care and cleaning tasks in patient’s homes, and client care status reporting procedures.

NURAST-420L Home Health Aide Laboratory (1)
Laboratory 48 - 54 hours.
Grading: Pass/No-Pass (Degree-applicable)
Corequisite: NURAST-420 Home Health Aide Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Admission into the Nursing Assistant program.

Clinical application of the care functions required to meet the physical, medical, and social needs of home-care and assisted living clients of all ages. Demonstration and practice in providing personal care, preparing food, assisting client with self-administering medications, performing basic cleaning of clients’ living environment, and assessing/reporting client status.

NURAST-450 Professional Development for the Nursing Assistant (1)
Lecture 16 - 19 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: Basic computer skills are recommended.
Limitation on Enrollment (e.g. Performance tryout or audition): Admission into the Nursing Assistant program.

Development of the interpersonal and professional skills needed by entry-level healthcare providers joining the workforce. Topics include: overview of the healthcare workforce and career ladder, the role of the CNA in the nursing process, critical thinking skills, employment opportunities, resume preparation, and job interview techniques.

NURSING: ASSOCIATE DEGREE - NURADN

Students must apply for admission into the Nursing (A.D.N.) program. See the Programs of Study for information on entrance requirements.

Students enrolled in two corequisite-linked courses (i.e. Nursing: A.D.N. 3 and 3L) will have the lower of the two grades earned assigned to both courses when either course grade is less than satisfactory. A minimum grade of “C” in the lecture course and “CR” in the lab course is required to advance in the Nursing A.D.N. program.

NURADN-3 Transition in Nursing (1.5) [Cx]
Lecture 24 - 27 hours.
Grading: Letter Grade (CSU)
Corequisite: NURADN-3L Transition in Nursing Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Must be a graduate of a Vocational Nursing School with an active LVN license, and at least one year of work experience as a LVN in a clinical health care setting. Core curriculum of the Associate Degree in Nursing Program, including theories of Maslow and Erickson. Development of critical thinking skills. Utilization of the nursing process, therapeutic communications and skills in client care.

NURADN-3L Transition in Nursing Laboratory (0.5) [Cx]
Laboratory 24 - 29 hours.
Grading: Pass/No-Pass (CSU)
Corequisite: NURADN-3 Transition in Nursing Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Must be a graduate of a Vocational Nursing School with an active LVN license, and at least one year of work experience as a LVN in a clinical health care setting. Application of basic nursing skills in the nursing-skills lab.

NURADN-6 Clinical Nursing Skills (1.5) [Cx]
Laboratory 72 - 86 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Admission to the Nursing A.D.N. program.

Development of the essential components of client care, enabling the practice of safe and effective nursing.
NURADN-14 NURSING PROCESS 1 (4) [Cx]
Lecture 64 - 72 hours.
Grading: Letter Grade (CSU)
Corequisite: NURADN-14L Nursing Process 1 Laboratory
Prerequisite: NURADN-6 Clinical Nursing Skills
Utilization of the nursing process in providing basic care for adult and geriatric clients and families. Development of beginning client-centered communication, interpersonal relationships, and critical thinking skills.
TOP Code: 1230.00 - Nursing

NURADN-14L NURSING PROCESS 1 LABORATORY (3.5) [Cx]
Laboratory 168 - 200 hours.
Grading: Pass/No-Pass (CSU)
Corequisite: NURADN-14 Nursing Process 1
Limitation on Enrollment (e.g. Performance tryout or audition): Admission to the nursing ADN program.
Clinical application of the nursing process in providing basic care of adult and geriatric clients and their families. Application of beginning client-centered communication, interpersonal relationships, and critical thinking skills. Clinical application at long-term care and medical surgical facilities. Students enrolled in two corequisite-linked courses that consist of one lecture and one lab course, will receive the lower of the two grades earned in these courses, for both courses, when either course grade is less than satisfactory. A minimum grade of “C” in the lecture and “CR” in the lab is required to advance in the ADN Program.
TOP Code: 1230.10 - Registered Nursing

NURADN-26 MATERNAL-NEWBORN NURSING (2) [Cx]
Lecture 32 - 36 hours.
Grading: Letter Grade (CSU)
Corequisite: NURADN-26L Maternal-Newborn Nursing Laboratory
Prerequisite: NURADN-27 Nursing Process 2
Nursing care of the child-bearing family. Use of the nursing process and critical thinking skills in perinatology and ambulatory settings, and in selected community agencies.
TOP Code: 1230.00 - Nursing

NURADN-26L MATERNAL-NEWBORN NURSING LABORATORY (1.5) [Cx]
Laboratory 72 - 86 hours.
Grading: Pass/No-Pass (CSU)
Corequisite: NURADN-26 Maternal-Newborn Nursing
Clinical application of maternal-newborn concepts in ambulatory, hospital, and home care settings.

NURADN-27 NURSING PROCESS 2 (4) [Cx]
Lecture 64 - 72 hours.
Grading: Letter Grade (CSU)
Corequisite: NURADN-27L Nursing Process 2 Laboratory
Prerequisite: NURADN-14 Nursing Process 1 and NURADN-14L Nursing Process 1 Laboratory or NURADN-3 Transition in Nursing and NURADN-3L Transition in Nursing Laboratory
Nursing care of adults in the hospital environment. Use of the nursing process and critical thinking skills in medical surgical units.

NURADN-27L NURSING PROCESS 2 LABORATORY (3) [Cx]
Laboratory 144 - 162 hours.
Grading: Pass/No-Pass (CSU)
Corequisite: NURADN-27 Nursing Process 2
Limitation on Enrollment (e.g. Performance tryout or audition):
Nursing care of adults in the hospital environment. Use of the nursing process and critical thinking skills in medical/surgical units.

NURADN-34 NURSING PROCESS 3 (4) [Cx]
Lecture 64 - 72 hours.
Grading: Letter Grade (CSU)
Corequisite: NURADN-34L Nursing Process 3 Laboratory
Prerequisite: NURADN-27 Nursing Process 2 and NURADN-27L Nursing Process 2 Laboratory or NURADN-3 Transition in Nursing and NURADN-3L Transition in Nursing Laboratory
Utilization of the nursing process and management of care for the gerontological, acute and chronically ill individuals/family.

NURADN-34L NURSING PROCESS 3 LABORATORY (3) [Cx]
Laboratory 144 - 171 hours.
Grading: Pass/No-Pass (CSU)
Corequisite: NURADN-34 Nursing Process 3
Management of care for gerontological, acute, and chronically ill patients and their families.

NURADN-38 FAMILY-CHILD NURSING (2) [Cx]
Lecture 32 - 36 hours.
Grading: Letter Grade (CSU)
Corequisite: NURADN-38L Family-Child Nursing Laboratory
Prerequisite: NURADN-27 Nursing Process 2 and NURADN-27L Nursing Process 2 Laboratory or NURADN-3 Transition in Nursing and NURADN-3L Transition in Nursing Laboratory
Clinical application in the nursing care of infants, children, and adolescents in ambulatory, hospital, and community settings.

NURADN-45 NURSING PROCESS 4 (4) [Cx]
Lecture 64 - 72 hours.
Grading: Letter Grade (CSU)
Corequisite: NURADN-45L Mental Health and Psychiatric Nursing Laboratory
Prerequisite: NURADN-27 Nursing Process 2
Clinical application of the nursing process and critical thinking skills in pediatric units and selected community agencies.

NURADN-45L MENTAL HEALTH AND PSYCHIATRIC NURSING (2) [Cx]
Lecture 32 - 36 hours.
Grading: Pass/No-Pass (CSU)
Corequisite: NURADN-45 Mental Health and Psychiatric Nursing Laboratory
Prerequisite: NURADN-6 Clinical Nursing Skills
Mental health and psychiatric illness across the life span. Application of client-centered communication, interpersonal relationships, and critical thinking skills.

NURADN-48 MENTAL HEALTH AND PSYCHIATRIC NURSING (2) [Cx]
Lecture 32 - 36 hours.
Grading: Letter Grade (CSU)
Corequisite: NURADN-48L Mental Health and Psychiatric Nursing Laboratory
Other: Students must apply for admission into the Nursing (A.D.N.) program.
Mental health and psychiatric illness across the life span. Application of client-centered communication and critical thinking skills.
NURADN-48L MENTAL HEALTH AND PSYCHIATRIC NURSING LABORATORY (1) [Cx]
Laboratory 48 - 54 hours.
Grading: Pass/No-Pass  (CSU)
Corequisite: NURADN-48L Mental Health and Psychiatric Nursing Laboratory
Other: Students must apply for admission into the Nursing (A.D.N.) program.
Clinical application of psychiatric nursing. Performance of client-centered communication and critical thinking skills at psychiatric and community health facilities. The student develops leadership focus on the VN role, responsibilities, and skills in extended-care facilities.
TOP Code: 1230.10 - Registered Nursing

NURADN-50 PROFESSIONAL ISSUES IN NURSING (1) [Cx]
Lecture 16 - 18 hours.
Grading: Letter Grade  (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Admission into the Nursing A.D.N. program.
Study of basic electrocardiogram (ECG) waveforms in relation to atrial, junctional and ventricular dysrhythmias. Designed to assist health care workers or those interested in health care with recognition and treatment of basic cardiac dysrhythmias.

NURADN-403 Pathophysiology for Nursing (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Advisory: Biology 22
Limitation on Enrollment (e.g. Performance tryout or audition): Admission into a nursing (ADN or VN) program or equivalent.
Mechanisms of disease processes, the resultant structural and functional changes, and the effects of these dysfunctional changes on the body as they relate to nursing practice. The use of the Nursing Process in prevention, evaluation and treatment of disease outcomes within the scope of nursing practice.

NURADN-404 Basic ECG and Dysrhythmia Interpretation (2) [Cx]
Lecture 32 - 36 hours.
Grading: Letter Grade  (Degree-applicable)
Study of basic electrocardiogram (ECG) waveforms in relation to atrial, junctional and ventricular dysrhythmias. Designed to assist health care workers or those interested in health care with recognition and treatment of basic cardiac dysrhythmias.

NURADN-428 Basic Pharmacology (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  
Limitation on Enrollment (e.g. Performance tryout or audition): Student must be in good standing in the Chaffey ADN or VN program or another California accredited ADN or VN program, or be a California licensed health care provider, or student must obtain permission of the nursing program coordinator.
Basic concepts of pharmacology with emphasis on the role of the nurse in drug administration. Drugs affecting body systems; drugs used in neoplastic diseases, infectious diseases and in skin disorders; immunologic agents, diagnostic agents, toxicology, fluids and electrolytes, and vitamins. Principles and factors for managing medication regimen in a home setting. Course is recommended for students enrolled in a nursing program and as Continuing Education credit for RN's and LVN's, BRN #00426.

NURADN-482 Cooperative Education: Nursing A.D.N. (1)
Hours: 60 hours/term (unpaid) or 75 hours/term (paid) on-site work experience.
Grading: Pass/No-Pass  (Degree-applicable)
Prerequisite: NURADN-14L Nursing Process I Laboratory
Work experience in cooperation with clinical agencies. Provides expanded learning opportunities directly related to the student's clinical experience.
TOP Code: 1230.10 - Registered Nursing

NURADN-550 Health Science Skills Development I (1)
Laboratory 48 - 54 hours.
Grading: Pass/No-Pass  (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Students must be enrolled in the ADN program.
Application of appropriate health science skills in a simulated laboratory setting. Skills taught correspond to skills levels in current health science program.

NURADN-551 Health Science Skills Development II (1)
Laboratory 48 - 54 hours.
Grading: Pass/No-Pass  (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Students must be enrolled in the ADN program.
Use of computers to improve test taking skills, critical thinking skills, and technical skills in conjunction with current health science courses.

NURVN-403 Fundamentals of Nursing (3) [Cx]
Lecture 48 - 54 hours.
Grading: Pass/No-Pass  (Degree-applicable)
Corequisite: NURVN-403L Fundamentals of Nursing Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the Vocational Nursing Program.
Fundamental principles and techniques necessary for the beginning vocational nursing student to provide basic nursing care to patients. Leadership focus on the VN role, responsibilities, and skills in extended-care clinical and home settings. Students select and use appropriate components of the nursing process and Maslow's Hierarchy of Needs to promote health, hygiene, nutrition, rest/sleep, safety, relief of pain, and meet the mobility, bowel/bladder, respiratory, sexual, spiritual, psychosocial, and self-esteem needs of adult and geriatric patients. Study of loss/grief concepts, health and disease, stress adaptation, and therapeutic communication styles is included. Includes 12 hours of related pharmacology content.

