

Course Descriptions



COURSE INFORMATION

Numbering of Courses

1-99	Designated baccalaureate-level courses, transferable to four-year institutions and applicable to Associate Degree
94	Designated Honors courses
100- 199	Applicable to Associate Degree; not intended for transfer, but may be accepted for transfer credit by agreement with specific four-year colleges and universities
200-299	Courses in occupational skills development, not applicable to Associate Degree
300-399	Non-credit, non-basic-skills courses for which no grade is awarded
400-499	Supplemental non-credit laboratory courses for which no grade is awarded
500-599	Vocational courses not intended for transfer or inclusion in a major; units may be used as elective credit to fulfill the 60-unit degree requirement
600-699	Basic skills credit courses that are not applicable to transfer or an Associate Degree
700-799	Non-credit, non-graded basic skills courses

Course Articulation with Other Colleges

Columbia College articulates many of its courses with other public and private two- and four-year colleges and universities. Please ask your counselor or the Career/Transfer Center Technician for information related to agreements which identify courses that will transfer and those that meet lower-division preparation for the major.

Transferability of Courses

Courses that transfer to the California State University System (CSU) and/or the University of California System (UC) are designated at the end of the course description:

CSU—Transfer to CSU System

UC—Transfer to UC System

UC/CSU—Transfer to both systems

UC or CSU—(Transfer credit limited. See a counselor.)

Students must understand that some courses designated as baccalaureate level may not meet certain requirements at the transferring institution; however, they may be used for elective credit at the discretion of the transfer school. Several

new courses are under review and should not be considered for transfer until official approval has been received. Check with the Articulation Officer for status of these courses.

Course Description

A course description is given for each credit course offered by the College. Students should refer to the course description for information concerning course prerequisites and allocation of class hours for lecture, laboratory, field trips, or other required learning activities. Refer to page 36 for important prerequisite information.

Courses Not Listed in the Catalog

1. Non-Credit Courses

In an effort to meet some of the special interest needs of the populations served by the College, non-credit courses are usually offered each semester. Some of these are listed on pages 171-172 of the catalog. Others may be offered either through Continuing Education or Community Services sponsorship. Non-credit courses cannot be applied toward fulfilling graduation, transfer, or vocational education programs, but such courses do provide information and/or training on a variety of topical subjects.

2. 70/170/270 Courses: Special Topics

Instruction is offered in a variety of special topics within broader discipline areas (such as child development). Lecture and/or laboratory hours, units of credit, repeatability, and transferability may vary. Check with the school to which student is transferring.

3. 98/198 Courses: Experimental Courses

Lecture and/or laboratory hours and units of credit may vary. Classes in which a particular topic in a discipline (such as history) is treated with in-depth study. The topic, the number of units and hours, and prerequisites (if any), will be determined in advance and published in the Schedule of Classes. Note that 98/198 courses may be repeated for credit with different topics only. For UC campuses, these courses may transfer for elective or other credit and will not fulfill requirements unless pre-authorized. It is the student's responsibility to have the course pre-authorized by the appropriate UC department chair and admissions office.

4. 99/199 Courses: Independent Study

Independent study courses are intended to give students an opportunity to independently research specialized areas not available as regular course offerings of the College. They are designed to meet specific student interests and may be made available in any subject matter area. Consult your advisor for specific procedures. (See page 40 for conditions, limitations.) For UC campuses, these courses may transfer as electives or other credit as pre-authorized by the transfer school. It is the student's responsibility to have the course pre-authorized by the appropriate UC department chair and admissions office.

Course Repetition

Courses may be repeated for credit only if: (1) the student has received a substandard grade (D, F, NC or NP) or (2) the course is approved as repeatable by the College Curriculum Committee and is so identified in this catalog. See page 38 for more information.

Credit Value

The number after the course indicates the unit credit value of the course. Courses listed in this catalog are described in semester units. One quarter unit equals .667 semester units.

Field Trips

Field trips may be required in a number of courses where such a statement is not currently a part of the course description.

Honors Program

The Honors Program provides opportunities for students to participate in special coursework that will challenge their competencies and bring together the depth and breadth of their acquired knowledge in a focused area of study. All students with at least 24 or more units earned at Columbia College and a cumulative GPA of 3.5 or better must be invited to enroll by written notice.

COURSE DESCRIPTIONS

ANTHROPOLOGY

ANTHR 1 Physical Anthropology – 3 units

Lecture: 3 hours

Scientific study of humankind and our evolutionary history with emphasis on recent developments; primatology; the fossil sequence beginning with pre-human through the Paleolithic era to the domestication of plants and animals and the dawn of civilizations and contemporary hunter-gatherers. (MJC ANTHR 101)

Transfer: UC/CSU. IGETC 4A, 5B; CSU-GE B2, D1

ANTHR 2 Cultural Anthropology – 3 units

Lecture: 3 hours

The scientific study of human societies including preliterate societies along with the concept of culture basic to Anthropology. Emphasis is on methods of fieldwork, cultural ecology, language, social and political structure, the psychological perspective, religion, cultural change and the cultural future of humanity. (MJC ANTHR 102)

Transfer: UC/CSU. IGETC 4A; CSU-GE D1

ANTHR 3 Current Issues in Anthropology – 3 units

Recommended for Success: ENGL 151

Lecture: 3 hours

Intra-specific aggression, territoriality, population control, primate social organization, intra- and inter-species communication, and the present and future trends in social organization, war, religion, and cultural change.

Transfer: CSU. CSU-GE D1

ANTHR 7 Gender, Culture and Society – 3 units

Lecture: 3 hours

The course takes an inclusive bio-cultural evolutionary perspective on gender, focusing on non-human primate societies as well as primitive (small scale) and modern (large scale) human societies. Factors such as culture, ecological conditions and historical circumstances, forces of stratification (e.g. age, social class), socialization (e.g. rites of passage, conformity and deviance) as well as the science (e.g. concepts, theories and methods) of studying these topics will be addressed. Though course readings will represent many disciplines, the foundation readings reflect the perspectives of bio-cultural anthropology as well as sociology. This emphasis addresses the fundamental assumption that while sex differences are biological, gender encompasses the traits that culture assigns and inculcates (with varying degrees of success) in males and females. Credit may be earned for only one of the following: ANTHR 7 or SOCIO 7.

Transfer: UC/CSU. IGETC 4D; CSU-GE D4

ANTHR 8 Research Methods in the Social and Behavioral Sciences – 3 units

Prerequisite: SOCIO1 with a grade of C or better, or P

Lecture: 3 hours

Surveys research traditions and processes in the social and behavioral sciences. The course addresses: epistemological traditions, research conceptualization, research design, research process, measures, sampling, data collection and analysis, reporting traditions, ethics, as well as implications for theory and public policy. While the primary focus is on Anthropology, Psychology, and Sociology, there will be a secondary focus on the disciplines of Biology, Demography, History, Political Science, and Public Health. Credit may be earned for only one of the following: ANTHR 8 or SOCIO 8.

Transfer: UC/CSU. CSU-GE DO; IGETC 4J; C-ID: SOCI 120

ANTHR 10 Archaeology and Cultural Prehistory – 3 units

Lecture: 3 hours

This course is an introduction to anthropological archaeology including concepts, theories, and methods employed by archaeologists in reconstructing past life ways of humans. Topics include history and interdisciplinary nature of archaeological research; data acquisition, analysis and interpretation with discussion of applicable data and models; cultural resource management; selected cultural sequences. (MJC ANTHR 130)

Transfer: UC/CSU. IGETC 4A; CSU-GE D1

ANTHR 15 Native People of North America – 3 units

Lecture: 3 hours

A survey of the origins, cultures, and customs of peoples indigenous to the North American continent with primary emphasis upon folkways dominant prior to interference by foreign cultures, and a secondary emphasis upon the status of Native Americans in the USA today. This course is designed to meet an ethnic studies requirement. (MJC ANTHR 150)

Transfer: UC/CSU. IGETC 4A, 4C; CSU-GE D1, D3

ART

ART 1 Basic Freehand Drawing – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours

Introduction to basic drawing techniques, rendering techniques, linear perspective, composition in various media.

Transfer: UC/CSU

ART 2 Basic Color and Design – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours

Introduction to elements and principles of visual design and color theory as applied in a studio setting.

Transfer: UC/CSU

ART 9A Life Drawing: Beginning – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 Problems in figure drawing, working from the undraped model.
 (MJC ART 123)
 Transfer: UC/CSU

ART 9B Life Drawing: Intermediate – 2-4 units

Prerequisite: ART 9A with a grade of C or better, or P
 Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 An extension of ART 9A emphasizing various media and
 compositional problems.
 Transfer: UC/CSU

ART 11 History of Art: Ancient and Medieval – 3 units

Recommended for Success: ENGL 151.
 Lecture: 3 hours
 Survey of art history from the Paleolithic Age through the Late
 Gothic Era. (MJC ART 164)
 Transfer: UC/CSU. IGETC 3A; CSU-GE C1

ART 12 History of Art: Renaissance, Baroque, and Modern – 3 units

Lecture: 3 hours
 Survey of art history from the 14th through the 20th century.
 (MJC ART 165)
 Transfer: UC/CSU. IGETC 3A; CSU-GE C1

ART 13 Art of Africa, Asia, Australia and the Americas – 3 units

Lecture: 3 hours
 Survey of the art of Africa, Asia, Australia, and the Americas
 from prehistoric to modern periods. This course is designed to
 meet an ethnic studies requirement. (MJC ART 169)
 Transfer: UC/CSU. IGETC 3A; CSU-GE C1

ART 21A Painting: Beginning – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 Basic principles, techniques, and materials of oil or acrylic
 painting on canvas. (MJC ART 148)
 Transfer: UC/CSU

ART 21B Painting: Intermediate – 2-4 units

Prerequisite: ART 21A with a grade of C or better, or P
 Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 Continuation of ART 21A with emphasis on personal
 expression. (MJC ART 149)
 Transfer: UC/CSU

ART 23A Watercolor: Beginning – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 Introduction to basic materials, techniques and problems
 of transparent watercolors. (MJC ART 144)
 Transfer: UC/CSU

ART 23B Watercolor: Intermediate – 2-4 units

Prerequisite: ART 23A with a grade of C or better, or P
 Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 Continuation of ART 23A introducing opaque watercolors and
 various experimental techniques. (MJC ART 145)
 Transfer: UC/CSU

ART 25 Mixed Media Painting – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 A beginning studio class which introduces students to the
 elements and principles of mixed media painting. The course
 will involve the use of oil or acrylic paints and will emphasize
 technique, special illusion and basic composition skills using
 different mixed media.
 Transfer: UC/CSU

ART 31 Ceramics: Introductory – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 Introduction to basic ceramic methods including hand-building
 and wheel-thrown forms, and introduction to glazes and
 decoration. (MJC ART 108)
 Transfer: UC/CSU

ART 32 Ceramics: Intermediate – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 Course emphasis is on glazes, formulation and application
 with increased opportunity for personal expression and
 experimentation.
 Transfer: UC/CSU

ART 33 Ceramics: Advanced – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 Course emphasis is on personal growth and independence.
 Transfer: UC/CSU

ART 35 Raku and Alternative Firing Methods – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours
 Introduction to the raku process, pit firing, fuming, barrel
 smoked, historic origins and contemporary uses. Practical
 experience in clay bodies, glazes, raku and other firing.
 Transfer: UC/CSU

ART 51 Publication Design I – 3 units

Recommended for Success: OFTEC 141.
 Lecture: 2 hours. Laboratory: 3 hours
 An introduction to general publication design theory with
 emphasis on typography, page layout, graphics, and design.
 Students will create media for print and digital publishing.
 Exercises and projects will include the creation of a multi-
 page booklet, poster, newsletter, brochures and an interactive
 document formatted for digital publishing. Credit may be
 earned for only one of the following: ART 51, CMPSC 31, or
 OFTEC 42.
 Transfer: CSU

ART 52 Publication Design II – 3 units

Prerequisite: ART 51 or CMPSC 31 or OFTEC 42, with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

A continuation of study in problems of Publication Design. Areas of focused study will be in advanced problems of page layout, typography, print, and interactive documents for digital publication. Credit may be earned for only one of the following: ART 52, CMPSC 32, or OFTEC 43.

Transfer: CSU

ART 53 Computer Graphics I – 3 units

Lecture: 2 hours. Laboratory: 3 hours

This course introduces the student to the fundamentals of computer graphics. Topics include the elements and principles of good graphic design, vector versus raster graphics, color theory, image scanning and formatting for print and screen. Students will acquire basic skills in current graphic design software and create original design pieces. Credit may be earned for only one of the following: ART 53 or CMPSC 33.

Transfer: UC/CSU

ART 54 Computer Graphics II – 3 units

Prerequisite: ART 53 or CMPSC 33, with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

A continuation of Computer Graphics I. Topics covered will include more advanced techniques of painting and drawing software, scanning, publishing for the Web and printing. Credit may be earned for only one of the following: ART 54 or CMPSC 34.

Transfer: UC/CSU

ART 56 Typography – 2-3 units

Prerequisite: ART 53 or CMPSC 33, with a grade of C or better, or P

Lecture: 2-3 hours

Designed to focus study on the elements of typography as related to print and to the World Wide Web. This is an interactive course where students practice and apply skills of typography for visual communication. Emphasis will focus on identifying type as a dynamic visual element; typographical forms and nuance; and the development of successful typographic solutions to convey concepts. Through collaborative discussions of assigned exercises and projects, students will acquire skills of analysis and critique. The course outcome will be the creation of a student portfolio of completed projects. Credit may be earned for only one of the following: ART 56 or CMPSC 56.

Transfer: UC/CSU

ART 71 Ceramic Sculpture: Introductory – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours

Basic principles, techniques and problems in sculpture.

Transfer: UC/CSU

ART 72 Ceramic Sculpture: Advanced – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours

Course emphasis is on advanced principles, techniques, and problems in hand-built sculpture.

Transfer: UC/CSU

ART 103 Practical Laboratory - Metal Sculpture – 1 unit

Prerequisite: ART 166 or WT 166, with a grade of C or better, or P

Laboratory: 3 hours

The student shall gain practical experience by working on individual projects in metal sculpture design and fabrication. Emphasis is on quality, appearance and function. Credit may be earned for only one of the following: ART 103 or WT 103.

ART 165 Metal Sculpture – 1.5 units

Lecture: 0.5 hour. Laboratory: 3 hours

An introduction to various metal working techniques with an emphasis on aesthetic design and quality of metal joining. An introduction to M.I.G. welding will be offered, time being available. Credit may be earned for only one of the following: WT 165 or ART 165. Field trips may be required.

ART 166 Metal Sculpture Projects – 1 unit

Prerequisite: ART 165 or WT 165, with a grade of C or better, or P

Laboratory: 3 hours

This course is designed to allow students to expand upon their skills in metal sculpture techniques and to provide for the student a more individualized pursuit in metal sculpturing. Students will work progressively more independently from instructor direction. Credits may be earned for only one of the following: ART 166 or WT 166. Field trips may be required.

PHOTOGRAPHY**ART 40 Photography: Beginning – 4 units**

Lecture: 3 hours. Laboratory: 3 hours

Introduction to the history, art, craft, and scope of black-and-white photography. Emphasis will be on the choice, types, and use of various cameras and lenses (special emphasis on the 35mm camera), camera work and handling, composition, and black-and-white darkroom procedures. Adjustable 35mm film camera (or equivalent) will be utilized. (MJC ART 170 or ART 181 & 182)

Transfer: UC/CSU

ART 41 Photography: Intermediate – 3 units

Recommended for Success: ART 40

Lecture: 2 hours. Laboratory: 3 hours

Emphasis will be on refining camera and darkroom work, composition, visual concepts; exposure and development of the negative, and printing skills in black and white. Adjustable 35mm film camera (or equivalent) will be utilized. Field trips may be required.

Transfer: UC/CSU

ART 44 Advanced Photography Laboratory – 1 unit

Recommended for Success: ART 40

Laboratory: 3 hours

Supervised black and white darkroom work in the production of negatives and prints to improve photographic skills.

Transfer: CSU

ART 45 Field Photography – 2.5 units

Lecture: 2 hours. Laboratory: 2 hours

An introduction to producing professional quality nature photographs. Field instruction in locations of natural beauty followed by lectures, demonstrations, and critiques. The student will utilize an adjustable film or digital camera. Field trips required.

Transfer: CSU

ART 46 Field Photography: Composition and Design – 2-4 units

Lecture: 1.5-3 hours. Laboratory: 1.5-3 hours

An introduction to elements of design and composition as they relate to field photography. Field instruction in locations of natural beauty and historical significance followed by lectures, demonstrations, and critiques. Requires adjustable 35mm camera or larger format, or adjustable SLR type digital. Field trips required.

Transfer: CSU

ART 47A Digital Darkroom: Beginning – 3 units

Recommended for Success: ART 40, CMPSC 1

Lecture: 2 hours. Laboratory: 3 hours

Introduction to the electronic darkroom. Scanning of black-and-white and color prints, slides and negatives into the computer. Use of image control software (Adobe Photoshop) to enhance, refine and artistically interpret images. Printing images using inkjet printers and a variety of photo-quality papers.

Transfer: CSU

ART 47B Digital Darkroom: Intermediate – 2-3 units

Recommended for Success: ART 47 A

Lecture: 1-2 hours. Laboratory: 3 hours

Study of the electronic darkroom using PC computers. Advanced scanning techniques for optimum image control, higher resolution and larger print sizes. Use of image management (Adobe Bridge) and image control software (Adobe Photoshop) to sort, edit and enhance images. Use of advanced layering techniques, creation of masks and alpha channels, painting on photos, photo restoration, plus further use of the special-effects filters and photo retouching tools. Use of advanced printer controls to create consistently high-quality prints on photo-quality inkjet printers with a variety of paper mediums.

Transfer: CSU

ART 48 Special Topics in Photography – 1-4 units

Recommended for Success: ART 40

Lecture: 0.5-2 hours and/or Laboratory: 1.5-6 hours

Various field- and studio-oriented courses limited to particular photographic topics such as slide tape presentations, landscape, architecture, portraiture, nude, small product and still-life, photojournalism, alternative processes and guest lecture forum. Field trips may be required.

Transfer: CSU

AUTOMOTIVE TECHNOLOGY**AT 97 Work Experience in Automotive Technology – 1-4 units**

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in Automotive Technology. The student's employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

AT 100 Introduction to Automotive Technology – 4 units

Lecture: 4 hours

Introduction to theory, operation and maintenance of automotive systems. Includes fundamentals of math, measuring devices, fasteners, shop safety, careers and certifications, tools/equipment common to the automotive industry, environmental issues, classifications/applications of lubricants, and resume writing. Environmental issues will be discussed. This course is designed to comply with the National Automotive Technicians Education Foundation (NATEF) objectives, enabling students to prepare for Automotive Service Excellence (ASE) certification. Offered for Pass/No Pass grading only.

AT 102 Engine Repair – 5 units

Lecture: 3 hours. Laboratory: 6 hours

Techniques involved in gasoline engine diagnosing and repair. Diagnosis of the engine's systems will be emphasized. This course is designed to comply with the National Automotive Technicians Education Foundation (NATEF) objectives, enabling students to prepare for Automotive Service Excellence (ASE) certification. Field trips may be required.

AT 102A1 ASE Certification Preparation (A1) – 5 units

Lecture: 3 hours. Laboratory: 6 hours

This course is designed for students who have completed the Engine Repair course, but are seeking ASE certification. Students' competencies in ASE A1 will be surveyed and an individual preparation plan will be developed. The focus on topics for study will be driven by the student's individual assessment.

AT 103 Practical Laboratory – 0.5-2 units

Recommended for Success: Six units of completed AT units with a grade of C or better, or concurrent enrollment in six units of AT courses

Laboratory: 1.5-6 hours

This course includes special automotive repair projects that are assigned to students, with emphasis on speed, accuracy, and quality work habits.

AT 104 Practical Laboratory (Auto Body) – 0.5-2 units

Laboratory: 1.5-6 hours

This course includes special auto body collision repair projects that are assigned to advanced students, with emphasis on speed, accuracy, and quality work habits. Completion of, or concurrent enrollment in three Automotive Technology units required.

Exceptions to the units requirement will be considered on an individual basis. Field trips may be required.

AT 105 Automotive Braking Systems – 4 units

Recommended for Success: AT 100

Lecture: 2 hours. Laboratory: 6 hours

This course covers the principles of operation and repair of automotive drum and disc brake systems. Also covered are anti-lock braking systems. The subjects covered allow for compliance with the National Automotive Technicians Education Foundation (NATEF) objectives, thus enabling students to prepare for Automotive Service Excellence (ASE) certification.

AT 105A5 ASE Certification Preparation (A5) – 4 units

Lecture: 2 hours. Laboratory: 6 hours

Designed for students who need additional preparation for the Automotive Service Excellence (ASE) A5 exam.

AT 106 Engine Performance – 8 units

Recommended for Success: AT 100

Lecture: 5 hours. Laboratory: 9 hours

Theory and operation of ignition systems, fuel systems, and on-board computers. Use of hand-held meters, oscilloscopes, late model computerized analyzers, and four gas infrared analyzers will be covered. Advanced diagnostic techniques will be included. This course is designed to comply with the National Technicians Education Foundation (NATEF) objectives enabling students to prepare for Automotive Service Excellence (ASE) exams.

AT 106A8 ASE Certification Preparation (A8) – 8 units

Lecture: 5 hours. Laboratory: 9 hours

Designed for students who need additional preparation for the Automotive Service Excellence (ASE) A8 exam.

AT 112 Heating and Air Conditioning – 3 units

Recommended for Success: AT 100

Lecture: 2 hours. Laboratory: 3 hours

Fundamentals and theory of air conditioning (R12 and R134a), as well as techniques of service and diagnosis. Recycling refrigerant and handling of hazardous materials are also covered. This course is designed to comply with the National Automotive Technicians Education Foundation (NATEF) objectives, enabling students to prepare for Automotive Service Excellence (ASE) certification. Field trips may be required.

AT 112A7 ASE Certification Preparation (A7) – 3 units

Lecture: 2 hours. Laboratory: 3 hours

Designed for students and technicians in need of further Automotive Service Excellence (ASE) A7 test preparation.

AT 113 Automotive Electrics – 7 units

Recommended for Success: AT 100

Lecture: 5 hours. Laboratory: 6 hours

Fundamentals of electricity and electronics that apply to all automotive electrical and electronic systems. Electrical theory, lighting systems, and chassis electrical and electronic circuits, and charging and starting systems are included. Methods of diagnosis will be emphasized. This course is designed to comply with the National Automotive Technicians Education Foundation (NATEF) objectives to enable students to prepare for Automotive Service Excellence (ASE) certification.

AT 113A6 ASE Certification Preparation (A6) – 7 units

Lecture: 5 hours. Laboratory: 6 hours

Designed for students and technicians who need additional preparation for Automotive Service Excellence (ASE) certification exams.

AT 120 Suspension and Steering – 4 units

Recommended for Success: AT 100

Lecture: 3 hours. Laboratory: 3 hours

Operations of automotive suspension and steering systems. Inspection, diagnosis, part replacement, and alignment procedures, wheel alignment and computerized alignment equipment. Emphasis will be placed on analyzing inspection results. This course is designed to comply with the National Automotive Technicians Education Foundation (NATEF) objectives, enabling students to prepare for Automotive Service Excellence (ASE) certification.

AT 120A4 ASE Certification Preparation (A4) – 4 units

Lecture: 3 hours. Laboratory: 3 hours

This course is designed for students who need additional preparation for the Automotive Service Excellence (ASE) A4 exam.

AT 122 Manual Power Trains and Axles – 4 units

Recommended for Success: AT 100

Lecture: 2 hours. Laboratory: 6 hours

Principles and operation of automotive power trains including diagnosis and overhaul of clutches, manual transmissions, and transfer cases. This course is designed to comply with the National Automotive Technicians Education Foundation (NATEF) objectives enabling students to achieve Automotive Service Excellence (ASE) certification. Field trips may be required.

AT 122A2 ASE Certification Preparation (A2) – 3 units

Lecture: 1 hour. Laboratory: 6 hours

This course is designed for students who need additional preparation for the Automotive Service Excellence (ASE) A2 exam.

AT 132 Automatic Transmissions and Transaxles – 3 units

Recommended for Success: AT 100

Lecture: 1 hour. Laboratory: 6 hours

Principles and theories involved with diagnosis, repair, and rebuilding of automatic transmissions and transaxles. This course is designed to comply with the National Automotive Technicians Education Foundation (NATEF) requirements, enabling students to prepare for certification. Field trips may be required.

AT 132A3 ASE Certification Preparation (A3) – 4 units

Lecture: 2 hours. Laboratory: 6 hours

For students or technicians in need of additional preparation for the Automotive Service Excellence (ASE) A3 exam.

AT 140 B.A.R. Smog Check Training, Level II – 3 units

Lecture: 2.5 hours. Laboratory: 1.5 hours

Students successfully completing this course will have met the training requirement for the Smog Check Inspector License. Note: Students are encouraged to contact Automotive Technology staff (on campus) or the Bureau of Automotive Repair for all licensing requirements. This course also serves as the Level III citation training.

AT 155 Automotive Spray Refinishing I – 2 units

Prerequisite: AT 186 with a grade of C or better, or P

Lecture: 1 hour. Laboratory: 3 hours

Introduction to automobile spray painting. Study of materials, supplies and equipment. Experience in feather edging and application of base coats; spray techniques in spot blending and panel refinishing with a base coat and clear coat. Field trips required.

AT 156 Automotive Spray Refinishing II – 3 units

Prerequisite: AT 155 with a grade of C or better, or P

Lecture: 1 hour. Laboratory: 6 hours

Advanced techniques in automotive refinishing with single stage, base/clear coat urethane paints, and estimate writing. Field trips may be required.

AT 165 Clean Air Car Course and OBD II Update Training – 4 units

Lecture: 4 hours

This course meets the Bureau of Automotive Repair requirements for Smog Technician candidate training in emission controls and OBD II systems. Successful candidates will partially satisfy the State's prerequisite requirements for the Smog Check technician examination.

AT 171 B.A.R. 2009 Update Training – 1 unit

Lecture: 1 hour

This course satisfies the Bureau of Automotive Repair's Smog Check Technician update training requirement for 2009. Topics include advanced diagnostics relative to emissions failures, internet resources, and Smog Check Program updates. Offered for Pass/No Pass grading only.

AT 185 Auto Body Collision Repair I – 2 units

Lecture: 1.5 hours. Laboratory: 1.5 hours

For beginning students in auto body collision repair work.

Theory and study of the body sheet metal and structure.

Theory and manipulative skills in oxy-acetylene welding, metal straightening, plastic filling and shrinking. Time allowing, students will learn basic proper removal and replacement of braking, engine, steering and suspension, and axle housing components as necessary to complete the auto body repair.

Curriculum is aligned with the National Automotive Technicians Education Foundation (NATEF). Field trips may be required.

AT 186 Auto Body Collision Repair II – 2 units

Recommended for Success: AT 185

Lecture: 1.5 hours. Laboratory: 1.5 hours

Advanced theory and study of body sheet metal and structure and manipulative skills in M.I.G. welding, sheet metal straightening, body alignment, making adjustments and refinishing equipment. Time allowing, students will learn basic removal and replacement of braking, engine, steering and suspension, and axle housing components as necessary to complete the auto body repair. Curriculum is aligned with the National Automotive Technicians Education Foundation (NATEF). Field trips may be required.

AT 187 Automotive Detailing – 1 unit

Lecture: 0.5 hour. Laboratory: 1.5 hours

This course is for beginning students in auto detailing work.

Topics covered include the theory and study of the proper maintenance and restoring of the automobile exterior finish by use of proper cleaning materials and methods approved by the industry.

AT 200 Exploring Automotive Technology – 0.5-3 units

Lecture: 0.5-1.5 hours. Laboratory: 0-4.5 hours
 This course allows students to perform routine maintenance and services in a supervised environment. Emphasis will be placed on safety and information competency. This course is also an exploratory course for those who are interested in learning proper usage of automotive repair facilities, equipment and tools, and in pursuing an automotive technology career. Offered for Pass/No Pass grading only. Field trips may be required.

AT 201 Team-Managed Projects – 3 units

Lecture: 2 hours. Laboratory: 3 hours
 Using a team-based format, students will solve problems (projects) using various principles and fundamentals in automotive technology. Project outcomes will be dependent on teamwork and research.

AT 220 Industry Update Training – 1 unit

Lecture: 1 hour
 This course will cover updates relevant to the eight ASE areas in automotive technology. Topics presented are intended for technicians currently employed in the field. Offered for Pass/No Pass grading only.

BIOLOGY**BIOL 2 Principles of Biology – 4 units**

Prerequisite: MATH 104 with a grade of C or better, or P
 Lecture: 3 hours. Laboratory: 3 hours
 Covers principles and applications of the structure and function of biological molecules, prokaryotic and eukaryotic cell structure and function, homeostasis, cell reproduction and its controls, molecular biology, molecular genetics, transmission genetics, cell metabolism, including photosynthesis, respiration, and viruses. Science as an ongoing process of inquiry is a theme that runs throughout this course. BIOL 2 is a laboratory course. (MJC BIO 101)
 Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5B, 5C; CSU-GE B2, B3

BIOL 4 Principles of Animal Biology – 4 units

Prerequisite: MATH 104 with a grade of C or better, or P
 Lecture: 3 hours. Laboratory: 3 hours
 This course covers the comparative structure and function of animals and protists, development, homeostasis, microevolution and macroevolution, taxonomy and systematics, molecular and morphological phylogeny, and behavior. Population and evolutionary history are also emphasized. Principles of Animal Biology is a laboratory course where dissection of animals is required. Field trips may be required. (MJC ZOOL 101)
 Transfer: UC/CSU. IGETC 5B, 5C; CSU-GE B2, B3

BIOL 6 Principles of Plant Biology – 4 units

Prerequisite: MATH 104 with a grade of C or better, or P
 Lecture: 3 hours. Laboratory: 3 hours
 Covers photosynthesis, algae, protists, fungi, comparative plant structures and function, homeostasis, development, evolution, phylogeny, and taxonomy of plants. Principles of population and community ecology and ecosystem interactions are emphasized. Field trips may be required. (MJC BOT 101)
 Transfer: UC/CSU. IGETC 5B, 5C; CSU-GE B2, B3

BIOL 10 Human Anatomy – 4 units

Recommended for Success: BIOL 17 or BIOL 150
 Lecture: 3 hours. Laboratory: 3 hours
 An introduction to the study of the gross and microscopic structure of the human body. Lab work entails dissection of cats, study of cadavers, microscopic work, and demonstrations on models. (MJC ANAT 125)
 Transfer: UC/CSU. IGETC 5B, 5C; CSU-GE B2, B3

BIOL 17 Fundamentals of Biology – 4 units

Lecture: 3 hours. Laboratory: 3 hours
 An integrated lecture and laboratory course of study emphasizing the fundamental principles common to all forms of life. The course is a core biology class for transfer students and for AA and AS students at Columbia College. The laboratory makes extensive use of computer simulations as well as experimentation in traditional laboratory. (MJC BIO 111)
 Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5B, 5C; CSU-GE B2, B3

BIOL 24 General Ecology – 4 units

Recommended for Success: ENGL 1A and MATH 101
 Lecture: 3 hours. Laboratory: 3 hours
 Students will be introduced to environmental biology, which focuses on physiological, behavioral, and population ecology, and on linking ecological processes to evolution. Principles of evolution at the molecular, organismal, and population levels will be related to conservation issues affecting ecosystem management. The ecology component will cover basic principles and experimental approaches to solving ecological problems. Case studies in pollution issues, resource use, global warming, and ozone depletion will also be covered. Field trips may be required. (MJC BIO 114)
 Transfer: UC/CSU. IGETC 5B, 5C; CSU-GE B2, B3

BIOL 39 Field Biology – 1-2 units

Lecture: 1-2 hours
 A lecture field course in biology to be held in natural surroundings. The study site will vary with the seasons. Natural history, ecology, and biology of the locale will be studied.
 Transfer: CSU

BIOL 40 Field Biology: Ecosystems – 1 unit

Lecture: 1 hour

A lecture field course in biology to be held in natural surroundings. The course will emphasize ecosystem level processes. Included will be the effects of climate change, and other regional human disturbances on ecosystem processes. Field trips required.

Transfer: CSU

BIOL 50 Nutrition – 3 units

Lecture: 3 hours

Introductory study of energy and nutrient requirements of the body in relation to growth, maintenance, and reproduction; factors influencing normal metabolism, construction of the adequate diet. Emphasis is placed upon the chemical aspects of nutrition. (MJC FDNTR 219)

Transfer: UC/CSU. CSU-GE E

BIOL 60 Human Physiology – 4 units

Recommended for Success: BIOL 10, BIOL 17, CHEM 14, CHEM 14L

Lecture: 3 hours. Laboratory: 3 hours

Study of the function, integration and homeostasis of the organ systems of the human body. (MJC PHYSO 101)

Transfer: UC/CSU. IGETC 5B, 5C; CSU-GE B2, B3

BIOL 65 Microbiology – 4 units

Recommended for Success: CHEM 14, CHEM 14L, BIOL17

Lecture: 3 hours. Laboratory: 3 hours

Morphology, physiology, genetics, cultivation and control of micro-organisms, particularly bacteria and viruses. Principles of immunology and the relationship of microbes to disease will be included. (MJC MICRO 101)

Transfer: UC/CSU. IGETC 5B, 5C; CSU-GE B2, B3

BIOL 150 Elementary Anatomy and Physiology – 3 units

Lecture: 3 hours

Introduction to human structure and function. Designed as a foundation course for the allied health student, but open to all interested students. (MJC AP 50)

BIOL 158 Birds of Central California – 1 unit

Lecture: 0.5 hour. Laboratory: 1.5 hours

A survey of the birds of Central California through field observations and lectures. Students will learn how to identify birds by sight and sound, then use identification skills as a tool for understanding other aspects of avian biology and ecology. Discussion topics will include anatomy, physiology, behavior, and ecology of birds. Offered for Pass/No Pass grading only. Field trips may be required.

BIOL 159 Wildflowers – 1-1.5 units

Lecture: 1-1.5 hours

A survey of seasonal wildflowers. Includes basic identification, and recognition of common species and families, terminology, and natural history. Offered for Pass/No Pass grading only. Field trips may be required.