NURVN-403L Fundamentals of Nursing Laboratory (2)
Laboratory 96 - 114 hours.
Grading: Pass/No-Pass  (Degree-applicable)
Corequisite: NURVN-403 Fundamentals of Nursing Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the Vocational Nursing Program.
Discussion, demonstration, and application of nursing theory, principles, and effective communication techniques. Using the nursing process and developmental theories as a framework, students provide care for adult and geriatric patients in home, acute, and extended-care clinical settings. Focus on medication administration and patient status reporting.

NURVN-403F Fundamentals of Nursing (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Corequisite: NURVN-403L Fundamentals of Nursing Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the Vocational Nursing Program.
Fundamental principles and techniques necessary for the beginning vocational nursing student to provide basic nursing care to patients. Leadership focus on the VN role, responsibilities, and skills in extended-care clinical and home settings. Students select and use appropriate components of the nursing process and Maslow's Hierarchy of Needs to promote health, hygiene, nutrition, rest/sleep, safety, relief of pain, and meet the mobility, bowel/bladder, respiratory, sexual, spiritual, psychosocial, and self-esteem needs of adult and geriatric patients. Study of loss/grief concepts, health and disease, stress adaptation, and therapeutic communication styles is included. Includes 12 hours of related pharmacology content.

NURVN-403L Fundamentals of Nursing Laboratory (2)
Laboratory 96 - 114 hours.
Grading: Pass/No-Pass  (Degree-applicable)
Corequisite: NURVN-403 Fundamentals of Nursing Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the Vocational Nursing Program.
Discussion, demonstration, and application of nursing theory, principles, and effective communication techniques. Using the nursing process and developmental theories as a framework, students provide care for adult and geriatric patients in home, acute, and extended-care clinical settings. Focus on medication administration and patient status reporting.
### NURVN-405 BEGINNING MEDICAL SURGICAL NURSING (4) [Cx]
- **Lecture**: 64 - 76 hours.
- **Grading**: Letter Grade  (Degree-applicable)
- **Corequisite**: NURVN-405L Beginning Medical Surgical Nursing Laboratory
- **Prerequisite**: NURVN-403 Fundamentals of Nursing and NURVN-403L Fundamentals of Nursing Laboratory
- **Discussion, demonstration, and application of the nursing process as a framework for providing care to patients with musculoskeletal, integumentary, genitourinary, and gastrointestinal disorders. Includes 12 hours of related pharmacology content.**

### NURVN-405L BEGINNING MEDICAL SURGICAL NURSING LABORATORY (3)
- **Laboratory**: 144 - 171 hours.
- **Grading**: Pass/No-Pass  (Degree-applicable)
- **Corequisite**: NURVN-405 Beginning Medical Surgical Nursing Laboratory
- **Prerequisite**: NURVN-403 Fundamentals of Nursing Laboratory
- **Nursing care of adult patients in the hospital/clinical setting. Utilization of the nursing process as a framework for providing care to patients with musculoskeletal, integumentary, genitourinary, and gastrointestinal systems in the clinical setting.**

### NURVN-407A BEGINNING NURSING SKILLS/CLINICAL SIMULATION LABORATORY (1)
- **Laboratory**: 48 - 54 hours.
- **Grading**: Pass/No-Pass  (Degree-applicable)
- **Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the Vocational Nursing Program**
- **Application of theoretical concepts to nursing skills performance in a skills laboratory setting. Participation in simulated clinical experiences using high-fidelity patient care simulators. Course focuses on the musculoskeletal, integumentary, gastrointestinal and genitourinary systems.**

### NURVN-407B INTERMEDIATE NURSING SKILLS/CLINICAL SIMULATION LABORATORY (1)
- **Laboratory**: 48 - 54 hours.
- **Grading**: Pass/No-Pass  (Degree-applicable)
- **Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the second semester of the Vocational Nursing Program**
- **Application of theoretical concepts to nursing skills performance in a skills laboratory setting. Participation in simulated clinical experiences using high-fidelity patient care simulators. Course focuses on maternal/child health nursing and on the cardiac, respiratory and endocrine systems.**

### NURVN-407C ADVANCED NURSING SKILLS/CLINICAL SIMULATION LABORATORY (1)
- **Laboratory**: 48 - 54 hours.
- **Grading**: Pass/No-Pass  (Degree-applicable)
- **Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the third semester of the Vocational Nursing Program**
- **Application of theoretical concepts to nursing skills performance in a skills laboratory setting. Participation in simulated clinical experiences using high-fidelity patient care simulators. Course focuses on emergency and trauma situations, and on diseases and disorders of the reproductive, hematologic and immune systems.**

### NURVN-409 INTERMEDIATE MEDICAL SURGICAL NURSING (4) [Cx]
- **Lecture**: 64 - 76 hours.
- **Grading**: Letter Grade  (Degree-applicable)
- **Corequisite**: NURVN-409L Intermediate Medical Surgical Nursing Laboratory
- **Prerequisite**: NURVN-405 Beginning Medical Surgical Nursing and NURVN-405L Beginning Medical Surgical Nursing Laboratory
- **Discussion, demonstration, and application of the nursing process and developmental theory to the care of adult patients with diseases and disorders of the cardiac, respiratory, and endocrine systems. Includes 12 hours of related pharmacology content.**

### NURVN-409L INTERMEDIATE MEDICAL SURGICAL NURSING LABORATORY (3)
- **Laboratory**: 144 - 171 hours.
- **Grading**: Pass/No-Pass  (Degree-applicable)
- **Corequisite**: NURVN-409 Intermediate Medical Surgical Nursing Laboratory
- **Prerequisite**: NURVN-405 Beginning Medical Surgical Nursing and NURVN-405L Beginning Medical Surgical Nursing Laboratory
- **Nursing care of adult patients in the hospital/clinical setting. Utilization of the nursing process as a framework for providing care to patients with respiratory, cardiac, and endocrine disorders.**

### NURVN-411 ADVANCED MEDICAL SURGICAL NURSING (7) [Cx]
- **Lecture**: 112 - 126 hours.
- **Grading**: Letter Grade  (Degree-applicable)
- **Corequisite**: NURVN-411L Advanced Medical Surgical Nursing Lab
- **Prerequisite**: NURVN-405 Beginning Medical Surgical Nursing and NURVN-405L Beginning Medical Surgical Nursing Laboratory
- **Discussion, demonstration, and application of the nursing process and developmental theory for the care of adult patients with diseases and disorders of the reproductive, hematologic, immune, and neurologic systems. Emergency nursing, shock and bioterrorism, and care of the patient with cancer will also be emphasized. Includes 12 hours of related pharmacology content.**

### NURVN-411L ADVANCED MEDICAL SURGICAL NURSING LAB (3)
- **Laboratory**: 144 - 171 hours.
- **Grading**: Pass/No-Pass  (Degree-applicable)
- **Corequisite**: NURVN-411 Advanced Medical Surgical Nursing Laboratory
- **Prerequisite**: NURVN-405 Beginning Medical Surgical Nursing and NURVN-405L Beginning Medical Surgical Nursing Laboratory
- **Nursing care of adult patients in the hospital/clinical setting. Utilization of the nursing process as a framework for providing care to patients with reproductive, hematologic and immunologic disorders. Care of the patient with cancer, and of patients with emergency and traumatic disorders will also be emphasized.**
NURVN-413 LEADERSHIP FOR THE VOCATIONAL NURSE (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: NURVN-413L Leadership for the Vocational Nurse Lab
Limitation on Enrollment (e.g. Performance tryout or audition): and Acceptance into the vocational nursing program. Successful completion of the second semester of the vocational nursing program or equivalent.
Leadership skills, capabilities, and knowledge essential to the vocational nurse including roles and responsibilities, application of the nursing process to problem solving methods, and supervision and evaluation of the effectiveness and quality of care. Managerial traits, styles, roles, and models are explored.

NURVN-413L LEADERSHIP FOR THE VOCATIONAL NURSE LAB (2)
Lecture 16 - 19 hours. Laboratory 96 - 114 hours.
Grading: Pass/No-Pass (Degree-applicable)
Corequisite: NURVN-413 Leadership for the Vocational Nurse
Limitation on Enrollment (e.g. Performance tryout or audition): and Acceptance into the vocational nursing program. Successful completion of the second semester of the VN program or equivalent.
Clinical application of leadership skills, capabilities, and knowledge essential to the vocational nurse including roles and responsibilities, application of the nursing process to problem solving methods, and supervision and evaluation of the effectiveness and quality of care.

NURVN-414 ACUTE CARE NURSING ASSISTANT: VOCATIONAL NURSING FOUNDATIONS (6)
Lecture 64 - 72 hours. Laboratory 96 - 108 hours.
Grading: Letter Grade (Degree-applicable)
Advisory - Prior Enrollment: MATH-450 Intermediate Algebra: A Critical Thinking Approach or MATH-420 Essentials of Intermediate Algebra and MATH-420B Bridge to STEM+ from Intermediate Algebra ENGL-1A Composition
Limitation on Enrollment (e.g. Performance tryout or audition): Evidence of current State of California CNA certification
Other: Students must provide proof of the following by the third week of class:
A satisfactory health examination including a drug screening test and proof of immunizations completed within the past 3 months, a cleared background check, and current CPR certification as an American Heart Association Healthcare Provider.
Prerequisite: BIOL-424 Anatomy and Physiology and BIOL-424L Anatomy and Physiology Laboratory or BIOL-20 Human Anatomy and BIOL-22 Human Physiology
Using a body systems approach, this course introduces medical terminology, pathophysiology and the medical treatment and nursing care of common diseases and disorders encountered in the acute care hospital setting. The course explores the role of the vocational nurse in today's healthcare system, as well as an introduction to the policies and expectations of the Vocational Nursing program. Introduction to principles of medication dosage calculation, including IV drip rate calculations.

This course prepares the CNA to function effectively in the acute care setting, and students who successfully complete this course are eligible to apply to the Vocational Nursing program. Includes 108 hours of instruction in the acute care clinical setting.

Students must provide proof of the following by the third week of class:
A satisfactory health examination including a drug screening test and proof of immunizations completed within the past 3 months, a cleared background check, and current CPR certification as an American Heart Association Healthcare Provider.

NURVN-415A GROWTH/DEVELOPMENT: PSYCHOLOGY ADULT - GERIATRIC (1) [Cx]
Lecture 16 - 19 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: NURVN-415A Growth/Development: Psychology Adult - Geriatric
Stages of growth and development, behavior, and characteristics of the adult and elderly. Influences of and differences between the theories of Freud, Erikson, Piaget, Kohlberg, and Maslow. Theories and perspectives of mental health nursing.

NURVN-415B GROWTH AND DEVELOPMENT OF THE CHILD (1) [Cx]
Lecture 16 - 19 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: NURVN-415A Growth/Development: Psychology Adult - Geriatric
Stages of growth and development, behavior, and characteristics of the child. Influences of and differences between the theories of Freud, Erikson, Piaget, Kohlberg, and Maslow. Theories and perspectives of mental health nursing as it relates to the care of children and adolescents.

NURVN-417A CRITICAL THINKING AND THE NURSING PROCESS I (1) [Cx]
Lecture 16 - 18 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: NURVN-417A Critical Thinking and the Nursing Process I and Application of advanced critical thinking skills in the health care setting. Introduction to care planning and utilization of the nursing process in clinical decision-making.

NURVN-417B CRITICAL THINKING AND THE NURSING PROCESS II (1) [Cx]
Lecture 16 - 19 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: NURVN-417B Critical Thinking and the Nursing Process II and Application of advanced critical thinking skills in the health care setting. Advanced concepts in the development of a plan of care and in clinical decision-making.

NURVN-421 MATERNAL AND CHILD HEALTH NURSING (4) [Cx]
Lecture 64 - 72 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: NURVN-421L Maternal and Child Health Nursing Lab
Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the vocational nursing program. Successful completion of the first semester of the vocational nursing program or equivalent.
Nursing care of mothers, newborns, and children in both health and illness, using Maslow’s theory of human needs to guide the plan of care.
TOP Code: 1230.20 - Licensed Vocational Nursing
NURVN-421L MATERNAL AND CHILD HEALTH NURSING LAB (2)
Laboratory 96 - 114 hours.
Grading: Pass/No-Pass  (Degree-applicable)
Corequisite: NURVN-421 Maternal and Child Health Nursing
Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the vocational nursing program or equivalent.
Nursing care of mothers, newborns, and children in the clinical setting, in both health and illness, using Maslow's theory of human needs to guide the plan of care.