BIOL 160 Mushrooms and Other Fungi – 1.5 units

Lecture: 1.5 hours

Survey of mushrooms with emphasis on mushroom taxonomy, identification, and differentiation of common edibles from poisonous fungi, the ecology of fungi, including their habitat and role in various ecosystems, as well as their impact on civilizations. Offered for Pass/No Pass grading only. Field trips may be required.

BIOL 179 Fishing and Fishery Biology of the Sierra Nevada – 1 unit

Lecture: 1 hour

An overview of the identification, ecology, and management of fish species inhabiting the foothill, forest and alpine communities of the Sierra Nevada. Offered for Pass/No Pass grading only. Field trips required.

BUSINESS ADMINISTRATION**BUSAD 2A Financial Accounting – 4 units**

Recommended for Success: BUSAD 161A, BUSAD 161B, CMPSC 30

Lecture: 4 hours

Provides Business Administration and Accounting majors an opportunity to develop a working knowledge of accounting information systems used in recording and reporting business transactions for service and merchandising businesses under sole proprietorship, partnership and corporation entities. Special focus is on the accounting cycle, financial statements, analysis and generally accepted accounting principles, including internal control and ethical issues. Students will work with asset, liability and equity valuation, revenue and expenditure recognition, cash flow calculations and appropriate computer applications. (MJC BUSAD 201)

Transfer: UC/CSU

BUSAD 2B Managerial Accounting – 4 units

Prerequisite: BUSAD 2A with a grade of C or better, or P

Recommended for Success: BUSAD 163, CMPSC 30

Lecture: 4 hours

Provides Business Administration and Accounting majors an opportunity to develop a working knowledge of techniques used for decision making, planning, directing, and controlling manufacturing operations. Particular focus is on costing methods, cost-volume-profit issues, incremental analysis and pricing. Students will work with standard cost, budgets, and control responsibility, including capital investments and cash flow analysis. (MJC BUSAD 202)

Transfer: UC/CSU

BUSAD 9 Introduction to Small Group and Team**Communication – 3 units**

Lecture: 3 hours

This course focuses on the intersection between communication and the ability of small groups or teams to effectively achieve objectives. Course includes the study of, and practice in, discussion methodology, types of discussion groups, information gathering, problem solving, decision making, and leadership roles. Credit may be earned for only one of the following: BUSAD 9 or SPCOM 9.

Transfer: CSU

BUSAD 18 Business Law – 4 units

Lecture: 4 hours

Laws and regulations affecting managerial decisions; legal concepts and case analyses in the areas of ethics, employment, agency, consumer transactions, business torts and crimes, business organizations, and with special emphasis on contracts. (MJC BUSAD 218)

Transfer: UC/CSU

BUSAD 20 Principles of Business – 3 units

Lecture: 3 hours

Survey of business principles, problems and procedures; ownership; recruitment and training of personnel; labor-management relations; production and distribution of goods; competition; profit; transportation; finance; managerial controls; government and business relations. (MJC BUSAD 248)

Transfer: UC/CSU. C-ID: BUS 110

BUSAD 24 Human Relations in Organizations – 3 units

Lecture: 3 hours

People and their roles in organizations. The nature of organizational relationships; working in groups, recognizing and solving human relations problems. Creating the win-win situation of satisfying individual and organizational objectives.

Transfer: CSU

BUSAD 25 Job Search and Interviewing Strategies – 1 unit

Lecture: 1 hour

Understanding the employment process and development of written and oral presentation skills necessary to conduct an efficient and effective job search. Topics include: the hiring process, employer perspectives, the hidden job market, networking, research, job search planning, making employer contacts and interviewing. Development of a master application, resume and letter of application. Credit may be earned for only one of the following: BUSAD 25 or GUIDE 25. Offered for Pass/No Pass grading only. (MJC GUIDE 112)

Transfer: CSU

BUSAD 30 Principles of Marketing – 3 units

Lecture: 3 hours

Marketing principles, policies, and functions, price policies and controls, trade channels, merchandising, market research, advertising, and competitive practices. (MJC BUSAD 245)

Transfer: CSU

BUSAD 40 Principles of Management – 3 units

Lecture: 3 hours

The functions of management, techniques of decision making and problem solving, methods used by the manager to achieve organizational goals, various theories of management, lines of authority, functions of departments, and the importance of policies, procedures and controls. (MJC BUSAD 240)

Transfer: CSU

BUSAD 41 Small Business Management – 3 units

Lecture: 3 hours

Small business operation with proper balance between business functions of purchasing, production, sales and finance, and the management functions of planning, organizing, actuating, and controlling.

Transfer: CSU

BUSAD 51 Management Information Systems – 4 units

Lecture: 4 hours

This course is an introduction to information systems. The objective is to build a basic understanding of the value and use of information system technology for business operations, managerial decision making, project management, and strategic advantage. Topics of special interest include information system planning, application development including systems analysis and design, decision support systems, and expert systems.

Credit may be earned for only one of the following: BUSAD 51 or CMPSC 51.

Transfer: UC/CSU

BUSAD 52 E-Commerce – 3 units

Recommended for Success: BUSAD 20, CMPSC 1

Lecture: 3 hours

This course is designed to familiarize individuals with current and emerging electronic commerce technologies using the Internet. Topics include Internet technology for business advantage, managing electronic commerce funds transfer, reinventing the future of business through electronic commerce, business opportunities in electronic commerce, electronic commerce development and marketing, social, political and ethical issues associated with electronic commerce, and business plans for technology ventures. Because companies are using these strategies in a global business environment, discussions of international, legal, ethical, and tax issues are included. The purpose of this course is to educate a new generation of managers, planners, analysts, marketers, and programmers of the realities and potential for electronic commerce. Credit may be earned for only one of the following: BUSAD 52 or CMPSC 52.

Transfer: CSU

BUSAD 53 Project Management – 3 units

Recommended for Success: CMPSC 1

Lecture: 3 hours

This course is designed to familiarize individuals with current and emerging project management technologies using the Internet, project management software and other application software packages as needed for project completion. Project management knowledge topics will include project integration, scope, time, cost, quality, human resource, communications, risk and procurement management. Credit may be earned for only one of the following: BUSAD 53 or CMPSC 53.

Transfer: CSU

BUSAD 97 Work Experience in Business and Commerce – 1-4 units

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience.

75 hours paid employment equals 1 unit of credit.

60 hours unpaid employment equals 1 unit of credit.

Provides students an opportunity to experience supervised employment in a variety of occupational settings within Business and Commerce (e.g., Business Administration, Hospitality Management, Computer Science). The student's employment must be related to educational or occupational goal. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

BUSAD 121 Adobe Acrobat Essentials – 2 units

Recommended for Success: CMPSC 1

Lecture: 1 hour. Laboratory: 3 hours

Designed for those who need to convert various file formats to the universally accepted PDF file format and work with Acrobat Standard or Professional in the creation, editing, packaging and management processes of PDF files. Students will also learn creation of Adobe forms and working with their interactive features.

BUSAD 135 Computerized Accounting (Quickbooks) – 1-2 units

Recommended for Success: BUSAD 161A

Lecture: 1-2 hours

Provides the student opportunities to set up and maintain an accounting system using application software, and is designed to provide the student with a review of financial accounting including payables, receivables, adjusting and closing entries and financial statements.

BUSAD 151 Finance and Investments – 3 units

Lecture: 3 hours

A study of financial systems and functions including markets, which funds are traded, institutions which participate in fund flows, and principles and concepts of management for making sound financial and investment decisions.

BUSAD 155 Computerized Accounting for Business – 6 units

Recommended for Success: BUSAD 2A or BUSAD 161A,

BUSAD 158

Lecture: 6 hours

This course provides students the opportunities to set up and maintain an accounting system using QuickBooks, MYOB, and Peachtree commercial accounting programs. By using these programs students will get hands-on practice in financial accounting including accounts receivable, accounts payable, inventory, payroll, adjusting and closing entries and financial statements.

BUSAD 158 Payroll Accounting – 3 units

Lecture: 3 hours

Introduction and practice in all payroll operations, the preparation of payroll registers, recording of payroll transactions, understanding of payroll laws, and preparation of required tax returns and reports.

BUSAD 161A Small Business Accounting I – 4 units

Lecture: 4 hours

Accounting procedures and analysis for most small businesses. Includes complete double entry accounting system with journals, ledgers, worksheets, and financial statements, with adjusting and closing entries for service or merchandising businesses; payroll for employees and employers, a voucher system, and use of manual and computerized simulations.

BUSAD 161B Small Business Accounting II – 4 units

Prerequisite: BUSAD 161A with a grade of C or better, or P

Lecture: 4 hours

Extension of the techniques learned in BUSAD 161A with more in-depth treatment of receivables, notes, inventory and depreciation, and with the introduction of partnership and corporation accounting and statements of cash flow and financial analysis; also an introduction to managerial accounting for decision making, departmentalized, cost and manufacturing systems, planning and budgeting, and exercises on computer use in both financial and managerial phases.

BUSAD 163 Business Mathematics – 4 units

Lecture: 4 hours

After review of mathematical processes, students will apply math skills in business situations that include banking, credit cards, discounts, retailing, payroll, interest, compounding, present value, annuities, sinking funds, revolving credit, home mortgages, financial analysis and ratio interpretation, depreciation, inventory, taxes, insurance, stocks, bonds, business statistics.

BUSAD 164 Income Tax – 2 units

Lecture: 1.5 hours. Laboratory: 1.5 hours

Instruction on income tax preparation and reporting based on the current requirements of the U.S. Internal Revenue Code and the California State Tax Code for individuals and Small Business filers. Successful completion of the course leads to VITA (Volunteer Income Tax Assistance) Certification.

CHEMISTRY

CHEM 2A General Chemistry I – 3 units

Prerequisite: MATH 104 with a grade of C or better, or P, and CHEM 5 or CHEM 14 or CHEM 20, with a grade of C or better, or P

Lecture: 3 hours

The first half of a two-semester course designed to give an in-depth survey of chemical principles and theories. The application of the scientific method to observable chemical phenomena is an overarching theme of this course. Subjects covered in-depth include measurement theory and practice, data acquisition and analysis, modern atomic theory, ionic and covalent bonding, reaction classifications, stoichiometry, gas and solution chemistry, thermochemistry, intermolecular forces, and colligative properties. Further introductions to molecular orbital theory, quantum chemistry, materials science, and environmental analysis ensure practical use of general chemical principles.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5A; CSU-GE B1

CHEM 2AL General Chemistry I Laboratory – 2 units

Prerequisite/Co-requisite: CHEM 2A with a grade of C or better, or P or concurrent enrollment in CHEM 2A

Lecture: 1 hour. Laboratory: 3 hours

The first laboratory course in a series designed so students gain multiple experiences in a chemistry lab. The investigation of compounds and elements using gravimetric, colorimetric, calorimetric, titrative, and qualitative means will be explored. The analysis of the validity of quantitative data will be included throughout the course. Standard laboratory safety (SLS) and good laboratory practice (GLP) will be emphasized.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5C; CSU-GE B3

CHEM 2B General Chemistry II – 3 units

Prerequisite: CHEM 2A with a grade of C or better, or P

Lecture: 3 hours

The second half of an in-depth survey of chemical principles and theories. Subjects studied include chemical equilibria, acids and bases, solubility, thermodynamics, kinetics, electrochemistry, nuclear chemistry. Further introductions to inorganic chemistry, environmental chemistry, organic chemistry and biochemistry are used to create well rounded chemical education.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5A; CSU-GE B

CHEM 2BL General Chemistry II Laboratory – 2 units

Prerequisite/Co-requisite: CHEM 2B with a grade of C or better, or P or concurrent enrollment in CHEM 2B

Lecture: 1 hour. Laboratory: 3 hours

The laboratory for the second semester of general chemistry covering kinetics, equilibrium, thermodynamics, electrochemistry, analytical chemistry, environmental chemistry, and organic chemistry. Emphasis will be on quantitative measurements, instrumentation, data analysis, and theory development.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5C; CSU-GE B3

CHEM 4A Organic Chemistry I – 3 units

Prerequisite: CHEM 2B with a grade of C or better, or P

Lecture: 3 hours

A mechanism-based investigation of the reactions of carbon and the analysis of the compounds produced. The nomenclature, structure, bonding, stereochemistry, and physical properties of alkanes, alkyl halides, alkenes, alkynes, alcohols, and ethers will be emphasized. Multi-step synthesis is also introduced. This is the first semester in a two-semester series in organic chemistry designed for students majoring in chemistry or life sciences.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5A; CSU-GE B1

CHEM 4AL Organic Chemistry I Laboratory – 2 units

Prerequisite/Co-requisite: CHEM 4A with a grade of C or better, or P or concurrent enrollment in CHEM 4A

Lecture: 1 hour. Laboratory 3 hours

The practice of laboratory skills involved in the synthesis, purification, and identification of organic molecules. The specific functional groups addressed will include alkanes, alkenes, alcohols, aromatics, and ethers.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5C; CSU-GE B3

CHEM 4B Organic Chemistry II – 3 units

Prerequisite: CHEM 4A with a grade of C or better, or P

Lecture: 3 hours

A mechanism-based investigation of the reactions of carbon and the analysis of the compounds produced. The chemistry of dienes, aromatics, amines, carbanions, carboxylic acids, carboxylic acid derivatives, aldehydes, ketones and biochemically important compounds will be examined. Multi-step synthesis is further extended from CHEM 4A to biomimetic natural product synthesis.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5A; CSU-GE B

CHEM 4BL Organic Chemistry II Laboratory – 2 units

Prerequisite/Co-requisite: CHEM 4B with a grade of C or better, or P or concurrent enrollment in CHEM 4B

Lecture: 1 hour. Laboratory: 3 hours

Further practice of chemical synthesis of organic compounds, the use of the tools used to purify products and the ways chemists characterize new products formed. Attention to detail while performing multi-step synthesis, chromatographic separations, and spectroscopy analysis will be required.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5C; CSU-GE B3

CHEM 5 Introductory Chemistry: Environmental Emphasis – 3 units

Lecture: 3 hours

Introductory chemical principles and theories applied to the study of the environment. Intended as a preparation course for general chemistry and other physical sciences, subjects include problem solving, measurement theory, data analysis, water solubility, spectral analysis, atomic structure, nuclear chemistry, ionic compounds, crystallography, stoichiometry, molecular compounds, gas laws, solutions, acids, bases, toxicity, equilibrium, kinetics, and the environmental analysis of water, soils and air. Science majors looking for an excellent foundation of chemistry before taking degree applicable physical science courses will benefit the most from this course offering.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5CA; CSU-GE B1.

CHEM 5L Introductory Chemistry Laboratory – 1 unit

Prerequisite/ Co-requisite: CHEM 5 with a grade of C or better, or P or concurrent enrollment in CHEM 5

Laboratory: 3 hours

Chemical laboratory practices related to environmental analysis including laboratory safety, measurement theory, data analysis, water sampling and analysis, soil sampling and analysis, atomic absorption spectroscopy, ionic and molecular compounds, environmental sampling, sample preparation, solution preparation, and use of standard solutions.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5C; CSU-GE B3

CHEM 14 Fundamental Chemistry for Allied Health– 3 units

Lecture: 3 hours

Fundamental theories and principles of chemistry related to biological systems; scientific method, measurements and units, atomic and molecular structure, common biological ions, Lewis structures, nuclear medicine, gas laws, chemical reactions, solutions, acids, bases, buffers, oxidation reduction reactions, and biologically important organic compounds.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5A; CSU-GE B1

CHEM 14L Fundamental Chemistry for Allied Health Laboratory – 1 unit

Prerequisite/Co-requisite: CHEM 14 with a grade of C or better, or P or concurrent enrollment in CHEM 14

Laboratory: 3 hours

Fundamental laboratory practices related to chemistry and biology; measurements and units, physical separations, solution preparation, observing chemical reactions, computer added molecular modeling, spectrophotometer analysis, organic synthesis, enzyme kinetics, qualitative analysis.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5C; CSU-GE B3

CHEM 16 Fundamental Organic And Biochemistry – 3 units

Prerequisite: CHEM 14 or CHEM 5 or CHEM 2A with a grade of C or better, or P

Lecture: 3 hours

The chemistry needed to pursue advanced allied health fields including the structure, nomenclature, physical properties, preparation, and reactions of organic compounds containing functional groups related to biological systems and the biochemistry of carbohydrates, lipids, amino acids, and nucleic acids. Special topics may include neurotransmitters, hormones, steroids, and other related biological molecules.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5A; CSU-GE B1

CHEM 16L Fundamental Organic and Biochemistry Laboratory – 1 unit

Prerequisite/Co-requisite: CHEM 16 with a grade of C or better, or P or concurrent enrollment in CHEM 16

Laboratory: 3 hours

Experiments and laboratory practices in organic and biochemistry will be explored in a wet lab setting. Organic purification techniques, compound analysis, and synthesis will be emphasized in the first half while reactions of biological molecules such as sugars, fats and oils, amino acids, and nucleic acids will be accomplished in the second half of the course.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5C; CSU-GE B3

CHEM 20 The Chemistry of Everything – 3 units

Lecture: 3 hours

An introduction to the way chemists look at the world. Designed for non-science majors, topics ranging from dirt and sunshine to water and explosives will be explored. A blend of chemistry content and real-life applications will be used to illustrate scientific thought processes. (MJC CHEM 150)

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5A; CSU-GE B1

CHEM 20L The Chemistry of Everything Laboratory – 1 unit

Prerequisite/Co-requisite: CHEM 20 with a grade of C or better or P or concurrent enrollment in CHEM 20

Laboratory: 3 hours

An introduction to how chemists work in the laboratory. Experiments will be performed in a wet lab environment allowing for a more in-depth understanding of how chemistry principles shape our world.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 5C; CSU-GE B3

CHILD DEVELOPMENT

Students may be required to acquire a fingerprint clearance before working with young children. See your instructor for more details.

CHILD 1 Child Growth and Development – 3 units

Recommended for Success: ENGL 1A or ENGL 151

Lecture: 3 hours

Growth and development of children, both typical and atypical, from conception through adolescence. Basic concepts related to physical, social, intellectual, and emotional development, including the effects of culture, will be explored. Emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages. (MJC CLDDV 103)

Transfer: UC/CSU. IGETC 4G; CSU-GE D9, E. C-ID: CDEV 100

CHILD 3 Principles and Practices of Teaching Young Children – 3 units

Lecture: 3 hours

An examination of the underlying theoretical principles of developmentally appropriate practice applied to programs, environments; emphasizing the key role of relationships, constructive adult-child relationships, 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. (MJC CLDDV 101)

Transfer: CSU. C-ID: ECE 120

CHILD 4 Observation and Assessment – 3 units

Lecture: 3 hours

This course focuses on the appropriate use of a variety of assessment and observation strategies to document development and behavior. Child observations will be conducted and analyzed.

Transfer: CSU. C-ID: ECE 200

CHILD 8 Early Literacy Development – 3 units

Lecture: 3 hours

This course will improve early childhood educators' and care providers' knowledge of early literacy development and the skills in teaching early literacy to children from birth through age five. It includes research-based principles for providing children birth through age five a strong foundation in early reading and writing within a developmentally appropriate approach. Meets or exceeds specifications of external agency.

Transfer: CSU

CHILD 10 Creative Activities in The Arts – 2 units

Lecture: 2 hours

Survey of a variety of educational activities suitable for young children in art, music, movement, language and literature; for pre-school teachers, family day care providers, parents, teacher aides, and anyone who is interested in creative expression for children.

Transfer: CSU

CHILD 12 Creative Activities in Math – 2 units

Lecture: 2 hours

Survey of math activities and concepts developmentally appropriate for young children; for pre-school teachers, family day care providers, teacher aides, parents and anyone interested in early childhood math education.

Transfer: CSU

CHILD 13 Creative Activities in Science – 2 units

Lecture: 2 hours

Survey of science activities and concepts developmentally appropriate for young children; for pre-school teachers, family day care providers, teacher aides, parents and anyone interested in early childhood science education.

Transfer: CSU

CHILD 16 Practicum – 3 units

Prerequisite: CHILD 1 and CHILD 22 with grades of C or better, or P. Corequisite: CHILD 3

Lecture: 1 hour. Laboratory: 6 hours

In this course students will practice and demonstrate developmentally appropriate early childhood program planning and teaching competencies at an approved placement site. Students will utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Child centered, play-oriented approaches to teaching, learning, and assessment, and knowledge of curriculum content areas will be emphasized as student teachers design, implement and evaluate experiences that promote positive development and learning for all young children. (MJC CLDDV 127B & 127C, or CLDDV 128B & 128C)

Transfer: CSU. C-ID: ECE 210

CHILD 17 Adult Supervision Practicum – 2 units

Lecture: 1 hour. Laboratory: 3 hours

This course will provide students with the skills and techniques needed to supervise adults in a developmentally appropriate children's program. Meets the adult supervision requirement for the Child Development Permit.

Transfer: CSU

CHILD 19 Exceptional Needs Children – 3 units

Lecture: 3 hours

A comprehensive overview for the child care provider who will work with young children with disabilities. Includes historical perspective, diversity issues, family partnerships, identifying and referring, caregiver strategies, Individualized Education Plans, definitions, health and safety considerations and administrative issues. (MJC CLDDV 163)

Transfer: CSU

CHILD 22 Child, Family, Community – 3 units

Lecture: 3 hours

An examination of the developing child in a societal context which focuses on the interrelationships of family, school, and community and emphasizes historical and socio-cultural factors. The processes of socialization and identity development will be highlighted. (MJC CLDDV 109)

Transfer: CSU. CSU-GE D7. C-ID: CDEV 110.

CHILD 23 Guiding Children's Social Development – 3 units

Lecture: 3 hours

This course is designed to provide early childhood educators and parents with the skills necessary to promote the emotional support and guidance young children need for healthy social development. Topics include: the developmental aspects of social/emotional development, supporting children in stressful situations, fostering self-discipline, supporting children's friendships, promoting pro-social behavior, handling children's aggressive behavior, and diversity issues. This course covers children birth through school-age. (MJC CLDDV 121)

Transfer: CSU

CHILD 25 Infant/Toddler Care – 3 units

Lecture: 3 hours

Principles and philosophy of infant care for children up to two years of age including growth and development, health and nutritional needs, social-emotional needs, cognitive development, language development, development of a positive self-image, parent education, community resources, and cultural and ethnic differences. (MJC CLDDV 125)

Transfer: CSU

CHILD 26 Health, Safety and Nutrition – 3 units

Lecture: 3 hours

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.

Transfer: CSU. C-ID: ECE 220

CHILD 28 Books for Young Children – 3 units

Lecture: 3 hours

An introductory course on books for young children. Topics will include how to evaluate content and illustration; choosing books that relate to children's developmental needs and interest; the art of reading aloud. Field work involving reading aloud to children under six years of age is required.

Transfer: CSU

CHILD 30 Child Care/Nursery School Administration – 3 units

Recommended for Success: ENGL 151

Lecture: 3 hours

Administration of public and private child care and nursery school programs in California. Topics include budget development and management; staff selection and supervision; programs, facilities, and equipment; parent and community relationships; and licensing requirements. (MJC CLDDV 150)

Transfer: CSU

CHILD 31 Advanced Child Care Administration – 3 units

Prerequisite: CHILD 30 with a grade of C or better, or P

Lecture: 3 hours

An advanced course for directors and lead teachers in child care. Students will learn staff development and leadership techniques. Fiscal, advocacy and current issues will be explored. (MJC CLDDV 151)

Transfer: CSU

CHILD 35 Introduction to Curriculum – 3 units

Lecture: 3 hours

An overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine teacher's role in supporting development and fostering the joy of learning for all young children using observation and assessment strategies emphasizing the essential role of play. An overview of content areas will include but not be limited to: language and literacy, social and emotional learning, sensory learning, art and creativity, math and science.

Transfer: CSU. C-ID: ECE 130

CHILD 36 Teaching in a Diverse Society – 3 units

Lecture: 3 hours

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.

Transfer: CSU. C-ID: ECE 230; CSU-GE D7

CHILD 40 Creative Activities in Motor Development – 2 units

Co-requisite: HHP 61

Lecture: 2 hours

Introduction to the concepts, recommendations and guidelines related to motor development for young children. Key components of health as related to physical activity will be discussed along with the importance of collaboration with families. Strategies for incorporating more physical activity throughout the day across the curriculum for all children will be identified. Focus on integrating concepts into everyday planning and program development.

Transfer: CSU

CHILD 97 Work Experience in Child Development – 1-4 units

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in Child Development. The student's employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

CHILD 116 Infant/Toddler Practicum – 3 units

Prerequisites: CHILD 1 and CHILD 22 with grades of C or better, or P. Co-requisite: CHILD 3

Lecture: 1 hour. Laboratory: 6 hours

In this course the student will practice and demonstrate developmentally appropriate early childhood program planning and teaching competencies in an approved infant or toddler field site. Students will utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Child-centered, play-oriented approaches to teaching, learning and assessment, and knowledge of curriculum content areas will be emphasized as student teachers design, implement and evaluate experiences that promote positive development and learning for all young children. This class can be used by students as a specialization class toward their Child Development Permit (issued by the California Teacher Credentialing Office).

CHILD 126 School-Age Child Care – 3 units

Lecture: 3 hours

This course will include the study of child development for children ages 6 to 12 and an overview of skills necessary to provide appropriate care for this age group. This class can be applied by students as a specialization class toward their Child Development Permit (issued by the California Teacher Credentialing Office).

COMPUTER SCIENCE**CMPS 1 Computer Concepts and Information Systems – 4 units**

Lecture: 3 hours. Laboratory: 3 hours

This course includes concepts of computer information systems in business, industry and other institutions. Study of computers, applications and network communications will also be covered. Actual practice is on personal computers in Windows environment on a network. Lab applications include graphical user interface, spreadsheets, word processing, database management, multimedia presentations and access to the Internet and World Wide Web.

Transfer: UC/CSU

CMPS 3 Operating Systems – 3 units

Recommended for Success: CMPS 1

Lecture: 2 hours. Laboratory: 3 hours

Provides an introduction to operating systems concepts, system architecture, structure, and management. Topics include operating system history, system commands, system programs, role of the operating system, its operational characteristics, its configuration, how to execute programs, installation, and file management.

Transfer: CSU

CMPS 4 Windows Operating Systems Essentials – 0.5-1.5 units

Lecture: 0.5-1.5 hours

This course provides instruction in Operating Systems. Topics include management of window elements, desktop arrangement, folders and files, and file management. Students will use multitasking, cut and paste, linking, and printing operations within selected Windows applications. Offered for Pass/No Pass grading only.

Transfer: CSU

CMPSC 5 Introduction to Programming – 3 units

Recommended for Success: MATH 104 or equivalent

Lecture: 3 hours. Laboratory: 1 hour

First course in computer programming for students with little or no programming experience. Covers computer architecture, data representation, file systems and networks, software development methods (structured and object-oriented design), and basic problem-solving using analysis, documentation, algorithm design and control structures. Programming using scripting languages such as JavaScript and Python, and a compiled, object-oriented language such as Java will be introduced. This course is designed for majors and non-majors.

Transfer: UC/CSU

CMPSC 9 Introduction to UNIX/Linux – 3 units

Prerequisite: CMPSC 3 with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

An introduction to the UNIX operating system using Linux as the working environment. Topics include operating system commands, shell scripting, TCP/IP basics, FTP, mail, telnet, text editors, disk, file and directory management, GUI interface with X windows, and multitasking. (MJC CMPSC 206)

Transfer: UC/CSU

CMPSC 10 Internet Essentials – 1-2 units

Lecture: 1-2 hours

Instruction in how to access the Internet using communications software and a web browser on personal computers. Topics include navigating browsers, electronic mail, search techniques, personal privacy, downloading, and the World Wide Web.

Offered for Pass/No Pass grading only. (MJC CMPGR 262)

Transfer: CSU

CMPSC 11 Presentations Using Computers and Multimedia – 1-2 units

Lecture: 1-2 hours

Use presentation software to prepare multimedia presentations. Combine text, graphics, video, and sound. Use the computer and multimedia projector to present information to an audience or to individuals using a PC.

(MJC CMPGR 215)

Transfer: CSU

CMPSC 12 Website Development Applications – 2-3 units

Recommended for Success: CMPSC 4

Lecture: 2-3 hours

Students will be able to use website/webpage development application software to prepare multimedia presentations for use with an Internet browser. They will also be able to combine text, graphics, video, and sound, enhance computer displays for an audience, and prepare home page links for access over the Internet. (MJC CMPGR 264)

Transfer: CSU

CMPSC 13 Introduction to HTML – 1-2 units

Recommended for Success: CMPSC 4

Lecture: 1-2 hours

Use HTML authoring tools and/or HTML home page software to prepare multimedia presentations to use with an Internet browser. Combine text, graphics, video, and sound. Enhance computer displays for an audience and prepare home page links for access over the Internet.

Transfer: CSU

CMPSC 14 Advanced Topics in Website Development – 2-3 units

Recommended for Success: CMPSC 13

Lecture: 2-3 hours

This course guides students through the process of exploring advanced tools for website design, which may include but are not limited to Flash, Javascript, ASP, and XML. Students will also attain skills in techniques for publicizing websites and best practices for site maintenance.

Transfer: CSU

CMPSC 15 Java Programming – 3 units

Recommended for Success: CMPSC 5

Lecture: 2 hours. Laboratory: 3 hours

Learn Java, a platform-independent, object-oriented programming language. Designed for students who do not intend to major in computer science, but are interested in Java programming. Topics include classes, objects, arrays, inheritance, interfaces, control flow, file and network input/output, and access to relational databases using the current Java SDK API.

Transfer: UC/CSU

CMPSC 17 Advanced Internet Research – 0.5-2 units

Recommended for Success: CMPSC 10

Lecture: 0.5-2 hours

This course provides instruction in Advanced Internet Research and will provide students advanced search and research techniques via the World Wide Web. The course reviews basic components of Internet search engines and includes advanced subject matter research techniques, database resources and advanced Internet technology skills. Topics include E-Commerce, Internet Resources, Digital Content, and Internet Publications.

Transfer: CSU

CMPSC 19 Computer Graphics and Animation – 2-3 units

Recommended for Success: CMPSC 12, CMPSC 14, or CMPSC 33

Lecture: 2-3 hours

Computer Graphics and Animation introduces the student to an interactive media application for creating vector graphics, animation, and interactive multimedia for web pages and other digital media. The course will also cover basic action scripting integration. (MJC CMPGR 268)

Transfer: UC/CSU

CMPSC 22 Programming Concepts and Methodology I – 4 units

Recommended for Success: MATH 104, CMPSC 5

Lecture: 3 hours. Laboratory: 3 hours

Designed for computer science majors but open to all students. Emphasizes problem-analysis skills and algorithm development. Software engineering skills will be developed for both procedural and object-oriented programming techniques. Programming language will be the currently preferred object-oriented language used by equivalent UC/CSU courses.

Extensive programming projects demonstrating problem solving and implementation skills will be assigned throughout the semester, including use of data types, conditions and Boolean logic, loops, recursion, arrays, functions, references, and file input/output. (MJC CMPSC 205)

Transfer: UC/CSU. C-ID: COMP 112 & COMP 122

CMPSC 24 Programming Concepts and Methodology II – 4 units

Prerequisite: CMPSC 22 with a grade of C or better, or P

Recommended for Success: MATH 104

Lecture: 3 hours. Laboratory: 3 hours

A continuation of CMPSC 22 for computer science majors. Problem-solving techniques using an object-oriented design approach. Programming language will be the currently preferred object-oriented language used by equivalent UC/CSU courses. Topics include asymptotic notation, dynamic data structures (linked lists, stacks, queues, binary trees), directed graphs, generics, and searching/sorting algorithms. Also introduces programming in an event-driven GUI environment. (MJC CMPSC 261)

Transfer: UC/CSU

CMPSC 27 C/C++ Programming – 3 units

Prerequisites: CMPSC 5 or CMPSC 22, with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

Computer programming and program design using the C Language. Topics include language syntax, pre-processors, data types, conditionals, logic, recursion, array and string processing, functions, structures, bit operations, pointers, interactive programming, file input/output and object-oriented features of C++.

Transfer: UC/CSU

CMPSC 28 Visual Basic Programming – 3 units

Recommended for Success: CMPSC 5

Lecture: 2 hours. Laboratory: 3 hours

Covers programming with current Microsoft Visual Basic tools (.NET environment). Emphasis is on structured design, object orientation, Graphical User Interface design, and event-driven applications. Includes programming projects using screen development, control constructs, array processing, file input/output and database access. (MJC CMPSC 213)

Transfer: UC/CSU

CMPSC 29A Introduction to Computer Video Production – 1.5-2 units

Recommended for Success: CMPSC 14 or ENGL 11

Lecture: 1 hour. Laboratory: 1.5-3 hours

Introduction to Computer Video Production introduces the student to the basic computer video production stages. Students will learn the process of creating computer video productions. This course is a project-based course. Students will be required to work in groups on approved class-related and school event projects.

Transfer: CSU

CMPSC 29B Advanced Computer Video Production – 2 units

Prerequisite: CMPSC 29A with a grade of C or better, or P

Lecture: 1 hour. Laboratory: 3 hours

Advanced Computer Video Production takes students to the advanced level of video production using the three-stage process. Students will learn the process of creating computer video productions using advanced techniques in video shooting, lighting, audio, editing and authoring. This course is a project-based course. Students may be required to work in groups on approved class-related activities and/or school event projects.

Transfer: CSU

CMPSC 30 Financial Worksheets on Computers – 3 units

Lecture: 2 hours. Laboratory: 3 hours

Electronic spreadsheets will be used to develop a basic understanding of business operations, managerial decision making, and strategic advantage. Students will develop spreadsheets for financial statements, what-if analysis, databases, and other ledger-type applications. Other topics include use of formulas and macros to customize data entry for business applications and combining data between worksheets and link files. Lab projects will focus on the use of spreadsheet design, development, and use for managerial decision making. (MJC CMPSC 278)

Transfer: CSU

CMPSC 31 Publication Design I – 3 units

Recommended for Success: OFTEC 141

Lecture: 2 hours. Laboratory: 3 hours

An introduction to general publication design theory with emphasis on typography, page layout, graphics, and design. Students will create media for print and digital publishing. Exercises and projects will include the creation of a multi-page booklet, poster, newsletter, brochures and an interactive document formatted for digital publishing. Credit may be earned for only one of the following: CMPSC 31, ART 51 or OFTEC 42.