NURVN-500 NCLEX REVIEW FOR VN LICENSURE EXAMINATION (2)
Lecture 32 - 38 hours.
Grading: Pass/No-Pass  (Non-degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): or Completion of an accredited vocational nursing program in the past 5 years or completion of licensure application packets and 54 hours of pharmacology, or eligibility for licensure through work experience or education.
Overview of common diseases with treatment modalities using the nursing process. Review of over 300 questions with rationale for answers. Test taking techniques and preparation for the computerized NCLEX examination using the most current NCLEX test plan. Taking this course does not guarantee passing of the NCLEX examination.

NUTRITION AND FOOD - NF

NF-5 NUTRITION FOR LIFE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Essentials of nutrition as they relate to diet, health and disease, risk-reduction, stress, and nutritional deficiencies. Topics include: developments and discoveries in the field of nutrition, nutrients essential for human health, disease consequence and prevention, eating disorders, obesity, dieting, nutritional fads and fallacies, vitamins and supplements, and changing nutritional needs across the lifespan. Use of sound consumer nutritional information in the development of an individual health plan.

NF-11 FOOD SERVICE MANAGEMENT SUPERVISION (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Advisory: NF-471 Dietetic Service Supervisor I
Aspects of food service management supervision. Role of the supervisor/manager in developing personnel programs and establishing workable labor-management relationships. Additional topics include: job descriptions, hiring practices, training procedures, advancement programs, and delegation of responsibility.

NF-15 NUTRITION I: INTRODUCTION TO NUTRITION SCIENCE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Introduction to the science of nutrition and its implications for human health. Scientific concepts of nutrition related to the function of nutrients in basic life processes and current health issues with emphasis on individual needs.
(C-ID NUTR 110)

NF-19 NUTRITION II: MODIFIED DIETS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Prerequisite: NF-15 Nutrition I: Introduction to Nutrition Science
The study of therapeutic diets and the principles of nutrition as related to special physical conditions. Screening and assessment techniques used by health care professionals.

NF-22 NUTRITION AND THE ACTIVE PERSON (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU)
Introduction to sports nutrition as related to the nutritional needs of all individuals interested in physical fitness, from the serious athlete, to the more leisurely active person. Topics include: the study of basic nutrition, disease prevention, methods for increasing cardiovascular endurance, weight control, increasing strength, flexibility, and stress management through the components of diet and fitness.

NF-27 HEALTHY COOKING (2)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade   (CSU)
Techniques of planning and preparing nutritious foods, incorporating lower levels of fat, cholesterol, and sodium into meals. Emphasis is on healthy food selection as a lifestyle.

NF-471 DIETETIC SERVICE SUPERVISOR I (1)
Lecture 16 - 19 hours.
Grading: Letter Grade   (Degree-applicable)
Corequisite: NF-471L Dietetic Service Supervisor: Supervised Clinical Laboratory I and Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a negative tuberculosis test within the past 12 months is required.
Supervisory and management roles in the professional health care setting for first semester students. Topics include: nutrition screening, nutritional status assessment of patients/clients with varying medical conditions, menu planning, purchasing, food production management, modified diets, health care management, supervision, and training. Sociocultural factors and individual differences of clients/patients/resident population are considered.

NF-471L DIETETIC SERVICE SUPERVISOR: SUPERVISED CLINICAL LABORATORY I (2)
Laboratory 96 - 114 hours.
Grading: Letter Grade   (Degree-applicable)
Corequisite: NF-471 Dietetic Service Supervisor I and Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a negative tuberculosis test within the past 12 months is required.
Practical experience in practice and live clinical situations for the first semester student. Application of dietetic principles and practices, communication skills, record keeping, introduction to conceptual patient/client screening and assessment, adherence to Federal and State regulations, and essential management functions.

NF-472 DIETETIC SERVICE SUPERVISOR II (1)
Lecture 16 - 19 hours.
Grading: Letter Grade   (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Proof of a negative tuberculosis test within the past 12 months is required.
Prerequisite: NF-471 Dietetic Service Supervisor I
Supervisory and management roles in the professional health care setting for the second semester student. Topics include: menu planning, purchasing, food production management, health care management, supervision, and training.
Students will be introduced to the role of a pharmacy technician and pharmacist in the institutional pharmacy practice setting, pharmaceutical care, the patient model, and the drug delivery process as they relate to these health-care facilities. An introduction to dosage forms, routes of administration, medication order reading, and patient profiles will be emphasized.

PHARMACY TECHNICIAN - PHARMT

**PHARMT-401 PHARMACOLOGY OF THE BODY SYSTEMS I (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Students are required to attend a mandatory orientation session and submit a contact application to the program.
Basic anatomy, physiology, and pharmacology related to drugs affecting the endocrine and gastrointestinal systems, neoplastic disorders, infectious diseases, immunological function, vitamin and mineral balance, and the eyes and ears. Emphasis will be placed on related medical terms, trade/generic drug names, drug classifications and indications used in each body system.

**PHARMT-402 PHARMACOLOGY OF THE BODY SYSTEMS II (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Student must attend a mandatory program orientation.
Basic anatomy, physiology, and pharmacology related to drugs affecting the respiratory, genitourinary, musculoskeletal, integumentary, nervous and cardiovascular systems and special senses. Emphasis will be placed on related medical terms, trade/generic drug names, drug classifications and indications used in each body system.

**PHARMT-403 PRINCIPLES OF COMMUNITY PHARMACY PRACTICE (1.5)**
Lecture 24 - 27 hours.
Grading: Letter Grade (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Students are required to attend a mandatory orientation session and submit a contact application to the program.
This course is designed to provide the student with an overview of the community pharmacy setting. The role of a pharmacy technician and pharmacist in the community pharmacy practice setting, pharmacy law and ethics, medical and pharmaceutical terminology, pharmaceutical dosage forms, drug development processes, drug classification systems, and introduction to prescription reading and labeling.

**PHARMT-404 PRINCIPLES OF INSTITUTIONAL PHARMACY PRACTICE (1.5)**
Lecture 24 - 27 hours.
Grading: Letter Grade (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Registration is restricted to students who have attended a mandatory orientation session and submitted a contact application to the program.
This course will introduce students to acute-care, long-term care and home-health care facilities.

**PHARMT-405 STERILE PRODUCTS (2)**
Lecture 32 - 36 hours.
Grading: Letter Grade (Degree-applicable)
Limitation on Enrollment (e.g. Performance tryout or audition): Students are required to attend a mandatory orientation session and submit a contact application to the program.
Basic concepts of aseptic techniques as they apply to the pharmacy technician. Focus on the use of laminar flow hoods and the proper handling and disposal of needles, syringes, and other supplies used in the preparation/compounding of sterile pharmacy products. Properties of antiseptics and antimicrobials used in maintenance of pharmacy equipment. Quality assurance processes and applicable governing laws, regulations, including USP 797.
PHARMACY OPERATIONS LABORATORY (1)

Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: PHARMT-421 Community Pharmacy Operations
Limitation on Enrollment (e.g. Performance tryout or audition): Students are required to attend a mandatory orientation session and submit a contact application to the program.
Application and practice of the knowledge, concepts, and skills acquired in the corequisite course that are needed to operate effectively in an ambulatory setting.

PHARMACY OPERATIONS (3)

Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: PHARMT-431 Institutional Pharmacy Operations Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Students are required to attend a mandatory orientation session and submit a contact application to the program.
Duties and responsibilities of the pharmacy technician working in an institutional setting.
Emphasized topics include: aseptic technique; use and maintenance of laminar flow hoods; IV admixture and Total Parenteral Nutrition preparation; materials management;
inpatient oral medication distribution systems; institutional organization and function;
and relevant legal and ethical issues. Students develop the knowledge and skills required to work with pharmacists, other clinical staff, and patients.

PHARMACY OPERATIONS LABORATORY (1)

Laboratory 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: PHARMT-431 Institutional Pharmacy Operations Laboratory
Limitation on Enrollment (e.g. Performance tryout or audition): Students are required to attend a mandatory orientation session and submit a contact application to the program.
Application and practice of the knowledge, concepts, and skills acquired in the corequisite course that are needed to operate effectively in an institutional setting.

PHARMACY CLINICAL EXTERNSHIP SEMINAR (1)

Lecture 16 - 18 hours.
Grading: Pass/No-Pass (Degree-applicable)
Corequisite: PHARMT-481 Clinical Externship
This externship seminar is a lecture course designed to provide students with practical experience in selected inpatient and outpatient pharmacy settings. This course will review the duties of a pharmacy technician in each practice setting in areas of pharmacy administration, federal/state laws and regulations, pharmacology and certification requirements.

PHARMACY CLINICAL EXTERNSHIP (4.5)

Lecture 8 - 9 hours. Laboratory 216 - 243 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: PHARMT-481 Clinical Externship Seminar
Limitation on Enrollment (e.g. Performance tryout or audition): Students are required to attend a mandatory orientation session and submit a contact application to the program.
This clinical experience course is to provide the student with practical pharmacy experience in selected out-patient community pharmacy settings and in selected in-patient or acute care settings, home health, or selected hospital settings with intravenous additives and sterile compounding areas under the supervision of a registered pharmacist and clinical externship coordinator. Students study the application of prescription dispensing, inventory management, customer service, communication and professional ethics. Placement is by the instructor and students will complete 120 hours in a minimum of two site locations for a total of 240 hours for the semester. This course should be taken at the same time as PHARMT 481.

PHILOSOPHY - PHIL

PHILOSOPHY INTRODUCTION TO PHILOSOPHY (3)

Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: ENGL-1A Composition
Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL
Students
Introductory study of questions and ideas pondered by philosophy's great thinkers. Topics include problems of knowledge (epistemology), the nature of reality (metaphysics), issues of values, aesthetics, and religion (axiology), and social/political influences. (C-ID PHIL 100)

PHILOSOPHY PHILOSOPHY OF FEMINISM (3)

Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Assessment Level: Eligibility for English 1A as determined by the Chaffey assessment process
Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL
Students
This course traces the development of, and ongoing need for, Feminist Philosophy; including descriptions of Liberal Feminism, Radical Feminism, Socialist Feminism as well as feminist interpretations of "traditional" philosophical fields such as Epistemology and Ethics. The course will also address modern feminist philosophical issues, e.g. sexuality, pornography, gender, separatism, sexual harassment, and the politics of family. TOP Code: 1509.00 - Philosophy

PHILOSOPHY SEMINAR IN ETHICS (3)

Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: PHIL-70 Introduction to Philosophy or PHIL-76 Critical Thinking or PHIL-72 Seminar in Ethics
Assessment Level: Eligibility for English 1A as determined by the Chaffey assessment process
Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL
Students
Seminar for the study of ethics with emphasis on personal, social, and political values. May be offered as an Honors course. (C-ID PHIL 120)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture Hours</th>
<th>Grading</th>
<th>Advisory</th>
<th>Prerequisite</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>PHIL-73</td>
<td>Seminar in Contemporary American Philosophy (3)</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU)</td>
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<td>Study of the leading American thinkers in the areas of aesthetics, political and social theory, scientific thought, religious philosophy, and ethics.</td>
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<tr>
<td>PHIL-75</td>
<td>Symbolic Logic (3)</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Advisory: PHIL-76 Critical Thinking</td>
<td>An introduction to symbolic methods of reasoning, covering sentential logic and predicate logic. Students will translate ordinary language sentences and arguments into symbolic form and will evaluate symbolized arguments using Truth Tables, Truth Trees and Natural Deduction.</td>
</tr>
<tr>
<td>PHIL-76</td>
<td>Critical Thinking (3)</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Prerequisite: ENGL-1A Composition</td>
<td>Exploration of the underlying structure of argument and the role of sound reasoning in the investigation of claims. Analysis of inductive and deductive argument reasoning, distinction of fact from opinion and belief from knowledge, identification of formal and informal fallacies, and application of learned skills to realistic life problems.</td>
</tr>
<tr>
<td>PHIL-77</td>
<td>History of Ancient Philosophy (3)</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Advisory: PHIL-70 Introduction to Philosophy Assessment Level: ENGL-1A Composition Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students</td>
<td>This course addresses ancient philosophy with emphasis on the development of Greek philosophy from the Pre-Socratics through Aristotle and may also include Hellenistic, Roman, medieval or non-western thinkers. (C-ID PHIL 130) TOP Code: 1509.00 - Philosophy</td>
</tr>
<tr>
<td>PHIL-78</td>
<td>History of Philosophy: Modern (3)</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Advisory: PHIL-70 Introduction to Philosophy Assessment Level: ENGL-1A Composition Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students</td>
<td>A survey of the major philosophers and ideas from Descartes to the 19th century, including Kant, Locke, Hume, Nietzsche, Kierkegaard, and others. (C-ID PHIL 140)</td>
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<tr>
<td>PHIL-79</td>
<td>Philosophy of Consciousness (3)</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Advisory: PHIL-70 Introduction to Philosophy or PHIL-76 Critical Thinking</td>
<td>A study of contemporary debate regarding the nature of the mind and consciousness and how it relates to the brain and body.</td>
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<tr>
<td>PHIL-80</td>
<td>Introduction to Religion (3)</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Assessment Level: ENGL-1A Composition Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students</td>
<td>Exploration into the philosophies of religion and their intellectual, cultural, and personal expressions.</td>
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<tr>
<td>PHIL-81</td>
<td>Introduction to Eastern Philosophy (3)</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Assessment Level: ENGL-1A Composition Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students</td>
<td>Survey of the philosophies and practices of Hinduism, Buddhism, Confucianism, and Taoism, and their influences in contemporary society.</td>
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<tr>
<td>PHIL-82</td>
<td>Introduction to Monothestic Religions: Judaism/Christianity/Islam (3)</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Assessment Level: ENGL-1A Composition Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students</td>
<td>The origins and manifestations for the Jewish, Christian, and Muslim belief systems.</td>
</tr>
<tr>
<td>PHOTO-1</td>
<td>History of Photography (3) [Cx]</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>History and appreciation of photography as a medium of artistic and social communication. May be offered as an Honors course.</td>
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<tr>
<td>PHOTO-7</td>
<td>Introduction to Digital Photography (4) [Cx]</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Introduction to the principles of digital photography. Topics include the development of technical and aesthetic skills, elements of design and composition, camera technology, materials and equipment, and contemporary trends in photography. Emphasis on issues in photography in the context of art, mass media, and media history, using digital cameras, software such as Photoshop, and digital printing. Students must furnish an adjustable digital camera.</td>
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<tr>
<td>PHOTO-9</td>
<td>Digital Imaging (4) [Cx]</td>
<td>48 - 54</td>
<td>Letter Grade</td>
<td>(CSU; UC)</td>
<td>Introductory course using computer imaging applications in photography and digital arts that explores the creative potential of imaging software used by visual artists. Students establish familiarity with output devices, hardware, and software such as Adobe Photoshop. The creation of digital art is examined within the framework of current issues in art and culture.</td>
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</tbody>
</table>
PHOTO-10 BEGINNING PHOTOGRAPHY (4) [Cx]
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(CSU; UC)
Introduction to the principles of photography. Emphasis on issues in photography in the context of art, mass media, and media history, using camera. Topics include the development of technical and aesthetic skills, elements of design and composition, camera technology, materials and equipment, and contemporary trends in photography. Instruction in the basic principles of black-and-white photography with darkroom experience. Students must furnish an adjustable non-digital camera.

PHOTO-11 INTERMEDIATE PHOTOGRAPHY (4) [Cx]
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(CSU; UC)
Continuation of the principles learned in Photography 10 with more advanced film based, conceptual and technical approaches to contemporary photography. Student must furnish an adjustable camera.

PHOTO-12 STUDIO LIGHTING (4) [Cx]
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(CSU)
Prerequisite: PHOTO-7 Introduction to Digital Photography
Introduction to the use of studio equipment and lighting techniques. Throughout the semester emphasis will also be on composition, aesthetic judgment and visual communication. Understanding lighting is critical to photography. Topics include portrait, still life, advertising, and art photography. Students must furnish an adjustable camera.

PHOTO-13 FINE ART PHOTOGRAPHY (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(CSU; UC)
Prerequisite: PHOTO-10 Beginning Photography
Students will explore photography as an art form. The focus will be on contemporary issues in art photography. Emphasis on students making photographic artwork.

PHOTO-20 PHOTOGRAPHY FOR MEDIA (4) [Cx]
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(CSU)
Prerequisite: PHOTO-7 Introduction to Digital Photography
Introduction to commercial publications and mediums that use photography to convey visual information, including photojournalism, sports, advertising, and editorials. Focus on the technical and aesthetic aspects of photo creation and the resulting communication impact. Students must supply an adjustable digital camera.

PHOTO-50 INTRODUCTION TO COLOR PHOTOGRAPHY (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(CSU)
Advisory: PHOTO-9 Digital Imaging and Production
Prerequisite: PHOTO-7 Introduction to Digital Photography
Basic background in the aesthetics, history, theory, techniques, and materials of color photography. Students must furnish an adjustable digital camera.

PHOTO-429 WEDDING, QUINCEAÑERA, AND EVENT PHOTOGRAPHY (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(Degree-applicable)
Prerequisite: PHOTO-7 Introduction to Digital Photography
Photographic techniques used by contemporary Wedding/Quinceañera/Events photographers. Subjects covered include: composition, subject posing, selection and use of cameras, lenses, filters, set-ups, lighting, special effects, basic digital workflow, as well as business presentations and sales strategies. Students will produce a portfolio of projects and student must furnish an adjustable digital camera.

PHOTO-430 FINE ART PHOTOGRAPHY PORTFOLIO (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(Degree-applicable)
Prerequisite: PHOTO-7 Introduction to Digital Photography and PHOTO-13 Fine Art Photography
This course is designed for photography students interested in furthering their conceptual and technical skills learned in Fine Art Photography through individually directed work in a supervised studio/lab environment with regular group, individual, and written critiques and reviews. Emphasis is on the development of a fine art portfolio.

PHOTO-436 STUDIO LIGHTING PORTFOLIO (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(Degree-applicable)
Prerequisite: PHOTO-7 Introduction to Digital Photography and PHOTO-12 Studio Lighting
This course is designed for photography students interested in further honing skills learned in Studio Lighting through individually directed work in a supervised studio environment. Regular group, individual, and written critiques and reviews with an emphasis on the development of work suitable for portfolio review are included.

PHOTO-438 PHOTOGRAPHY FOR MEDIA PORTFOLIO (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(Degree-applicable)
Prerequisite: PHOTO-7 Introduction to Digital Photography and PHOTO-20 Photography for Media
This course is designed for photography students interested in further honing skills learned in Photography for Media through individually directed work in a supervised environment with regular group, individual, and written critiques and reviews with an emphasis on the development of work suitable for Media based portfolio review.

PHOTO-439 WEDDING, QUINCEAÑERA, AND EVENT PHOTOGRAPHY PORTFOLIO (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
(Degree-applicable)
Prerequisite: PHOTO-7 Introduction to Digital Photography PHOTO-429 Wedding, Quinceañera, and Event Photography
Designed for photography students interested in further honing skills learned in Wedding, Quinceañera and Event Photography. Individually directed work in a supervised studio/lab environment that includes group and individual critiques, along with reviews that put an emphasis on the development of a professional portfolio.
PHOTO-475 LABORATORY PRACTICE IN PHOTOGRAPHY (1)
Lecture 48 - 54 hours.
Grading: Letter Grade  (Degree-applicable)
Prerequisite: PHOTO-7 Introduction to Digital Photography or PHOTO-10 Beginning Photography
Beginning Photography
Provides an opportunity for students who wish additional time in lab to develop and expand their digital or film processing skills or lighting capabilities. Allows students to develop and enhance their commercial photography capabilities geared towards commercial industry specifications.

PHOTO-677 WORKFORCE PREPARATION IN PHOTOGRAPHY (0)
Lecture 48 - 54 hours.
Grading: Letter Grade and Pass/No-Pass  (Non-credit)
Corequisite: PHOTO-7 Introduction to Digital Photography or PHOTO-10 Beginning Photography or PHOTO-11 Intermediate Photography or PHOTO-12 Studio Lighting or PHOTO-13 Fine Art Photography or PHOTO-20 Photography for Media or PHOTO-50 Introduction to Color Photography or PHOTO-412 Intermediate Studio Lighting or PHOTO-30A
Beginning Photography
To become marketable, student need access to professional photography tools such lighting and software, which are available in this course. This course provides laboratory experience for workforce preparation in the field of photography. For the current photography student who wishes to increase skills.

PHYSICAL SCIENCE - PHSCI

PHSCI-10 SURVEY OF CHEMISTRY AND PHYSICS (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC)
Advisory: Completion of MATH-450 or MATH-420.
Prerequisite: or Completion of 1 year high school algebra - or Eligibility for MATH 450 or 420 MATH-410 Elementary Algebra or MATH-550 Introduction to Algebra
Introduction to the principles of physics and chemistry. Topics include: motion, forms of energy, electricity, magnetism, waves, electromagnetic radiation, atomic structure, bonding, phases of matter, pH and nuclear chemistry, acids and bases, and solutions. Course is recommended for liberal studies majors and future teachers. This course aligns with C-ID CHEM 140 and PHYS 140.

PHYSICS - PHYS

PHYS-5 THE IDEAS OF PHYSICS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Basic concepts of mass, force, and Newton’s Laws of Motion will be covered, as well as conservation laws, (momentum and energy). Introduction to physics for students requiring a general education science lecture course and for students majoring in engineering technology and life sciences.

PHYS-6 THE IDEAS OF PHYSICS LABORATORY (1)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade
Corequisite: PHYS-5 The Ideas of Physics
Introduction to physics for students requiring a general education science lab course and for students majoring in engineering technology and life sciences. Experiments with some of the lecture concepts may include: measurement, free fall, vector addition and components, springs, centripetal force, kinetic energy, gravitational potential energy, conservation of momentum, and Archimedes’ principle.

PHYS-20A ALGEBRA/TRIGONOMETRY COLLEGE PHYSICS I (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Prerequisite: MATH-31 Plane Trigonometry and - One year of high school physics. PHYS-5 The Ideas of Physics
Course is designed for students majoring in a life or medical science, or engineering technology, whose university major does not require calculus-based physics. Position, velocity, and acceleration of objects are described using vectors. The concepts of mass, force, Newton’s Laws of Motion, momentum, impulse, work, energy, and power are used to describe straight-line motion, projectile motion, circular motion, collisions, explosions, and vibration. Rotational motion includes torque, moment of inertia, angular momentum, and static equilibrium. (C-ID PHYS 105)

PHYS-20B ALGEBRA/TRIGONOMETRY COLLEGE PHYSICS II (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Prerequisite: PHYS-20A Algebra/Trigonometry College Physics I
Course is designed for students majoring in a life or medical science, or engineering technology, whose university major does not require calculus-based physics. Topics include: simple harmonic motion, static fluids and fluid flow, zeroth, first and second laws of thermodynamics, sound waves, electric force and field, electric potential energy, electrical potential, capacitance, resistance, electromotive force, magnetic force and field, Faraday’s Law, inductors, light waves, and optics. (C-ID PHYS 110)

PHYS-30A PHYSICS FOR THE MEDICAL AND LIFE SCIENCES I (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade  (CSU; UC credit limitations)
Corequisite: MATH-65A Calculus I
Prerequisite: or One year of high school physics. PHYS-5 The Ideas of Physics or PHYS-44 Introduction to Motion or MATH-61 Pre-Calculus
Course is designed for students majoring in a life or medical science, or engineering technology, whose university major requires calculus-based physics. Position, velocity, and acceleration of objects are described using vectors. The concepts of mass, force, Newton’s Laws of Motion, momentum, impulse, work, energy, and power are used to describe straight-line motion, projectile motion, circular motion, collisions, and explosions. Rotational motion includes torque, moment of inertia, angular momentum, and static equilibrium. Differential calculus is used to describe velocity and acceleration, and in presenting the laws of conservation of momentum and conservation of angular momentum. (C-ID PHYS 105)
**PHYS-30B PHYSICS FOR THE MEDICAL AND LIFE SCIENCES II (4)**  
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.  
Grading: Letter Grade (CSU; UC credit limitations)  
Prerequisite: PHYS-30A Physics for the Medical and Life Sciences I and MATH-65A Calculus I  
Course is designed for students majoring in a life or medical science, whose university major requires calculus-based physics. Electricity and magnetism, including electric force and field, electric potential energy, potential, capacitance, resistance, electromagnetic force, magnetic force and field, and Faraday’s Law. Inductors, with induced electromotive force presented as a derivative of flux. Power, intensity and loudness of sound waves. Interference, diffraction, and geometrical optics of light waves. (C-ID PHYS 110)

**PHYS-44 INTRODUCTION TO MOTION (4)**  
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.  
Grading: Letter Grade (CSU; UC credit limitations)  
Prerequisite: MATH-61 Pre-Calculus  
Introduction to mechanics for students majoring in a physical science or engineering. Position, velocity, and acceleration of objects are described using vectors. Concepts of mass, force, Newton’s Laws of Motion, momentum, and impulse are used to describe straight line motion, projectile motion, circular motion, collisions, and explosions. In the laboratory, microcomputers with motion detectors and force probes are used to study the concepts of velocity and acceleration, and Newton’s Laws of Motion. Graphical representations of motion - velocity-time graphs, acceleration-time graphs, and force-time graphs - are emphasized.