Transfer: CSU

CMPSC 32 Publication Design II – 3 units

Prerequisite: CMPSC 31 or ART 51 or OFTEC 42, with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

A continuation of study in problems of Publication Design. Areas of focused study will be in advanced problems of page layout, typography, print, and interactive documents for digital publication. Credit may be earned for only one of the following: CMPSC 32, ART 52 or OFTEC 43.

Transfer: CSU

CMPSC 33 Computer Graphics I – 3 units

Lecture: 2 hours. Laboratory: 3 hours

This course introduces the student to the fundamentals of computer graphics. Topics include the elements and principles of good graphic design, vector versus raster graphics, color theory, image scanning and formatting for print and screen. Students will acquire basic skills in current graphic design software and create original design pieces. Credit may be earned for only one of the following: CMPSC 33 or ART 53.

Transfer: UC/CSU

CMPSC 34 Computer Graphics II – 3 units

Prerequisite: CMPSC 33 or ART 53, with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

A continuation of Computer Graphics I. Topics covered will include more advanced techniques of painting and drawing software, scanning, publishing for the Web and printing. Credit may be earned for only one of the following: CMPSC 34 or ART 54.

Transfer: UC/CSU

CMPSC 35 Digital 3D Modeling and Animation – 3 units

Recommended for Success: CMPSC 19

Lecture: 2 hours. Laboratory: 3 hours

This course introduces digital 3D modeling and animation. Students will explore 3D modeling software, digital modeling techniques, and animation. CMPSC 35 is intended to train students who are pursuing 3D computer-driven animation in preparation for additional study in digital animation, game design and Multimedia. The course uses industry standard, state-of-the-art, high-end computer-driven animation software which is upgraded as industry changes.

Transfer: CSU

CMPSC 36 Introduction to Digital Multimedia – 3 units

Lecture: 3 hours

An introduction to the various elements that comprise the multimedia development environment. This includes hardware and software tools for text, sound, images, animation, video, multimedia authoring, and multimedia tools for the Web.

Transfer: CSU

CMPSC 37 Writing for Multimedia – 3 units

Lecture: 3 hours

This course will present an overview of multimedia writing including techniques for effective communication in web page copy, digital storytelling, scripts, critique writing, storyboarding, and other current industry modes of delivery.

Transfer: CSU

CMPSC 39 Photo Editing for Digital and Print Publication – 3 units

Lecture: 2 hours. Laboratory: 3 hours

This course focuses on the principles and practices of photo editing, artistic expression, and development of problem-solving skills, using an industry standard photo editing software program. Included is a survey of the tools and techniques used to create effective and sophisticated digital imagery for websites, multimedia and print publications. Additionally, the course will integrate the use of tablets and cloud technology as they pertain to photo editing.

Transfer: CSU

CMPSC 41 Networking Essentials – 3 units

Recommended for Success: CMPSC 1

Lecture: 2 hours. Laboratory: 3 hours

An introduction to computer networking and data communications. The focus is on concepts, terminology, and technologies in current networking environments. It is based on, and covers the OSI model including discussions of Local and Wide Area Networks (LAN and WAN). A laboratory component provides hands-on experience in network setup and computer configuration. Includes the first semester of Cisco Networking Academy Program, which prepares students for CCNA certification. The topics covered are also applicable to Microsoft Certified Systems Engineer (MCSE) and other industry networking certifications.

Transfer: CSU

CMPSC 51 Management Information Systems – 4 units

Lecture: 4 hours

This course is an introduction to information systems. The objective is to build a basic understanding of the value and use of information system technology for business operations, managerial decision making, project management, and strategic advantage. Topics of special interest include information system planning, application development including systems analysis and design, decision support systems, and expert systems. Credit may be earned for only one of the following: CMPSC 51 or BUSAD 51.

Transfer: UC/CSU

CMPSC 52 E-Commerce – 3 units

Recommended for Success: CMPSC 1, BUSAD 20

Lecture: 3 hours

This course is designed to familiarize individuals with current and emerging electronic commerce technologies using the Internet. Topics include Internet technology for business advantage, managing electronic commerce funds transfer, reinventing the future of business through electronic commerce, business opportunities in electronic commerce, electronic commerce development and marketing, social, political and ethical issues associated with electronic commerce, and business plans for technology ventures. Because companies are using these strategies in a global business environment, discussions of international, legal, ethical, and tax issues are included.

The purpose of this course is to educate a new generation of managers, planners, analysts, marketers, and programmers of the realities and potential for electronic commerce. Credit may be earned for only one of the following: CMPSC 52 or BUSAD 52.

Transfer: CSU

CMPSC 53 Project Management – 3 units

Recommended for Success: CMPSC 1

Lecture: 3 hours

This course is designed to familiarize individuals with current and emerging project management technologies using the Internet, project management software and other application software packages as needed for project completion. Project management knowledge topics will include project integration, scope, time, cost, quality, human resource, communications, risk and procurement management. Credit may be earned for only one of the following: CMPSC 53 or BUSAD 53.

Transfer: CSU

CMPSC 55 Database Management – 4 units

Recommended for Success: CMPSC 1

Lecture: 4 hours

Fundamentals of database design and administration. Covers basic terminology, types of database systems, and how to design a database appropriate to an application. Topics include linking of tables in a relational database, SQL commands, Query By Example, and design of input forms and reports. Hands-on component uses a current commercial database management system in a Windows environment. (MJC CMPSC 275)

Transfer: CSU

CMPSC 56 Typography – 2-3 units

Prerequisite: CMPSC 33 or ART 53, with a grade of C or better, or P

Lecture: 2-3 hours

Designed to focus study on the elements of typography as related to print and to the World Wide Web. This is an interactive course where students practice and apply skills of typography for visual communication. Emphasis will focus on identifying type as a dynamic visual element; typographical forms and nuance; and the development of successful typographic solutions to convey concepts. Through collaborative discussions of assigned exercises and projects, students will acquire skills of analysis and critique. The course outcome will be the creation of a student portfolio of completed projects. Credit may be earned for only one of the following: CMPSC 56 or ART 56.

Transfer: UC/CSU

CMPSC 57 GIS Data Management - Introduction to Geodatabase – 1-3 units

Recommended for Success: CMPSC 4, CMPSC 10

Lecture: 1-3 hours

Students who take this course will learn to use the ArcGIS Geodatabase format for management of spatial data. Students will be introduced to the concepts of database design and system architecture using ArcGIS software. Concepts covered include: introduction to the geodatabase; metadata; geodatabase vs. shapefile formats; overview of ArcGIS data models; feature datasets and feature classes; editing a geodatabase; personal geodatabase vs. multi-user geodatabase; domains and validation rules; and relationships and subtypes. Credit may be earned for only one of the following: CMPSC 57 or GEOGR 57.

Transfer: CSU

CMPSC 58 GIS - ArcView – 1 unit

Lecture: 1 hour

Introduction to practical application of ArcView software; importation of GIS data, display, visualization, exploration, query, analysis, and production of hard-copy maps and reports. Students will be guided through a complete sequence of application fundamentals similar to what would normally be used in displaying, analyzing, and plotting a standard ArcView GIS application. Credit may be earned for only one of the following: CMPSC 58 or GEOGR 58. Offered for Pass/No Pass grading only.

Transfer: CSU

CMPSC 59 Geographic Information and Global Positioning Systems – 1-3 units

Lecture: 1-3 hours

Introduction to basic GIS and GPS concepts and applications in the field of natural resources, earth sciences, and environmental systems. Students will learn to use Global Positioning System units, combined with Geographic Information System software to collect field data and produce maps for spatial analysis and decision-making purposes. Six weeks will be spent learning ArcView software; another six weeks will be spent learning to use GPS units; and another six weeks will be spent learning to design and carry out a research project merging GPS and GIS technologies. Credit may be earned for only one of the following: CMPSC 59 or GEOGR 59.

Transfer: CSU

CMPSC 60 Introduction to ArcGIS – 3 units

Lecture: 3 hours

An introduction to fundamental Geographic Information Systems (GIS) concepts. Students will be introduced to the ArcGIS software package as the main vehicle for learning GIS. GIS geodatabases and maps will be produced from several different data sources. Emphasis will be placed on planning the design of GIS geodatabases which will permit specific types of queries. Credit may be earned for only one of the following: CMPSC 60 or GEOGR 60.

Transfer: CSU

CMPSC 61 GIS Mapping - Introduction to Fire Incident Mapping – 1 unit

Recommended for Success: CMPSC 4, CMPSC 10

Lecture: 1 hour

Students who take this course will learn how to apply their GIS skills in Fire Incident Mapping. Students will learn fire incident symbology, data standards and organization, fire incident map products, and responsibilities of a Fire GIS Specialist. Additionally, students will utilize GPS data that they have collected, convert them to shapefiles, and create a fire incident map. This course includes hands-on experience in fire incident mapping and data organization. Students will also be encouraged to present their final project in public at GIS Day events. Credit may be earned for only one of the following: CMPSC 61 or GEOGR 61. Offered for Pass/No Pass grading only.

Transfer: CSU

CMPSC 62 GIS Mapping - Introduction to SAR GIS – 1 unit

Lecture: 1 hour

Students who take this course will learn how to apply their GIS skills in Search and Rescue (SAR) Mapping. Students will learn SAR incident symbology, data standards and organization, establishing incident locations, search segments, SAR incident map products, and responsibilities of a GIS specialist on SARs and other critical incidents. The course will use a workflow and data model developed by SAR personnel that integrates with ArcGIS 10. Additionally, students will utilize GPS data that they have collected from GPS devices, convert them to shapefiles, and create team and briefing incident maps. During a full-day exercise, students will also live-track SAR teams using satellite tracking devices. This course includes hands-on experience in SAR incident mapping and data organization. Credit may be earned for only one of the following: CMPSC 62, GEOGR 62 or SAR 62. Offered for Pass/No Pass grading only.

Transfer: CSU

CMPSC 65 GIS Applications – 0.5-3 units

Recommended for Success: CMPSC 60 or GEOGR 60

Lecture: 0.5-3 hours

Uses the ArcGIS ArcView software to explore intermediate topics in GIS applications. Topics include geodatabase creation and editing, geoprocessing models, geocoding, and working with annotation. The course consists of a combination of lectures, demonstrations, hands-on exercises, and a student project. Credit may be earned for only one of the following: CMPSC 65 or GEOGR 65.

Transfer: CSU

CMPSC 70 Introduction to Raster-Based GIS – 3 units

Recommended for Success: GEOGR 59 or CMPSC 59 or CMPSC 60 or GEOGR 60

Lecture: 3 hours

This course uses the ArcGIS ArcView software along with the Spatial Analyst and 3D extensions to explore the use of raster GIS data in analysis and visualization. Topics include terrain analysis, hydrologic analysis, suitability analysis, and 3D modeling. The course consists of a combination of lectures, demonstrations, hands-on exercises, and a student project. Credit may be earned for only one of the following: CMPSC 70 or GEOGR 70.

Transfer: CSU

CMPSC 75 GIS Applications in Resource Management – 0.5-3 units

Recommended for Success: CMPSC 70 or GEOGR 70

Lecture: 0.5-3 hours

Uses ArcGIS ArcView software and the Image Analyst extension to explore the use of GIS in natural resource analysis and management. Emphasis is on the use of satellite imagery and aerial photography to derive information for GIS analysis. The course consists of a combination of lectures, demonstrations, hands-on exercises, and a student project. Credit may be earned for only one of the following: CMPSC 75 or GEOGR 75.

Transfer: CSU

CMPSC 101 How to Succeed as an Online Student – 0.5-2 units

Lecture: 0.5-2 hours

This course is an introduction to a Face-to-Face and Simulated Online combined course for those interested in taking online courses. The course covers basic components of how a Web-based classroom works as well as the technology skills needed to feel more confident in achieving a successful experience.

Offered for Pass/No Pass grading only.

CMPSC 138 Excel Spreadsheets –2 units

Lecture: 2 hours

Instruction in spreadsheet applications on computers, using Microsoft Excel. Develop, plan, and build spreadsheets for business decisions. Use formatting, charting, and lists to customize desired output. Offered for Pass/No Pass grading only.

CMPSC 142 Desktop Publishing Essentials –1-2 units

Lecture: 1-2 hours

Introduction to general desktop publishing theory with emphasis on design elements of formatted text, frames, photographs, clip art, lines, and pictures. Students will create sample projects such as newsletters, brochures, flyers, business cards, etc. Note: Basic word processing skills needed. Credit may be earned for only one of the following: OFTEC 142 or CMPSC 142. Offered for Pass/No Pass grading only.

CMPSC 149 Photoshop for the Web – 2-3 units

Lecture: 2-3 hours

Photoshop is a comprehensive environment for professional designers and graphic producers to integrate digital content for the Web. This course involves manipulating graphics and digital content for optimum use on any Web-based platform.

CMPSC 150 Image Managing and Editing for Digital Photographers –2-3 units

Recommended for Success: ART 47A or CMPSC 149

Lecture: 2-3 hours

Using image management software created for professional photographers and designers, students will process, organize and edit large numbers of digital images. This course will teach a comprehensive workflow from importing, reviewing, organizing and enhancing digital images to publishing photos, creating web galleries and producing client presentations.

CMPSC 155 Access – 1-2 units

Lecture: 1-2 hours

Develop database applications using Database Management System (DBMS) software. Create databases, enter and edit data, query the database, create and use forms, create and print reports, customize fields and tables, manage data and files, use as database for word mail merge.

CMPSC 162 Networking - CCNA 2: Routing Protocols and Concepts – 3 units

Prerequisite: CMPSC 41 with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

Cisco Networking Academy Semester 2. An introduction to static and currently popular dynamic routing protocols as used in Wide Area Networks. Emphasis is on the configuration of routers and data communications equipment. Includes Cisco IOS, and the command interface. A laboratory component provides hands-on experience in the configuration of routers.

CMPSC 163 Networking - CCNA 3: LAN Switching and Wireless – 3 units

Prerequisite: CMPSC 41 with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

Cisco Networking Academy Exploration Semester 3. Covers advanced switching including LAN Design, Virtual LANs, Spanning Tree Protocol, and configuring a Wireless Router.

CMPSC 164 Networking - CCNA 4: Accessing the WAN – 3 units

Prerequisite: CMPSC 163 with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

Cisco Networking Academy Exploration Semester 4. Covers WAN technologies and design, WAN protocols theory and configuration including PPP, authentication protocols, and Frame-Relay. Also covers Network Security, Access Control Lists and IP Addressing services. Includes a laboratory component emphasizing troubleshooting networks of Cisco switches and routers.

CMPSC 167 PC Assembly, Upgrade and Support (A+) – 3 units

Lecture: 2 hours. Laboratory: 3 hours

The first of two courses designed to prepare students to pass the current CompTIA A+ exams. Includes theory and hands-on activities for installing and maintaining current desktop computer installations. Also covers upgrading and adding I/O devices to desktop PCs.

CMPS 168 PC Operating System Installation and Support (A+) – 3 units

Prerequisite: CMPS 167 with a grade of C or better, or P
Lecture: 2 hours. Laboratory: 3 hours

The second of two courses designed to prepare students to pass the current CompTIA A+ exams. Includes theory and hands-on activities for installing and maintaining current Windows desktop installations. Also covers diagnosing and correcting operating system issues, and introduces connecting desktop PCs to LAN networks and the Internet.

CMPS 210 Basic Computer Skills for College Success – 0.5-1.5 units

Lecture: 0.5-1.5 hours

Provides students with the opportunity to build a foundation of basic computer skills vital to success in the college environment, including navigating the college website, file management, word processing, course management systems for hybrid and online courses, Internet and email. The material is developed to ensure that students will see the importance of learning how to use the applications for future coursework. Offered for Pass/No Pass grading only.

DRAFTING

DRAFT 50A Computer Assisted Drafting I – 3 units

Lecture: 2 hours. Laboratory: 3 hours

Introduction to the use of the computer as a tool for accomplishing basic drafting tasks. Included topics: polar and rectangular coordinates, lines, polygons, layers, blocks, editing, hatches, dimensioning, orthographic projections, isometric drawing, layout view, plotting, and an introduction to 3-D.

Transfer: CSU

DRAFT 50B Computer Assisted Drafting II – 3 units

Prerequisite: DRAFT 50A with a grade of C or better, or P
Lecture: 2 hours. Laboratory: 3 hours

Intermediate to advanced features of AutoCAD through creation of 3-D drawings. Included topics: customizing the AutoCAD environment, use of digitizer tablet, 3-D surfaces, solids modeling, elevated plane, extrusions, revolution, shading, rendering, scenes, lighting, textures, user coordinate system, views and ports, exporting of drawing, external databases.

Transfer: CSU

DRAMA

DRAMA 10 Introduction to the Theatre – 3 units

Lecture: 3 hours

Provides an introduction to the art of theatre, surveying the roles of the playwright, the director, the actor, the designers, the producer, the critics and the audience. Investigates the variety of theatrical styles observed in contemporary theatre, compares live theatre with the electronic forms, and assesses the value of theatre in modern society. Designed to promote the student's greater understanding and enjoyment of the theatrical form.

Field trips may be required. (MJC THETR 100)

Transfer: UC/CSU. IGETC 3A; CSU-GE C1

DRAMA 19 Exploring Radio Drama – 1.5-3 units

Lecture: 1.5-3 hours

An intensive course focused on audio theatre production featuring the expressive use of the voice and sound effects. Students will create, rehearse, perform and provide sound effects for audio plays to be recorded. Credit may be earned for only one of the following: DRAMA 19 or SPCOM 19.

Transfer: CSU

DRAMA 20 Oral Expression and Interpretation – 3 units

Recommended for Success: ENGL 1A

Lecture: 3 hours

Techniques in reading literature aloud; vocal development, production, articulation, and variety; understanding and interpreting prose, poetry, and dramatic literature; processes in the oral performance of principal literary genre. (MJC THETR 120)

Transfer: UC/CSU. CSU-GE C1; C-ID: COMM 170

DRAMA 22 Introduction to Readers' Theatre – 3 units

Lecture: 2 hours. Activity: 3 hours

Theory and practice of Readers' Theatre as an art form. Directed experiences in selecting, cutting, arranging and performing the Readers' Theatre script. (MJC THETR 122)

Transfer: UC/CSU

DRAMA 42 Acting Fundamentals – 3 units

Lecture: 2 hours. Activity: 3 hours

Investigation of techniques and theories prerequisite to theatrical performances; psychological, philosophical, and practical preparation for the actor's art. (MJC THETR 160)

Transfer: UC/CSU. CSU-GE C1

DRAMA 43 Acting-Directing – 3 units

Recommended for Success: DRAMA 42

Lecture: 2 hours. Activity: 3 hours

A workshop in techniques of both acting and directing with specific focus upon the production of short scenes from a variety of theatrical genres.

Transfer: UC/CSU. CSU-GE C1

EARTH SCIENCE

ESC 1 Energy: Uses and Alternatives – 3 units

Lecture: 3 hours

The physical concepts of energy, work, and energy conversion techniques, including the first and second laws of thermodynamics, embedded energy, energy conservation and carbon footprint. Other concepts include the biogeochemical cycles (Carbon and Nitrogen cycles and anthropogenic impacts from energy consumption), historical and conventional uses (America and worldwide), environmental impacts generated by energy conversion, population growth and its potential impact upon energy consumption, alternative and renewable sources of energy, how we arrived at our current state of energy production/consumption, global impacts of energy production/consumption, and alternatives for future energy production/consumption. Sustainability and intergenerational equity are also explored. Apply critical thinking processes through analysis of present-day energy issues and formulation of alternative future solutions. Satisfies general education requirements for non-majors. Field trips required.

Transfer: UC/CSU. IGETC 5A; CSU-GE B1

ESC 5 Physical Geology – 4 units

Recommended for Success: ENGL 1A

Lecture: 3 hours. Laboratory: 3 hours

The study of the earth, its materials, structures, and processes. Erosion and deposition by streams, wind, waves and glaciers; mountain building and volcanoes at subduction zones, and rifting of the earth's plates at mid-ocean ridges; tracing the energy from the sun and from the earth's interior as it drives all of the processes of change on earth; the study of life on earth, past and present; the search for valuable minerals and building materials from the earth. Field trips may be required. (MJC GEOL 161)

Transfer: UC/CSU. IGETC 5A, 5C; CSU-GE B1, B3. C-ID: GEOL 101

ESC 10 Environmental Geology – 3 units

Recommended for Success: Eligibility for ENGL 1A

Lecture: 3 hours

Students will be introduced to environmental geology, which includes the study of hazards associated with seismicity, mass wasting, flooding, coastal processes, and volcanism. Resource and pollution issues will be discussed in the context of population pressures. Global climate change and ozone depletion/hole are also covered. Students will learn to conduct geologic research and will work collaboratively with peers inquiring about geo-environmental issues. (MJC GEOL 165)

Transfer: UC/CSU. IGETC 5A; CSU-GE B1. C-ID: GEOL 130

ESC 22 Historical Geology – 3 units

Lecture: 3 hours

This course will provide an introduction to the origin, development, and evolution of the earth and its inhabitants. The course covers the 4-billion-year history of life on earth, as interpreted from the geologic and fossil record. The course will emphasize the diversity of life through geological time, including the origin, evolution, and extinction of the major groups of animals and plants. In addition, we will assess impacts of changing landscapes and geologic environments on the history of life. Lectures will be augmented with overhead transparencies, slides, and films. Through the course, students will learn to critically think as geologists and paleontologists do in order to solve geologic, paleontologic, and evolutionary problems. Topics include the study of fossils and rocks, evolution, continents and ocean basins, geologic time, plate tectonics, climate change, and mass extinctions. Intended audience: This course is a general science class, intended to satisfy general education requirements for non-majors. Field trips required.

Transfer: UC/CSU. IGETC 5A; CSU-GE B1. C-ID: GEOL 110

ESC 25 Geology of the National Parks – 3 units

Recommended for Success: Eligibility for ENGL 1A

Lecture: 3 hours

The study of the earth's surface in relation to the formation of our National Parks. What part glaciation, erosion, volcanism, and other mountain-building processes play in the formation of the National Parks. Field trips may be required.

Transfer: CSU

ESC 30 Global Tectonic Geology – 3 units

Recommended for Success: ENGL 1A

Lecture: 3 hours

An introduction to global geology and how it has revolutionized man's understanding of the way the earth works. For all who wish to learn about the earth's wandering continents and spreading sea floors; what causes rising mountain ranges, volcanoes, and earthquakes; and the role that magnetism has played in the revelation of geology.

Transfer: UC/CSU. IGETC 5A; CSU-GE B1

ESC 33 Introduction to the Earth – 4 units

Lecture: 3 hours. Laboratory: 3 hours

This course is intended to provide an introduction to physical earth processes as studied through the disciplines of geology, oceanography, astronomy, and meteorology. Lectures will be augmented with overhead transparencies, slides, and films. Through the course, students will learn to critically think as geologists, oceanographers, meteorologists, and astronomers do in order to solve earth science problems. Topics include the study of rocks and minerals, mountain building, earthquakes and volcanoes, sea floor spreading, ocean and shoreline features, planets and stars, weather, and climate. Intended audience: This course is a general science class, intended to satisfy general education requirements for non-majors. Field trips may be required. (MJC EASCI 161)

Transfer: UC/CSU. IGETC 5A, 5C; CSU-GE B1, B3

ESC 35 Field Geology – 0.5-3 units

Lecture: 0.5-3 hours

A field study of selected geologic features and related Earth Science topics. A one- to seven-day field trip will be taken with pre- and post-classroom sessions. Field trips required. (MJC GEOL 171A & B)

Transfer: CSU

ESC 35CC Geology and Gold Mining of Calaveras County – 1-3 units

Lecture: 1-3 hours

A field study of Calaveras County's selected geologic features, gold mining, and other related Earth Science topics, including coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 35DV Geology of Death Valley – 1-3 unit

Lecture: 1-3 hours

A field study of Death Valley's selected geologic features and related Earth Science topics, including coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 35LS Geology of Lassen, Shasta, Lava Beds – 1-3 units

Lecture: 1-3 hours

A field study of Mt. Shasta, Lava Beds National Monument, and Lassen Peak volcanic areas. We will learn about selected geologic features and related Earth Science topics, including coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 35LT Geology of the Lake Tahoe Region – 1-3 units

Lecture: 1-3 hours

A field study of the Lake Tahoe region's selected geologic features and related Earth Science topics, including coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 35LV Geology of the Long Valley Caldera – 1-3 units

Lecture: 1-3 hours

A field study of the Long Valley Caldera and surrounding area's selected geologic features and related Earth Science topics, including coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 35ML Geology of the Mother Lode – 1-3 units

Lecture: 1-3 hours

A field study of the Mother Lode's selected geologic features and related Earth Science topics, including coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 35SA Geology of the San Andreas Fault – 1-3 units

Lecture: 1-3 hours

A field study of the San Andreas Fault, Pinnacles National Monument, selected geologic features and related Earth Science topics, including coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 35SN Geology of the Sierra Nevada – 1-3 units

Lecture: 1-3 hours

A field study of the Sierra Nevada's selected geologic features and related Earth Science topics, including Yosemite, King's Canyon, and Sequoia National Parks. Also included will be coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 35SP Geology of the Sonora Pass Area – 1-3 units

Lecture: 1-3 hours

A field study of the Sonora Pass region's selected geologic features and related Earth Science topics, including coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 35TR Geology of the Tuolumne River – 1-3 units

Lecture: 1-3 hours

A field study of the Tuolumne River's selected geologic features and related Earth Science topics, including coverage of the California State Earth Science Standards. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions.

Transfer: CSU

ESC 40 Descriptive Astronomy – 3 units

Recommended for Success: Eligibility for ENGL 1A

Lecture: 3 hours

A survey course in astronomy. Topics include history of astronomy, telescopes, solar system, stars, galaxies, origin of universe, and extraterrestrial life. Field trips may be required.

Transfer: UC/CSU. IGETC 5A; CSU-GE B1

ESC 42 Natural Hazards – 3 units

Lecture: 3 hours

This course is intended to provide an introduction to natural hazards as studied through the disciplines of geology, oceanography, astronomy, and meteorology. Lectures will be augmented with overhead transparencies, slides, and films. Through the course, students will learn to critically think as geologists, oceanographers, meteorologists, and astronomers do in order to solve earth science problems. Topics include the study of subsidence, flooding, mass wasting, wildfires, comet/asteroid impacts and extinctions, climate change, severe weather, coastal hazards, earthquakes, and volcanoes. Intended audience: This course is a general science class, intended to satisfy general education requirements for non-majors. Field trips may be required.

Transfer: UC/CSU. IGETC 5A; CSU-GE B1

ESC 50 Oceanography – 4 units

Lecture: 3 hours. Laboratory: 3 hours

This course will provide students with insights into the field of Oceanography. Students will be exposed to various subtopics including plate tectonics, the ocean floor, air-sea interactions, ocean circulation, waves and water dynamics, tides, earth resources, the coast and coastal processes, the marine habitat and its animal and plant life, etc. This course will spend time teaching you to critically think as an oceanographer does in order to solve oceanographic problems. You will be able to transfer these thinking skills to other areas of your life. This course is a general science class, intended to satisfy general education requirements for non-majors as well as one of the first courses expected of oceanography and marine geology majors. (MJC EASCI 162)

Transfer: UC/CSU. IGETC 5A, 5C; CSU-GE B1, B3

ESC 62 Meteorology – 3 units

Lecture: 3 hours

An introduction to the field of Meteorology. Topics include air pollution, clouds, precipitation, fog, storms, weather forecasting, the greenhouse effect, ozone depletion, and global warming. You will be asked to critically think as a meteorologist in order to solve meteorological problems. Field trips may be required.

Transfer: UC/CSU. IGETC 5A; CSU-GE B1

ECONOMICS**ECON 10 Principles of Economics - Macro – 4 units**

Lecture: 4 hours

This course focuses on the ongoing concerns of a market economy, particularly the United States and its dealings with growth, unemployment, inflation, and gross domestic product. Students will explore macroeconomic models, national income accounting, aggregate demand, aggregate supply, fiscal, and monetary policy. International implications are introduced throughout the course to explain the impact of globalization on our economy. Further understanding of these concepts and topics will be aided by the use of current events both foreign and domestic, and enhanced instruction by the use of electronic communication and interactive material. (MJC ECON 101)

Transfer: UC/CSU. IGETC 4B; CSU-GE D2

ECON 11 Principles of Economics - Micro – 4 units

Lecture: 4 hours

Microeconomics emphasizes the study of individual units. The consumer: consumer behavior theory, demand and elasticity. The corporation: analysis of costs, theory of production, pricing factor inputs including wages, rent, and interest; the social implications of various market structures; and special economic problems. Further understanding of these concepts and topics will be aided by the use of current events, both foreign and domestic, and enhanced instruction by the use of electronic communication and interactive material. (MJC ECON 102)

Transfer: UC/CSU. IGETC 4B; CSU-GE D2.

EDUCATION**EDUC 10 Practicum in Teaching – 3 units**

Co-requisite: EDUC 16

Recommended for Success: ENGL 151

Lecture: 3 hours

Orientation to teaching. Designed for prospective teachers, or those who are in informal and formal teaching situations, but open to all students. Students will gain practical experience through 15 weeks of two hours per week, tutoring students in reading in area schools, sharing experiences, and receiving support from faculty and peers as an initial step towards being an effective teacher. (MJC SOCSC 109)

Transfer: UC/CSU

EDUC 12 Introduction to Education: Intermediate Field Experience – 3 units

Prerequisite: EDUC 10 with a grade of C or better, or P

Co-requisite: EDUC 16

Lecture: 3 hours

Orientation to the teaching profession. Designed for prospective elementary, secondary, special or alternative education teachers, but open to all students. Classroom experience will include 15 weeks of two hours per week of observation in area classrooms as a required part of preparation for teaching careers. Students will be guided by faculty and practicing teachers from area schools. Observations will be analyzed and discussed with attention to teaching styles and classroom management techniques. (MJC SOCS 110)

Transfer: UC/CSU

EDUC 14 Basic Strategies to Improve Content Area Reading – 1 unit

Recommended for Success: ENGL 151

Lecture: 1 hour

Strategies for improvement of student reading comprehension in a variety of content areas in K-12 schools. Includes both elementary and secondary attention to textbook reading in mathematics, science, social science and any class work or course that requires non-fiction reading for information through print and/or electronic methods. Offered for Pass/No Pass grading only.

Transfer: CSU

EDUC 16 Elementary School Teacher Practicum – 0.5-1 unit

Co-requisite: EDUC 10 or EDUC 12

Laboratory: 1.5-3 hours

Supervised practicum at approved elementary classroom site. Students will plan and implement activities with elementary school age students, develop classroom teaching techniques, and work with teachers in the classroom as a student teacher. Students are required to submit fingerprints to be cleared through the Department of Justice for working with children. Students must submit a TB Clearance that was taken within the last four years.

Transfer: CSU

EMERGENCY MEDICAL SERVICES

EMS 4 Emergency Medical Technician Training – 7 units

Prerequisite: EMS 13 or EMS 157, with a grade of C or better, or P

Recommended for Success: EMS 175

Lecture: 7 hours. Laboratory: 1 hour

An intensive course to assist the student in developing didactic and manipulative skills to recognize and treat illness and injuries in the pre-hospital environment. The course meets or exceeds both State of California and United States Department of Transportation's EMT-Basic National Standard Curriculum (DOT HS 808 149) training guidelines. This course prepares students for both State of California and National Registry certification as an Emergency Medical Technician. At the first class session, students will be required to show verification of current CPR certification equivalent to current American Heart Association's Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care at the Healthcare Provider level as specified by State of California regulations. (MJC EMS 390)

Transfer: CSU

EMS 10 Outdoor Emergency Care Training – 6 units

Lecture: 6 hours. Laboratory: 1 hour

This is an intensive course to assist the student in developing didactic and manipulative skills to recognize and treat illness and injuries in the non-urban, pre-hospital environment. The course shall meet or exceed the training guidelines and requirements as specified by the National Ski Patrol and the American Academy of Orthopedic Surgeons. Those students wishing to become National Ski Patrol Basic Patrollers must have approval from sponsoring agency and may be required to pass a skiing proficiency test on the first day of the class or prior to certification. Field trips may be required.

Transfer: CSU

EMS 12 Pre-Paramedic Training – 8 units

Lecture: 8 hours

Provides prerequisites needed for entry into a Paramedic Training Program. An intensive course dealing with anatomy, physiology, pharmacology, and EKG interpretation, and their relationship in the pre-hospital environment. Current EMT certification is required. Two or more years of pre-hospital work experience is strongly recommended. A class entrance exam will be administered on the first evening of class.

Transfer: CSU

EMS 13 Advanced First Aid and Emergency Care – 3 units

Lecture: 3 hours

This course is designed to develop the functional capabilities of individuals who as part of their employment or everyday experiences may be required to provide emergency first aid prior to the arrival of qualified medical personnel. (MJC HE 101)

Transfer: CSU

EMS 20 Basic Cardiology and Cardiac Dysrhythmias – 3 units

Lecture: 3 hours

An intensive course that details basic cardiac anatomy and physiology, normal vs. abnormal cardiac function, electrocardiogram recognition of cardiac dysrhythmias, and the interventions, including pharmacologic therapy, pertaining to specific dysrhythmias. Designed for both the health care professional and the pre-hospital care professional. Serves as an excellent ACLS review and/or prepares students for a paramedic training program. Meets requirements for “Monitor Technician” at many health care facilities. Current EMT certification and/or LVN or higher nursing certification is required for class eligibility.

Transfer: CSU

EMS 97 Work Experience in Emergency Medical Service – 1-4 units

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience.

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in EMS. The student’s employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

EMS 107 Skills Refresher for Emergency Medical Technicians and First Responders – 1.5 units

Prerequisite: EMS 4 or EMS 157, with a grade of C or better, or P, or equivalent medical certification level

Lecture: 1.5 hours

This instructor-based course meets or exceeds the Skills Competency and Continuing Education requirements required for EMT recertification. Students will reacquire themselves with the equipment and skills used by both Emergency Medical Technicians and/or First Responders in emergency medical situations. The course is designed to update existing EMT and First Responder certifications as well as provide continuing education (CE) for EMT and First Responder certificated personnel. Note: Students who do NOT require skills competency verification and require ONLY instructor-based Continuing Education credits should consider EMS 109 (Online Emergency Medical Technician Refresher). Offered for Pass/No Pass grading only.