**PHYS-45 PHYSICS FOR SCIENTISTS AND ENGINEERS I (5)**  
Lecture 64 - 76 hours. Laboratory 48 - 54 hours.  
Grading: Letter Grade (CSU; UC credit limitations)  
Prerequisite: MATH-61A Calculus I and PHYS-44 Introduction to Motion or - or Completion of High School Physics.  
For students majoring in a physical science or engineering. Topics covered include: translational and rotational kinematics and dynamics; conservation laws; hydrostatics and hydrodynamics, and equilibrium. (C-ID PHYS 205)

**PHYS-46 PHYSICS FOR SCIENTISTS AND ENGINEERS II (5)**  
Lecture 64 - 76 hours. Laboratory 48 - 54 hours.  
Grading: Letter Grade (CSU; UC credit limitations)  
Prerequisite: PHYS-45 Physics for Scientists and Engineers I and MATH-65B Calculus II  
For students majoring in a physical science or engineering. Electromagnetic concepts: electric force ? Coulomb’s Law, electric field, Gauss? Law, electric potential energy, electric potential, capacitance, resistance, electromagnetic force, power, meters, RC circuits, magnetic field, magnetic force - cyclotrons, Ampere’s Law, Faraday’s Law, Maxwell’s equations, inductors, LC circuits, and LCR circuits ? impedance and power factor. (C-ID PHYS 210)

**PHYS-47 PHYSICS FOR SCIENTISTS AND ENGINEERS III (5)**  
Lecture 64 - 76 hours. Laboratory 48 - 54 hours.  
Grading: Letter Grade (CSU; UC credit limitations)  
Prerequisite: MATH-65B Calculus II and PHYS-45 Physics for Scientists and Engineers I and  
For students majoring in a physical science or engineering. Topics include: first and second laws of thermodynamics, heat engines, sound wave intensity, Doppler effect, light waves ? interference and diffraction, optics ? refraction, lenses, images, special relativity, energy levels in the hydrogen atom, and spectrum of the hydrogen atom. (C-ID PHYS 215)

**PHYS-47 PHYSICS FOR SCIENTISTS AND ENGINEERS III (5)**  
Lecture 64 - 76 hours. Laboratory 48 - 54 hours.  
Grading: Letter Grade (CSU; UC credit limitations)  
Prerequisite: MATH-65B Calculus II and PHYS-45 Physics for Scientists and Engineers I and  
For students majoring in a physical science or engineering. Topics include: first and second laws of thermodynamics, heat engines, sound wave intensity, Doppler effect, light waves ? interference and diffraction, optics ? refraction, lenses, images, special relativity, energy levels in the hydrogen atom, and spectrum of the hydrogen atom. (C-ID PHYS 215)
## PSYCHOLOGY - PSYCH

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Lecture Hours</th>
<th>Grading:</th>
<th>Advisory:</th>
<th>Prerequisite:</th>
<th>Notes</th>
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<tr>
<td><strong>PSYCH-1 INTRODUCTION TO PSYCHOLOGY (3) [Cx]</strong></td>
<td>Lecture 48 - 54 hours.</td>
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<td>Grading: Letter Grade (CSU; UC)</td>
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<td>Guid-2 Essentials of Student Success ENGL-495 Fundamentals of College Reading and Writing or ESL-475 Fundamentals of College Reading and Writing for ESL Students</td>
<td>PSYCH-1 Introduction to Psychology</td>
<td>Introduction to the study of psychological concepts, core empirical findings, and the methods used in psychological science. Topics include biological basis of behavior, perception, cognition and consciousness, learning, memory, emotion, motivation, developmental psychology, personality, social behavior, lifespan development, psychological disorders and their treatment, and applied psychology. May be offered as an honors course. (C-ID PSY 110)</td>
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<tr>
<td><strong>PSYCH-5 PERSONAL AND SOCIAL AWARENESS (3)</strong></td>
<td>Lecture 48 - 54 hours.</td>
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<td>Grading: Letter Grade (CSU)</td>
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<td>PSYCH-1 Introduction to Psychology</td>
<td>This course considers individual human behavior in relation to the social environment. The power of the situation, other individuals, and the social group will be examined. Emphasized topics include: aggression, prejudice and stereotypes, interpersonal attraction, attitudes and attitude change, conformity, group phenomena, gender roles, cultural norms, person perception, and social cognition. (C-ID PSY 170)</td>
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<tr>
<td><strong>PSYCH-20 DEVELOPMENTAL PSYCHOLOGY: CHILDHOOD AND ADOLESCENCE (3)</strong></td>
<td>Lecture 48 - 54 hours.</td>
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<td>Grading: Letter Grade (CSU; UC credit limitations)</td>
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<td>PSYCH-1 Introduction to Psychology</td>
<td>Study of human development from conception through adolescence. The physical, social and cognitive development of the growing child and adolescent are examined in light of contemporary research and theory.</td>
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<tr>
<td><strong>PSYCH-25 DEVELOPMENTAL PSYCHOLOGY: LIFESPAN DEVELOPMENT (3)</strong></td>
<td>Lecture 48 - 54 hours.</td>
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<td>Grading: Letter Grade (CSU; UC credit limitations)</td>
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<td>An overview of human development from conception through aging with particular emphasis on biological and environmental influences, Social, cognitive and physical changes in the growing child, adolescent and adult are examined in light of contemporary research and theory. (C-ID PSY 180)</td>
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<tr>
<td><strong>PSYCH-41 BIOLOGICAL PSYCHOLOGY (3)</strong></td>
<td>Lecture 48 - 54 hours.</td>
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<td>Grading: Letter Grade (CSU; UC)</td>
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<td>PSYCH-1 Introduction to Psychology</td>
<td>Study of the biological basis of behavior. Topics include: basic neuroanatomy and neurophysiology; neurophysiological mechanisms in movement, sensation, perception, learning, memory, emotion, psychological disorders, language, and consciousness; scientific method as applied in the brain sciences; brain evolution; and the effects of discoveries in the neurosciences on modern views of human nature and theories of mind. (C-ID PSY 150)</td>
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<tr>
<td><strong>PSYCH-55 ABNORMAL PSYCHOLOGY (3)</strong></td>
<td>Lecture 48 - 54 hours.</td>
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<td>Grading: Letter Grade (CSU; UC)</td>
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<td>PSYCH-1 Introduction to Psychology</td>
<td>Introduction to psychopathology. Disorders of sensation, perception, emotions, and thinking, and their nature, causes, and effects on life. Analysis of attempts at alleviation, helping therapies, and problem intervention. (C-ID PSY 120)</td>
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PSYCH-80 RESEARCH METHODS IN PSYCHOLOGY (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: PSYCH-1 Introduction to Psychology and SCSCI-10 Statistics for Social Science
Survey of research methods currently used in psychology: archival, naturalistic observation, case study, survey, and field and laboratory experiments. Designed for the psychology major and others who require familiarity with such research techniques. Emphasis on student participation in conducting research and analyzing data. (C-ID PSY 205 B)

RADTEC-10 ANATOMY AND RADIOGRAPHIC POSITIONING I (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-10L Laboratory for Anatomy and Radiographic Positioning I
Limitation on Enrollment (e.g. Performance tryout or audition): Admission to the Radiologic Technology Program
Comprehensive study of radiographic positioning of the chest, upper extremity, lower extremity, shoulder and pelvic girdle, abdomen, and urinary system, with emphasis on associated anatomy, radiographic image evaluation, communication, patient care and safety. Provides the knowledge base necessary to perform standard radiographic procedures. Consideration is given to radiation protection and the production of images for optimal diagnostic quality. Laboratory experience complements the didactic portion.

RADTEC-10L LABORATORY FOR ANATOMY AND RADIOGRAPHIC POSITIONING I (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-10 Anatomy and Radiographic Positioning I
Limitation on Enrollment (e.g. Performance tryout or audition): Admission to the Radiologic Technology Program
Discussion, application, demonstration, role-play and timed simulated procedure evaluations for positioning of the chest, upper extremity, lower extremity, shoulder girdle, pelvic girdles, abdomen, and urinary system. Emphasis on associated anatomy, radiation protection, patient communication and effective interaction and communication with patient/family. Radiographic images are evaluated for appropriate anatomy, image quality and radiation protection according to standard criteria.

RADTEC-16 MEDICAL PROCEDURES FOR RADIOLOGIC TECHNOLOGISTS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-16L Laboratory for Medical Procedures for Radiologic Technologists and Limitation on Enrollment (e.g. Performance tryout or audition): Admission to the Radiologic Technology Program
An overview of the Radiologic Technologist's role in the health care delivery system to include history, legal/ethical terminology, attitudes and communication for appropriate patient care, scope of practice, and radiation safety practices to include trauma, geriatric, neonatal, and pediatric patients. Topics include: ethical issues and dilemmas found in clinical practice; role of the radiographer in patient education and patient care; professional standards and the ASRT scope of practice. Recognition and treatment of adverse reactions to contrast agents, as well as patients suffering from stroke, myocardial infarction, and respiratory distress. Addresses various tubes, catheters and venous/arterial lines; oxygen delivery systems; infection control procedures (medical and surgical asepsis) using standard and isolation precautions; skills theory to include acquiring vital signs, enema administration, drug preparation administration, urinary catheterization, and transfer of patients. Patient and radiographer safety protocols, including body mechanics, patient transfer and movement, positioning, immobilization, environmental safety and accident / incident reporting are emphasized. Laboratory experience complements the didactic portion.

RADTEC-16L LABORATORY FOR MEDICAL PROCEDURES FOR RADIOLOGIC TECHNOLOGISTS (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-16 Medical Procedures for Radiologic Technologists RADTEC-16 Medical Procedures for Radiologic Technologists and Admission into the Radiologic Technology Program 16L requires corequisite RT 16Fall 1st semester; 1st year students
Limitation on Enrollment (e.g. Performance tryout or audition): Admission to the Radiologic Technology Program
Discussion, application, role-play and timed simulated procedure evaluations of the medical procedures and techniques commonly used in radiology departments to include pediatric, geriatric and trauma & special needs patients. Enema administration, drug administration procedures. Infection control procedures using standard precautions including the use of portable equipment. Assessment of patient status for vital signs and blood pressure. Focus on patient care, safety, effective communication, and proper body mechanics for wheelchair/stretcher transfer along with the importance of documentation and informed consent is emphasized. Medical and surgical aseptic technique is studied in depth.

RADTEC-20 RADIOLOGIC SCIENCE AND PROTECTION (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-20L Laboratory for Radiologic Science and Protection Limitation on Enrollment (e.g. Performance tryout or audition): Admission into the Radiologic Technology Program
This course establishes a basic knowledge of the fundamental properties of radiation, x-ray production and interaction with matter. The content covers the operation of radiographic equipment and digital imaging systems. The prime technical factors required to produce a radiographic image and influence the production and recording of radiologic images are introduced. Imaging receptors computed radiography and direct-digital radiography systems are compared for methods of image acquisition, processing, delivery, storage, image display, archiving and retrieval. Radiation interaction effects on living systems and the factors affecting biological responses are studied. Emphasis is placed on attenuation and absorption of radiation within the human body, basic radiation measurement and the associated health effects. Principles of
radiologic protection and safety for the patient and technologist are reviewed and correlated to state and federal radiation control laws. The use of accessories in radiography are explored. Laboratory experiments are performed to compliment the didactic instruction.

RADTEC-20L LABORATORY FOR RADIOLOGIC SCIENCE AND PROTECTION (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-20 Radiologic Science and Protection Limitation on Enrollment (e.g. Performance tryout or audition): Admission into the Radiologic Technology Program.
Experiments are performed in on-campus radiographic laboratories to illustrate the theories presented in lecture. Through a process of discussion, demonstration, return demonstration, group sharing and demonstration evaluation, students correlate concepts with the actual making of a radiographic image. Laboratory experiments demonstrate the actual production of radiation, facilitating student acquisition of competency and skill in the handling of radiographic equipment. Calculations of exposure factors needed to produce radiographic images are performed for digital radiography systems. Focus is placed on equipment manipulation (to include mobile units), image receptors, ionization and exposure, beam intensity and radiation protection. Radiographic image evaluation and critiques are performed to assist students utilizing a digital imaging system.

RADTEC-25 ANATOMY AND RADIOGRAPHIC POSITIONING II (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-25L Laboratory for Anatomy and Radiographic Positioning II Limitation on Enrollment (e.g. Performance tryout or audition): Successful completion of the first semester of the Radiologic Technology Program.
Prerequisite: RADTEC-10 Anatomy and Radiographic Positioning I Comprehensive study of radiographic positioning of the vertebral column, bony thorax, gastrointestinal tract, and biliary system. Imaging considerations for trauma, mobile/portable, surgical and age specific approaches for pediatric and geriatric patients. Emphasis on associated anatomy, related introductory pathology, radiographic image evaluation, communication, and patient care and safety. Radiation protection and the evaluation of optimal diagnostic images are stressed. Course provides the knowledge base and cognitive skills necessary to perform standard radiographic procedures.

RADTEC-25L LABORATORY FOR ANATOMY AND RADIOGRAPHIC POSITIONING II (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-25 Anatomy and Radiographic Positioning II and Limitation on Enrollment (e.g. Performance tryout or audition): Successful completion of the first semester of the Radiologic Technology Program.
Prerequisite: RADTEC-10L Laboratory for Anatomy and Radiographic Positioning I Discussion, application, demonstration, role-play and timed simulated procedure evaluations for positioning of the vertebral column, bony thorax, gastrointestinal and biliary systems, trauma, mobile/surgical, pediatric and geriatric radiography. Emphasis on associated anatomy, radiation protection, patient communication and effective interaction and communication with patient/family. Radiographic images are evaluated for appropriate anatomy, image quality and radiation protection measures according to standard criteria.

RADTEC-31 RADIOGRAPHIC CLINICAL EDUCATION I (2)
Laboratory 96 - 108 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Admission to the Radiologic Technology Program.
First semester of clinical practice experiences designed for sequential development, application, critical analysis, and integration of the concepts and theories presented in the on-campus courses. Using competency-based assignments, the student first observes and then performs - under direct supervision - patient care and radiographic procedures. Course emphasis on familiarizing the student with the clinical educational setting, patient-centered clinical practice, professional development, and working relationships with other health care professionals. Competency and outcomes measurement ensure the well-being of the patient pre-, during, and post-procedure. Students perform under direct supervision following the policy and procedures in the Radiology Technology Student Handbook.

RADTEC-34 RADIOGRAPHIC IMAGING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-34L Laboratory for Radiographic Imaging Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the Radiologic Technology Program.
Prerequisite: RADTEC-20 Radiologic Science and Protection Comprehensive study of digital imaging systems, including design, image acquisition, display, processing, delivery, and storage. Review of diagnostic radiology equipment components, function, and operation, to include x-ray tube circuitry, and radiographic grids. Differences between detectors for cassette-based and cassette-less digital systems response to radiation are explored. In-depth study of radiation protection, health physics, cell radiosensitivity, and radiobiologic effects on humans.

RADTEC-34L LABORATORY FOR RADIOGRAPHIC IMAGING (1)
Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-34 Radiographic Imaging Limitation on Enrollment (e.g. Performance tryout or audition): Admission into the Radiologic Technology Program.
Prerequisite: RADTEC-20L Laboratory for Radiologic Science and Protection Theoretical concepts are correlated with laboratory results in a series of experiments conducted in on-campus laboratories. Through a process of discussion, demonstration, return demonstration, group sharing, and evaluation, students apply radiation theory to the production of quality digital images. Digital imaging using computed radiography cassettes demonstrate the range of possible exposure latitude and association with patient dose considerations. The use and misuse of grids and quality control tests are performed and evaluated. Beam restriction (collimation), centering sensitivity, acquisition errors, and post-processing capabilities of digital imaging are also explored. Image evaluation and critiques assist students in developing the required skills when utilizing digital imaging systems.
# COURSE DESCRIPTIONS

**RADTEC-41 Radiographic Clinical Education II (7)**
Laboratory 336 - 378 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Successful completion of first semester of the RADTEC program.
Prerequisite: RADTEC-31 Radiographic Clinical Education I
Clinical practice experiences designed for sequential development, application, critical analysis, integration, synthesis, and evaluation of concepts and theories in the performance of radiologic procedures. Using structured competency-based assignments, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined, evaluated, and reinforced. Course emphasis on patient assessment, and performance of radiologic imaging procedures, and total quality management. TOP Code: 1225.00 - Radiologic Technology

**RADTEC-51 Radiographic Clinical Education III (4.75)**
Laboratory 228 - 271 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the Chaffey College Radiologic Technology program and successful completion of the 1st two semesters
Continued clinical practice experiences designed for sequential development, application, critical analysis, integration, synthesis, and evaluation of concepts and theories in the performance of radiologic procedures. Through structured, competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined, evaluated, and reinforced. Emphasis is on patient care and assessment, competent performance of radiologic imaging procedures, appropriate sequencing, and total quality management. TOP Code: 1225.00 - Radiologic Technology

**RADTEC-55 Radiographic Equipment and Clinical Application (2)**
Lecture 32 - 36 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the Radiologic Technology program with successful completion of the first two semesters.
Course establishes a knowledge base in fluoroscopic equipment requirements, design, and operation to include conventional and digital fluoroscopic equipment. Study of the radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies, and health care organizations. Study of radiobiology as it relates to occupational and public dose limits and radiation effects on the human body. Overview of personnel dose monitoring, record keeping and equipment. Study of radiation protection practices specific to fluoroscopy studies consistent with ALARA principles. Class demonstrations/labs provide opportunity for application and reinforcement of theory.

**RADTEC-61 Radiographic Clinical Education IV (8)**
Laboratory 384 - 432 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Must be a 2nd year Radiologic Technology student in good standing.
Continued clinical practice experiences designed for sequential development, application, critical analysis, integration, synthesis and evaluation of concepts and theories in the performance of radiologic procedures. Through structured, competency-based assignments in the clinical setting, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined, evaluated, and reinforced. Emphasis is on patient care and assessment, competent performance of radiologic imaging, and total quality management.

**RADTEC-66 Anatomy and Radiographic Positioning III (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-66L Laboratory for Anatomy and Radiographic Positioning III
Limitation on Enrollment (e.g. Performance tryout or audition): Student must be a 2nd year Radiologic Technology student in good standing.
Comprehensive study of radiographic positioning of the calvarium, facial area, sinuses, and temporal bone provides the knowledge base necessary to perform standard imaging procedures. An introduction to CT and other modalities is also included. Laboratory experience complements the didactic portion.

**RADTEC-66L Laboratory for Anatomy and Radiographic Positioning III (1)**
Laboratory 480 - 540 hours.
Grading: Letter Grade (CSU)
Corequisite: RADTEC-66 Anatomy and Radiographic Positioning III
Limitation on Enrollment (e.g. Performance tryout or audition): Student must be a 2nd year Radiologic Technology student in good standing.
Laboratory practice in the production of radiographic images of the calvarium, facial area, sinuses, and temporal bone on simulated patients. Emphasis on relevant anatomy, radiation protection, and effective patient interaction in the production of quality radiographic images and their evaluation.

**RADTEC-71 Radiographic Clinical Education V (10)**
Laboratory 480 - 540 hours.
Grading: Letter Grade (CSU)
Prerequisite: Limitation on Enrollment (e.g. Performance tryout or audition)
Must be a 2nd year Radiologic Technology student in good standing.
Guided practice in the application of radiologic technology to patients in a hospital environment, with increasingly independent performance by the student practitioner. Clinical experiences reinforce theory, perfect skills, and strengthen student-patient interactions, providing for the production of quality diagnostic images and patient well-being prior to, during, and following the procedure. Students do a secondary rotation for nine weeks to experience different equipment and procedures.

**RADTEC-77 Radiographic Pathology (3)**
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Limited to 2nd year students in good standing in the RT program.
Introduction to theories of disease causation and the pathophysiologic disorders that compromise healthy systems. Radiobiology, radiation protection, analysis of alterations in body systems’ anatomy and physiology occurring in response to disease, emphasizing the impact on related radiographic procedures. Definitions and classifications, etiology, pathophysiologic responses, complications, clinical manifestations, radiographic appearance, and procedural and technique considerations are studied in depth.
RADTEC-82 RADIOPHASIC CLINICAL EDUCATION VI (4)
Laboratory 192 - 216 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Acceptance into the Chaffey College Radiologic Technology program and successful completion of the 1st five semesters.
Prerequisite: RADTEC-71 Radiographic Clinical Education V
Final course in the series of guided practicums applying radiologic technology to patients in a hospital environment. Advanced clinical practice experiences designed to provide patient assessment and care, competent performance of radiological imaging, and assure total quality management. Sequential development, critical analysis, integration, synthesis, application, and evaluation of concepts and theories in the performance of radiologic procedures. Students perform independently with appropriate supervision to assess their skills for employment.
TOP Code: 1225.00 - Radiologic Technology

RADTEC-470 VENIPUNCTURE FOR IMAGING PROFESSIONALS (1)
Lecture 16 - 18 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: RADTEC-470L Venipuncture Laboratory for Imaging Professionals
Limitation on Enrollment (e.g. Performance tryout or audition): Student should be a 2nd year radiography student or a graduate of JRCERT-approved radiography program, and possess a current health care provider CPR card.
Basic concepts of the pharmacology associated with venipuncture. Procedural techniques; anatomy and physiology of venipuncture sites, use of instruments and related equipment, and administration of diagnostic contrast agents and/or intravenous medication. Emphasis on appropriate delivery of patient care during the procedure and documentation requirements.

RADTEC-470L VENIPUNCTURE LABORATORY FOR IMAGING PROFESSIONALS (0.5)
Laboratory 24 - 27 hours.
Grading: Letter Grade (Degree-applicable)
Corequisite: RADTEC-470 Venipuncture for Imaging Professionals
Limitation on Enrollment (e.g. Performance tryout or audition): Student must be a 2nd year radiography student or a graduate of a JRCERT approved radiography program, and possess a current health care provider CPR card.
Application of skills and reinforcement of theory in the basic concepts of pharmacology and venipuncture. Demonstration of the anatomy and physiology of venipuncture sites, venipuncture instrumentation, I.V. solutions, and use of related equipment. Students first execute simulated demonstrations, then perform a minimum of 10 successful venipuncture sticks on simulated mannequins. Patient care aspects of venipuncture are emphasized.

REAL ESTATE - RE

RE-10 REAL ESTATE PRINCIPLES (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Fundamentals of real estate, covering basic laws and principles of California real estate. Gives understanding, background, and terminology necessary for advanced study in the specialized courses.

RE-15 REAL ESTATE PRACTICE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: RE-10 Real Estate Principles
Office procedures and practices of the broker and sales person in the real estate business, including listing, prospecting, advertising, financing, exchanges, and sales techniques. Course is applicable toward the educational requirements for broker’s license and real estate salesperson’s license.

RE-60 REAL ESTATE FINANCE (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: RE-10 Real Estate Principles
Analysis of real property financing. Topics include: primary and secondary sources of real estate loans, mathematics and legal aspects of finance, role of government agencies, mortgage insurance and interest rates, credit reporting, real estate appraisal, and taxation. Course is applicable toward the educational requirements for broker’s license and real estate salesperson’s license.

RE-70 REAL ESTATE APPRAISAL (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: Current real estate license may substitute for Real Estate 10.
Prerequisite: RE-70 Real Estate Appraisal
Introductory course covering the purposes of appraisals, the appraisal process and approaches, and the methods and techniques used to determine the value of various types of property, with emphasis on the single-family residence. Course is applicable toward the educational requirements for broker’s license and real estate sales-person’s license.

RE-86 REAL ESTATE PROPERTY MANAGEMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: RE-10 Real Estate Principles
Introduction to management of real estate property. Identification and analysis of functions, responsibilities, legal rights, liabilities, and leasing instruments of property management. Course is an elective for the California sales or broker’s license.