EMS 109 Online Emergency Medical Technician Refresher – 1.5 units

Prerequisite: EMS 4 or EMS 157, with a grade of C or better, or P, or equivalent medical certification level

Lecture: 1.5 hours

This online course meets or exceeds local requirements for instructor-based EMT Continuing Education and Recertification. Students will re-acquaint themselves with the treatment protocols and knowledge required by Emergency Medical Technicians. The course is designed to update existing EMT and/or First Responder certifications as well as provide continuing education credit (CE) for EMT and First Responder certificated personnel. Note: This course only provides instructor-based Continuing Education credits. Students should consider EMS 107 (Skills Refresher for Emergency Medical Technicians and First Responders) if skills competency verification and/or CPR/AED certification is desired. Offered for Pass/No Pass grading only.

EMS 153 CPR and Basic First Aid – 0.5 unit

Lecture: 0.5 hour

A basic course designed for the citizen who wishes to maintain or acquire Cardio-Pulmonary Resuscitation (CPR) and Basic First Aid certification, or who wishes to learn basic CPR and basic first aid techniques. Successful course completion results in Adult, Child and Infant CPR certification and Basic First Aid certification. Offered for Pass/No Pass grading only.

EMS 157 Emergency Medical Responder and CPR – 3 units

Lecture: 3 hours

A basic course for emergency service workers (volunteer or professional) who may, in the performance of their duties, be responding to medical emergencies. Particular emphasis will be placed on situations unique in the rural setting. Stresses continuity of care through the approach to the patients and prioritization of their injuries/illnesses where advanced life support response is delayed or unavailable. Meets or exceeds United States Department of Transportation National Standard Curriculum, and State and local government requirements. (MJC EMS 350)

EMS 165 Conversational Medical Spanish for Emergency Health Care Providers – 3 units

Lecture: 3 hours

This course is intended to develop fundamental conversational skills primarily for Emergency Health Care Providers and other health care providers. This course is not intended to replace or substitute for a course of study in a foreign language and is specific in its design and content. Basic dialogue and pattern practice will be the instructional method, emphasizing a medical question and answer format. The course will cover basic non-technical vocabulary, some specialized functional terms, idiomatic expressions and situational phrases used in medical Spanish. Also included will be cultural characteristics of the local population of Spanish speakers.

EMS 175 EMS Skills Development –2 units

Lecture: 1.5 hours. Laboratory: 1.5 hours
 This course focuses on the development of basic skills needed for the operation of a variety of emergency medical equipment according to commonly accepted protocols. Sessions are designed to develop speed and accuracy in the application of equipment and enhance assessment and treatment techniques. Offered for Pass/No Pass grading only.

ENGLISH

ENGL 1A Reading and Composition: Beginning – 3 units

Prerequisite: ENGL 151 with a grade of C or better, or P, or placement through the assessment process
 Lecture: 3 hours
 Development of college-level reading and composition skills. Emphasis will be on applying techniques of critical analysis to reading, interpreting, writing, and conducting research. Writing emphasis will be on the expository essay, including the longer documented essay. Note: Students will complete writing assignments with a total minimum of 8,000 words by the end of the semester. (MJC ENGL 101)
 Transfer: UC/CSU. IGETC 1A; CSU-GE A2; C-ID: ENGL 100

ENGL 1B Advanced Composition and Introduction to Literature – 3 units

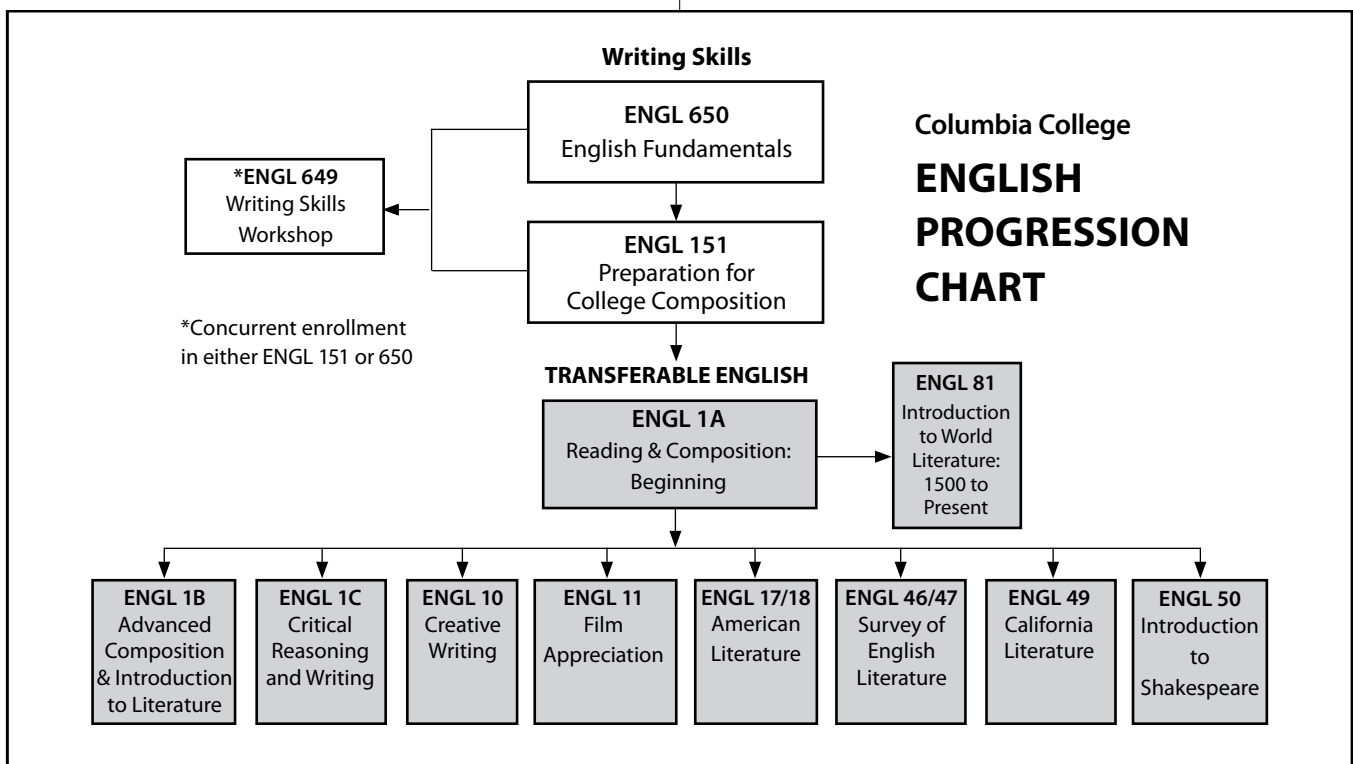
Prerequisite: ENGL 1A with a grade of C or better, or P
 Lecture: 3 hours
 This transfer-level course introduces students to major literature genres: poetry, drama, short story, and long works of fiction from diverse cultural sources and perspectives. Students write approximately 8,000-10,000 words in critical essays, employing methods of literary analysis and research, demonstrating further development of reading, critical reasoning, and writing skills. (MJC ENGL 102)
 Transfer: UC/CSU. IGETC 1B; CSU-GE A3, C2; C-ID: ENGL 120

ENGL 1C Critical Reasoning and Writing – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P
 Lecture: 3 hours
 Designed to develop critical thinking, reading, and writing beyond the level taught in ENGL 1A. Will focus on the development of logical reasoning, analysis, and argumentation in composition. Note: Students will complete writing assignments with a total minimum of 8,000 words by the end of the semester. (MJC ENGL 103)
 Transfer: UC/CSU. IGETC 1B; CSU-GE A3. C-ID: ENGL 105

ENGL 10 Creative Writing – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P
 Lecture: 3 hours
 Instruction and practice in writing poetry, fiction, drama, and non-fiction prose, including autobiography, essays, and articles. Students may choose to concentrate on one particular form. Analysis of contemporary works with respect to literary techniques. The class employs a workshop format.
 Transfer: UC/CSU



ENGL 11 Film Appreciation – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P
 Lecture: 2.5 hours. Laboratory: 1.5 hours
 Development of technical awareness and critical thinking in individual response to cinema. (MJC ENGL 161)
 Transfer: UC/CSU. IGETC 3B; CSU-GE C2

ENGL 17 American Literature – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P
 Recommended for Success: ENGL 1B
 Lecture: 3 hours
 A study of American literature from its beginning to the late nineteenth century. Reading, analysis, and discussion of the major literary trends and authors of the time, including Emerson, Thoreau, Poe, Hawthorne, Melville, Whitman, and Dickinson. (MJC ENGL 135)
 Transfer: UC/CSU. IGETC 3B; CSU-GE C2. C-ID: ENGL 130

ENGL 18 American Literature – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P
 Recommended for Success: ENGL 1B
 Lecture: 3 hours
 A study of American literature from the late nineteenth century to the present. Reading, analysis, and discussion of the major literary trends and authors of the time, including Twain, James, Crane, Frost, Eliot, and Faulkner as well as a diverse group of contemporary writers. (MJC ENGL 136)
 Transfer: UC/CSU. IGETC 3B; CSU-GE C2. C-ID: ENGL 135

ENGL 46 Survey of English Literature – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P
 Recommended for Success: ENGL 1B
 Lecture: 3 hours
 English literature from the Anglo-Saxons through the 18th Century. (MJC ENGL 137)
 Transfer: UC/CSU. IGETC 3B; CSU-GE C2. C-ID: ENGL 160

ENGL 47 Survey of English Literature – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P
 Recommended for Success: ENGL 1B
 Lecture: 3 hours
 English literature of the 19th and 20th Centuries. (MJC ENGL 138)
 Transfer: UC/CSU. IGETC 3B; CSU-GE C2. C-ID: ENGL 165

ENGL 49 California Literature – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P
 Recommended for Success: ENGL 1B
 Lecture: 3 hours
 An overview of the literary heritage of California, from its early origins to Harte, Bierce, and Twain through the realism of Norris and London, the regionalism of Steinbeck, Saroyan, Jeffers to the naturalism of Muir. Also will include writings from the Carmel cadre, the San Francisco Beat writers, to contemporary writers including Stegner, Yamamoto, Soto, Haslam, Tan, Didion, Rose, Miles, and Valdez. The approach will emphasize the rich ethnic diversity that has contributed to our literary heritage. Field trips may be required.
 Transfer: UC/CSU. IGETC 3B; CSU-GE C2

ENGL 50 Introduction to Shakespeare – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P
 Recommended for Success: ENGL 1B
 Lecture: 3 hours
 An introduction to the representative works by Shakespeare including the characteristics of the different genres—comedy, history, and tragedy—and a study of a number of the sonnets. In addition, students will study the literary, social, and historical backgrounds of Shakespeare's time as they affect the meaning of the works studied. (MJC ENGL 163)
 Transfer: UC/CSU. IGETC 3B; CSU-GE C2

ENGL 81 Introduction to World Literature: 1500 to Present – 3 units

Recommended for Success: ENGL 1A or eligibility for ENGL 1A
 Lecture: 3 hours
 Literature, including historical backgrounds, from the Renaissance to contemporary literatures of Asian, Middle Eastern, European, African, American, and Latin American cultures. Field trips may be required. (MJC ENGL 132)
 Transfer: UC/CSU. IGETC 3B; CSU-GE C2

ENGL 125 Shakespeare Live: A Week of Theatre in Ashland, Oregon – 3 units

Lecture: 3 hours
 Ashland is the home of the Oregon Shakespeare Festival, one of America's premier theater companies. Students will travel to Ashland to experience a variety of plays, plus receive instruction on acting and design from the company's actors. At least one of the plays will be written by Shakespeare (more in the Autumn), so much of the course will focus on Shakespeare and his times. Prior to the week in Ashland, students will attend classes at Columbia College to prepare for the plays.

ENGL 133 Writing It Real: Creative Nonfiction – 0.5-3 units

Recommended for Success: ENGL 151
 Lecture: 0.5-3 hours
 Development of skills in creative nonfiction writing. Study the principles involved in writing creative nonfiction, such as memoirs, personal essays, reviews, profiles, nature writing, and reportage. Participants create writings as well as analyze and respond to peer and professional work. Field trips may be required.

ENGL 151 Preparation for College Composition – 5 units

Prerequisite: ENGL 650 with a grade of C or better, or P, or placement through the assessment process

Lecture: 5 hours

Developing writing skills. Students will implement writing process strategies in the production of 500-750 word essays. Course will emphasize techniques for developing descriptive, narrative, and expository essays, including essays requiring research and the inclusion of source materials, while demonstrating control over structural components of writing. Students will also develop critical reading skills and information-gathering competency. Satisfactory completion of this course will prepare students for ENGL 1A. Note: Concurrent enrollment in ENGL 649 will complement studies in ENGL 151. (MJC ENGL 50)

ENGL 606 English as a Second Language: Advanced – 3 units

Prerequisite: ENGL 705A, ENGL 705B and/or ENGL 705C

Lecture: 3 hours

This course will prepare the non-native speaker of English for regular college courses. It will involve reading, writing, listening and speaking with emphasis on reading various college-level materials and writing essays with additional preparation for success on the TOEFL.

ENGL 637 Writing for Personal Enrichment – 0.5 unit

Lecture: 0.5 hour

Writing is an instinctive art form that can nourish and sustain; it is an art that is accessible to everyone. Personal writing is a means to access and develop that art. Participants will examine different writings and analyze their effective elements. Then students will focus on putting pen to paper, taking time to pause, reflect, discover their creative source, and ultimately work to create prose and/or poetry that contains specific qualities. Activities will involve analyzing literary selections and exploring the writing process in the context of journal writing and guided exercises. Offered for Pass/No Pass grading only.

ENGL 649 Writing Skills Workshop – 1 unit

Co-requisite: Enrollment in ENGL 151 or ENGL 650

Lecture: 1 hour

Individual assistance for students enrolled in ENGL 151 or ENGL 650. Students will be assisted with prewriting, revision and proofreading strategies. The focus will be on encouraging students to identify their specific problems when completing writing assignments for ENGL 151/650. Offered for Pass/No Pass grading only.

ENGL 650 English Fundamentals – 3 units

Recommended for Success: ENGL 649

Lecture: 3 hours

Fundamentals of the writing process. Students will engage in the various stages of the writing process. Emphasis will be on improving writing fluency and grammatical skills, developing sentence structure, and proofreading strategies within the context of brief 250-500 word essays. Instruction will include using word processing for writing. (MJC ENGL 49)

ENTREPRENEURSHIP**ENTRE 101 Introduction to Entrepreneurship – 2 units**

Lecture: 2 hours

The student will evaluate the business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. The student will understand the role of entrepreneurial businesses in the United States and the impact on our national and global economy.

ENTRE 102 Entrepreneurial Marketing – 2 units

Lecture: 2 hours

The student will gain insights essential for marketing an entrepreneurial venture utilizing innovative and financially responsible marketing strategies. The student will analyze marketing philosophies implemented by key successful entrepreneurs. Additionally, the student will prepare a marketing plan to launch the entrepreneurial venture and a marketing plan to implement during the first two years of business operation.

ENTRE 103 Financial Management for Entrepreneurs – 2 units

Lecture: 2 hours

The importance and impact of funding sources for an entrepreneurial venture. This will be accomplished by reviewing the impact of venture capital in every phase of the business venture from idea to exit, including planning, teambuilding, protecting intellectual capital, identifying funding sources, raising money, writing funding agreements, and managing through to an initial public offering (IPO) or merger and acquisition. Additionally, the student will develop and present a funding proposal.

ENTRE 104 Preparing Effective Business Plans – 2 units

Lecture: 2 hours

Designed to help students develop an effective written implementation plan for a new business venture, including the critical decisions and action steps that entrepreneurs must take in both planning and executing a new venture. The course focuses on "doing" rather than on mere facts about business development and business plan writing.

ENTRE 105 Social Media Marketing – 2 units

Lecture: 2 hours

Learn to use social media as a marketing tool, and develop competitive strategies to make your business or product stand out from the crowd. Whether it's a blog, Facebook, LinkedIn, Twitter, or any other social media tool, social platforms are driving purchasing decisions in both the online and offline worlds.

FIRE TECHNOLOGY

FIRE 1 Fire Protection Organization – 3 units

Lecture: 3 hours

Introduction to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection; fire loss analysis; fire department 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. (MJC FSCI 301)

Transfer: CSU

FIRE 2 Fire Prevention Technology – 3 units

Prerequisite: FIRE 1 with a grade of C or better, or P

Lecture: 3 hours

Fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationship of fire prevention with fire safety education and detection and suppression systems. (MJC FSCI 302)

Transfer: CSU

FIRE 3 Fire Protection Equipment and Systems— 3 units

Prerequisite: FIRE 1 with a grade of C or better, or P

Lecture: 3 hours

Provides information relating to the features of design 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. Field trips may be required. (MJC FSCI 303)

Transfer: CSU

FIRE 4 Building Construction for Fire Protection – 3 units

Prerequisite: FIRE 1 with a grade of C or better, or P

Lecture: 3 hours

The study of the components of building construction that relate to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre-planning fire operations, and operating at fires. The development and evolution of building and fire codes will be studied in relation to past fires in residential, commercial, and industrial occupancies. (MJC FSCI 304)

Transfer: CSU

FIRE 5 Fire Behavior and Combustion – 3 units

Prerequisite: FIRE 1 with a grade of C or better, or P

Lecture: 3 hours

Theory and fundamentals of how and why fires start, spread, and are controlled; an in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents, and fire control techniques. (MJC FSCI 305)

Transfer: CSU

FIRE 7 Wildland Fire Control – 3 units

Prerequisite: FIRE 1 with a grade of C or better, or P

Lecture: 3 hours

Provides practical knowledge and an overview of the fundamental principles of wildland fire control and management. Topics include firefighter safety, wildland fire behavior, strategy and tactics, wildland-urban intermix fires and the role of prescribed fire activities. (MJC FSCI 337) (CC FIRE 7, FIRE 50, FIRE 101, FIRE 106 & FIRE 107 = MJC FSCI 362 & FSCI 363)

Transfer: CSU

FIRE 10 Introduction to Search Theory – 2 units

Lecture: 2 hours

An overview of current search theories as developed by the National Park Service and the National Association for Search and Rescue. National Association for Search and Rescue Certification available to the student. Credit may be earned for only one of the following: FIRE 10 or SAR 10.

Transfer: CSU

FIRE 29A Driver/Operator Training 1A – 1 unit

Prerequisite: FIRE 101 with a grade of C or better, or P, or Firefighter I certificate, or Volunteer Firefighter certification, or equivalent

Lecture: 0.6 hour. Laboratory: 1.6 hours

Designed to provide the student with information on driver techniques for emergency vehicles and techniques of basic inspection and maintenance for emergency vehicles, including actual driving exercises under simulated emergency conditions. (CC FIRE 29A & 29B = MJC FSCI 364)

Transfer: CSU

FIRE 29B Driver/Operator Training 1B – 1 unit

Prerequisite: FIRE 29A with a grade of C or better, or P, or Firefighter I Certificate, or Volunteer Firefighter certification or equivalent

Lecture: 0.60 hour. Laboratory: 1.60 hours

Designed to provide the student with information and skills on Pump Techniques and Operations including basic inspection and maintenance. Offered for Pass/No Pass grading only. (CC FIRE 29A & FIRE 29B = MJC FSCI 364)

Transfer: CSU

FIRE 50 Low Angle Rope Rescue – 1.5 units

Lecture: 1.5 hours

This course is designed to take the student to the basic skill and knowledge levels of Low Angle (not vertical) Rope Rescue. Topics will include, but are not limited to: basic rappelling, rescue of ambulatory and non-ambulatory persons with an emphasis on safety and teamwork. Topics reflect current Urban Search and Rescue and California State Fire Training standards and equipment. Successful students will be certified in Low Angle Rope Rescue by the California State Fire Marshal's Office. Credit may be earned for only one of the following: FIRE 50 or SAR 50. Offered for Pass/No Pass grading only. (CC FIRE 7, FIRE 50, FIRE 101, FIRE 106 & FIRE 107 = MJC FSCI 362 & FSCI 363)

Transfer: CSU

FIRE 51 High Angle Rope Rescue – 1.5 units

Prerequisite: FIRE 50 or SAR 50, with a grade of C or better, or P
Lecture: 1.5 hours

This course is designed to take the student from the basic skill levels of Low Angle (non-vertical) Rope Rescue Certification to the more complex rappelling and rope rescue skills found in High Angle (vertical) Rope Rescue situations. This course will reflect current Urban Search and Rescue and California State Fire Training standards. Credit may be earned for only one of the following: FIRE 51 or SAR 51. Offered for Pass/No Pass grading only.

Transfer: CSU

FIRE 59 Rescue Systems I: Instructor Training – 3 units

Lecture: 3 hours

Review and update of heavy duty rescue skills and techniques designed to prepare qualified personnel to teach those skills and techniques to others. Credit may be earned for only one of the following: FIRE 59 or SAR 59. Offered for Pass/No Pass grading only.

Transfer: CSU

FIRE 97 Work Experience in Fire Technology – 1-4 units

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in Fire Technology. The student's employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

FIRE 101 Firefighter I Academy – 16 units

Prerequisites: EMS 157 and HHP 55A with grades of C or better, or P, or concurrent enrollment in EMS 157 and HHP 55A

Lecture: 8 hours. Laboratory: 24 hours

This course is designed for students who desire to enter the firefighting field and meet requirements, units A-X, for the California State Firefighter 1 certification. Upon successful completion of the course, the student is then responsible for completing the required field experience with Fire Department verification (either six months full-time or one year part-time or volunteer) before submitting an application to the State. Curriculum for the fire academy includes firefighting skills, safety, incident management systems, operations, manipulative skills, tools and equipment, emergency scene operations, fire prevention, and investigation. Additional certifications include I-100, I-200, I-700.a, S-130, S-133, S-134, S-190, L-180, Seasonal Wildland Firefighter, Basic Land Navigation, Auto Extraction, Low Angle Rope Rescue, Hazardous Materials Full FRO, Firefighter Safety and Survival, Confined Space Awareness, and Basic Power Saw Safety. Note: Students must have a medical release for the course to engage in strenuous physical lifting, carrying, and related activities. Field trips required.

FIRE 106 Hazardous Materials First Responder Operational – 1 unit

Lecture: 1 hour

Meets requirements of CAL-OSHA for training of emergency responders to hazardous materials incidents, per CFR 1910.120(q)(6)(ii) and Title 8 California Code of Regulations 5192(q)(6)(B). Includes awareness and recognition of potential hazards, and procedures to insure safety of emergency personnel, the public and the environment. Offered for Pass/No Pass grading only. (CC FIRE 7, FIRE 50, FIRE 101, FIRE 106, FIRE 108 & FIRE 110 = MJC FSCI 362 & FSCI 363)

FIRE 108 Confined Space Awareness – 0.5 unit

Lecture: 0.5 hour

Prepares students to identify and safely consider operations in and around defined "confined spaces." Meets the requirements of CAL-OSHA Title 8 for "Confined Space Awareness Level" training. Offered for Pass/No Pass grading only. (CC FIRE 7, FIRE 50, FIRE 101, FIRE 106, FIRE 108 & FIRE 110 = MJC FSCI 362 & FSCI 363)

FIRE 110 ICS 200 – Basic Incident Command System – 1 unit

Lecture: 1 hour

Introduces students to the principles and features associated with the Incident Command System. Offered for Pass/No Pass grading only. (CC FIRE 7, FIRE 50, FIRE 101, FIRE 106, FIRE 108 & FIRE 110 = MJC FSCI 362 & FSCI 363)

FIRE 111 Basic Power Saw Safety – 1 unit

Total lecture hours: 16

Basic Power Saw Safety is aligned with State Fire Marshal S-212 to provide instruction on the function, maintenance and use of internal-combustion-engine-powered chain saws, and their tactical fire application. Instruction will support entry-level training for firefighters with little or no previous experience in operating a chain saw, providing hands-on experience in maintaining power saws.

FIRE 120 Fire Operations in the Urban Interface – 1.5 units

Lecture: 1.5 hours

This course addresses content in initial attack incident command and control of wild land fire that threatens life, property and improvements.

FIRE 131 Introduction to ICS and Dispatch Recorder – 1 unit

Lecture: 1.11 hours

This course is designed to provide the student with the training, skills and knowledge necessary to work in the position of Dispatch Recorder, working in an emergency dispatch center in support of a wildland fire incident or other event. Instruction will include how to complete Resource Order Cards, how to document a pertinent request, resource or incident information and how to use the Virtual Resource Order and Status System (ROSS). This course will also teach the student how to identify positions in the Incident Command System, how to identify the proper chain of command, when to implement the Incident Command System and how to shrink and expand the Incident Command System to meet the needs of the incident.

FIRE 155 Volunteer Firefighting Training – 2.5 units

Lecture: 2 hours. Laboratory: 1.5 hours

Current concepts, techniques, skills and theories for volunteer firefighters. Offered for Pass/No Pass grading only.

FOREIGN LANGUAGE see Spanish**FORESTRY****FORES 1 Introduction to Professional Forestry– 3 units**

Lecture: 3 hours

Survey of the major U.S. forest regions and significant forest history events. Forestry practices, wood utilization and applied techniques of private tree farm/woodlot management for long-term production of timber, fuel wood, Christmas trees and other resources. Forestry education, career opportunities, licensing and ethics. Field trips required. (MJC NR 220)

Transfer: CSU

FORES 10 Dendrology – 3 units

Lecture: 2 hours. Laboratory: 3 hours

Covers evolution, systematics, identification, terminology, morphology, anatomy, life cycle, ecology, growth requirements, distribution and ethnobotany of trees and shrubs. Emphasis is on trees and shrubs of the Sierra Nevada, California and the western United States. Field trips required. (MJC NR 376)

Transfer: UC/CSU

FORESTRY TECHNOLOGY**FORTC 153 Forest Surveying – 1.5-3 units**

Lecture: 1-2 hours. Laboratory: 1.5-3 hours

Objectives and methods of forest surveying. Use of basic forest surveying instruments. Application of hand and staff compass, engineer's tape, clinometer, abney, dumpy and hand levels, engineer's transit (theodolite), and total station. Field recording techniques, laboratory computations and map drafting. Field trips may be required.

FORTC 162 Applied Forest Inventory and Management – 2 units

Lecture: 1 hour. Laboratory: 3 hours

Techniques of forest inventory and management including forest surveys, cruising, and scaling; data collection and analysis; location and delineation of forest properties and resources; survey and management of other natural resources. Field trips required. (MJC NR 376)

FORTC 165 Fire-Fuels Management – 3 units

Lecture: 3 hours

Fundamentals of fire-fuels management, including: objectives of fuels reduction, preliminary surveys and reports, prescriptions for fuels reduction, and techniques for carrying out fuels reduction. Field trips may be required.

GEOGRAPHY**GEOGR 12 Cultural Geography – 3 units**

Lecture: 3 hours

Examines humankind's relationship with the environment using multidisciplinary perspectives and techniques. Historical and contemporary patterns of cultural-environment adaptations, the landscape of cultural diversity, demography and mobility, political organization, the process of urbanization, and economic organization will be emphasized. (MJC GEOG 102)

Transfer: UC/CSU. IGETC 4E; CSU-GE D5. C-ID: GEOG 120.

GEOGR 15 Physical Geography – 3 units

Lecture: 3 hours

An introduction to selected aspects of the earth's physical environment (landforms, weather, climate, soils, and vegetation) and the processes and conditions giving rise to their worldwide distribution. The study of the earth as the home of man. (MJC GEOG 101)

Transfer: UC/CSU. IGETC 5A; CSU-GE B1.

GEOGR 57 GIS Data Management - Introduction to Geodatabase – 1-3 units

Recommended for Success: CMPSC 4, CMPSC 10

Lecture: 1-3 hours

Students who take this course will learn to use the ArcGIS Geodatabase format for management of spatial data. Students will be introduced to the concepts of database design and system architecture using ArcGIS software. Concepts covered include: introduction to the geodatabase; metadata; geodatabase vs. shapefile formats; overview of ArcGIS data models; feature datasets and feature classes; editing a geodatabase; personal geodatabase vs. multi-user geodatabase; domains and validation rules; and relationships and subtypes. Credit may be earned for only one of the following: GEOGR 57 or CMPSC 57.

Transfer: CSU

GEOGR 58 GIS - ArcView – 1 unit

Lecture: 1 hour

Introduction to practical application of ArcView software; importation of GIS data, display, visualization, exploration, query, analysis, and production of hard-copy maps and reports. Students will be guided through a complete sequence of application fundamentals similar to what would normally be used in displaying, analyzing, and plotting a standard ArcView GIS application. Credit may be earned for only one of the following: GEOGR 58 or CMPSC 58. Offered for Pass/No Pass grading only.

Transfer: CSU

GEOGR 59 Geographic Information and Global Positioning Systems – 1-3 Units

Lecture: 1-3 hours

Introduction to basic GIS and GPS concepts and applications in the field of natural resources, earth sciences, and environmental systems. Students will learn to use Global Positioning System units, combined with Geographic Information System software to collect field data and produce maps for spatial analysis and decision-making purposes. Six weeks will be spent learning ArcView software; another six weeks will be spent learning to use GPS units; and another six weeks will be spent learning to design and carry out a research project merging GPS and GIS technologies. Credit may be earned for only one of the following: GEOGR 59 or CMPSC 59.

Transfer: CSU

GEOGR 60 Introduction to ArcGIS – 3 units

Lecture: 3 hours

An introduction to fundamental Geographic Information Systems (GIS) concepts. Students will be introduced to the ArcGIS software package as the main vehicle for learning GIS. GIS geodatabases and maps will be produced from several different data sources. Emphasis will be placed on planning the design of GIS geodatabases which will permit specific types of queries. Credit may be earned for only one of the following: GEOGR 60 or CMPSC 60. (MJC GEOG 109)

Transfer: CSU

GEOGR 61 GIS Mapping–Introduction to Fire Incident Mapping – 1 unit

Recommended for Success: CMPSC 4, CMPSC 10

Lecture: 1 hour

Students who take this course will learn how to apply their GIS skills in Fire Incident Mapping. Students will learn fire incident symbology, data standards and organization, fire incident map products, and responsibilities of a Fire GIS Specialist. Additionally, students will utilize GPS data that they have collected, convert them to shapefiles, and create a fire incident map. This course includes hands-on experience in fire incident mapping and data organization. Students will also be encouraged to present their final project in public at GIS Day events. Credit may be earned for only one of the following: GEOGR or CMPSC 61. Offered for Pass/No Pass grading only.

Transfer: CSU

GEOGR 62 GIS Mapping - Introduction to SAR GIS – 1 unit

Lecture: 1 hour

Students who take this course will learn how to apply their GIS skills in Search and Rescue (SAR) Mapping. Students will learn SAR incident symbology, data standards and organization, establishing incident locations, search segments, SAR incident map products, and responsibilities of a GIS specialist on SARs and other critical incidents. The course will use a workflow and data model developed by SAR personnel that integrates with ArcGIS 10. Additionally, students will utilize GPS data that they have collected from GPS devices, convert them to shapefiles, and create team and briefing incident maps. During a full-day exercise, students will also live-track SAR teams using satellite tracking devices. This course includes hands-on experience in SAR incident mapping and data organization. Credit may be earned for only one of the following: GEOGR 62, CMPSC 62 or SAR 62. Offered for Pass/No Pass grading only.

Transfer: CSU

GEOGR 65 GIS Applications – 0.5-3 units

Recommended for Success: GEOGR 60 or CMPSC 60

Lecture: 0.5-3 hours

Uses the ArcGIS ArcView software to explore intermediate topics in GIS applications. Topics include geodatabase creation and editing, geoprocessing models, geocoding, and working with annotation. The course consists of a combination of lectures, demonstrations, hands-on exercises, and a student project. Credit may be earned for only one of the following: GEOGR 65 or CMPSC 65.

Transfer: CSU

GEOGR 70 Introduction to Raster-Based GIS – 3 units

Recommended for Success: GEOGR 59, GEOGR 60, CMPSC 59 or CMPSC 60

Lecture: 3 hours

This course uses the ArcGIS ArcView software along with the Spatial Analyst and 3D extensions to explore the use of raster GIS data in analysis and visualization. Topics include terrain analysis, hydrologic analysis, suitability analysis, and 3D modeling. The course consists of a combination of lectures, demonstrations, hands-on exercises, and a student project. Credit may be earned for only one of the following: CMPSC 70 or GEOGR 70.

Transfer: CSU

GEOGR 75 GIS Applications in Resource Management – 0.5-3 units

Recommended for Success: GEOGR 70 or CMPSC 70

Lecture: 0.5-3 hours

Uses ArcGIS ArcView software and the Image Analyst extension to explore the use of GIS in natural resource analysis and management. Emphasis is on the use of satellite imagery and aerial photography to derive information for GIS analysis. The course consists of a combination of lectures, demonstrations, hands-on exercises, and a student project. Credit may be earned for only one of the following: GEOGR 75 or CMPSC 75.

Transfer: CSU

GUIDANCE

GUIDE 1 Career/Life Planning – 3 units

Recommended for Success: ENGL 151

Lecture: 3 hours

Designed to help students formulate and experience an organized and realistic approach to career planning. Development of awareness and objectivity in the areas of interests, skills, values, aptitudes, etc. Introduction to sources of occupational information, and occupational trends. Introduction to decision-making, career information, career trends and social influences on career-life planning. May include administration of standardized interest and personality inventories. (Satisfies MJC Guidance requirement)

Transfer: CSU. CSU-GE E.

GUIDE 10A Introduction to Helping Skills – 1.5 units

Lecture: 1.5 hours

An introduction to the skills basic to a helping relationship. Includes instruction in the concepts and principles, as well as experience in the use of specific skills. Designed for non-professional and paraprofessional helpers such as peer tutors, peer counselors, advisors, managers, supervisors etc. Offered for Pass/No Pass grading only.

Transfer: CSU

GUIDE 10B Intermediate Helping and Basic Conflict Management Skills – 1.5 units

Prerequisite: GUIDE 10A with a grade of C or better, or P

Lecture: 1.5 hours

Continued instruction in concepts, principles and skills basic to a helping relationship. Experience in the specific use of each skill. Includes an emphasis on both helping skills and introduction to the skills unique to the process of conflict management. Designed for non-professional and paraprofessional helpers, especially in informal settings, including, but not limited to: friend-friend, parent-child, teacher-student, supervisor-employee, worker-client, and peer counseling situations. Offered for Pass/No Pass grading only.

Transfer: CSU

GUIDE 11 Occupational Exploration – 1 unit

Lecture: 1 hour

An introduction to occupational exploration and career choice. Emphasis will be on linking personal information (interests, values and abilities) obtained through career assessment, with information about occupations, researched by using Career Center and online resources. Career choices will be clarified and corresponding and appropriate educational goals will be selected. Students will receive instruction in goal setting, decision making, and problem solving as they relate to the development and fulfillment of educational and career plans. (MJC GUIDE 111)

Transfer: CSU

GUIDE 25 Job Search and Interviewing Strategies – 1 unit

Lecture: 1 hour

Understanding the employment process and development of written and oral presentation skills necessary to conduct an efficient and effective job search. Topics include: the hiring process, employer perspectives, the hidden job market, networking, research, job search planning, making employer contacts and interviewing. Development of a master application, resume and letter of application. Credit may be earned for only one of the following: GUIDE 25 or BUSAD 25. (MJC GUIDE 112)

Transfer: CSU

GUIDE 100 College Success – 3 units

Lecture: 3 hours

Prepares students for the challenges of college-level coursework. Designed for students new to college, re-entering college, or those on academic or progress probation status who would like to develop or improve skills and abilities necessary for college success. Topics include: values, goal-setting methods, time management, note-taking techniques, textbook reading strategies, test-taking skills, memorization, critical and creative thinking, learning styles, and the use of technology for academic success. Familiarizes students with the College, its curriculum, facilities, services, policies, programs and degree and transfer requirements. (MJC STSK 78)

GUIDE 107 Orientation to College – 0.5-1 unit

Lecture: 0.5-1 hour

A course designed to prepare the student to meet the demands of college rigor. Especially beneficial to new students to Columbia College and students returning to college after a long absence, this course addresses policies and practices at Columbia College. Topics covered include academic renewal, grading policy, advanced placement credit, academic and progress probation and dismissal, educational planning, requirements for the associate degree, certificates of achievement and transfer to the four-year university, and other topics related to the use of the programs and services at Columbia College. Such topics include financial aid, tutoring, counseling, special services for students with disabilities, career planning and job placement. Offered for Pass/No Pass grading only. (MJC GUIDE 110)

GUIDE 108 Guidance for Career Technical Education – 1 unit

Lecture: 1 hour

Designed to familiarize students with the various Career Technical Education certificates and degrees available at Columbia College. Course topics will include college resources available to assist students in meeting the rigor of college coursework, as well as the research and planning required to successfully achieve educational goals. Offered for Pass/No Pass grading only. Field trips required.

GUIDE 115 Principles of Leadership – 1 unit

Lecture: 1 hour

Designed to assist students in gaining basic knowledge of leadership skills, to develop skills in principles and administration of parliamentary law; the co-curricular activity program; finances, including budgetary procedure; and group dynamics. Offered for Pass/No Pass grading only. (MJC SOCSC 58)

GUIDE 150 Guidance for Nursing Majors – 0.5 unit

Lecture: 0.5 hour

Course will familiarize Columbia College students with the MJC Associate Degree in Nursing Program. Subjects will include: nursing curriculum, facilities, student services and resources, academic requirements, nursing program prerequisites, graduation and transfer requirements. Student aptitudes, interests, values and skills will be addressed in relation to a nursing career. Important aspects of nursing as an occupational choice will be covered along with information regarding the nursing profession. Students will be taught the curriculum requirements that pertain to the nursing program and will formulate a detailed education plan with alternatives for higher education. Offered for Pass/No Pass grading only. Field trips may be required. (Satisfies MJC Guidance requirement)

HEALTH & HUMAN PERFORMANCE

Note: Columbia College Health and Human Performance activity courses receive equivalent credit at MJC for physical education.

HHP 1 Introduction to Physical Education, Fitness, and Sport – 3 units

Lecture: 3 hours

Introduces students to the fields of physical education, exercise science, sports medicine, and related fields, presenting the history and trends in physical education and the human movement sciences. Explores key concepts, programs, professions, problems and issues, and essential background knowledge needed for career success. Historical discussions and evolving philosophies of physical education and sport are followed with current trends and themes.

Transfer: UC/CSU

HHP 2 Women's Health Issues – 3 units

Lecture: 3 hours

This course will focus on the politics of women's health and medical care issues in the United States including analyzing, as well as establishing methods of utilizing, the health care system with specific attention to women as health care consumers; contemporary concerns about the health care delivery system with emphasis on the gender politicalization of the social, physical, emotional, intellectual, spiritual and environmental aspects of gender-health. (MJC HE 111)

Transfer: UC/CSU. IGETC 4D; CSU-GE D4, E.

HHP 3 Introduction to Kinesiology – 3 units

Lecture: 3 hours

Provides an introduction to the interdisciplinary approach to the study of human movement. Emphasis on the importance of the subdisciplines will be discussed as well as career opportunities.

Transfer: UC/CSU. C-ID: KIN 100

HHP 4 Care and Prevention of Athletic Injuries – 3 units

Recommended for Success: BIOL 10

Lecture: 2.5 hours. Laboratory: 1.5 hours

An introduction to the principles and skills associated with an athletic trainer. The student will learn the prevention, recognition, assessment, care, and rehabilitation of common athletic injuries. Basic assessment skills and taping techniques will be introduced and practiced. (MJC PE 108)

Transfer: UC/CSU

HHP 5 Introduction to Recreation and Leisure – 3 units

Lecture: 3 hours

This course provides students a detailed overview of the history, developments, and current trends in leisure and recreation studies. It reflects recent social change and challenges facing recreation industries in the 21st Century, including population shifts, technology and marketing. It also addresses the history of the parks movement and tourism/sport segments. This course is of interest to students of Hospitality and Human Performance (Recreation-related subjects). Credit may be earned for only one of the following: HHP 5 or HPMGT 10.

Transfer: CSU. CSU-GE E.

HHP 6A Lifetime Fitness Program I – 1-3 units

Lecture: 0.5-1.5 hours. Activity: 1.5-4.5 hours

Introduction to the fundamental principles and practices of scientific exercise conditioning, nutritional requirements, weight control techniques, coronary heart disease concepts, and considerations of preventive medicine. Basic exercise routine involves the circuit training system.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) CSU-GE E.

HHP 6B Lifetime Fitness Program II – 1-2 units

Prerequisite: HHP 6A with a grade of C or better, or P

Activity: 3-6 hours

A continuation of the exercise principles and practices employing the circuit training system presented in Lifetime Fitness Program I with emphasis on improving fitness component levels, compliance, motivation, and increased awareness of sound nutritional practices.

Transfer: UC/CSU (Transfer credit limited. See a counselor.) CSU-GE E.

HHP 8A Aerobic Exercise – 1 unit

Activity: 3 hours

Provides an introduction to cardiovascular conditioning with an emphasis on the fundamental principles of exercise as a component of health.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 8B Step Aerobics – 1 unit

Activity: 3 hours

Designed to improve cardiovascular endurance with an emphasis on step aerobics as a component of health.

Transfer: CSU

HHP 9 Circuit Cross-Training – 1 unit

Activity: 3 hours

A comprehensive workout at an introductory level to achieve personal fitness goals through the use of cardiovascular and strength training systems.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 10 Adaptive Physical Education – 1 unit

Activity: 3 hours

Designed to offer individually prescribed fitness direction to the physically limited with emphasis on the improvements of cardiovascular, flexibility, and strength components.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 13A Introduction to Cardiac Rehabilitation – 2-3 units

Lecture: 1 hour. Activity: 3-6 hours

A secondary prevention program designed for patients with angina pectoris, healed myocardial infarctions, or post-cardiac surgical referrals whose functional capacity is relatively uncompromised. Primary physician referral required.

Transfer: CSU

HHP 13B Cardiac Rehabilitation – 1-2 units

Recommended for Success: HHP 13A

Activity: 3-6 hours

Designed to continue rehabilitation for the cardiac patient.

Emphasis is placed on a higher level of cardiovascular functional capacity and reducing factors associated with coronary heart disease. Primary physician referral required.

Transfer: CSU

HHP 15A Introduction to Cardiac Family Fitness – 2-3 units

Lecture: 1 hour. Activity: 3-6 hours

Designed to introduce the cardiac student's family to cardiovascular fitness principles and practices. Emphasis will be placed on modifying risk factors necessary for the full rehabilitation of the cardiac student. Must be a member of enrolled cardiac student's family.

Transfer: CSU

HHP 15B Cardiac Family Fitness – 1-2 units

Recommended for Success: HHP 15A

Activity: 3-6 hours

This class is designed for family of cardiac patients. Emphasis will be on developing a higher level of cardiovascular functional capacity and reducing the risk factors associated with coronary artery disease. Must be a member of enrolled cardiac student's family. Physician referral required.

Transfer: CSU

HHP 16 Walking for Fitness – 1 unit

Activity: 3 hours

Provides various methods of walking along with other exercises to achieve whole-body fitness. Emphasis is on cardiovascular efficiency, muscle endurance and strength, flexibility, and body composition.

Transfer: CSU

HHP 17 Stability Ball Training for Fitness – 0.5-2 units

Activity: 1.5-6 hours

This class is designed to acquaint students with non-traditional physical activities as a means to achieve personal fitness goals. Coursework will focus on the development/improvement of muscular strength and endurance, cardio-respiratory fitness and flexibility by using the stability ball.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 18A Yoga I for Better Health – 0.5-2 units

Activity: 1.5-6 hours

This is a beginning yoga class using postures, breathing and relaxation techniques to increase flexibility, strength, balance and coordination.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 18B Yoga II for Better Health – 0.5-2 units

Recommended for Success: HHP 18A

Activity: 1.5-6 hours

Intermediate yoga practice using more advanced postures, breathing, and relaxation techniques to further increase flexibility, strength, balance and coordination.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 23 Contemporary Dance – 0.5-1.5 units

Activity: 1.5-4.5 hours

Introduction to contemporary dance technique; designed to acquaint the student with the fundamentals of dance and creative movement exploration while developing strength, flexibility, and expressiveness.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 25 Jazz Dance – 0.5-1.5 units

Activity: 1.5-4.5 hours

Introduction to the fundamentals of jazz dance; designed to acquaint the student with basic technique in a cultural and historical context while developing strength, flexibility, and stylistic awareness.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 32 Basketball: Men's Rules – 0.5-1 units

Activity: 1.5-4.5 hours

Instruction, practice, and participation in game play. Emphasis on rules, individual and team skills, and team strategy.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 34 Basketball: Advanced Theory and Practice – 3 units

Lecture: 1 hour. Activity: 6 hours

Advanced concepts, strategy, and practice necessary in the playing and understanding of collegiate basketball. Field trips may be required.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 35 Volleyball: Advanced Theory and Practice – 2-3 units

Prerequisite: HHP 53C with a grade of C or better, or P

Lecture: 1-2 hours. Activity: 3 hours

Advanced concepts, strategy, and practice necessary in the playing and understanding of collegiate volleyball. Field trips may be required.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 38A Golf I – 0.5-1.5 units

Activity: 1.5-4.5 hours

Instruction and practice in fundamentals.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 38B Golf II – 0.5-1.5 units

Recommended for Success: HHP 38A

Activity: 1.5-4.5 hours

Instruction and practice in skills, rules and strategy.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 45 Co-Ed Flag Football – 0.5-2 units

Activity: 1.5-6 hours

Designed to introduce the necessary skills and knowledge to participate in recreational flag football. Instruction of rules along with drills to improve the student's skill level.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 46 Indoor Sport Climbing – 0.5-1.5 units

Activity: 1.5-4.5 hours

An introduction to rock climbing using an indoor climbing wall. Instruction and practice in belaying, climbing technique, strength training, flexibility, and injury prevention. Includes discussion of gear, anchors, rappelling, and safety.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 47A Soccer I – 0.5-1.5 units

Activity: 1.5-4.5 hours

Instruction, practice, and participation in game play. Emphasis on rules, individual skills, and strategy on the field.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 47B Soccer I – 0.5-1.5 units

Recommended for Success: HHP 47A

Activity: 1.5-4.5 hours

Instruction and practice in the advanced aspects of soccer.

Emphasis on individual positioning and strategy of the game. Includes set plays and advanced skill builders.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 48 Co-Ed Softball – 0.5-1.5 units

Activity: 1.5-4.5 hours

Discussion and practical application of rules and offensive/defensive team strategies in the sport of softball. Instruction on biomechanics and emphasis on skill development in throwing, catching, hitting, bunting, fielding, pop-ups, pitching, catching, base running, and sliding.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 50A Tennis I – 0.5-1.5 units

Activity: 1.5-4.5 hours

Instruction and practice in fundamentals of Eastern grip tennis. Emphasis on development of sound ground strokes, serve, and volley. Includes rules, scoring, and game play in both singles and doubles tennis.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 50B Tennis II – 0.5-1.5 units

Prerequisite: HHP 50A with a grade of C or better, or P

Activity: 1.5-4.5 hours

Instruction and practice in the advanced aspects of Eastern grip tennis. Emphasis on game play and development with individualized coaching and analysis for the more experienced player. Includes tactics and court coverage to encourage a more powerful game in both singles and doubles tennis.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 53A Volleyball I – 0.5-1.5 units

Activity: 1.5-4.5 hours

Basic techniques with emphasis on offensive and defensive tactics of team play. Rules and intra-class competition included.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 53B Volleyball II – 1 unit

Activity: 3 hours

An intermediate level of skills and strategies for the experienced player; an introduction to power volleyball play.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 53C Volleyball III – 1 unit

Activity: 3 hours

An advanced level of skill and strategies for the experienced player. Intra-class power play competition included.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 55A Fitness Training I for Firefighting – 1 unit

Activity: 3 hours

An introductory course designed to prepare students for the Candidate Physical Ability Test (CPAT) which is a requirement to become a firefighter in California. Training and conditioning will focus on specific agility, flexibility, muscle strength, muscle endurance, and cardiovascular activities for the CPAT and work-related duties. Emphasis on nutrition and maintaining a healthy lifestyle will be included.

Transfer: CSU

HHP 55B Fitness Training II for Firefighting – 1 unit

Activity: 3 hours

An intermediate course designed to prepare students for the Candidate Physical Ability Test (CPAT) which is a requirement to become a firefighter in California. Training and conditioning will focus on specific agility, flexibility, muscle strength, muscle endurance, and cardiovascular activities. Emphasis on developing a well-balanced workout will be emphasized.

Transfer: CSU

HHP 56A Weight Training I – 1 unit

Activity: 3 hours

Instruction in use of weights and body building equipment with emphasis upon individual program development.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 56B Weight Training II – 1 unit

Recommended for Success: HHP 56A or equivalent

Activity: 3 hours

Designed to help individuals accomplish a fine state of physical fitness through the use of "overload" equipment and progressive resistance exercises. Each person shall, with the counseling of the instructor, analyze particular needs and establish a program that will help accomplish these goals.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 57 Body Sculpting – 1 unit

Activity: 3 hours

Provides an introduction to the application of mechanical and anatomical principles. Emphasis is on muscular strength and endurance using free weights, resistance bands, and toning exercises.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 58 Ultimate Frisbee I – 0.5-1 units

Activity: 1.5-3 hours

Designed to enhance the student's skills and abilities in Ultimate Frisbee. Emphasis will be placed on cardiovascular and muscular fitness. This course is progressive; the intensity increases as the individual improves abilities.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 59A Beginning Tai Chi – 1 unit

Activity: 3 hours

This is a beginning course in Tai Chi Chuan—Yang-style short form, 21 movements. Also included will be a history of Tai Chi and warm-up exercises.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 60 Health and Fitness Education – 3 units

Lecture: 3 hours

Personal and community health: an understanding of contemporary health issues and problems with an emphasis on personal fitness and adjustment. An informative material survey contributing to a person's mental, physical, and social well-being. (MJC HE 110)

Transfer: UC/CSU. CSU-GE E

HHP 61 Activities in Motor Development – 1 unit

Co-requisite: CHILD 40

Activity: 3 hours

Introduction and physical applications of gross motor activities and concepts across early childhood curriculum. Key components that ensure developmentally-appropriate physical activities for both children and staff will be identified along with the importance of collaboration with families and caregivers.

Transfer: CSU

HHP 62 Safety and First Aid Education – 2 units

Lecture: 2 hours

Theory and skills involved in the immediate and temporary care given to the victims of accidents and sudden illnesses. Covers American Red Cross Standard First Aid with CPR/AED-Adult/Child plus infant certificates available upon satisfactory completion of the course.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 63 Sociology of Sport – 3 units

Lecture: 3 hours

Examines the history of sport and its political, social and economic impact on public opinion. Includes an investigation into the phenomenon of sport, including cultural stratification, race, gender, education, economics, politics and the mass media.

Transfer: CSU/UC. IGETC 4J; CSU-GE D0

HHP 66 Mental Aspects of Sport – 3 units

Lecture: 3 hours

Theoretical, practical and mental aspects of sport, exercise, and rehabilitation settings. The influence of psychological variables on participation in sport and exercise. The influence of participation on psychological factors and well-being. Topics include motivation, anxiety, observational learning, imagery, exercise adherence, goal setting, and youth sport participation.

Transfer: CSU

HHP 72 Introduction to Backpacking – 1 unit

Lecture: 0.5 hour. Activity: 1.5 hours

An introductory course to basic backpacking. Designed for students to actively experience backpack outings. Emphasis will include an introduction of clothing and equipment, meals, trip planning and preparation, camp set-up, leave-no-trace principles, fitness and conditioning, trail hiking skills, and navigation with a map and compass. Offered for Pass/No Pass grading only. Field trips required.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 74 Introduction to Sport Management – 3 units

Lecture: 3 hours

Provides an introductory overview of professional sport management in North America. The political, historical, social, economic, and cultural impacts of sport management are explored. Topics will include team management, organizational administration, legal issues, public relations, and facility management. Students will become familiar with career opportunities in the sports management field.

Transfer: CSU

HHP 76 Beginning Sports Conditioning – 0.5-1.5 units

Activity: 1.5-4.5 hours

This is a course designed to expose the student to the various components of sport-related conditioning. The student will develop a theoretical knowledge of these components and will participate in activities that include jogging, running and plyometrics, as well as strength training and flexibility training. This class is for the athlete or student wishing to participate in a vigorous training program. May be repeated three times.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 82 Varsity Basketball (Men) – 1.5 units

Activity: 6 hours

Preparation and training for intercollegiate varsity basketball competition. Participation in contests with other colleges will be scheduled. Field trips required. May be repeated three times.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 86 Varsity Volleyball (Women) – 3 units

Activity: 9 hours

Preparation and training for intercollegiate varsity volleyball competition. Participation in contests with other colleges will be scheduled. Field trips required. May be repeated three times.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

HHP 100 College Success for Athletes—2 units

Lecture: 2 hours

Designed for new student-athletes to assist with the adjustment to college-level academics and athletics. The focus is on application of learning strategies, academic planning with a college counselor, time management, transfer and eligibility guidelines, life skills and study skills. Additionally, this course will promote realistic expectations of college while understanding what is necessary to succeed as an intercollegiate athlete.

HEALTH OCCUPATIONS**HL-OC 97 Work Experience in Health Occupations – 1-4 units**

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in Health Occupations. The student's employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

HISTORY**HIST 5 Introduction to the History and Philosophy of Science – 3 units**

Prerequisite: ENGL 1A with a grade of C or better, or P

Lecture: 3 hours

An introduction to the ideas, processes and consequences of science through history. The historical development of philosophies of science will be central throughout. Critical reasoning and extensive writing will be required. Contextual cultural analysis is expected. Credit may be earned for only one of the following: HIST 5 or PHILO 5.

Transfer: UC/CSU. IGETC 1B, 3B; CSU-GE A3, C2

HIST 11 History of California – 3 units

Lecture: 3 hours

Survey of California history from pre-Colombian period to the present. Emphasis will include the Indians, Spaniards, Mexicans, and Anglo-Americans. Considerable attention will be devoted to California's influential role in national and world events. (MJC HIST 129)

Transfer: UC/CSU. IGETC 4F; CSU-GE D6

HIST 13 World Civilizations: to 1650 – 3 units

Lecture: 3 hours

Survey of the history of the world from the Neolithic period to the middle of the seventeenth century. The course will use a cross-cultural comparative approach as it analyzes the origins, achievements and decline of civilizations in Asia, Africa and the Americas, as well as the Middle East and Western Europe. Emphasis on the application of major theories of history to various stages of world development. The position of women in society will be highlighted. (MJC HIST 106)

Transfer: UC/CSU. IGETC 4F; CSU-GE D6

HIST 14 World Civilizations: 1650 to Present – 3 units

Lecture: 3 hours

Survey of world history from the middle of the seventeenth century to the present time. The theme of revolution will be illustrated by the Industrial Revolution, the democratic revolutions of the eighteenth century, and the Communist revolutions of the twentieth century. Contemporary problems in Asia, Africa, Central and South America will be placed in historical context. The contributions of women in history will be a special topic of study. (MJC HIST 107)

Transfer: UC/CSU. IGETC 4F; CSU-GE D6

HIST 16 United States: to 1877 – 3 units

Lecture: 3 hours

Survey of the history of the United States from pre-European settlement to the end of Reconstruction. Important topics include: the Art and Science of History, pre-European civilizations, Colonization and Society, the War for Independence, Constitutional Development and Federalism, American Leadership, Westward Expansion, Industrialization and Economic Transformation, Urbanization, Sectional Conflicts and the Impending Crisis, Slavery and experiences of historically disadvantaged groups in the United States, relative to their geographic, economic, political, and social contexts. Political and historical developments particular to California and in relation to the federal government will be highlighted. HIST 16, taken in conjunction with POLSC 10, satisfies Associate Degree and CSU requirements in United States History, Constitution, and American Ideals. Completion of HIST 16 and/or HIST 17 in combination with MJC HIST 101 or HIST 102 will not fulfill the requirement for CSU graduation. (MJC HIST 101)

Transfer: UC/CSU. IGETC 4F; CSU-GE D6

HIST 17 United States: 1877 to Present – 3 units

Lecture: 3 hours

Survey of the history of the United States from the end of Reconstruction to the present era. Course includes examinations of Reconstruction, Western Conquest, Federalism, Industrialization and Post-Industrialization, Urbanization, Foreign Relations, Social Movements, Major Wars, the Great Depression, Major Political and Institutional Developments, and Globalization. This course will also examine U.S. citizens' rights and obligations, with special attention given to the experiences of historically disadvantaged groups in the U.S. Political and historical developments particular to California and in relation to the federal government will be highlighted. HIST 17, taken in conjunction with Polsc 10, satisfies Associate Degree and CSU requirements in United States History, Constitution, and American Ideals. Completion of Hist 16 and/or Hist 17 in combination with MJC HIST 101 or HIST 102 will not fulfill the requirement for CSU graduation. (MJC HIST 102)

Transfer: UC/CSU. IGETC 4F; CSU-GE D6

HIST 21 Women in American History – 3 units

Lecture: 3 hours

Review and evaluate the roles and contributions of American women from the colonial period to the present, viewed within the context of the total American experience. The diversity of experience according to class and ethnicity will be emphasized, including the roles and experiences of Native American, African American, European, Latina, and Asian women in American history. (MJC HIST 116)

Transfer: UC/CSU. IGETC 4D, 4F; CSU-GE D4, D6

HIST 49 The Mother Lode – 3 units

Lecture: 3 hours

Introduction to a contextual examination of major topics in Mother Lode history including the geography of the region, Native Americans, California Gold Rush, the timber and ranching industries, the railroad, water and environmental issues, and Mother Lode myths. Field trips may be required.

Transfer: CSU

HOSPITALITY MANAGEMENT**HPMGT 97 Work Experience in Hospitality Management – 1-4 units**

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in Hospitality Management. The student's employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Two units of hotel work is required of hotel students.

Transfer: CSU (Transfer credit limited. See a counselor.)

HPMGT 102 Introduction to Hospitality Careers and Human Relations – 1.5 units

Lecture: 1.5 hours

An introduction to the hospitality industry (comprising lodging, food and beverage services, and tourism) with a focus on its career opportunities and human relations management in the hospitality industry. Individual goal-setting and career planning are emphasized.

HPMGT 104 Hospitality Laws and Regulations – 2 units

Lecture: 2 hours

The study of legal issues relating to commercial food service and lodging operations which are national, State and local in scope. Using both the case method and specific statutes, introduces students to general concepts including the types of law, the nature of agreements and the judicial system, as well as regulatory agencies and the particular laws they enforce in the hospitality field.

HPMGT 112 Front Office Management/ Hotel Catering – 2 units

Lecture: 2 hours

Introduction to the essential equipment, routines, and duties of the front desk clerk and their relationship to other hotel departments. Covers planning and preparation for private parties, dinners, meetings, and other special events that a hotel or restaurant may cater.

HPMGT 114 Introduction to Maintenance and Housekeeping – 1.5 units

Lecture: 1.5 hours

Introduces the essential components of effective hotel or motel maintenance and housekeeping operations, including technical information on equipment and its servicing to establish a preventive maintenance routine. Provides broad scope of the housekeeping position, stressing employee responsibilities, record-keeping and use of equipment and materials.

HPMGT 120 Safety and Sanitation – 1 unit

Lecture: 1 hour

Sanitation and safety principles and practices for the food service professional. Provides ServSafe certification from the National Restaurant Association.

HPMGT 122 Restaurant Math – 1 unit

Lecture: 1 hour

This is an arithmetic course for restaurant personnel. Students will be learning and applying basic math skills: addition, subtraction, multiplication, division, fractions, and percentages. There will be use of hand-held calculators, gauges, scales and devices for measuring weights and volumes. Currency will be handled and time, distance, and temperature will be measured. There will be an emphasis on recognition and use of geometric shapes.

HPMGT 126 Nutrition for Chefs – 2 units

Lecture: 2 hours

Students will understand the USDA recommendations for basic nutritional requirements for good health, the food groups encompassing carbohydrates, proteins, fats, vitamins, phytochemicals and minerals, their sources and dependency along with the roles of water, electrolytes and atmospheric gasses in human health. Students will be familiar with the fundamental physiology of digestion and how the basic food groups interact and react in the human body. They will have the knowledge to evaluate recipes and menus for nutritional balance and can devise recipes and menus that conform to USDA nutritional recommendations. They will understand the relationship between nutritional and physical exercise needs in terms of energy balances.

HPMGT 128 Kitchen Management – 3 units

Lecture: 3 hours

Focused on the development of skills used to manage a commercial kitchen. Students will write menus and develop recipes, establish portion sizes and recipe costs, then price the menu items. Purchasing foods and supplies: comparative pricing among vendors, ordering, receiving, rotating and storing goods; taking and extending inventories. Students will learn to base production plans on sales forecasts, staff the kitchen accordingly, establish policies, standards and procedures regarding production, staff issues, facility/equipment maintenance and kitchen cleanliness. Basic concepts from the Uniform System of Accounts for Restaurants relating to kitchen operations will also be addressed.

HPMGT 130 Survey of Commercial Food Service Operations – 3-6 units

Lecture: 1-2 hours. Laboratory: 6-12 hours

A survey course which gives practical experience in operating a commercial food service operation. Production efficiency, marketing, ServSafe Sanitation guidelines, quality control, and production records are emphasized.

HPMGT 133A Introduction to Commercial Food Preparation – 3 units

Co-requisite: HPMGT 120

Lecture: 1.5 hours. Laboratory: 5 hours

Initial culinary training for chefs includes concepts about safe, sanitary, and efficient food production procedures, orientation and training on equipment, hand tools and foods, and applications of nutritional concepts to recipe writing. Food inventory management skills will be practiced using both traditional and computer-aided costing. Adopting professional standards regarding uniforms, dependability, teamwork and quality performance will be emphasized. Field trips may be required.

HPMGT 133B Commercial Food Preparation – 4 units

Prerequisite: HPMGT 133A with a grade of C or better, or P

Lecture: 1.5 hours. Laboratory: 8.5 hours

Focus is on restaurant line cookery. Involves preparation of soups, salads, entrees, vegetables and starches. Menu cycle extends from family-style to classical cuisine, including buffets. Quality assurance, production efficiency and kitchen management are emphasized.

HPMGT 134 Commercial Baking: Beginning – 2.5 units

Co-requisites: HPMGT 120 and HPMGT 122

Lecture: 1 hour. Laboratory: 4.5 hours

This course covers tools, terms and functions in preparation of baked goods: yeast breads and pastries, cookies, cakes and specialty items. Field trips may be required.

HPMGT 135 Commercial Baking: Advanced – 2 units

Prerequisite: HPMGT 134 with a grade of C or better, or P
Lecture: 2 hours
Formulas used in commercial pastry shop, cake decoration, marzipan, chocolate work, pâte à chou and specialty items. Student participation. Field trips may be required.

HPMGT 136 Dining Room Service and Management I – 2 units

Lecture: 1 hour. Laboratory: 4 hours
Operation of the Cellar Restaurant dining room and related service support stations is covered. The focus is on how to hire, train, motivate, schedule and assign jobs to a wait staff. Cost control, labor and supplies, Quality assurance and productivity standards are addressed.

HPMGT 140 Contemporary Cuisine – 2-3.5 units

Prerequisite: HPMGT 133B with a grade of C or better, or P
Lecture: 1.5 hours. Laboratory: 6-8 hours
Focused on the preparation of seasonal ingredients used to develop the menus for the advanced culinary course. Cooking techniques and theory pertaining to contemporary cuisine will be emphasized and the student will prepare on-line cooking stations in pastry, pantry, sauté, and grill.

HPMGT 141 Restaurant Desserts – 2 units

Prerequisite: HPMGT 135 with a grade of C or better, or P
Lecture: 1 hour. Laboratory: 3 hours
The production and presentation of classical and contemporary restaurant desserts. A practical study of the restaurant pastry chef's special vendors, equipment, supplies, foods, processes and techniques used to produce a wide variety of desserts.

HPMGT 142 Garde Manger – 1 unit

Lecture: 0.5 hour. Laboratory: 1.5 hours
A study of cold food preparation which includes vegetable and fruit carvings, appetizers, hors d'oeuvres, canapés, sauces, salads, forcemeats, pâtés, tray presentations, table setups, room setups, and food show competitions. Field trips may be required.

HPMGT 143 Advanced Garde Manger – 1 unit

Prerequisite: HPMGT 142 with a grade of C or better, or P
Lecture: 0.5 hour. Laboratory: 1.5 hours
Advanced study of cold food preparation to include vegetable, fruit, and ice carvings, appetizers, hors d'oeuvres, canapés, sauces, salads, forcemeats, pâtés, tray presentation, table and room setup with attention to food shows and special event programs.

HPMGT 146 Dining Room Service and Management II – 1-3.5 units

Prerequisite: HPMGT 136 with a grade of C or better, or P
Lecture: 0-1.5 hours. Laboratory: 4-6 hours
Advanced service techniques, table settings and dining room etiquette utilizing a restaurant as a laboratory. Emphasis is on elegance and showmanship, developing the fine points of service, understanding wine and food compatibilities, building sales, managing the dining room with reservations, proper staffing and hosting. Field trips required.

HPMGT 147 Beverage Management – 2 units

Lecture: 1.5 hours. Laboratory: 1.5 hours
A study of all aspects of beverage management including federal, State and local regulations, mixology, background and future of the beverage industry. Students should be 21 years of age, or if under 21, will be required to complete a number of independent assignments instead of labs. Field trips may be required.

HPMGT 148 Introduction to Wines – 2 units

Lecture: 2 hours
A study of wines from around the world with an emphasis on California. History and development of the wine industry, viticulture, wine making techniques, restaurant sales, and restaurant service. Wine evaluation, marketing, and wine's relationship to food and menus will be covered. Field trips may be required.

HPMGT 152 Restaurant Planning – 3 units

Lecture: 3 hours
Using a restaurant as a vehicle for attaining personal and professional goals students create a plan to conceive, design, staff, equip, stock, market and open the restaurant. They develop systems, policies and procedures for daily operations as well as relationships with professional service providers, vendors, lenders and regulatory agencies. This is an advanced class. Many topics will have been addressed and skills developed in earlier courses. This class unifies that knowledge and skill in the formation of a comprehensive restaurant plan. Field trips may be required.

HPMGT 190 Culinary Arts Internship – 2 units

Prerequisite: HPMGT 140 with a grade of C or better, or P
Lecture: 0.5 hour. Laboratory: 4 hours
Supervised field experience in Culinary or Pastry Arts study and research related to job training. Current developments in Culinary Arts.

HPMGT 200 Exploring Culinary and Baking Skills – 0.5-2.5 units

Lecture: 0-1 hour. Laboratory: 0-4.5 hours
This course is an exploratory course for those who are interested in learning proper usage of baking ovens, stoves, cooking equipment and tools. This course allows students to perform culinary and baking skills in a supervised environment. Emphasis will be placed on safety, sanitation, professionalism and basic competencies. Offered for Pass/No Pass grading only.

HUMANITIES

HUMAN 1 Old World Culture – 3 units

Lecture: 3 hours

An introductory survey of influences on Western culture, historically structured from classical Greece to the Renaissance, presenting enduring works of art, drama, literature, music, and philosophy. (MJC HUMAN 105)

Transfer: UC/CSU. IGETC 3B; CSU-GE C2

HUMAN 2 Modern Culture – 3 units

Recommended for Success: Eligibility for ENGL 1A

Lecture: 3 hours

An introductory survey of humanistic culture, historically structured from the enlightenment to the present, focusing on enduring works of art, drama, literature, music, and philosophy. (MJC HUMAN 106)

Transfer: UC/CSU. IGETC 3B; CSU-GE C2

HUMAN 3 World Culture – 3 units

Recommended for Success: Eligibility for ENGL 1A

Lecture: 3 hours

A study of selected works of literature, art, music, film, religion, philosophy, theatre and other forms of expression, particularly emphasizing the non-Western world. The works will be studied in their historical and cultural contexts. Specific works will vary from time to time, depending upon the interests and needs of students and the instructor. (MJC HUMAN 110)

Transfer: UC/CSU. IGETC 3B; CSU-GE C2

HUMAN 4 World Religions and Spirituality – 3 units

Lecture: 3 hours

Study of the development of religious consciousness, including the earliest belief systems in the world, the major “living religions” today, tribal religions, “new age” religion and spirituality, and an examination of the meaning of the religious experience. Field trips may be required. (MJC PHILO 115)

Transfer: UC/CSU. IGETC 3B; CSU-GE C2

INDEPENDENT STUDY

Independent Study courses are intended to give students an opportunity to independently research specialized areas not available as regular course offerings of the college. They are designed to meet specific student interests and may be made available in any subject matter area. Consult your advisor for specific procedures. (See page 40 for conditions, limitations). These courses may transfer as electives or other credit as authorized by the transfer school. For UC, student is responsible for pre-authorization from UC department chair and Admissions Office.