RE-472 ADVANCED REAL ESTATE APPRAISAL (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Prerequisite: RE-70 Real Estate Appraisal
Appraisal of residential apartment buildings, small office buildings, shopping centers, and industrial buildings. Course meets California real estate broker license requirements, and is accepted as 54 hours toward Office of Real Estate Appraisers (OREA) certificate-residential/certificate-general appraisal requirements.
RE-475 REAL ESTATE ESCROW I (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (Degree-applicable)
Advisory: RE-10 Real Estate Principles
Case study method of escrow procedures, including the actual processing of sale escrow. Topics include: encumbrances, interest adjustments, reconveyance, mortgages, insurance, taxes, fees, unique vocabulary, title policy types, drawing of documents, and other processing details pertinent to the handling of an escrow from inception to closing. Course applies towards the education requirements for broker’s and real estate salesperson’s licenses.

SOCIAL SCIENCE - SCSCI

SCSCI-10 STATISTICS FOR SOCIAL SCIENCE (4)
Lecture 48 - 54 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Assessment Level: Eligibility for MATH-25 or higher as determined by the Chaffey assessment process
Prerequisite: MATH-450 Intermediate Algebra: A Critical Thinking Approach or MATH-420 Essentials of Intermediate Algebra or MATH-425 Intermediate Algebra
Survey of methods used to analyze and interpret data generated by scientific investigation. Purpose and application of statistics, frequency distributions and graphing, central tendency, variability, percentiles, standard scores, the normal distribution, regression, correlation, probability, hypothesis testing, simple and two-factor analysis of variance, and non-parametric techniques. The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t-tests; and application of technology for statistical analysis including the interpretation of the relevance of the statistical findings. Applications using data from disciplines including business, social sciences, psychology, life science, health science, and education. Use of computerized statistical packages (e.g. SPSS).
(C-ID SOCI 125) TOP Code: 2201.00 - Social Sciences, General

SCSCI-17 HUMAN SEXUALITY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: Completion of one or more behavioral science courses.
Interdisciplinary introduction to human sexuality, with an emphasis on sexual values, sexual communication, and sexual relationships. Includes physiological, cross-cultural, historical, sociological, and psychological information, as well as an evaluation of sex research.

SOCIOLOGY - SOC

SOC-10 INTRODUCTION TO SOCIOLOGY (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: ENGL-495 College Reading and Writing
Assessment Level: ENGL-1A Composition or Eligibility for English 1A as determined by the Chaffey assessment process.
Prerequisite: ESL-475 Fundamentals of College Reading and Writing for ESL Students
This class introduces students to basic concepts, theoretical approaches and methods employed in Sociology. This class will examine and explain social structure, group membership and dynamics, socialization and the self, social stratification, culture and diversity, social change and globalization. Students should be able to apply the sociological framework to everyday life upon taking this course. (C-ID SOCI 110)

SOC-14 SOCIOLOGY OF GENDER (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: SOC-10 Introduction to Sociology
Roles and status of women and men in society. Topics include historical constructs and practices; sex and gender stratification; cross-cultural variances; impact of political and economic changes on societal expectations, family dynamics, education and laws; socialization processes; media influences; as well as sex and gender debates. (C-ID SOCI 140)

SOC-15 ETHNIC AND RACE RELATIONS: U.S. AND GLOBAL PERSPECTIVES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: SOC-10 Introduction to Sociology
Application of major sociological theories and concepts to the examination of ethnic and race relations in the United States and the world, with detailed focus on the four major U.S. ethnic groups: African-American, Latino-American, Asian-American, and Native American. Scrutiny of historical, socioeconomic, and gender influence on inter-group relations. Examination of the cultural, political, and economic practices and institutions that support or challenge racism, racial and ethnic inequalities, as well as patterns of interaction between various racial and ethnic groups. Significance of contemporary multiculturalism, and its relation to racism, ethnocentrism, and sexism. (C-ID SOCI 150)

SOC-16 MARRIAGE, FAMILY AND RELATIONSHIPS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: ESL-475 Fundamentals of College Reading and Writing for ESL Students
Assessment Level: Eligibility for ENGL 1A Composition Eligibility for English 1A as determined by the Chaffey assessment process
Socio-historical, cross-cultural, social class, and ethnic variation in marriages, families and relationships. Topics include romantic love, mate selection, gender roles, communication, sexuality, parenting, divorce, single parent families, remarriage, cohabitation, variations in relationships, changes in the definition of relationships over time, and abusive relationships. Emphasis on the application of theories, research and social factors. (C-ID SOCI 130)

SOC-18 SOCIOLOGY OF AGING (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Advisory: SOC-10 Introduction to Sociology or Social, cultural, and policy issues for an aging society. Diversity in the experience of aging; cultural, economic, gender, and ethnic differences. Age and aging as social constructs. Life-long age status and role expectations. Society’s response to an increasingly aged population. May be offered as an Honors course.
TOP Code: 2208.00 - Sociology

SOC-25 INTRODUCTION TO CHICANO/LATINO STUDIES IN THE UNITED STATES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Survey of Chicano/Latino people in the United States; examining race, ethnicity, gender and sexuality, social class, history, politics, institutional discrimination, culture, migration and globalization, literature, and the arts.
SOC-26 INTRODUCTION TO LATIN AMERICAN SOCIETIES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Survey of the Latin American societies in Mexico, Central and South America, and the Caribbean. Examination of the patterns of social, economic, political, and cultural change in modern Latin America, and the multidimensional legacies of conquest. Analysis of U.S.-Latin American relations and symbiotic influences. Study of cultural diversity, race, and gender as reflected in religion, art, literature, music, and film. Scrutiny of the influence of race, gender, class divisions, and social conditions as stimuli for cultural change, social movements, revolutions, civil wars, dictatorships, and democracy. Application of sociological perspectives to the study of Latin American societies.

SOC-30 INTRODUCTION TO LGBTQ STUDIES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
This introductory course examines a broad range of contemporary gay, lesbian, bisexual, transgender, and queer issues in various contexts including bio-medical, sociological, political, racial and sexual. (C-ID SJS 130) TOP Code: 2208.00 - Sociology

SOC-32 INTRODUCTION TO WOMEN STUDIES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Introduction to the origins, purpose, subject matter, and methods of Women's Studies and to feminist perspectives on a range of social issues affecting women of diverse backgrounds. Study of gender and its intersections with race, class, sexuality, disability, age, religion, and other systems of difference. (C-ID SJS 120).
TOP Code: 2201.10 - Women's Studies

SOC-33 INTRODUCTION TO SOCIAL JUSTICE STUDIES (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Inter-disciplinary study of dominant and minority group relations. Examines the emergence of social justice movements to address oppression on the basis of race, sex, religion, gender, social class and ability in the United States. to provide a basis for a better understanding of the socio-economic, cultural and political conditions among key social groups. (C-ID SJS 110) TOP Code: 2208.00 - Sociology

SOC-70 SOCIAL PROBLEMS (3)
Lecture 48 - 54 hours.
Grading: Letter Grade   (CSU; UC)
Prerequisite: SOC-10 Introduction to Sociology
An examination of contemporary social problems with emphasis on how issues come to be defined as social problems, the causes and consequences of social problems, as well as an evaluation of solutions.

SOC-80 INTRODUCTION TO RESEARCH METHODS IN SOCIOLOGY (4)
Lecture 64 - 76 hours.
Grading: Letter Grade   (CSU; UC)
Advisory: SCSCI-10 Statistics for Social Science
Prerequisite: SOC-10 Introduction to Sociology
Survey of research methods from a sociological perspective - to understand and explain how social forces affect groups within a society. Includes attention to the nature of sociological theory, hypotheses, variables, and ethics of research. Sociological research dealing with quantitative data such as surveys and experiments; qualitative data, such as participant observation, in-depth interviews, case studies, and ethnography; secondary analysis, such as comparative historical research, census analysis, and content analysis. Designed for the sociology major and others who require familiarity with sociological research techniques. Emphasis on student participation in conducting research, analyzing data from a variety of methodological approaches. (C-ID SOCI 120)

SPANISH - SPAN

SPAN-1 ELEMENTARY SPANISH I (4)
Lecture 64 - 76 hours.
Grading: Letter Grade   (CSU; UC)
Prerequisite: SOC-10 Introduction to Sociology
This introductory course teaches beginning language acquisition in a cultural context through listening, speaking, reading and writing. The students will interact with authentic language in cultural context. This course corresponds to the first year of high school Spanish. Spanish 1 is not recommended for heritage (native) speakers of Spanish.
Ten hours of supplemental learning in a Success Center that supports this course is required. (C-ID SPAN 100)

SPAN-2 ELEMENTARY SPANISH II (4)
Lecture 64 - 76 hours.
Grading: Letter Grade   (CSU; UC)
Other: One year of high school Spanish.
Prerequisite: SPAN-1 Elementary Spanish I or
This course continues to teach language acquisition in a cultural context through listening, speaking, reading and writing at the second semester level. The students will continue to interact with authentic language in cultural context. This course corresponds to the second year of high school Spanish. Spanish 2 is not recommended for heritage (native) speakers of Spanish.
Ten hours of supplemental learning in a Success Center that supports this course is required. (C-ID SPAN 110)

SPAN-3 INTERMEDIATE SPANISH I (4)
Lecture 64 - 76 hours.
Grading: Letter Grade   (CSU; UC)
Other: two years of high school Spanish.
Prerequisite: SPAN-2 Elementary Spanish II
This course teaches culture and facilitates language acquisition through listening, speaking, reading and writing. Students will continue to interact with authentic language in context. Content is expanded beyond ‘survival’ needs of the immediate environment in order to express personal meaning and to apply different strategies and techniques to go beyond casual conversation and express opinions, make suggestions on familiar topics, as well as some abstract issues and plans. Students demonstrate an increased awareness of cultural norms, values, and culturally relevant appropriate customs and events. Accuracy becomes quite high for high frequency structures and vocabulary but more complex discourse is still developing and requires a somewhat sympathetic listener or reader. Students will demonstrate the ability to think critically by analyzing linguistic structures and reflecting on and making cross-cultural comparisons. This course is taught primarily in Spanish.
Ten hours of supplemental learning in a Success Center that supports this course is required. (C-ID SPAN 200)
SPAN-3S Spanish for Heritage Speakers I (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: SPAN-2 Elementary Spanish II or department-determined equivalency
This course is designed for heritage speakers of Spanish or other linguistically qualified students. It provides instruction that builds upon the existing reading, writing, speaking and listening skills and the cultural heritage and knowledge of these students. The course will continue to increase awareness of linguistic registers, discuss items beyond the familiar routine and develop an appreciation for Hispanic cultures as manifested in Spanish speaking countries and in the United States. This course is entirely conducted in Spanish. (C-ID SPAN 220)

SPAN-4 Intermediate Spanish II (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: SPAN-3 Intermediate Spanish I or
This course continues to expand upon culture and facilitate language acquisition through listening, speaking, reading and writing. Students will interact with more sophisticated authentic language in context. Content continues to expand in order to express more complex ideas in order to express personal meaning and to apply different strategies and techniques to go beyond casual conversation and express opinions, make suggestions on familiar topics, as well as some abstract issues and plans. Students demonstrate an increased awareness of cultural norms, values, and culturally relevant appropriate customs and events. Accuracy becomes quite high for high frequency structures and vocabulary but more complex discourse is still developing and requires a somewhat sympathetic listener or reader. Students will continue to demonstrate the ability to think critically by analyzing linguistic structures and reflecting on and making cross-cultural comparisons. This course is taught primarily in Spanish. Ten hours of supplemental learning in a Success Center that supports this course is required. (C-ID SPAN 210)

SPAN-4SS Spanish for Heritage Speakers II (4)
Lecture 64 - 76 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: SPAN-3SS Spanish for Heritage Speakers I or department-determined equivalency
This course continues to provide instruction that builds upon the existing reading, writing, speaking and listening skills and the cultural heritage and knowledge of these students. The course will continue to increase awareness of linguistic registers, discuss items beyond the familiar routine and expand upon students appreciation for Hispanic cultures as manifested in Spanish speaking countries and in the United States. This course is entirely conducted in Spanish. (C-ID SPAN 230)

SPAN-8 Survey of Hispanic Literature: 1700 - Present (3) [Cx]
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Other: Department-determined equivalency
Prerequisite: SPAN-3 Intermediate Spanish I or SPAN-3SS Spanish for Heritage Speakers I or
A Chronological survey, conducted in Spanish, of the history and development of Spanish and Spanish-American literature from 1700 to the present. Emphasis is on critical thinking and reasoned support of ideas. Literary discussions and written expression will be important components of the class, as well as exposure to Peninsular and Latin American culture. This course is designed for advanced speakers of Spanish who wish to improve their skills through reading, writing, and literary discussion. Prepares students for upper-division courses.
TOP Code: 1105.00 - Spanish

SPAN-13 Survey of Mexican Literature (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: ENGL-1A Composition
A course exploring Mexican cultural identity through reading and discussion of major works in Mexican literature in translation from different historical periods. Close reading will guide the reader toward greater understanding and appreciation of the culture and history of Mexico. Selected readings from important authors such as Mariano Azuela, Juan Rulfo, Rosario Castellanos, Carlos Fuentes and Octavio Paz among others.