INTERDISCIPLINARY STUDIES

INDIS 48 Sustainable Living – 3 units

Lecture: 3 hours

This course will introduce life skills and decision-making strategies to students interested in a sustainable future for themselves and their local/global communities. The course will cover topics such as: how do our food choices affect both our health and our environment, what are the impacts of various consumer goods on the environment and society, what does it mean to build and maintain a sustainable house/building, where do my wastes go when I flush the toilet, where does my drinking water come from, where does my energy come from and what is its true cost? The course will be designed to help students see the individual as the pivot point between community health/world health and personal health. Field trips may be required.

Transfer: CSU. CSU-GE E.

INDIS 101 Career Tools for Excellence I – 2 units

Lecture: 1.5 hours. Laboratory: 1 hour

This course is designed to emphasize leadership, project management, team-building and problem-solving as they apply in the workplace. Students will use a project-based format and design an e-portfolio demonstration while incorporating a wide variety of leadership skills required for success in the workplace. Offered for Pass/No Pass grading only.

INDIS 110 Peer Tutoring – 1 unit

Lecture: 1 hour

Provides students with techniques and strategies for peer tutoring. Students will study learning styles, multiple intelligence theory, learning disabilities, as well as effective communication skills, planning and structuring a tutor session, questioning techniques and multicultural perspectives. Studying these topics will lead to clarifying the nature of an effective tutor. This course meets State regulations for peer tutoring training and College Reading and Learning Association (CRLA) certification. Offered for Pass/No Pass grading only.

INDIS 111 Group Peer Tutoring – 0.5 unit

Lecture: 0.5 hour

The Group Peer Tutoring course will train students to facilitate a structured group tutoring session and/or Supplemental Instruction (S.I.) session. Particular emphasis will be on tutoring techniques designed to improve study skills of students attending group sessions and/or S.I. sessions. Offered for Pass/No Pass grading only.

LIBRARY

LIBR 1 Introduction to Library and Information Resources – 1 unit

Lecture: 1 hour

This course is an introduction to the use of electronic and print resources, including developing effective search strategies and evaluating information sources. Emphasis is on library online catalogs, online periodical databases, print and electronic reference sources, and Internet resources.

Transfer: CSU

LIBR 101 Introduction to the Library – 0.5 unit

Lecture: 0.5 hour

Basic familiarization with library collections and services. Focus is on being an effective library user, including how to identify and locate print and electronic materials using library resources. Offered for Pass/No Pass grading only.

MANAGEMENT

MGMT 110 Communication in the Workplace – 0.5 unit

Lecture: 0.5 hour

Designed to introduce the student to key elements in communication within business organizations. Topics include verbal and nonverbal communication, listening skills and specific supervisory communication skills. Offered for Pass/No Pass grading only.

MGMT 111 Customer Service – 0.5 unit

Lecture: 0.5 hour

Designed to provide the student with certain key skills and attitudes in order to effectively meet the needs of customers. The student will be introduced to the concept of internal and external customers, customer satisfaction and customer retention. Topics will also include communicating with customers, developing a positive attitude, handling complaints and sales skills. Offered for Pass/No Pass grading only.

MGMT 112 Team Building – 0.5 unit

Lecture: 0.5 hour

Designed to provide the student with an understanding of how teams work together, common problems teams encounter and how to solve them. Students will learn to recognize various team player styles. Students will be introduced to team building in the workplace. Offered for Pass/No Pass grading only.

MGMT 113 Attitude in the Workplace – 0.5 unit

Lecture: 0.5 hour

Designed to provide the student with certain key skills in the area of attitude so that they may effectively maintain a positive attitude at the workplace and at home. The student will be introduced to the concepts of how attitudes are communicated, the three types of attitudes and how to adjust one's attitude. Topics will also include the primary causes of a bad attitude, turnaround strategies to battle these bad attitudes and specific

techniques to raise the attitude of others. Offered for Pass/No Pass grading only.

MGMT 114 Values and Ethics in the Workplace – 0.5 unit

Lecture: 0.5 hour

Designed to acquaint the student with the importance of values and ethics in the workplace. The importance of values and ethics involved in the supervisor's carrying out his/her duties will be emphasized. Offered for Pass/No Pass grading only.

MGMT 115 Time Management – 0.5 unit

Lecture: 0.5 hour

Designed to introduce the student to time management principles and specific tools that assist in making maximum use of time. Basic concepts of managing space will also be covered. Offered for Pass/No Pass grading only.

MGMT 116 Stress Management in the Workplace – 0.5 unit

Lecture: 0.5 hour

Designed to acquaint the student with various skills the supervisor needs to help employees. Included is the recognition of stress and how to manage it, job burnout and what to do about it, and counseling employees in various situations. Offered for Pass/No Pass grading only.

MGMT 117 Conflict Management – 0.5 unit

Lecture: 0.5 hour

Designed to provide the student with an analysis of attitudes and behavior which create conflict between individuals and groups within an organization. Offered for Pass/No Pass grading only.

MGMT 118 Decision Making in the Workplace – 0.5 unit

Lecture: 0.5 hour

Designed to introduce the student to decision making and problem solving as a supervisor or employee. Offered for Pass/No Pass grading only.

MGMT 119 Managing Organizational Change – 0.5 unit

Lecture: 0.5 hour

Designed to provide the student with an understanding of change and the influence it has on an organization and the individuals in that organization. Topics will include understanding organizational change, theoretical models of change, stages of change, and how to manage organizational change. Offered for Pass/No Pass grading only.

MGMT 120 Generational Diversity: Managing Cross-Generational Teams – 0.5 unit

Lecture: 0.5 hour

For the first time in America's history, we have four generations working side by side in the workplace. This course is designed to equip students with knowledge and skills to work with and lead cross-generational teams. Offered for Pass/No Pass grading only.

MATHEMATICS

MATH 2 Statistics – 4 units

Prerequisite: MATH 104 with a grade of C or better, or P, or placement through the assessment process

Lecture: 4 hours

Descriptive statistics, normal distributions, correlation and regression, probability, sampling distributions, inference about quantitative and categorical variables, inference about relationships. (MJC MATH 134)

Transfer: UC/CSU. IGETC 2A; CSU-GE B4

MATH 4A Mathematics for Elementary Teachers I – 4 units

Prerequisite: MATH 104 with a grade of C or better, or P, or placement through the assessment process

Lecture: 4 hours

Structure of arithmetic for prospective elementary school teachers. The definitions, operations, and properties of sets, counting numbers, integers, rational and irrational numbers; numeration systems; number theory, logic. Field trips may be required. (MJC MATH 105)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)
CSU-GE B4

MATH 4B Mathematics for Elementary Teachers II – 4 units

Prerequisite: MATH 4A with a grade of C or better, or P
Recommended for Success: High School Geometry

Lecture: 4 hours

Elementary probability, statistics and geometry for prospective elementary school teachers. Includes Euclidean geometry, measurement, and analytic geometry. Field trips may be required. (MJC MATH 106)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)
CSU-GE B4

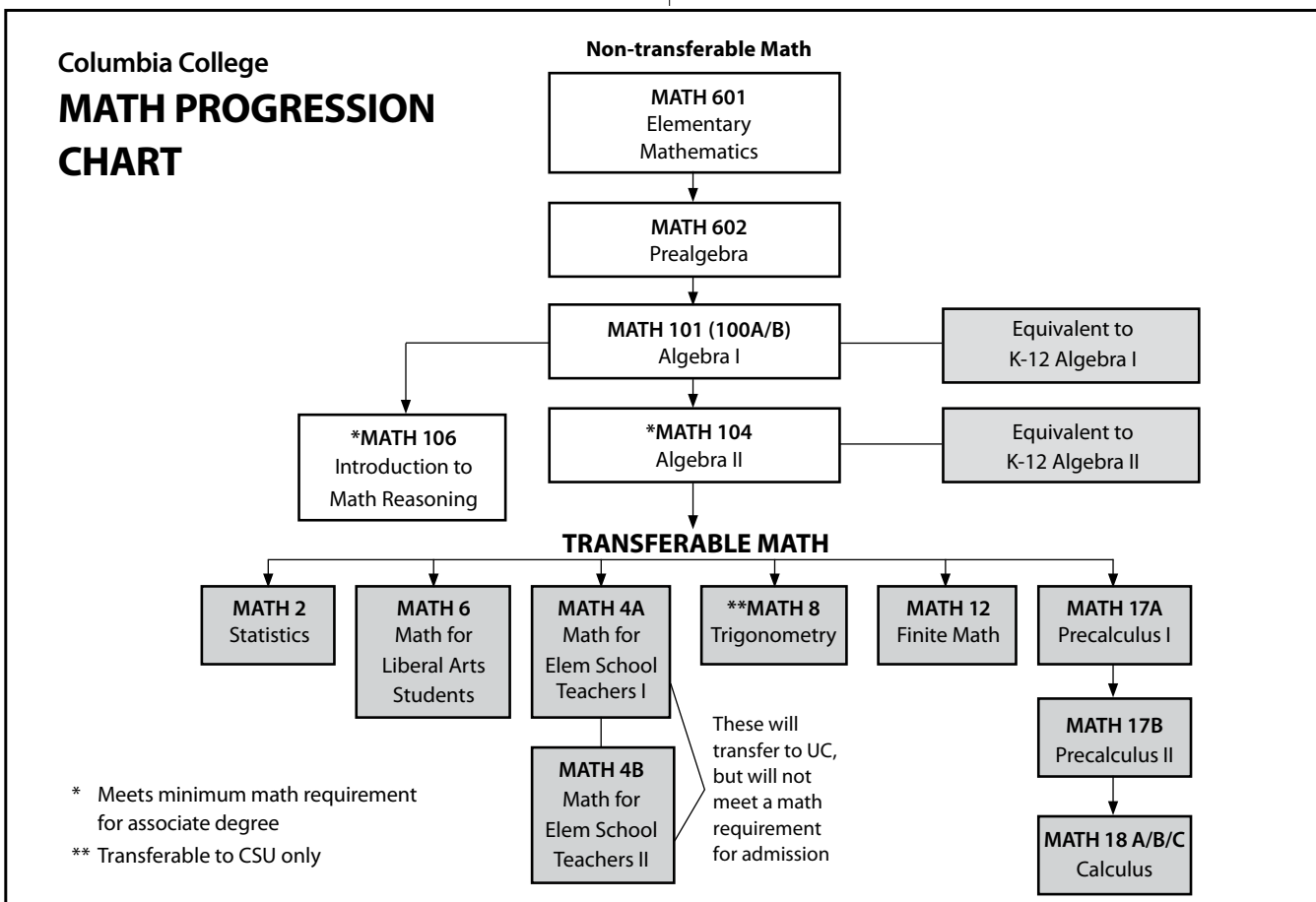
MATH 6 Mathematics for Liberal Arts Students – 3 units

Prerequisite: MATH 104 with a grade of C or better, or P, or placement through the assessment process

Lecture: 3 hours

A survey of important mathematical ideas with insight into their historical development, with emphasis on the nature of mathematical reasoning and the importance and applications of mathematics in society. Topics may include set theory and logic, number theory, functions and graphs, geometric ideas, probability and statistics, calculus, graph theory, or other significant areas of mathematics. (MJC MATH 101)

Transfer: UC/CSU. IGETC 2A; CSU-GE B4



MATH 8 Trigonometry – 3 units

Prerequisite: MATH 104 with a grade of C or better, or P, or placement through the assessment process

Lecture: 3 hours

The study of trigonometric functions analytically and graphically, in both Cartesian and polar coordinates. Course will cover solving trigonometric equations using identities and inverse functions and applying these concepts to right and oblique triangles, the unit circle, vectors, complex numbers and other applications.

Transfer: CSU. CSU-GE B4

MATH 12 Finite Mathematics – 3 units

Prerequisite: MATH 104 with a grade of C or better, or P, or placement through the assessment process

Lecture: 3 hours

Introduction to mathematical modeling, linear systems of equations and inequalities (linear programming), sets, combinatorics, probability, statistics, and the mathematics of finance. (MJC MATH 130)

Transfer: UC/CSU. IGETC 2A; CSU-GE B4

MATH 17A Precalculus I – 5 units

Prerequisite: MATH 104 with a grade of C or better, or P, or placement through the assessment process

Lecture: 5 hours

A one-semester college algebra course or, together with MATH 17B, a two-semester precalculus course. Emphasis on algebra skills essential for success in calculus. Topics include: review of linear, quadratic, rational, radical, exponential and logarithmic equations; functions and graphs; synthetic division; complex roots of polynomials; the Fundamental Theorem of Algebra; applications of exponential and logarithmic equations; linear and nonlinear systems of equations. (MJC MATH 121)

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 2A; CSU-GE B4. 17A + 17B = 5 UC units maximum

MATH 17B Precalculus II – 5 units

Prerequisite: MATH 17A with a grade of C or better, or P
Lecture: 5 hours

A comprehensive course in analytic geometry and trigonometry. Topics include: trigonometric functions, trigonometric identities, solving trigonometric equations, solving right and oblique triangles; vectors; the complex plane; polar and parametric functions, conic sections, sequences and series, mathematical induction. MATH 17B and MATH 17A together form a two-semester precalculus course sequence. (MJC MATH 122)

Transfer: UC/CSU (Transfer credit limited. See a counselor.) IGETC 2A; CSU-GE B4. 17A + 17B = 5 UC units maximum

MATH 18A Calculus I – 5 units

Prerequisite: MATH 17B, with a grade of C or better, or P

Lecture: 5 hours

Families of functions, limits, continuity, the derivative, derivative formulas, implicit differentiation, applications of derivatives, and an introduction to concepts and applications of the definite integral. Graphing calculator required. Satisfies high school math deficiency for UC admission. (MJC MATH 171)

Transfer: UC/CSU. IGETC 2A; CSU-GE B4

MATH 18B Calculus II – 5 units

Prerequisite: MATH 18A with a grade of C or better, or P

Lecture: 5 hours

Antiderivatives, The First and Second Fundamental Theorems of Calculus, techniques of integration, applications of definite integrals to geometry, physics, probability and economics, numerical integration, improper integrals, differential equations, convergence of series, power series, Taylor series, Fourier series, areas defined by polar curves. (MJC MATH 172)

Transfer: UC/CSU. IGETC 2A; CSU-GE B4

MATH 18C Calculus III – 5 units

Prerequisite: MATH 18B with a grade of C or better, or P

Lecture: 5 hours

Vectors and solid analytic geometry, vector valued functions, partial differentiation, multiple integrals, vector fields and vector calculus.

Transfer: UC/CSU. IGETC 2A; CSU-GE B4

MATH 100A Algebra I: First Half – 3 units

Prerequisite: MATH 602 with a grade of C or better, or P, or placement through the assessment process

Lecture: 3 hours

This course is equivalent to the first half of MATH 101, allowing the student more study time for the course topics. Completion of both MATH 100A and MATH 100B is equivalent to completion of MATH 101.

MATH 100B Algebra I: Second Half – 3 units

Prerequisite: MATH 100A with a grade of C or better, or P

Lecture: 3 hours

This course is equivalent to the second half of MATH 101, allowing the student more study time for the course topics. Completion of both MATH 100A and MATH 100B is equivalent to completion of MATH 101.

MATH 101 Algebra I – 5 units

Prerequisite: MATH 602 with a grade of C or better, or P, or placement through the assessment process

Lecture: 5 hours

Introduction to algebraic structures using tabular, graphical and symbolic representations. Properties of real numbers, evaluating and simplifying algebraic expressions, linear equations and inequalities in one and two variables, systems of linear equations and inequalities, proportions and direct variation, linear functions and models, integer exponents, polynomial operations, factoring, solution of quadratic equations by factoring and the quadratic formula. (MJC MATH 70)

MATH 104 Algebra II – 5 units

Prerequisite: MATH 100B or MATH 101, with a grade of C or better, or P, or placement through the assessment process
Lecture 5 hours

Algebra II continues from Algebra I, studying functions using graphical, numerical, formulaic and descriptive techniques. Students will solve problems and applications modeled by linear, polynomial, rational, exponential, logarithmic functions and quadratic functions in one and two variables using conic sections. Students also perform operations, simplify expressions and solve equations involving polynomials, complex numbers, matrices and rational exponents. Introduction to series and summation notation, as well as transformations and the algebra of functions. Graphing calculator required. This course is prerequisite to undergraduate transfer general education mathematics courses. (MJC MATH 90)

MATH 106 Introduction to Mathematical Thinking – 4 units

Prerequisites: MATH 101 or MATH 100B, with a grade of C or better, or P, or placement through the assessment process
Lecture: 4 hours

Understanding, interpreting and reasoning with the quantitative information of everyday life. An application-based treatment of useful topics in mathematics including critical thinking, problem solving, finances, descriptive statistics, mathematical models and applications for real-world situations. Satisfies the Mathematics requirement for an Associate Degree but does not satisfy the prerequisite requirements for transfer or transferable math and science courses.

MATH 601 Elementary Mathematics – 4 units

Lecture: 4 hours

Study of the concepts and procedures of arithmetic, with emphasis on developing understanding as well as computational skills. Topics include mathematical vocabulary, symbolic representation, arithmetic operations, fractions, decimals, percents, ratio, proportion, prime factorization, and student study skills. (MJC MATH 10)

MATH 602 Prealgebra – 4 units

Prerequisite: MATH 601 with a grade of C or better, or P, or placement through the assessment process

Lecture: 4 hours

Designed to help students prepare for algebra and applied math courses by reviewing fundamental operations of arithmetic and common geometric formulas, and introducing the algebraic concepts of simplifying expressions, polynomial arithmetic, and solving linear equations. Arithmetic reviewed includes calculation with integers, decimals, and fractions. Ratios, percents, and their applications are also studied. (MJC MATH 20)

MATH 650 Personalized Mathematics Development – 0.5-2 units

Laboratory: 1.5-6 hours

This course provides students opportunities to review or learn mathematics in an individualized, self-paced setting. Topics include: Basic Math, Prealgebra, Beginning Algebra, Introduction to Geometry, Intermediate Algebra, College Algebra, Trigonometry, Precalculus, and Introduction to Statistics. Offered for Pass/No Pass grading only.

MUSIC**Repeat Limitations on Music Courses**

The following limitations apply to all Music activity classes. Each activity is limited to a maximum of four enrollments, regardless of the skill level of the individual courses. For example, a student may enroll (a) in beginning piano four times or (b) twice in beginning piano and twice in intermediate piano. In either of these cases, the student cannot enroll in any additional piano courses because the maximum of four piano courses has been met.

MUSIC 2 Introduction to Music – 3 units

Recommended for Success: ENGL 151

Lecture: 3 hours

Survey of the many fields within the discipline of music, including a brief overview of fundamentals, music history, the voice, musical instruments, the science of acoustics, rock, jazz, and current styles, psychology of music, and analytical listening. Attendance at selected local concerts is required.

Transfer: UC/CSU. IGETC 3A; CSU-GE C1

MUSIC 4A Elementary Musicianship – 2 units

Recommended for Success: Concurrent enrollment in MUSIC 20A

Lecture: 2 hours

Basic course for developing musical skills. Teaches sight singing, ear training, melodic dictation, and basic keyboard skills. (MJC MUST 131)

Transfer: UC/CSU. C-ID: MUS 125

MUSIC 4B Elementary Musicianship – 2 units

Recommended for Success: MUSIC 4A and concurrent enrollment in MUSIC 20B

Lecture: 2 hours

Continuation of MUSIC 4A to develop skills in sight singing, melodic and rhythmic dictation, and aural analysis of harmonic materials, and basic keyboard skills. (MJC MUST 132)

Transfer: UC/CSU. C-ID: MUS 125

MUSIC 5A Intermediate Musicianship – 2 units

Prerequisite: MUSIC 4B with a grade of C or better, or P

Lecture: 2 hours

Continuation of MUSIC 4B, including development of individual proficiency in sight singing, dictation, aural and keyboard skills. (MJC MUST 133)

Transfer: UC/CSU

MUSIC 5B Intermediate Musicianship – 2 units

Recommended for Success: MUSIC 21A and MUSIC 5A

Lecture: 2 hours

Continuation of MUSIC 5A, including sight singing, melodic and rhythmic dictation, and aural analysis of harmonic materials and basic keyboard skills. (MJC MUST 134)

Transfer: UC/CSU. C-ID: MUS 155

MUSIC 10 Survey of Music History and Literature: Ancient to 1750 – 3 units

Lecture: 3 hours

A survey of elements of style, major composers, and masterpieces of music from the Greek era through Medieval, Renaissance, Baroque, and Early Classic periods; survey from 1000 BC through 1750 AD. Includes the music of Palestrina, Bach, and Handel. (MJC MUSG 121)

Transfer: UC/CSU. IGETC 3A; CSU-GE C1

MUSIC 11 Survey of Music History And Literature: 1750 to Present – 3 units

Lecture: 3 hours

A survey of elements of style, major composers, and masterpieces of music during the Classic, Romantic, and Modern periods from 1750 to the present. Includes music of Mozart, Beethoven, Wagner, Debussy, Schoenberg, and Copland. (MJC MUSG 122)

Transfer: UC/CSU. IGETC 3A; CSU-GE C1

MUSIC 12 American Popular Music: Blues and Jazz to Rock 'n' Roll – 3 units

Lecture: 3 hours

An introduction to jazz style, jazz history, and popular music of the 20th and 21st centuries.

Transfer: UC/CSU. IGETC 3A; CSU-GE C1

MUSIC 20A Elementary Music Theory – 3 units

Recommended for Success: Concurrent enrollment in MUSIC 4A

Lecture: 3 hours

Analysis of the essentials for understanding and writing music. Included are rhythm, scales, intervals, chords, notation, melody writing; study of diatonic 4 part harmony, figured bass, chord progressions, and harmonic motion. (MJC MUST 121)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

MUSIC 20B Elementary Music Theory – 3 units

Prerequisite: MUSIC 20A with a grade of C or better, or P

Lecture: 3 hours

Continuing study in harmony and analysis. Included are secondary dominants, modulation, altered chords, nonharmonic notes, and extended chords. (MJC MUST 122)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

MUSIC 21A Intermediate Music Theory – 3 units

Prerequisite: MUSIC 20B with a grade of C or better, or P

Lecture: 3 hours

A continuation of the study of the basic structural elements of music such as melody, rhythm, harmony and form with an emphasis on the organization of these elements; also includes a study of chromaticism, chromatic alterations, and complex tertian structures. (MJC MUST 123)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

C-ID: MUS 140

MUSIC 21B Intermediate Music Theory – 3 units

Prerequisite: MUSIC 21A with a grade of C or better, or P

Lecture: 3 hours

Continued development of analytical and compositional techniques; study of modal and tonal counterpoint; introduction to Impressionism and to 20th century concepts of melody, harmony, and form. (MJC MUST 124)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

C-ID: MUS 150

MUSIC 31A Elementary Piano – 1 unit

Activity: 3 hours

An introduction to the skill of piano playing based on music reading; fundamentals of rhythm, notation, and technique. Basic theory will include knowledge and application of musical terms, scales, key signatures, and chords. Field trips required. (MJC MUSA 121)

Transfer: UC/CSU

MUSIC 31B Elementary Piano – 1 unit

Prerequisite: MUSIC 31A with a grade of C or better, or P

Activity: 3 hours

Continuation of the fundamentals of piano performance with emphasis given to the essentials of music reading. Theory will include the presentation of scales and keys, both major and minor, review and application of chords and inversions, and an introduction to improvisation. Piano literature will include both classical and popular compositions as well as exercises and technical studies. Field trips required.

Transfer: UC/CSU

MUSIC 36 Elementary Voice – 1 unit

Activity: 3 hours

Large group instruction in singing for those with little or no vocal solo training. Includes basic singing techniques and songs for improving pitch, building range, endurance, tone, and breath control. (MJC MUSA 151)

Transfer: UC/CSU

MUSIC 37 Advanced Elementary Voice – 1 unit

Prerequisite: MUSIC 36 with a grade of C or better, or P

Activity: 3 hours

Large group instruction in singing for those with one semester of private or solo class voice. Includes reinforcement of basic singing techniques for building range, endurance, tone, and breath capacity as taught in MUSIC 36. Music includes folk/traditional as well as English and Italian art song. (MJC MUSA 152)

Transfer: UC/CSU

MUSIC 38 Intermediate Voice – 1 unit

Prerequisite: MUSIC 37 with a grade of C or better, or P

Activity: 3 hours

Individual and small group instruction in the refinement of vocal technique for people with two semesters of class voice. Includes continued development of tone, endurance, and flexibility with an emphasis on solo public performance with traditional and art song literature.

Transfer: UC/CSU

MUSIC 39 Advanced Intermediate Voice – 1 unit

Prerequisite: MUSIC 38 with a grade of C or better, or P

Activity: 3 hours

Individual and small group instruction in the development of vocal technique for people with three semesters of class voice. Includes continued development of expression and increased emphasis on public performance. Field trips may be required. (MJC MUSA 153)

Transfer: UC/CSU

MUSIC 41A Intermediate Piano – 1 unit

Prerequisite: MUSIC 31B with a grade of C or better, or P

Activity: 3 hours

Continuation of the fundamentals of piano performance attained in MUSIC 31B with more emphasis given to technique, phrasing, and dynamics as progressively difficult music is presented. Theory will include additional major and minor scales and keys, chords, and inversions including seventh chords, improvisation, and transposition. Piano literature will include both classical and popular compositions as well as exercises and technical studies. (CC MUSIC 41A & 41B = MJC MUSA 123)

Transfer: UC/CSU

MUSIC 41B Intermediate Piano – 1 unit

Prerequisite: MUSIC 41A with a grade of C or better, or P

Activity: 3 hours

Continuation of the fundamentals of piano performance attained in MUSIC 31A, 31B, and 41A with more emphasis given to the adaptation of various techniques regarding style, touch, dynamics, and phrasing as they apply to different periods of piano literature. Opportunity to accompany instrumentalists and vocalists is offered as well as the performance of two-piano works. Theory will include all key signatures, scales, embellishments, diminished and augmented chords, and study of the Baroque, Classical, Romantic, and Contemporary periods in Music. (CC MUSIC 41A & 41B = MJC MUSA 123)

Transfer: UC/CSU

MUSIC 49 Beginning Guitar – 1 unit

Activity: 3 hours

Basic guitar techniques, open string chords, right hand string and finger-picking. Introduction to music reading, basic chords, simple song accompaniments and melodic playing in first position. Student must provide a tunable, nylon string acoustic guitar. (MJC MUSA 141)

Transfer: UC/CSU

MUSIC 50–56 Series - Private Lessons

Lecture: 1 hour

Study of performance techniques, interpretation, and repertoire in private instruction. Designed primarily for music majors and minors. Outside performance required. May be repeated three times.

Transfer: UC/CSU

MUSIC 50 Private Lessons: Guitar – 1 unit

(MJC MUSA 145)

MUSIC 51 Private Lessons: Keyboard – 1 unit**MUSIC 52 Private Lessons: Woodwinds – 1 unit**

(MJC MUSA 183)

MUSIC 53 Private Lessons: Brass – 1 unit**MUSIC 54 Private Lessons: Strings – 1 unit****MUSIC 55 Private Lessons: Percussion – 1 unit****MUSIC 56 Private Lessons: Voice – 1 unit**

(MJC MUSA 154)

MUSIC 60 College Choir – 1 unit

Activity: 3-6 hours

Instruction and performance in vocal and choral techniques including group tone production, singing, parts, and reading music. Designed for singers with limited or no choir experience as well as intermediate. Repertoire includes selections of various styles. Field trips required. May be repeated three times.

Transfer: UC/CSU

MUSIC 64 Jazz Choir – 1 unit

Activity: 3-6 hours

Study and performance of vocal jazz and improvisation in an ensemble of limited size. May be repeated three times.

Transfer: UC/CSU

MUSIC 66 Columbia College Community Chorus – 1 unit

Activity: 3-6 hours

Study and performance of mixed choral works of various styles and periods. Includes development of vocal technique and musicianship. Audition required. May be repeated three times.

(MJC MUSE 151)

Transfer: UC/CSU

MUSIC 72 Jazz Ensemble – 1 unit

Activity: 3-6 hours

Study and performance of instrumental jazz and improvisation; techniques of improvisation will be explored. May be repeated three times.

Transfer: UC/CSU

MUSIC 75 Jazz Studies – 1 unit

Activity: 6-12 hours

Study and performance of instrumental and vocal jazz in both solo and ensemble (including big band, choir, combos, and solo with accompaniment). Includes beginning jazz theory, improvisation, style, interpretation, performance practice and the development of an individual standard jazz repertoire.

Repertoire may vary from semester to semester. Field trips may be required. May be repeated three times.

Transfer: UC/CSU

MUSIC 76 Community Orchestra – 1 unit

Activity: 3-6 hours

Study and performance of orchestral literature of various styles and media. Audition required for wind, brass, and percussion players as needed. May be repeated three times. (MJC MUSE 161)

Transfer: UC/CSU

MUSIC 78 Ensemble: Instrumental Emphasis – 1 unit

Activity: 3-6 hours

Study and performance of music for small ensembles, duets, and chamber groups. May be repeated three times. (MJC MUSE 166 or MUSE 176)

Transfer: UC/CSU

NATURAL RESOURCES**NATRE 1 Environmental Conservation – 3 units**

Lecture: 3 hours

Conservation of the biological and physical environment.

History of the conservation movement. A case-study approach to land use practices of environmental conservation with current topics on endangered species, environmental pollution, wilderness management, energy, population, and the uniqueness of California and Alaska natural resources. Field trips may be required.

Transfer: UC/CSU. CSU-GE D7

NATRE 3 Natural Resources Law and Policy – 3 units

Lecture: 3 hours

Introduction to principles and practice of natural resource policy and law in the United States. Topics include overview of major environmental policies and laws, environmental ethics, historical role of activists in legislative change and enforcement, development and limits of legislative and judicial approaches to solving environmental problems, and local and regional issues related to natural resources law and policy. Field trips may be required.

Transfer: UC/CSU

NATRE 6 Soil Resources – 3 units

Lecture: 2 hours. Laboratory: 3 hours

Introduction to physical, chemical, and biological properties of soils. Soil development, type, and analysis. Implications and applications for natural resources management.

Transfer: CSU

NATRE 9 Parks and Forests Law Enforcement – 2 units

Lecture: 2 hours

This course helps develop the knowledge and skills required in areas of constitutional, criminal, and civil law as related to law enforcement activities conducted by resource agencies. Field trips may be required.

Transfer: CSU

NATRE 22 Ecology and Use of Fire in Forest Ecosystems – 2 units

Lecture: 1.5 hours. Laboratory: 1.5 hours

Introduction to the ecology and management of fire in California. Selected topics include the effects of fire on vegetation, soils, hydrology, wildlife, air quality, and esthetics; forest fire behavior and the role of fire suppression; the history and current issues of prescribed burning; the planning and implementation of fuels reduction and prescribed burning programs in selected locations. Field trips required. (MJC NR 379).

Transfer: CSU

NATRE 30 Introduction to Watershed Management – 3 units

Lecture: 2 hours. Laboratory: 3 hours

Fundamentals of watershed management, monitoring and stewardship, with an emphasis on California and the Sierra Nevada. Concepts and applications of climatology, meteorology, geology, soils, hydrology, biology, chemistry, physics and engineering as they pertain to management of watersheds. Field and laboratory techniques of sampling and monitoring soil, water, air, vegetation, and other biota. Application of integrated ecosystem approaches to natural resource protection and management of watersheds. Field trips may be required.

Transfer: CSU

NATRE 50 Natural History and Ecology – 2 units

Lecture: 2 hours

Introduction to concepts and examples of natural history and ecology with emphasis on the interrelationships among the biota, geology, and climate of California. Selected topics may include plant succession, ecosystem processes, adaptation and diversity, evolution, California's physical and biological environment, and biomes. Field trips may be required.

Transfer: CSU

NATRE 97 Work Experience in Forestry and Natural Resources – 1-4 units

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in Forestry and Natural Resources. The student's employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

NATRE 110 Natural Resources Field Camp – 3 units

Lecture: 3 hours

An extended field course that can serve as both an introduction and a capstone to Forestry and Natural Resource majors, or as a refresher during any point in a forestry or natural resources career. Provides instruction and hands-on, real-world experiences in a field setting. Integrates topics including safety and first aid, maps and aerial photos, compass and GPS, geology and soils, hydrology and watershed, plants and wildlife, ecology and ecosystem management, natural resource inventory and utilization, and wildland recreation management.

NATURAL RESOURCES TECHNOLOGY**NARTC 155 Interpretive Guided Tours – 2 units**

Lecture: 2 hours

Methods of meeting and serving diverse public groups in their social, cultural, and recreational use of wildland recreation sites. Field trips may be required.

NARTC 160 Introduction to Maps and Remote Sensing – 1.5-2 units

Lecture: 0.75-1 hour. Laboratory: 2.25-3 hours

Application and interpretation of map and remote sensing information including aerial photography, multispectral and thermal scanning, and digital imaging. Emphasis on map features, coordinate systems, topography, land cover, resource management and navigation. Field trips required. (MJC NR 224)

NARTC 161 Introduction to Water Resources Management – 3 units

Lecture: 3 hours

An introduction to the Water Resources Management Program. This course provides an overview of the educational tracks offered in the program, including: Watershed Management, Water for Consumption and Distribution, Wastewater Collection and Treatment Plant Operations, and the emerging field of Decentralized Wastewater Management.

NARTC 163 Water for Consumption – 3 units

Lecture: 3 hours

Study of present and future sources of community water supply with special attention to State standards for potable water; analysis, processing, treatment, quality control, storage, and distribution of community water. Meets Water Treatment Plant Operator State certification prerequisite for examination at Grade 2 level. Offered for Pass/No Pass grading only. Field trips may be required.

NARTC 165 Rural Wastewater Strategies – 3 units

Lecture: 3 hours

History of human waste management. Past practices and the known impact on human health and the environment. Understanding the evolution of wastewater treatment from cesspools to municipal sewers and the current focus on decentralized wastewater and recycling strategies. The application of physical, biological and hydrogeological sciences in wastewater treatment. How do regulations affect change in the wastewater field? Emerging technologies, practices, and concepts that offer solutions to our waste management concerns of a growing population. The need for fresh innovative ideas and leadership. Field trips required.

NARTC 166 Decentralized Wastewater Management – 3 units

Prerequisite: NARTC 165 with a grade of C or better, or P

Lecture: 3 hours

A comprehensive experience in the inspection, operations, maintenance and monitoring of Onsite Wastewater Treatment Systems (OWTS). Students will learn how to evaluate the condition of all types of systems from simple standard gravity septic to high tech advanced treatment technologies. Various aspects of management including operation, maintenance and monitoring of all types of engineered systems including aerobic treatment units, media filters, constructed wetlands, disinfection technologies and a wide range of soil treatment applications. This course is designed to prepare individuals for national certification testing and entrance into the onsite wastewater management field. Field trips may be required.

NARTC 167 Operation of Wastewater Treatment Plants – 3 units

Lecture: 3 hours

Designed to train students in the practical aspects of operating and maintaining wastewater treatment plants, emphasizing the use of safe practices and procedures. Information presented includes the role and responsibilities of a treatment plant operator, an explanation of why wastes must be treated, and detailed descriptions of the equipment and processes used in a wastewater treatment plant. Field trips may be required.

NARTC 169 Operation of Wastewater Treatment Plants 2 – 3 units

Lecture: 3 hours

An advanced course designed to train wastewater treatment plant operators in the practical aspects of operating and maintaining wastewater treatment plants. Topics covered include conventional activated sludge processes, sludge digestion and solids handling, effluent disposal, plant safety and good housekeeping, plant and equipment maintenance, laboratory procedures and chemistry, use of computers for plant operation and maintenance, analysis and presentation of data, records and report writing, analyzing and solving operational problems, and performing mathematical calculations relating to wastewater treatment process control. This course is worth 9 CEUs (90 contact hours). Field trips may be required.

NARTC 172 Nature Photography – 1.5 units

Lecture: 1.5 hours

An introduction to nature and wildlife photography including field craft, maintaining records, conveying scale, performing basic photographic techniques, equipment specific to nature and wildlife photography, and advantages and disadvantages of digital photography. Instruction is in the field. Digital cameras and tripods required. Macro lenses and telephoto lenses recommended. Offered for Pass/No Pass grading only. Field trips may be required.

NARTC 181 California Wildlife – 4 units

Lecture: 4 hours

Study of the characteristics, evolution, population biology, ecology, behavior, life history, and management of California animals. Introduction to methods of studying and managing wildlife to improve populations, habitat, and ecosystem function. Practice of specific field and laboratory techniques of species identification, population biology, and wildlife management. Field trips may be required. (MJC NR 215)

NARTC 182 Natural History and Techniques of Surveying Sierra Nevada Wildlife – 2 units

Total lecture hours: 34

A field lecture course at the High Sierra Institute to train and inform U.S. Forest Service employees, college students, and community members on the natural history and methods of surveying and monitoring Sierra mammals, raptors, uncommon songbirds, reptiles and amphibians. Natural history topics covered include field identification of pelage, tracks, plumage, life cycle specifics, geographic ranges, habitat ecological niche, field signs, behavioral patterns, and State and federal listed status. Techniques of surveying and monitoring wildlife include types of track plates, hair snare systems, and the various models of passive and active remote, motion-sensitive cameras. Mammal detection emphasis will be on sensitive meso-carnivores.

NARTC 183 Ecological Restoration in Practice – 1 unit

Total lecture hours: 16

A field lecture course to train and inform college students, land management professionals, environmental consultants, and community members on ecological restoration techniques. Natural resource topics covered include the importance of ecological restoration to society and the environment, identification and prioritization of natural community types in jeopardy, assessment of resource damage and causative factors, and restoration techniques, implementation, and monitoring.

NARTC 184 Leave-No-Trace Trainer Class – 1 unit

Lecture: 1 hour

An 18-hour field course that informs and trains land management employees and volunteers, youth group leaders, outdoor educators, outfitters and guides in effective instruction in the Leave-No-Trace program of outdoor skills and ethics, and provides experience in presenting and organizing LNT instruction. Offered for Pass/No Pass grading only. Field trips required.

NARTC 185 Wild by Law: An Introduction to the National Wilderness Preservation System – 1 unit

Lecture: 1 hour

A two-day summer field course that informs and trains land management employees, volunteers, and others in the historical and philosophical antecedents to the Wilderness Act of 1964 and the provisions and administration of the National Wilderness Preservation System. Offered for Pass/No Pass grading only. Field trips required.

OFFICE TECHNOLOGY

OFTEC 42 Publication Design I – 3 units

Recommended for Success: OFTEC 141

Lecture: 2 hours. Laboratory: 3 hours

An introduction to general publication design theory with emphasis on typography, page layout, graphics, and design. Students will create media for print and digital publishing. Exercises and projects will include the creation of a multi-page booklet, poster, newsletter, brochures and an interactive document formatted for digital publishing. Credit may be earned for only one of the following: OFTEC 42, CMPSC 31, or ART 51.

Transfer: CSU

OFTEC 43 Publication Design II – 3 units

Prerequisite: OFTEC 42 or ART 51 or CMPSC 31, with a grade of C or better, or P

Lecture: 2 hours. Laboratory: 3 hours

A continuation of study in problems of Publication Design. Areas of focused study will be in advanced problems of page layout, typography, print, and interactive documents for digital publication. Credit may be earned for only one of the following: OFTEC 43, CMPSC 32, or ART 52.

Transfer: CSU

OFTEC 50 Medical Terminology – 3 units

Lecture: 3 hours

An introduction to basic word structure including word roots, prefixes and suffixes used in medical vocabulary; also specialized vocabulary for the various anatomical systems used by allied health fields. (MJC MDAST 321)

Transfer: CSU

OFTEC 51 Medical Terminology for ICD-10 Coding – 3 units

Lecture: 3 hours

An introduction to the expanded anatomy and physiology terminology needed for ICD-10-CM/PCS coding. Basic word structure includes roots, prefixes, and suffixes. Terminology specific to ICD coding is combined with the right level of A & P content to ensure coding proficiency.

Transfer: CSU

OFTEC 97 Work Experience in Office Technology – 1-4 units

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in Office Technology. The student's employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

OFTEC 100 Computer Keyboarding I – 1 unit

Laboratory: 3 hours (self-paced)

Designed for students wishing to master the touch method of keyboarding.

OFTEC 125 Records Management and Filing Applications – 3 units

Lecture: 3 hours

This is a basic course in the principles and practices of effective records management systems and includes practice in classifying, arranging, and storing of records for both manual and computerized records systems. Emphasis is placed on practical applications of alphabetic, numeric, geographic and subject filing systems. Meets or exceeds specifications of American Records Management Association.

OFTEC 130 Business English – 3 units

Lecture: 3 hours

A review of the mechanics of English grammar, punctuation, and sentence structure with emphasis on business applications. Vocabulary development, spelling, and use of the dictionary are also studied.

OFTEC 131 Office Procedures and Technology – 3 units

Prerequisite: OFTEC 125 with a grade of C or better, or P

Lecture: 3 hours

Application of workforce issues and development of skills including decision making, team building, business ethics, communication, and time management. Introduction to meeting management, travel and conference planning. Development of presentation skills and employment portfolio. (MJC OFADM 314)

OFTEC 132 Business Communications – 3 units

Prerequisite: OFTEC 130 or ENGL 650, with a grade of C or better, or P

Lecture: 3 hours

Study and development of a variety of communication skills. Emphasis will be placed on writing skills as well as speaking, listening, and nonverbal skills. Students will learn how to compose and create effective documents typically used in business and personal situations including letters, memos, technology-related messages and reports.

OFTEC 140 Beginning Word Processing – 2 units

Recommended for Success: OFTEC 100

Lecture: 2 hours

Students receive instruction in a current word processing program which includes editing, saving, changing format, fonts, tabs; using Spell Check; creating headers/footers and footnotes/endnotes; cutting and pasting; and using file management techniques.

OFTEC 141 Intermediate Word Processing – 3 units

Recommended for Success: OFTEC 140

Lecture: 2 hours

Laboratory: 3 hours

Students receive instruction in intermediate word processing features which will be applied to creating business documents. Areas of emphasis will include text columns, macros, styles, math, merge, repetitive documents, sort and select, and graphics. (MJC CMPSC 231)

OFTEC 142 Desktop Publishing Essentials – 1-2 units

Lecture: 1-2 hours

Introduction to general desktop publishing theory with emphasis on design elements of formatted text, frames, photographs, clip art, lines, and pictures. Students will create sample projects such as newsletters, brochures, flyers, business cards, etc. Note: Basic word processing skills needed. Credit may be earned for only one of the following: OFTEC 142 or CMPSC 142. Offered for Pass/No Pass grading only.

OFTEC 149 Electronic Health Records – 2 units

Lecture: 2 hours

Students learn to apply hands-on skills by creating charts for new patients, recording vital signs, managing office visits, and creating letters to patients and healthcare providers. Students experience computer-simulated office management through EHR software.

OFTEC 150 Medical Law and Ethics – 1.5 units

Lecture: 1.5 hours

This course is an introduction to law and ethics in the medical office. The course studies principles, procedures, and regulations involving legal and ethical relationships among physicians, patients, and medical assistants. It also includes current ethical issues and risk management as they relate to the practice of medicine and fiduciary responsibilities.

OFTEC 151 Medical Office Management – 3 units

Recommended for Success: OFTEC 50

Lecture: 3 hours

An introduction to the multiple functions performed by the Medical Office Specialist. Topics include appointment scheduling; verbal, nonverbal, and written communication; interpersonal skills; telephone techniques; managing office supplies, equipment, and personnel; development of organizational and decision-making skills; and financial records.

OFTEC 152A Medical Billing and Coding – 3 units

Recommended for Success: OFTEC 50 with a grade of C or better, or P

Lecture: 3 hours

A fundamental course in medical insurance billing and coding, Blue Cross and Blue Shield, Medicaid and Medi-Cal, Medicare, Champus and Workers' Compensation.

OFTEC 152B Medical Coding II – 3 units

Recommended for Success: OFTEC 152A

Lecture: 3 hours

Intensive application of coding skills in the various medical specialties which expands on procedure and diagnostic coding skills. Abstracting information from the patient records and combining it with knowledge of coding guidelines to optimize physician payment.

OFTEC 152C Advanced Medical Coding – 3 units

Prerequisite: OFTEC 152B with a grade of C or better, or P

Lecture: 3 hours

Advanced Coding provides an in-depth understanding of physician-based medical coding and coding services such as medical visits, diagnostic testing and interpretation, treatments, surgeries, and anesthesia. Students will enhance clinical decision-making skills and learn to pull the right information from documents, select the right codes, determine the correct sequencing of those codes, and audit cases.

OFTEC 168 Creating and Managing a Virtual Office – 3 units

Recommended for Success: OFTEC 120, CMPSC 4, CMPSC 10

Lecture: 3 hours

Application of administrative support and entrepreneurial skill sets in the development of a virtual office business. Emphasis will be placed on business development, personal skill sets, marketing strategies, communications, organization, and operations. In this setting, a virtual assistant is a highly skilled professional working independently in support of other businesses, often with the latest technology.

OFTEC 210 Typing Speed and Accuracy Building – 1 unit

Laboratory: 3 hours (self-paced)

Speed building and accuracy on straight copy; statistical writing, intensive drills, timed writings and remedial work.

OFTEC 215 Word Processing for Personal Use – 1 unit

Lecture: 1 hour

Instruction in typing, storing, revising, printing, and other beginning commands for a variety of applications using a word processing program. Designed for non-majors; no previous computer experience is required. Offered for Pass/No Pass grading only.

OFTEC 216 Intermediate/Advanced Word Processing for Personal Use – 1-2 units

Recommended for Success: OFTEC 215

Lecture: 1-2 hours

Intermediate and advanced functions of word processing programs, particularly for personal use. Topics may include styles, headers/footers, footnotes and endnotes, tables, merging, and a variety of graphic, clip art and drawing features. This course is designed for non-majors. Prior basic word processing experience is recommended. Offered for Pass/No Pass grading only.

PHILOSOPHY

PHILO 1 Introduction to Philosophy – 3 units

Recommended for Success: Eligibility for ENGL 1A

Lecture: 3 hours

Survey of the field of philosophy, including human nature, meaning in life, and values in ethics, social justice, and art; knowledge, truth, logic, and the scientific method; ultimate reality and philosophy of religion. (MJC PHILO 101)

Transfer: UC/CSU. IGETC 3B; CSU-GE C2

PHILO 5 Introduction to the History and Philosophy of Science – 3 units

Prerequisite: ENGL 1A with a grade of C or better, or P

Lecture: 3 hours

An introduction to the ideas, processes and consequences of science through history. The historical development of philosophies of science will be central throughout. Critical reasoning and extensive writing will be required. Contextual cultural analysis is expected. Credit may be earned for only one of the following: PHILO 5 or HIST 5.

Transfer: UC/CSU. IGETC 1B, 3B; CSU-GE A3, C2

PHILO 25 Twentieth Century Philosophy – 3 units

Recommended for Success: ENGL 1A

Lecture: 3 hours

A brief survey of nineteenth and twentieth century philosophy emphasizing the contributions of various thinkers to our understanding of what it is to be human, the nature of society and the relationship of the individual to it, science, technology and human values, and the meaning of life itself. (MJC PHILO 123)

Transfer: UC/CSU. IGETC 3B; CSU-GE C2

PHILO 35 Environmental Ethics – 3 units

Lecture: 3 hours

Do we have moral obligations towards nature? Who counts more: ecosystems, species, or individuals? What, if anything, is the value of wilderness? Course will address questions and issues such as these that arise when considering the relationship between human beings and the environment. Topics include animal rights, land use policy, sustainability, bioengineering, climate change, environmental justice. Theoretical approaches include deep ecology, anthropocentrism, eco-feminism, and pragmatism. Field trips may be required.

Transfer: UC/CSU. IGETC 3B; CSU-GE C2

PHOTOGRAPHY see Art

PHYSICS

PHYCS 1 Conceptual Physics – 3 units

Lecture: 3 hours

A conceptual investigation of the physics of motion, energy, light and color, gravitation, and an introduction to black holes and relativistic time travel. (MJC PHYS 160)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

IGETC 5A; CSU-GE B1

PHYCS 2 Conceptual Physical Science: A Starship Voyage – 3 units

Recommended for Success: MATH 101

Lecture: 3 hours

You have been accepted to be a crew member of Earth's first starship, the Sakarov. Class meetings are simulations of the crew's orientation seminars and orientation workshops—the textbook being the orientation manual for this first interstellar voyage. During orientation workshops, crew members, working in small groups, will apply elementary physics and astronomy concepts, learned from the seminars, to deal with voyage predicaments. Topics addressed include scale and composition of the local universe; gravitation; how stars and planets form; light; how telescopes work; keys to understanding motion in space; linear momentum; and angular momentum.

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

IGETC 5A; CSU-GE B1

PHYCS 4A Introductory Physics I: Trigonometry Level – 4 units

Prerequisite: MATH 8 or MATH 17B, with a grade of C or better, or P

Lecture: 4 hours. Laboratory: 2 hours

A trigonometry-level introduction to the modeling of physical phenomena using Newtonian theory and its extensions. Topics include macroscopic force laws, linear and rotational dynamics, energy, fluids, oscillations, waves, and thermal physics. This course requires the student to use the following college-level skills: algebra, trigonometry, abstract concept assimilation, and critical thinking. Field trips may be required. (MJC PHYS 142)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

IGETC 5A, 5C; CSU-GE B1, B3

PHYCS 4B Introductory Physics II: Trigonometry Level – 4 units

Prerequisite: PHYCS 4A with a grade of C or better, or P

Lecture: 4 hours. Laboratory: 2 hours

A trigonometry-level introduction to the modeling of physical phenomena using electrostatics, magnetostatics, electromagnetic induction, and electric circuit theories. Includes an introduction to optics, and modern physics. This course requires the student to use the following college-level skills: algebra, trigonometry, abstract concept assimilation, critical thinking, and a four-stage physics modeling procedure (developed in Introductory Physics I). (MJC PHYS 143)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)

IGETC 5A, 5C; CSU-GE B1, B3. C-ID: PHYS 110

PHYCS 5A Introductory Physics I: Calculus Level – 5 units

Prerequisite/Co-requisite: MATH 18A with a grade of C or better, or P or concurrent enrollment in MATH 18A

Lecture: 5 hours. Laboratory: 2 hours

A calculus-based introduction to the modeling of physical phenomena using Newtonian theory and its extensions. Topics include macroscopic force laws, linear and rotational dynamics, energy, fluids, oscillations, thermal physics, and waves. This course requires the student to use the following college-level skills: algebra, trigonometry, beginning calculus, abstract concept assimilation, and critical thinking. Field trips may be required. (MJC PHYS 101)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)
IGETC 5A, 5C; CSU-GE B1, B3. C-ID: PHYS 205

PHYCS 5B Introductory Physics II: Calculus Level – 5 units

Prerequisite: PHYCS 5A with a grade of C or better, or P
Prerequisite/Co-requisite: MATH 18B with a grade of C or better, or P, or concurrent enrollment in MATH 18B

Lecture: 5 hours. Laboratory: 2 hours

A calculus-level introduction to modeling with electrostatics, magnetostatics, electromagnetic induction, and electric circuit theories. Includes an introduction to optics and modern physics. The course requires the student to use the following college-level skills: algebra, trigonometry, integral calculus, abstract concept assimilation, critical thinking, and a four-stage physics modeling procedure (developed in Introductory Physics I). (MJC PHYS 103)

Transfer: UC/CSU (Transfer credit limited. See a counselor.)
IGETC 5A, 5C; CSU-GE B1, B3. C-ID: PHYS 210

POLITICAL SCIENCE**POLSC 10 Constitutional Government – 3 units**

Lecture: 3 hours

A survey course in the political system of the United States from its inception at the end of the eighteenth century until the present time. Primary focus will be the Constitution, its ideological underpinnings, uses and limitations. Class will also cover the two-party system, the process of justice, the specific mechanisms of legislature, and the governmental power at the national, state, and local levels, with specific emphasis on the state of California. The interests and rights of all historically under represented groups will be included in the analysis of the power structure. (MJC POLSC 101) (POLSC 10, taken in conjunction with HIST 16 or HIST 17, satisfies the Associate Degree and CSU requirements in United States History, Constitution, and American Ideals.)

Transfer: UC/CSU. IGETC 4H; CSU-GE D8

POLSC 12 American Political Thought – 3 units

Lecture: 3 hours

Historical survey of major American political ideas, political processes, ideals and aspirations. The origins, evolution, and current directions of American political thought will be examined through specific American values and beliefs. The course will introduce the major political ideologies, their origins, and the implications and consequences of those in American history.

Transfer: UC/CSU. IGETC 4H; CSU-GE D8

POLSC 14 International Relations – 3 units

Lecture: 3 hours

Introduction to the principles and practices of international politics, emphasizing problems of war and peace, foreign policies of major powers, problems of developing countries, and global problems. Emphasis placed upon the formulation and execution of American foreign policy within a constitutional and political framework. The dynamics of interstate relations, diplomacy, international law, non-state actors and supra-national organizations will be emphasized. (MJC POLSC 110)

Transfer: UC/CSU. IGETC 4H; CSU-GE D8

PSYCHOLOGY**PSYCH 1 General Psychology – 3 units**

Recommended for Success: ENGL 151

Lecture: 3 hours

An introductory survey course of the general field of psychology. Topics to be covered include: the scientific method (including the impact of diversity and ethics), conditioning, personality development, aggression, emotions, stress, anxiety, therapy, sexuality, motivation, consciousness, biology and behavior, and abnormal psychology. (MJC PSYCH 101)

Transfer: UC/CSU. IGETC 4I; CSU-GE D9. C-ID: PSY 110

PSYCH 2 Current Issues in Psychology – 3 units

Prerequisite: PSYCH 1 with a grade of C or better, or P

Lecture: 3 hours

A look at the more advanced areas of study in psychology concentrating on current theoretical approaches and research findings regarding areas of current interest and controversy.

Transfer: CSU

PSYCH 5 Human Sexual Behavior – 3 units

Recommended for Success: ENGL 151

Lecture: 3 hours

Exploration of issues in human sexuality from the perspectives of the behavioral, social and biological sciences. Study and discussion of sexual behavior, feelings, and attitudes as they affect one's self and others. (MJC PSYCH 110)

Transfer: UC/CSU. IGETC 4I; CSU-GE E; C-ID: PSY 130

PSYCH 10 Lifespan Human Development – 3 units

Recommended for Success: PSYCH 1

Lecture: 3 hours

An introduction to the scientific study of the human being from conception to death. The interplay of biological, psychological, social and cultural forces on the developing human will be examined. As well as examining universal development, the course will examine individual differences in human development including developmental problems associated with physical, cognitive, social and personality issues. Instruction will include theoretical concepts as well as practical application. (MJC PSYCH 141)

Transfer: UC/CSU. IGETC 4I; CSU-GE E; C-ID: PSY 180

PSYCH 15 Research Methods in Psychology – 3 units

Prerequisites: PSYCH 1 and MATH 2, with grades of C or better, or P

Lecture: 3 hours

An introduction to basic research methods used in Psychology (and other behavioral sciences). This includes an examination of the scientific method, research design (descriptive, observational, correlational and experimental methods), experimental procedures, the collection, analysis and reporting of research data, the review and evaluation of research articles and ethics in research. Research design and methodology will be illustrated through selected research topics in psychology; for example, neuroscience, learning, memory, development and social psychology.

Transfer: UC/CSU. CSU-GE D9

PSYCH 20 Sport Psychology – 3 units

Lecture: 3 hours

Introductory survey of the theoretical and practical applications of psychology to sport and exercise. Cognitive, behavioral, social-psychological and affective factors related to populations and topics in sport and exercise will be covered. Topics include introduction to sport psychology, personality and sport, audience effect, aggression, arousal/stress, anxiety, motivation, team climate, and youth issues/gender issues.

Transfer: CSU. CSU-GE D9, E

PSYCH 30 Psychology of Adjustment – 3 units

Recommended for Success: ENGL 151

Lecture: 3 hours

The study of personal growth and adjustment to help prepare the individual for lifelong understanding of self and adjustments over the life span. Discussion of personality theory and development, interpersonal relations, sexuality, stress management, family dynamics, dealing with losses, and other concerns of the individual in our society. Field trips may be required. (MJC PSYCH 130)

Transfer: CSU. CSU-GE E

PSYCH 35 Introduction to Drugs and Behavior – 3 units

Recommended for Success: PSYCH 1

Lecture: 3 hours

An introduction to how drugs affect behavior. Instruction in basic pharmacology and neurophysiology as it relates to drug self-administration and resultant altering of behavior. Overview of the history, concepts and theory of drug use. Includes discussion of issues related to drug use such as drug abuse as a disease or disorder, and drug use for specific purposes such as enhancing sports performance. Designed for students who do not possess a technical background. (MJC HUMSR 116)

Transfer: UC/CSU. IGETC 4I; CSU-GE D9, E

PSYCH 40 Stress Management – 3 units

Recommended for Success: ENGL 151

Lecture: 3 hours

An overview of the psychological, physiological, sociological and behavioral dynamics underlying the management of the human stress response. The class covers the biological and psychological aspects of the stress response, as well as the appraisal and management of stress. This includes time management, lifestyle choices, behavior modification techniques, relaxation training, and interpersonal communication techniques.

Transfer: CSU. CSU-GE E

PSYCH 52 Introduction to Peer Support for Psychosocial Rehabilitation – 3 units

Lecture: 3 hours

This course provides an overview of the knowledge, skills and attitudes that are required for individuals entering the field of Peer Counseling. The individual role of peer counselor is defined, as well as how the peer counselor integrates into a multidisciplinary team. The core values of psychosocial rehabilitation and recovery are reviewed, and students will identify their strengths in relationship to these values. Core skills are defined and demonstrated, such as self-management (using Mary Ellen Copeland's Wellness Recovery Action Plan), advocacy, boundaries and working from a strengths perspective. In addition, the student learns basic documentation skills and reviews confidentiality regulations under HIPAA.

Transfer: CSU

PSYCH 56 Introduction to Psychosocial Rehabilitation – 3 units

Prerequisite: PSYCH 52 with a grade of C or better, or P.

Lecture: 3 hours

The course reviews the history of the treatment of persons with psychiatric disorders and shows the evolution of thinking and practice in the field. The course provides an overview of the fundamental theories, strategies, practice models and interventions commonly utilized in psychosocial rehabilitation. During the course, the student will review the principles and values of psychosocial rehabilitation, emphasizing consumer empowerment and recovery. The course will cover a brief history of the field, current practice models, and will identify important issues facing the psychosocial rehabilitation practitioner today. The purpose of this course is to present the core values and principles of recovery-oriented, psychosocial rehabilitation practice. Also presented is basic information on psychiatric disorders, current research and how to work in an empowering way with consumers about medication.

Transfer: CSU

SEARCH AND RESCUE

SAR 10 Introduction to Search Theory – 2 units

Lecture: 2 hours

An overview of current search theories as developed by the National Park Service and the National Association for Search and Rescue. National Association for Search and Rescue Certification available to the student. Credit may be earned for only one of the following: SAR 10 or FIRE 10.

Transfer: CSU

SAR 50 Low Angle Rope Rescue – 1.5 units

Lecture: 1.5 hours

This course is designed to take the student to the basic skill and knowledge levels of Low Angle (not vertical) Rope Rescue. Topics will include, but are not limited to: basic rappelling, rescue of ambulatory and non-ambulatory persons with an emphasis on safety and teamwork. Topics reflect current Urban Search and Rescue and California State Fire Training standards and equipment. Successful students will be certified in Low Angle Rope Rescue by the California State Fire Marshal's Office. Credit may be earned for only one of the following: SAR 50 or FIRE 50. Offered for Pass/No Pass grading only. (CC FIRE 7, FIRE 50, FIRE 101, FIRE 106 & FIRE 107 = MJC FSCI 362 & FSCI 363)

Transfer: CSU

SAR 51 High Angle Rope Rescue – 1.5 units

Prerequisite: SAR 50 or FIRE 50, with a grade of C or better, or P

Lecture: 1.5 hours

This course is designed to take the student from the basic skill levels of Low Angle (non vertical) Rope Rescue Certification to the more complex rappelling and rope rescue skills found in High Angle (vertical) Rope Rescue situations. This course will reflect current Urban Search and Rescue and California State Fire Training standards. Credit may be earned for only one of the following: SAR 51 or FIRE 51. Offered for Pass/No Pass grading only.

Transfer: CSU

SAR 59 Rescue Systems I: Instructor Training – 3 units

Lecture: 3 hours

Review and update of heavy duty rescue skills and techniques designed to prepare qualified personnel to teach those skills and techniques to others. Credit may be earned for only one of the following: SAR 59 or FIRE 59. Offered for Pass/No Pass grading only.

Transfer: CSU

SAR 62 GIS Mapping - Introduction to SAR GIS – 1 unit

Lecture: 1 hour

Students who take this course will learn how to apply their GIS skills in Search and Rescue (SAR) Mapping. Students will learn SAR incident symbology, data standards and organization, establishing incident locations, search segments, SAR incident map products, and responsibilities of a GIS specialist on SARs and other critical incidents. The course will use a workflow and data model developed by SAR personnel that integrates with ArcGIS 10. Additionally, students will utilize GPS data that they have collected from GPS devices, convert them to shapefiles, and create team and briefing incident maps. During a full-day exercise, students will also live-track SAR teams using satellite tracking devices. This course includes hands-on experience in SAR incident mapping and data organization. Credit may be earned for only one of the following: SAR 62, CMPSC 62 or GEOGR 62. Offered for Pass/No Pass grading only.

Transfer: CSU

SIGN LANGUAGE

SIGN 40A ASL: Beginning Communication with the Deaf – 3 units

Lecture: 3 hours

This is the beginning course in American Sign Language (ASL) and Deaf culture. ASL is the language used by culturally Deaf people in the United States. The class focus is on everyday conversations and situations. Emphasis is on both receptive and expressive skills.

Transfer: UC/CSU. CSU-GE C2

SIGN 40B ASL: Intermediate Communication with the Deaf – 3 units

Prerequisite: SIGN 40A with a grade of C or better, or P
Lecture: 3 hours

This is an intermediate course in American Sign Language (ASL) and Deaf culture. ASL is the language used by culturally Deaf people in the United States. The class focus is on everyday conversations and situations. Emphasis is on both receptive and expressive skills.

Transfer: UC/CSU. IGETC 3B, 6A; CSU-GE C2

SIGN 40C ASL: Advanced Intermediate Communication with the Deaf – 3 units

Prerequisite: SIGN 40B with a grade of C or better, or P
Lecture: 3 hours

This is the third course in American Sign Language (ASL) and Deaf Culture. ASL is the language used by most deaf people in the United States. Emphasis is on improving speed and fluency.

Transfer: UC/CSU. IGETC 3B, 6A; CSU-GE C2

SKILLS DEVELOPMENT**SKLDV 610 Introduction to Computer Access – 0.5-1 unit**

Prerequisite: Verified disability according to California Community College Title 5 regulations

Laboratory: 1.5-3 hours

Designed to provide access to and instruction in specialized computer programs for students with verified learning, developmental, or physical disabilities. Students will work in one or more areas, including adaptive typing and word processing, fundamental academic skills such as reading, spelling, vocabulary, grammar, and mathematics, and/or cognitive exercises and memory-building techniques.

Offered for Pass/No Pass grading only.

SKLDV 690 Study Skills – 0.5 unit

Lecture: 0.5 hour

An introductory discussion of effective study methods. Topics will include goal setting, time management, learning styles, note taking, textbook analysis, memory/concentration, and test taking.

SOCIOLOGY**SOCIO 1 Introduction to Sociology – 3 units**

Lecture: 3 hours

Introduction to the principal concepts and methods of sociology; survey of interactions, interrelationships and processes of society, such as culture, socialization, stratification, minorities, primary and secondary groups, social change. (MJC SOCIO 101)

Transfer: UC/CSU. IGETC 4J; CSU-GE D0. C-ID: SOCI 110

SOCIO 2 American Society: Social Problems and Deviance – 3 units

Lecture: 3 hours

A focus on social problems, such as family disorganization, religious conflicts, educational irregularities, poverty, physical and mental health care, political issues, crime and justice, violence and aggression, drug issues, and environmental problems. These problems and others will be studied from the perspective of social institutions, social deviance, and other perspectives of sociology. (MJC SOCIO 102)

Transfer: UC/CSU. IGETC 4J; CSU-GE D0. C-ID: SOCI 115

SOCIO 5 Ethnicity and Ethnic Relations in America – 3 units

Lecture: 3 hours

This is a multidisciplinary study of ethnicity (belonging to an ethnic group) and ethnic group relations in the United States from an historical and sociological perspective. It emphasizes a challenging field of study with the dynamics of emergence, ethnocentrism, change, marginality and acculturation of major ethnic groups in the United States. The immense diversity of these groups will be explored and analyzed through the methodology of recent sociological research. This course is designed to meet an ethnic studies requirement. (MJC SOCIO 150)

Transfer: UC/CSU. IGETC 4C, 4J; CSU-GE D0, D3. C-ID: SOCI 150

SOCIO 7 Gender, Culture and Society – 3 units

Lecture: 3 hours

The course takes an inclusive bio-cultural evolutionary perspective on gender, focusing on non-human primate societies as well as primitive (small scale) and modern (large scale) human societies. Factors such as culture, ecological conditions and historical circumstances, forces of stratification (e.g. age, social class), socialization (e.g. rites of passage, conformity and deviance) as well as the science (e.g. concepts, theories and methods) of studying these topics will be addressed. Though course readings will represent many disciplines, the foundation readings reflect the perspectives of bio-cultural anthropology as well as sociology. This emphasis addresses the fundamental assumption that while sex differences are biological, gender encompasses the traits that culture assigns and inculcates (with varying degrees of success) in males and females. Credit may be earned for only one of the following: SOCIO 7 or ANTHR 7.

Transfer: UC/CSU. IGETC 4D; CSU-GE D4. C-ID: SOCI 140

SOCIO 8 Research Methods in the Social and Behavioral Sciences – 3 units

Prerequisite: SOCIO 1 with a grade of C or better, or P
Lecture: 3 hours

Surveys research traditions and processes in the social and behavioral sciences. The course addresses: epistemological traditions, research conceptualization, research design, research process, measures, sampling, data collection and analysis, reporting traditions, ethics, as well as implications for theory and public policy. While the primary focus is on Anthropology, Psychology, and Sociology, there will be a secondary focus on the disciplines of Biology, Demography, History, Political Science, and Public Health. Credit may be earned for only one of the following: SOCIO 8 or ANTHR 8.