SPAN-14 Latin American Literature (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Advisory: ENGL-1A Composition
A course studying the diverse cultures of Latin America through reading and discussion of major works of Latin American literature in translation from different historical periods. Selections will be made from different genres: novel, drama, poetry and the essay. Students will learn to identify literary movements and recognize historical, cultural and artistic influences in the work of important authors such as Gabriela Mistral, Pablo Neruda, Jorge Luis Borges, Mario Vargas Llosa, and Gabriel Garcia Marquez.

SPAN-16 Spanish Composition (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Prerequisite: SPAN-4SS Spanish for Heritage Speakers II or SPAN-3 Intermediate Spanish I
Writing in Spanish, including writing strategies as well as recognition and self-correction of errors. Focus on paragraph development using appropriate grammar, punctuation, tense, style, and complex sentences, with ultimate goal of writing an essay in Spanish.

STATISTICS - STAT

STAT-10 Elementary Statistics (4)
Lecture 64 - 72 hours.
Grading: Letter Grade (CSU; UC credit limitations)
Assessment Level: Eligibility for MATH-25 or higher as determined by the Chaffey assessment process or completion of MATH-420 or MATH-450.
Prerequisite: MATH-450 Intermediate Algebra: A Critical Thinking Approach of MATH-420 Essentials of Intermediate Algebra or
The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Introduction to descriptive and inferential statistics.
Topics include: frequency distribution; measures of variation and central tendency; discrete and continuous random variables and probability distributions; sampling distributions; interval estimations of population parameters; hypothesis testing; analysis of variance; chi square and t-test analysis; and linear regression and correlation. Application of technology for statistical analysis including the interpretation of the relevance of statistical findings; Applications using data from various disciplines such as: business, physical sciences, social sciences, psychology, life science, health science, and education. A specific statistical graphing & computing utility is required; see instructor before acquiring. May be offered as an Honors course.
(C-ID MATH 110)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Type</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>THEATRE-1</td>
<td>INTRODUCTION TO THEATRE (3)</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>This course introduces students to elements of the production process including playwriting, acting, directing, design, and criticism. Students will also survey different periods, cultures, styles, and genres of theatre through play reading, discussion, films and viewing of live theatre, including required attendance of theatre productions. (C-ID THTR 111)</td>
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<tr>
<td>THEATRE-2</td>
<td>THEATRICAL DANCE (3)</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>Study of physical movement as it relates to the body on the stage including movements commonly used in musical theatre, jazz, and modern dance techniques. This course is for the theatre and/or dance major, or any performer or student interested in developing awareness of dance theory and understanding the importance of control, coordination, balance, strength, and conscious development of movement habits.</td>
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<tr>
<td>THEATRE-4</td>
<td>THEATRE HISTORY: ANCIENT TO 1700 (3) [Cx]</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>The study of theatre history from the Origins of Theatre through the 17th Century. Emphasis on historical, philosophical, and sociological influences on development of the theatre. Plays are read for analysis of structure, plot, character and historical relevance. (C-ID THTR 113)</td>
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<tr>
<td>THEATRE-5</td>
<td>THEATRE HISTORY: 1700-PRESENT (3) [Cx]</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>The study of theatre history from the late 17th century through the present. Emphasis on historical, philosophical, and sociological influences on the development of the theatre. Plays are read for analysis of structure, plot, character and historical relevance.</td>
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<tr>
<td>THEATRE-7</td>
<td>THEATRICAL SCRIPT ANALYSIS (3)</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>This course explores principles, techniques and theories of play script analysis for theatrical production. TOP Code: 1007.00 - Dramatic Arts</td>
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<tr>
<td>THEATRE-8</td>
<td>VOICE AND MOVEMENT FOR THE ACTOR (3)</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>In depth application of techniques designed to examine the integral use of the voice and body for the actor; developing skills for vocal and physical relaxation, flexibility, and strength. This course is for the theatre majors or any performer or student interested in developing vocal and physical awareness and understanding the importance of transforming the actor’s use of his/her vocal and physical instrument.</td>
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<tr>
<td>THEATRE-10</td>
<td>BEGINNING ACTING (3)</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>Theory of acting and acting techniques with an introduction to Stanislavski’s method of acting. Provides a foundation in acting through a study of improvisation, vocal techniques, historical concepts, and theory through scene and monologue work. Emphasis on character development through the use of voice, movement and script analysis. (C-ID THTR 151)</td>
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<tr>
<td>THEATRE-12</td>
<td>INTERMEDIATE ACTING (3)</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>Advanced acting techniques necessary for drama of various types. Stylized acting students will study Elizabethan, Commedia Delsarte, Comedy of Manners and contemporary styles of acting. Some work on dialects as needed for specific scenes.</td>
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<tr>
<td>THEATRE-14</td>
<td>STYLIZED ACTING (3)</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>This course is designed for theatre students to explore fundamentals of play directing. Through a series of exercises, students will demonstrate a knowledge of specific directing techniques and skills necessary to direct a contemporary play.</td>
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<tr>
<td>THEATRE-18</td>
<td>SEMINAR IN TELEVISION PRODUCTION: ACTING</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>This course involves participation in all the technical aspects of preparing a scheduled College production. (C-ID THTR 171)</td>
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<tr>
<td>THEATRE-20</td>
<td>DIRECTING FOR THE STAGE I (3)</td>
<td>48 - 54 hours</td>
<td>Lecture</td>
<td>This course involves participation in all the technical aspects of preparing a scheduled College production. (C-ID THTR 171)</td>
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</tbody>
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THEATRE-32 THEATRE DESIGN-LIGHTING (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: THEATRE-30 Stagecraft
This course involves the study and execution of stage lighting with emphasis on equipment, control, color and their relationship to design. (C-ID THTR 173)

THEATRE-35 MUSICAL THEATRE PERFORMANCE I (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: THEATRE-10 Beginning Acting
Study of performance techniques in musical theatre. Emphasis on the integration of acting, singing, and movement techniques through a combination of group scenes and solo works.

THEATRE-36 STAGE MANAGEMENT (3)
Lecture 48 - 54 hours.
Grading: Letter Grade (CSU)
This course involves the study and practical application of the practices of the stage manager as they pertain to the theatrical production process. Emphasis is placed on the duties, responsibilities and procedures from pre-production to postproduction. The course will prepare all students who are interested in stage management positions for the Theatre Arts Department productions.

THEATRE-37 MUSICAL THEATRE PERFORMANCE II (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Prerequisite: THEATRE-35 Musical Theatre Performance I
Extensive practice of synthesizing acting, singing, and movement skills. Course will include the preparation and performance of an audition portfolio appropriate for musical theatre auditions.
TOP Code: 1007.00 - Dramatic Arts

THEATRE-40 STAGE COSTUMING (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Students will study costume history, design, and basic construction techniques as an introduction to basic theatrical costuming. Fabrics and their various uses will be investigated specifically to live theatrical productions. (C-ID THTR 174)

THEATRE-42 THEATRICAL MAKEUP (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU; UC)
Introduction to the theory, design, and application of makeup for theatre, including corrective, character, and non-realistic makeups for the various theatrical forms. (C-ID THTR 175)

THEATRE-44 AUDIO/VISUAL DESIGN IN THEATRE AND LIVE ENTERTAINMENT (3)
Lecture 32 - 38 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
This course provides an overview of the use of audio, video and projection media and their practical applications in live performance, entertainment, and event design. Contemporary and historical techniques for media integration will be examined through readings, viewings, and laboratory projects as well as performance applications. Technologies examined include audio composition, live audio mixing, live-feed video, prepared video content, and interactive performance.
TOP Code: 1006.00 - Technical Theater

THEATRE-50 MAIN STAGE PRODUCTION WORKSHOP -REHEARSAL AND PERFORMANCE (3)
Lecture 144 - 162 hours.
Grading: Letter Grade (CSU; UC)
Limitation on Enrollment (e.g. Performance tryout or audition): Audition/Interview with faculty overseeing that specific production.
A supervised practical experience in the rehearsal and performance of a faculty-directed public production. Requires participation in acting, or stage management role. Students will participate in the Kennedy Center/American College Theatre Festival academic theatre competition OR the production will participate in the Kennedy Center/American College Theatre Festival academic theatre competition. (C-ID THTR 191)

THEATRE-52 MAIN STAGE PRODUCTION WORKSHOP- TECHNICAL THEATRE (3)
Lecture 96 - 108 hours.
Grading: Letter Grade (CSU)
Limitation on Enrollment (e.g. Performance tryout or audition): Interview required.
Course provides instruction and supervised practical experience in the technical preparation and public performance of a faculty-directed theatrical production. Requires participation in design, or production role. Students will participate in the Kennedy Center/American College Theatre Festival academic theatre competition OR This production will participate in the Kennedy Center/American College Theatre Festival academic theatre competition.

THEATRE-57 COMMUNITY OUTREACH THEATRE (3)
Lecture 32 - 36 hours. Laboratory 48 - 54 hours.
Grading: Letter Grade (CSU)
Advisory: THEATRE-10 Beginning Acting
Grading: Letter Grade (CSU; UC)
This course is designed for advanced theatre students who have completed several acting courses or who have extensive stage training through participation in public and traveling performances. This course examines the dramatic structure, acting, directing and stage-managing that are employed for an Outreach theatre performance. Outreach Theatre includes performances designed specifically for a target audience such as: K-12, community centers, outside venues and University campuses creating a guided pathway of communications between Chaffey College and the community.
Practical and creative applications of scenic design, costumes, make-up, improvisational skills and performance are among the topics studied in the preparation of the final production. Students will audition, rehearse, design and perform in a production suited for targeted audience. The production will travel to different venue sites allowing the actors to experience a variety of theatre spaces. Homework may include required attendance at evening or weekend performance.

THEATRE-62 SHOWCASE DEVELOPMENT WORKSHOP (1)
Lecture 8 - 9 hours. Laboratory 24 - 27 hours.
Grading: Letter Grade (CSU)
This course is designed for advanced theatre students who have completed several acting courses or who have extensive stage training through participation in public. Workshop in which student playwrights, directors, actors, and designers develop and refine new theatre pieces producing them in a studio development of new plays from drafts through staged reading to showcase productions. Students will audition, rehearse, design and perform in a showcase production suited for targeted audience.
THEATRE-496ABCD INTERNSHIPS IN TECHNICAL THEATRE AND ENTERTAINMENT DESIGN (1 - 4)

Grading: Letter Grade
Prerequisite: Limitation on enrollment (interview). Consent of Technical Theatre program coordinator is required for registration.

Supervised employment which is designed to assist students in achieving job-related learning objectives and acquiring desirable work habits, attitudes and skills so as to enable them to become productive employees. This internship/work experience also provides students with career awareness for jobs. This type of work experience is available to students whose job and educational or occupational goals are not directly related. Career and professional development include knowledge, judgments, skills and attitudes essential for success in the workplace, and achievement of job related learning objectives. Practical experience in the application of production responsibilities in any of the following: stage management, house management, construction, scenery, properties, costume, lighting, sound, audio/visual and running crews.

WELDING - WELD

WELD-70 BEGINNING ARC WELDING (5)
Lecture 32 - 36 hours. Laboratory 144 - 162 hours.
Grading: Letter Grade (CSU)

This course provides an introduction to Shielded Metal Arc Welding (SMAW), Flux Core Arc Welding (FCAW), and Gas Metal Arc Welding (GMAW). Students will learn how to weld utilizing various electrodes in multiple positions. The professional use of carbon arc, plasma arc, and oxy-acetylene. Course includes lectures and demonstrations on industrial fabrications.