Transfer: UC/CSU. IGETC 4J; CSU-GE D0; C-ID: SOCI 120

SOCIO 12 Sociology of the Family – 3 units

Lecture: 3 hours

Comparative and historical treatment of the family institution. Analysis of kinship and family structure, roles and relationships within the family. Interdisciplinary assessment of the reciprocal relationship between contemporary society and the American family. (MJC SOCIO 125)

Transfer: UC/CSU. IGETC 4J; CSU-GE E. C-ID: SOCI 130

SOCIO 28 Death and Dying – 3 units

Lecture: 3 hours

Principles, concepts and methods of sociology used in examining predominant attitudes and practices regarding death, dying, and grief in the U.S.; included will be interdisciplinary methods and materials relevant to suicide, the terminally ill, bereavement, and various viewpoints about the phenomenon of death. Field trips may be required. (MJC HUMSR 114)

Transfer: CSU. CSU-GE E

SPANISH

SPAN 1A Spanish: Beginning – 5 units

Recommended for Success: Eligibility for ENGL 1A
Lecture: 5 hours

Introduction to the Spanish language, emphasizing natural communications and supported by foundation grammar. For true beginners and students with one year of high school Spanish or the equivalent. (MJC SPAN 101)

Transfer: UC/CSU. IGETC 6A; CSU-GE C2; C-ID: SPAN 100

SPAN 1B SPANISH: Beginning – 5 units

Prerequisite: SPAN 1A or 2 years of high school Spanish, with a grade of C or better, or P

Lecture: 5 hours. Laboratory: 1 hour

Continuation of SPAN 1A, fundamentals of spoken and written Spanish. (MJC SPAN 102)

Transfer: UC/CSU. IGETC 3B, 6A; CSU-GE C2

SPAN 2A SPANISH: Intermediate – 5 units

Prerequisite: SPAN 1B with a grade of C or better, or P, or 3 years of high school Spanish or equivalent
Lecture: 5 hours

Continuation of SPAN 1B. Includes grammar, conversation and discussion, composition and reading. (MJC SPAN 103)

Transfer: UC/CSU. IGETC 3B, 6A; CSU-GE C2. C-ID: SPAN 200

SPAN 2B Spanish: Intermediate – 5 units

Prerequisite: SPAN 2A with a grade of C or better, or P
Lecture: 5 hours

A continuation of intermediate-level SPAN 2A. (MJC SPAN 104)

Transfer: UC/CSU. IGETC 3B, 6A; CSU-GE C2. C-ID: SPAN 210

SPAN 10A Conversational Spanish: Beginning – 3 units

Lecture: 3 hours

Practice in vocabulary, idioms and grammatical usage with emphasis on conversational use of the language as spoken in Hispanic America. (MJC SPAN 51)

Transfer: CSU

SPAN 20A Conversational Spanish: Intermediate – 3 units

Recommended for Success: SPAN 1B or satisfactory completion of 3 years of high school Spanish, or equivalent
Lecture: 3 hours

An intermediate-level conversation course designed for the practice of listening and speaking skills in Spanish with a focus on everyday language in a comparative cultural context. Preparation includes reading of assigned material.

Transfer: CSU

SPAN 20B Conversational Spanish: Intermediate – 3 units

Prerequisite: SPAN 20A or SPAN 2A with a grade of C or better, or P

Lecture: 3 hours

An intermediate-level conversation course designed to refine listening and speaking skills through discussion of contemporary issues in a comparative cultural context. Preparation includes reading of assigned material.

Transfer: CSU

SPAN 150A Spanish for the Community – 2 units

Lecture: 2 hours

A conversation-based course for beginners. This course will be useful for individuals who work with Spanish-speaking customers or employees, for individuals planning to travel to Spanish-speaking countries, or for those wishing a basic orientation to the structure of Spanish with an eye to continuing language study. Offered for Pass/No Pass grading only.

SPAN 150B Spanish for the Community II – 2 units

Lecture: 2 hours

Continuation of an introductory conversational Spanish course for beginning learners. Course will be useful for individuals who work with Spanish-speaking customers or employees, for individuals planning to travel to Spanish-speaking countries, or for those wishing a basic orientation to the structure and use of Spanish. Offered for Pass/No Pass grading only.

SPEECH COMMUNICATION**SPCOM 1 Introduction to Public Speaking – 3 units**

Lecture: 3 hours

Principles of oral communication: speech composition and techniques of presenting informal and formal speeches. Emphasis given to organization, delivery, critical thinking, and evaluative listening. (MJC SPCOM 100)

Transfer: UC/CSU. IGETC 1C; CSU-GE A1. C-ID: COMM 110

SPCOM 2 Argumentation and Debate – 3 units

Prerequisite: SPCOM 1 with a grade of C or better, or P

Lecture: 3 hours

A study of argumentation and debate. Emphasis is given to analysis of the rules, strategies, and argumentation models central to parliamentary debate. Special consideration will be given to the elements of logic; analysis of opposing arguments and models of refutation and rebuttal. These areas of inquiry are conducted through modes specific to oral traditions and contemporary debate theory. (MJC SPCOM 104)

Transfer: UC/CSU. CSU-GE A3. C-ID: COMM 120

SPCOM 4 Introduction to Human Communication – 3 units

Lecture: 3 hours

This course provides a brief introduction to topics and subjects central to the discipline of speech communication. Course introduces students to non-verbal communication, interpersonal communication, group communication and public speaking. Students will have an opportunity to practice and study all four modes. (MJC SPCOM 102)

Transfer: UC/CSU. IGETC 1C; CSU-GE A1

SPCOM 5 Intercultural Communication – 3 units

Lecture: 3 hours

A study of intercultural communication with a focus on the analysis and comparisons of message perception and transmission in interactions between people from different cultures. Practical application of skills for effective communication between people of different domestic and international cultures is emphasized. Field trips required. (MJC SPCOM 130)

Transfer: UC/CSU. IGETC 4C; CSU-GE D3. C-ID: COMM 150

SPCOM 7 Forensics Workshop – 3 units

Lecture: 3 hours

Principles of applied speech communication through participation in competitive speech performances. Students will participate in intercollegiate forensics. Competitive events include debate, individual speaking, and interpretive performances. Field trips required. May be repeated three times. (MJC SPCOM 105)

Transfer: CSU. C-ID: COMM 160B

SPCOM 9 Introduction to Small Group and Team Communication – 3 units

Lecture: 3 hours

This course focuses on the intersection between communication and the ability of small groups or teams to effectively achieve objectives. Course includes the study of, and practice in, discussion methodology, types of discussion groups, information gathering, problem solving, decision making, and leadership roles. Credit may be earned for only one of the following: SPCOM 9 or BUSAD 9. (MJC SPCOM 106)

Transfer: CSU. C-ID: COMM 140

SPCOM 12 Media and American Culture – 3 units

Lecture: 3 hours

An overview of the evolution of mass media and its cumulative effects on public perception and American cultural identity. Specific emphasis includes television, newspapers, film, advertising, and the internet. Course content explores the relationship the media has in shaping public perception and behavior.

Transfer: UC/CSU. IGETC 4G; CSU-GE D7

SPCOM 19 Exploring Radio Drama – 1.5-3 units

Lecture: 1.5-3 hours

An intensive course focused on audio theatre production featuring the expressive use of the voice and sound effects. Students will create, rehearse, perform and provide sound effects for audio plays to be recorded. Credit may be earned for only one of the following: SPCOM 19 or DRAMA 19.

Transfer: CSU

TEACHER AIDE TRAINING**T-AID 97 Work Experience as a Teacher Aide – 1-4 units**

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in Teacher Aide Training. The student's employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

WELDING TECHNOLOGY

WT 97 Work Experience in Welding Technology – 1-4 units

Co-requisite: Must be enrolled in at least seven (7) units including Work Experience

75 hours paid employment equals 1 unit of credit

60 hours unpaid employment equals 1 unit of credit

Provides students an opportunity to experience supervised employment in Welding Technology. The student's employment must be related to educational or occupational goals. Offered for Pass/No Pass grading only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.

Transfer: CSU (Transfer credit limited. See a counselor.)

WT 101 Practical Laboratory – 1 unit

Prerequisite: WT 100 with a grade of C or better, or P
Laboratory: 3 hours

The student shall gain practical welding experience by working on individual projects (including certification projects).

Emphasis is on quality, appearance and function.

WT 103 Practical Laboratory - Metal Sculpture – 1 unit

Prerequisite: WT 166 or ART 166 with a grade of C or better, or P

Laboratory: 3 hours

The student shall gain practical experience by working on individual projects in metal sculpture design and fabrication.

Emphasis is on quality, appearance and function. Credit may be earned for only one of the following: WT 103 or ART 103.

WT 111 Advanced Arc Welding Techniques – 3 units

Prerequisite: WT 100 with a grade of C or better, or P

Lecture: 1 hour. Laboratory: 6 hours

Arc welding in flat, horizontal, vertical and overhead positions. Welding cast iron, carbon arc cutting, basic pipe welding, plasma cutting, metallurgy, hard facing technology is included. Special emphasis will be on control of heat and distortion and failure analysis. Students will prepare for A.W.S. welding certification.

WT 121 Welding Technology Level I – 3 units

Lecture: 1 hour. Laboratory: 6 hours

Covers welding safety, shielded metal arc welding (SMAW), and metal cutting processes. This course complies with American Welding Society (AWS) and Schools Excelling through National Skills Education (SENSE) curriculum standards. Students are required to supply leathers, safety glasses, and welding gloves.

Field trips may be required.

WT 122 Welding Technology Level II – 3 units

Prerequisite: WT 121 or WT 100 with a grade of C or better, or P

Lecture: 1 hour. Laboratory: 6 hours

Covers welding safety, welding symbols and detail drawings, characteristics of metallurgy, Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW) and Gas Tungsten Arc Welding (GTAW) processes. This course complies with American Welding Society (AWS) and Schools Excelling through National Skills Education (SENSE) curriculum standards. Materials fee is \$20.00. Students are required to supply leathers, safety glasses, and welding gloves. Credit may be earned for only one of the following: WT 122 or WT 110. Field trips may be required.

WT 123 Welding Technology Level III – 3 units

Prerequisite: WT 122 with a grade of C or better, or P

Lecture: 1 hour. Laboratory: 6 hours

Covers welding safety, Shielded Metal Arc Welding (SMAW), including stainless steel, all positions, Gas Metal Arc Welding (GMAW) all positions, Flux Core Arc Welding (FCAW) all positions and Gas Tungsten Arc Welding (GTAW), including stainless steel, all positions. This course complies with American Welding Society (AWS) and Schools Excelling through National Skills Education (SENSE) curriculum standards. Students are required to supply leathers, safety glasses, and welding gloves. Field trips may be required.

WT 165 Metal Sculpture – 1.5 units

Lecture: 0.5 hour. Laboratory: 3 hours

An introduction to various metal working techniques with an emphasis on aesthetic design and quality of metal joining. An introduction to M.I.G. welding will be offered, time being available. Credit may be earned for only one of the following: WT 165 or ART 165. Field trips may be required.

WT 166 Metal Sculpture Projects – 1 unit

Prerequisite: WT 165 or ART 165, with a grade of C or better, or P

Laboratory: 3 hours

This course is designed to allow students to expand upon their skills in metal sculpture techniques and to provide for the student a more individualized pursuit in metal sculpturing. Students will work progressively more independently from instructor direction. Credit may be earned for only one of the following: WT 166 or ART 166. Field trips may be required.

WT 180 Welding Certification – 0.5 unit

Prerequisite: WT 100 and WT 111, with grades of C or better, or P

Laboratory: 1.5 hours

This course is designed to prepare the student for the welding certification test according to industry codes and standards. Special emphasis will be placed on welder dexterity and correcting deficiencies in welding techniques. Students must pay for coupon testing, typically \$125.00. Offered for Pass/No Pass grading only.

WORK EXPERIENCE

All CSU campuses will accept Work Experience; see your counselor or work experience coordinator for limitations.

WKEXP 97 Cooperative Work Experience – 1-4 units

Co-requisite: Enrollment in a minimum of seven (7) units of coursework including Cooperative Work Experience at Columbia College

75 hours of paid employment equals 1 unit of credit.

60 hours of unpaid employment equals 1 unit of credit.

The student's part-time or full-time employment is parallel or concurrent with enrollment in regular college classes, and the student receives a maximum of 4 units per semester. A student must enroll in and complete a total of at least 7 units per semester including work experience. GENERAL CWEE students may enroll in a maximum of 3 units of CWEE per semester. Offered for Pass/No Pass grading only. May be repeated for a maximum of 16 units of credit from WKEXP 96 and/or WKEXP 97.

Transfer: CSU (Transfer credit limited. See a counselor.)

NON-CREDIT COURSES

ENGL 705 English as a Second Language

Lecture: 3 hours

Elementary course in speaking, hearing, reading, and writing English for persons learning English as another language. Emphasis is on vocabulary and sentence structure for practical communication.

ENGL 705A English as a Second Language: Low Beginning

Lecture: 3 hours

Elementary course in speaking, hearing, reading, and writing English for persons learning English as another language. Emphasis is on vocabulary and sentence structure for practical communication. Basic literacy in first language is recommended. May be repeated five times.

ENGL 705B English as a Second Language: High Beginning

Recommended for Success: ENGL 705A

Lecture: 3 hours

Elementary II course in speaking, hearing, reading and writing English for persons learning English as another language with continued emphasis on practical communication. May be repeated three times.

ENGL 705C English as a Second Language: Low Intermediate

Recommended for Success: ENGL 705B

Lecture: 3 hours

Low Intermediate I course in speaking, hearing, reading and writing English for persons learning English as another language with continued emphasis on practical communication. May be repeated three times.

HHP 300 Lifelong Health and Fitness

Laboratory: 1.5 hours

Designed to offer lifelong education and promote the health and physical wellbeing of individuals. It includes a comprehensive workout designed to achieve personal fitness goals. Unlimited repeats. Note: 27 to 108 contact hours.

HHP 302 Cardiac Family Fitness - First Step for Fitness

Prerequisite: HHP 13B or HHP 15B with a grade of C or better, or P

Designed to develop optimal levels of cardiovascular functional capacity and reduce the risk factors associated with coronary artery disease. Emphasis will also be placed on maintaining and/or improving all components of fitness.

HHP 303 Rehabilitation for Physically Limited

Laboratory: 1.5 hours

Designed to offer individually prescribed fitness to the physically limited with emphasis on the improvements of cardiovascular, flexibility and strength components. Unlimited repeats.

MUSIC 302 Choral Singing

Laboratory: 4 hours

Study and performance of mixed choral works of various styles and periods. Includes development of vocal technique and musicianship. Audition required.

MUSIC 303 Orchestra

Laboratory: 3 hours

Study and performance of orchestral literature of various styles and media. Audition required for wind, brass, and percussion players as needed.

MUSIC 305 Jazz Studies

Laboratory: 6-12 hours

Study and performance of instrumental and vocal jazz in both solo and ensemble (including big band, choir, combos, and solo with accompaniment). Includes beginning jazz theory, improvisation, style, interpretation, performance practice and the development of an individual standard jazz repertoire. Repertoire may vary from semester to semester. Field trips may be required. May be repeated 32 times.

SKLDV 302 Parenting Strategies and Family Relationships

Lecture: 20 hours total. Laboratory: 12 hours total

This course examines the importance of family relationships and helps identify strategies that can lead to positive changes within the family. Students will learn strategies for effective parenting, effective communication, stress and anger management, domestic violence resolution and personal boundary maintenance.

SKLDV 410 Supervised Tutoring

Provides supervised tutoring in a designated laboratory/ learning center in order to support student success in course(s) in which they are enrolled. Note: Student contact hours may range from 1-10 hours weekly.

SKLDV 700 GED Preparation

Lecture: 3 hours

Designed to teach the general skills needed to pass the General Educational Development test.

SKLDV 701 Life Strategies for Success

Lecture: 20 hours total. Laboratory: 12 hours total

Students will learn and practice skills and strategies that will assist them in developing and implementing a personal plan for achieving their life goals.

SKLDV 703 Practical Money Skills for Life

Lecture: 20 hours total. Laboratory: 12 hours total

This is a basic course in money management. Each student will be introduced to the benefits of budgeting and financial planning. Students will become familiar with recognizing how to best utilize their financial resources, identify the benefits and drawbacks of using credit, learn the various types of checking and savings accounts, identify various consumer scams, and learn how to protect themselves from identity theft.

SKLDV 705 Preparation for Citizenship Test

Lecture: 1 hour

Review of high-frequency English vocabulary and pronunciation, basic U.S. historical facts and U.S. government principles to prepare for the citizenship test. Requires basic literacy in home language and mid-beginning ESL. May be repeated four times.

SKLDV 792 Applied Skills

Laboratory: 3 hours

The course is designed for students who need to develop basic skills and personal qualities in preparation for successful employment or enrollment in continuing education. Individualized assistance will be provided to analyze specific learning needs and to plan a program of study to improve skills. Skill areas may include basic arithmetic, reading development, employment/personal skills, time management, problem solving, and communication skills (oral and written). Emphasis on a six-week employment skills/job readiness module will be the focus of activities during the first third of the course and will include use of a performance assessment tool. May be repeated two times.

Two-Year Course Offerings / Courses Required for Certificates and Associate Degrees

To assist students in planning their schedules, Columbia College has prepared a proposed listing of courses to be offered in the next two years. This list is subject to change due to fiscal constraints and availability of staff and/or facilities. **Please consult the semester Schedule of Classes for actual course offerings.**

Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
ANTHROPOLOGY						
1 Physical Anthropology		X	X		X	X
2 Cultural Anthropology		X	X		X	X
7 Gender, Culture and Society					X	
ART						
1 Basic Freehand Drawing		X	X	X	X	X
2 Basic Color and Design			X			X
9A Life Drawing: Beginning		X			X	
9B Life Drawing: Intermediate		X			X	
11 History of Art: Ancient & Medieval		X			X	
12 History of Art: Renaissance, Baroque & Modern	X	X	X	X	X	X
13 Art of Africa, Asia, Australia, and the Americas		X	X		X	X
21A Painting: Beginning	X	X	X	X	X	X
21B Painting: Intermediate	X	X	X	X	X	X
23A Watercolor: Beginning		X			X	
25 Mixed Media Painting			X		X	X
31 Ceramics: Introductory		X	X	X	X	X
32 Ceramics: Intermediate		X	X	X	X	X
33 Ceramics: Advanced		X	X	X	X	X
35 Raku & Alternative Firing Methods		X	X		X	X
40 Photography: Beginning		X	X		X	X
41 Photography: Intermediate			X			
44 Advanced Photography Laboratory			X			
45 Field Photography		X	X	X	X	X
46 Field Photography: Composition and Design		X			X	
48 Special Topics in Photography						
51 Publication Design I			X			X
52 Publication Design II			X			X
53 Computer Graphics I		X				
54 Computer Graphics II			X			X
56 Typography		X	X			X
71 Ceramic Sculpture: Introductory		X	X		X	X
72 Ceramic Sculpture: Advanced		X	X		X	X
AUTOMOTIVE TECHNOLOGY						
97 Work Experience in Auto Technology		X	X		X	X
100 Introduction to Auto Technology					X	
102 Engine Repair					X	

Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
103 Practical Laboratory	X	X	X		X	X
104 Practical Laboratory (Auto Body)		X	X			X
105 Automotive Braking Systems		X			X	
106 Engine Performance						X
112 Heating and Air Conditioning			X			X
113 Automotive Electrics			X			
120 Suspension and Steering		X				
122 Manual Power Trains & Axles		X				
132 Automatic Transmissions & Transaxles			X			
140 B.A.R. Smog Check Training, Level II						
155 Automotive Spray Refinishing I			X			X
156 Automotive Spray Refinishing II			X			X
165 Clean Air Car Course and OBD II Update Training			X			
BIOLOGY						
2 Principles of Biology		X			X	
4 Principles of Animal Biology		X			X	
6 Principles of Plant Biology			X			X
10 Human Anatomy	X	X	X		X	X
17 Fundamentals of Biology	X	X	X	X	X	X
24 General Ecology		X			X	
39 Field Biology		X	X	X	X	X
50 Nutrition	X	X	X		X	X
60 Human Physiology		X	X		X	X
65 Microbiology		X	X		X	X
150 Elementary Anatomy and Physiology	X	X	X		X	X
BUSINESS ADMINISTRATION						
2A Financial Accounting		X			X	
2B Managerial Accounting			X			X
18 Business Law		X	X		X	X
20 Principles of Business		X	X		X	X
24 Human Relations in Organizations			X			X
25 Job Search and Interviewing Strategies			X			X
30 Principles of Marketing		X			X	
40 Principles of Management		X			X	
41 Small Business Management			X			X
52 E-Commerce			X			X
53 Project Management			X			X

Course		2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
97	Work Experience in Business and Commerce		X	X		X	X
121	Adobe Acrobat Essentials			X			X
135	Computerized Accounting (Quickbooks)		X			X	
151	Finance and Investments			X			X
155	Computerized Accounting for Business			X			X
158	Payroll Accounting		X			X	
161A	Small Business Accounting I		X			X	
161B	Small Business Accounting II			X			X
163	Business Mathematics		X	X		X	X
164	Income Tax		X			X	
	CHEMISTRY						
2A	General Chemistry I		X	X		X	X
2AL	General Chemistry I Laboratory		X	X		X	X
2B	General Chemistry II	X		X	X		X
2BL	General Chemistry II Laboratory	X		X	X		X
4A	Organic Chemistry I		X			X	
4AL	Organic Chemistry I Laboratory		X			X	
4B	Organic Chemistry II			X			X
4BL	Organic Chemistry II Laboratory			X			X
5	Introductory Chemistry: Environmental Emphasis		X		X		X
5L	Introductory Chemistry Laboratory		X		X		X
14	Fundamental Chemistry for Allied Health	X	X	X	X	X	X
14L	Fundamental Chemistry for Allied Health Laboratory	X	X	X	X	X	X
16	Fundamentals of Organic and Biochemistry	X	X		X	X	
16L	Fundamentals of Organic and Biochemistry Laboratory	X	X		X	X	
20	The Chemistry of Everything			X	X		X
20L	The Chemistry of Everything Laboratory			X	X		X
	CHILD DEVELOPMENT						
1	Child Growth and Development		X	X		X	X
3	Principles and Practices of Teaching Young Children			X			X
4	Observation and Assessment		X			X	
8	Early Literacy Development			X			X
10	Creative Activities in the Arts		X			X	
12	Creative Activities in Math		X			X	
13	Creative Activities in Science		X			X	
16	Practicum		X	X		X	X

Course		2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
17	Adult Supervision Practicum			X			X
22	Child, Family, Community		X	X		X	X
23	Guiding Children's Social Development		X			X	
25	Infant/Toddler Care		X			X	
26	Health, Safety and Nutrition	X	X	X		X	X
28	Books for Young Children			X		X	
30	Child Care/Nursery School Administration			X		X	
31	Advanced Child Care Administration		X			X	
35	Introduction to Curriculum	X			X		
36	Teaching in a Diverse Society	X			X		
97	Work Experience in Child Development		X	X		X	X
116	Infant/Toddler Practicum		X	X		X	X
126	School-Age Child Care			X			X
	COMPUTER SCIENCE						
1	Computer Concepts and Information Systems		X	X		X	X
3	Operating Systems		X			X	
4	Windows Operating Systems Essentials		X	X		X	X
5	Introduction to Programming		X	X		X	X
9	Introduction to UNIX/Linux			X			X
10	Internet Essentials		X	X		X	X
11	Presentations Using Computers and Multimedia			X			X
12	Website Development Applications		X			X	
13	Introduction to HTML			X			X
14	Advanced Topics in Website Development			X			X
15	Java Programming			X			X
17	Advanced Internet Research	X	X	X		X	X
19	Computer Graphics and Animation			X			X
22	Programming Concepts and Methodology I		X			X	
24	Programming Concepts and Methodology II						X
27	C/C++ Programming			X			
28	Visual Basic Programming		X			X	
29A	Introduction to Computer Video Production		X			X	
30	Financial Worksheets on Computers			X			X
31	Publication Design I					X	
32	Publication Design II			X			X
33	Computer Graphics I		X	X		X	X

	Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
34	Computer Graphics II			X			X
35	Digital 3D Modeling and Animation		X			X	
36	Introduction to Digital Multimedia		X			X	
37	Writing for Multimedia			X			X
39	Photo Editing for Digital & Print Publication		X	X		X	X
41	Networking Essentials	X	X	X		X	X
52	E-Commerce			X			X
53	Project Management			X			X
55	Database Management					X	
56	Typography		X				X
57	GIS Data Management: Introduction to Geodatabase			X			X
58	GIS-ArcView			X			X
59	Geographic Information and Global Positioning Systems		X		X	X	
60	Introduction to Arc GIS			X			X
61	GIS Mapping: Introduction to Fire Incident Mapping			X			X
62	GIS Mapping: Introduction to Search and Rescue (SAR) GIS		X	X			X
65	GIS Applications					X	
70	Introduction to Raster-Based GIS			X			X
75	GIS Applications in Resource Management		X				
138	Excel Spreadsheets		X			X	
150	Image Managing & Editing for Digital Photographers			X			X
155	Access			X			X
162	Networking-CCNA 2: Routing Protocols and Concepts			X			X
163	Networking-CCNA 3: LAN Switching & Wireless		X			X	
164	Networking-CCNA 4: Accessing the WAN		X			X	
167	PC Assembly, Upgrade, Support (A+)	X	X		X	X	
168	PC Operating System Installation and Support (A+)			X			X
	DRAFTING						
50A	Computer Assisted Drafting I		X	X		X	X
	DRAMA						
10	Introduction to the Theatre			X			X
19	Exploring Radio Drama			X			X
20	Oral Expression and Interpretation		X			X	
42	Acting Fundamentals		X			X	
43	Acting-Directing			X			X

	Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
	EARTH SCIENCE						
1	Energy: Uses and Alternatives			X			X
5	Physical Geology		X	X		X	X
10	Environmental Geology		X	X		X	X
22	Historical Geology		X				
30	Global Tectonic Geology			X		X	X
33	Introduction to the Earth			X			X
35	Field Geology	X	X	X	X	X	X
40	Descriptive Astronomy		X			X	
42	Natural Hazards			X			X
50	Oceanography		X			X	
	ECONOMICS						
10	Principles of Economics - Macro		X			X	
11	Principles of Economics - Micro			X			X
	EDUCATION						
10	Practicum in Teaching						
12	Introduction to Education: Intermediate Field Experience						
	EMERGENCY MEDICAL SERVICES						
4	Emerg. Medical Technician Training		X	X		X	X
12	Pre-Paramedic Training		X			X	
13	Advanced First Aid and Emergency Care			X			
20	Basic Cardiology and Cardiac Dysrhythmias			X			X
97	Work Experience in Emergency Medical Service		X	X		X	X
107	Skills Refresher for EMT's and First Responders		X	X		X	X
109	Online Emergency Medical Technician Refresher						
153	CPR and Basic First Aid		X	X		X	X
157	Emergency Medical Responder and CPR	X	X	X	X	X	X
165	Conversational Medical Spanish for Emergency Health Care Providers		X			X	
175	EMS Skills Development		X	X		X	X
	ENGLISH						
1A	Reading & Composition: Beginning	X	X	X	X	X	X
1B	Advanced Composition and Introduction to Literature	X	X	X	X	X	X
1C	Critical Reasoning & Writing	X	X	X		X	X
10	Creative Writing	X	X	X		X	X
11	Film Appreciation	x	X	X		X	X
17	American Literature					X	
18	American Literature						X

Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
46		X				
47			X			
50			X			X
81			X			X
151	X	X	X	X	X	X
ENTREPRENEURSHIP						
101		X			X	
102		X			X	
103			X			X
104			X			X
105		X	X			X
FIRE TECHNOLOGY						
1		X	X		X	X
2		X	X		X	X
3		X	X		X	X
4		X			X	
5			X			X
7			X			X
10						
29A		X			X	
29B			X			X
50		X	X		X	X
51			X			X
97		X	X		X	X
101		X	X		X	X
106		X	X		X	X
108		X	X		X	X
110		X	X		X	X
FOREIGN LANGUAGE (see Spanish)						
FORESTRY						
1		X			X	
10		X			X	
FORESTRY TECHNOLOGY						
153			X			X
162		X			X	
165			X			
GEOGRAPHY						
12		X	X		X	X
15		X	X		X	X

Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
GUIDANCE						
1	X	X	X		X	X
10A			X			X
10B			X			X
11		X			X	
25			X			X
30				X		
100	X	X	X	X	X	X
107	X	X		X	X	
108					X	
115		X			X	
150		X			X	
HEALTH AND HUMAN PERFORMANCE						
1			X			X
2		X	X		X	X
3			X			X
4						
5	X	X	X		X	X
6A		X	X		X	X
6B		X	X		X	X
8A		X	X		X	X
9	X	X	X	X	X	X
10	X	X	X	X	X	X
13A			X		X	X
13B		X	X		X	X
15A			X		X	X
15B			X		X	X
17						
18A	X	X	X	X	X	X
18B	X	X	X	X	X	X
23						
25						
32			X		X	X
34		X	X		X	X
35			X	X		X
38A			X		X	X
38B			X		X	X

Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
45		X				
46			X			X
47A		X	X		X	X
47B		X	X		X	X
48						
50A		X			X	
50B		X			X	
53A			X	X		X
53B			X	X		X
53C			X	X		X
56A	X	X	X	X	X	X
56B	X	X	X	X	X	X
57		X	X		X	X
58						
59A			X			X
60	X	X	X	X	X	X
61	X					
62	X				X	
63			X			X
66		X			X	
72						
74			X			X
76		X	X		X	X
82		X	X		X	X
86		X			X	
100		X		X		
HISTORY						
5		X			X	
11		X			X	
13		X			X	
14			X			X
16		X	X	X	X	X
17	X	X	X	X	X	X
HOSPITALITY MANAGEMENT						
97	X	X	X		X	
102		X			X	
104		X			X	
112		X			X	
114		X	X		X	
120	X	X	X		X	X

Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
122		X	X		X	X
126			X			X
128			X			X
130	X			X		
133A		X	X		X	X
133B		X	X		X	X
134		X			X	
135	X		X			X
136		X	X		X	X
140		X	X		X	X
141	X		X			X
142			X			X
143		X			X	
146		X	X		X	X
147			X		X	X
148		X			X	
152			X			X
190			X		X	X
200	X			X		
HUMANITIES						
1		X				
2	X		X			X
3	X			X		
4				X	X	
LIBRARY						
1		X	X		X	X
101	X			X		
MATHEMATICS						
2	X	X	X	X	X	X
4A						X
4B						
6			X			X
8					X	
12					X	
17A		X			X	
17B			X			X
18A		X			X	
18B			X			X

	Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
18C	Calculus III	X					
100A	Algebra I: First Half		X			X	
100B	Algebra II: Second Half			X			X
101	Algebra I	X	X	X	X	X	X
104	Algebra II	X	X	X	X	X	X
106	Introduction to Mathematical Thinking						X
601	Elementary Mathematics		X	X		X	X
602	Prealgebra	X	X	X		X	X
650	Personalized Mathematics Development		X	X		X	X
	MUSIC						
2	Introduction to Music		X	X	X	X	X
4A	Elementary Musicianship		X			X	
4B	Elementary Musicianship			X			X
5A	Intermediate Musicianship					X	
5B	Intermediate Musicianship						X
10	Survey of Music History and Literature: Ancient to 1750		X			X	
11	Survey of Music History and Literature: 1750 to present			X			X
12	American Popular Music: Blues and Jazz to Rock'n Roll			X			X
20A	Elementary Music Theory		X			X	
20B	Elementary Music Theory			X			X
21A	Intermediate Music Theory		X			X	
21B	Intermediate Music Theory			X			X
31A	Elementary Piano		X	X		X	X
36	Elementary Voice		X	X		X	X
37	Advanced Elementary Voice		X	X		X	X
38	Intermediate Voice			X		X	X
39	Advanced Intermediate Voice			X		X	X
41B	Intermediate Piano		X	X		X	X
49	Beginning Guitar		X	X	X	X	X
50-56	Private Lessons		X	X		X	X
60	College Choir		X	X		X	X
64	Jazz Choir		X	X	X	X	X
66	Columbia College Community Chorus		X	X		X	X
72	Jazz Ensemble		X	X	X	X	X
75	Jazz Studies		X	X		X	X
76	Community Orchestra		X	X		X	X
78	Ensemble: Instrumental Emphasis		X	X		X	X
	NATURAL RESOURCES						
1	Environmental Conservation	X	X	X	X	X	X

	Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
3	Natural Resources Law and Policy			X			X
6	Soil Resources		X				
9	Parks and Forests Law Enforcement			X			
22	Ecology and Use of Fire in Forest Ecosystems		X				
30	Introduction to Watershed Management			X			X
50	Natural History and Ecology	X			X		
97	Work Experience in Forestry and Natural Resources		X	X		X	X
	NATURAL RESOURCES TECHNOLOGY						
97	Work Experience in Natural Resources Technology		X	X		X	X
155	Interpretive Guided Tours	X			X		
160	Introduction to Maps and Remote Sensing		X			X	
161	Introduction to Water Resources Management		X			X	
163	Water for Consumption			X			X
165	Rural Wastewater Strategies			X			X
166	Decentralized Wastewater Mangement		X				
167	Operation of Wastewater Treatment Plants			X			X
169	Operation of Wastewater Treatment Plants 2		X				
181	California Wildlife			X			X
182	Natural History and Techniques of Surveying Sierra Nevada Wildlife	X			X		
183	Ecological Restoration in Practice	X			X		
	OFFICE TECHNOLOGY						
42	Publication Design I					X	
43	Publication Design II			X			X
50	Medical Terminology	X	X	X		X	X
51	Medical Terminology and Anatomy			X		X	X
97	Work Experience in Office Technology		X	X		X	X
100	Computer Keyboarding I		X	X		X	X
125	Records Management & Filing Applications		X			X	
130	Business English		X			X	
131	Office Procedures & Technology						X
132	Business Communications			X			X
140	Beginning Word Processing		X	X		X	X
141	Intermediate Word Processing			X		X	X
142	Desktop Publishing Essentials		X			X	

Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
149		X			X	
150		X			X	
151			X			
152A			X			X
152B		X			X	
152C			X			X
168		X			X	
210		X	X		X	X
PHILOSOPHY						
1	X	X	X	X	X	X
5		X			X	
25					X	
PHYSICS						
1						
2						
4A		X			X	
4B			X			X
5A		X			X	
5B			X			X
POLITICAL SCIENCE						
10	X	X	X	X	X	X
12		X			X	
14			X			X
PSYCHOLOGY						
1	X	X	X	X	X	X
2						
5	X	X	X		X	X
10			X			X
15		X			X	
20						
30		X	X		X	X
35					X	
40		X			X	
52		X			X	
56					X	
SEARCH & RESCUE						
50		X	X			X
51			X			X
SIGN LANGUAGE						
40A		X			X	

Course	2013 Sum	2013 Fall	2014 Spr	2014 Sum	2014 Fall	2015 Spr
40B		X	X			X
40C		X			X	
SKILLS DEVELOPMENT						
610			X			X
SOCIOLOGY						
1	X	X	X		X	X
2			X			X
5		X			X	
7					X	
12		X			X	
28			X			X
SPANISH						
1A		X			X	
1B			X			X
2A					X	
2B			X			X
10A					X	
20A					X	
20B			X			X
SPEECH COMMUNICATION						
1	X	X	X	X	X	X
2		X	X			X
4	X				X	
5						
7		X	X		X	X
9			X			
12			X			X
19						
WELDING TECHNOLOGY						
97		X	X		X	X
101	X	X	X		X	X
103		X	X		X	X
111			X		X	X
165		X	X		X	X
166		X	X		X	X
180						